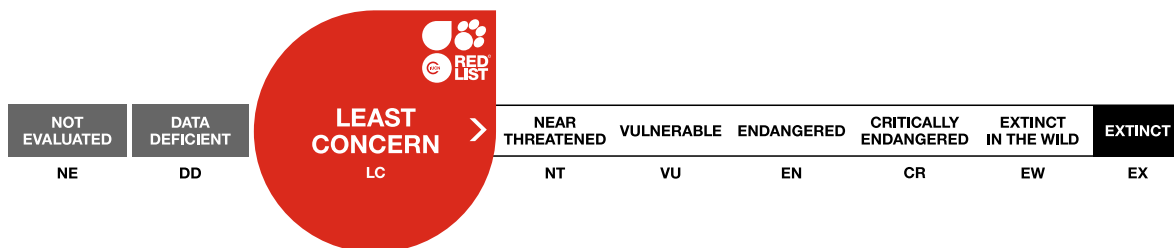


## *Umbrina canosai*, Argentine Croaker

Assessment by: Haimovici, M., Ruarte, C. & Rico, R.



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## Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Perciformes	Sciaenidae

**Scientific Name:** *Umbrina canosai* Berg, 1895

### Common Name(s):

- English: Argentine Croaker
- French: Ombrine D'Argentine
- Spanish; Castilian: Pargo Blanco, Verrugato Pargo
- Portuguese: Calafate-da-Argentina, Castanha, Chora-chora, Corvina-branca

### Taxonomic Source(s):

Eschmeyer, W.N. 2013. Catalog of Fishes. Available at: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (Accessed: 9 Sep 2013).

## Assessment Information

**Red List Category & Criteria:** Least Concern [ver 3.1](#)

**Year Published:** 2021

**Date Assessed:** July 30, 2019

### Justification:

This demersal species inhabits the continental shelf from southeastern Brazil to Argentina and has an estimated generation length of 14 years. Two stocks are currently recognized: a small stock in southeastern Brazil and a large migratory stock from southern Brazil to Argentina, with the latter being heavily fished in southern Brazil. This species is not directly targeted in Argentina and Uruguay, but is taken in mixed-species coastal fisheries. Catch has typically been at relatively low levels, and there are no indications of decline at this time. Conservation measures are in place in Argentina and Uruguay to manage fishing of coastal, demersal species, which includes this species. In Brazil, significant declines in abundance were observed in the 1990s and a recovery occurred in the 2000s. In the late 2000s, fishing effort significantly increased due to the development of a mid-water trawl fishery that targets spawning aggregations and the landings declined again. In the most recent decade, some conservation measures have been implemented to reduce fishing effort in Brazil. Although landings in southern Brazil are in decline, it is not expected to have declined in Argentina and Uruguay; therefore, global-level declines are not expected to be approaching a Near Threatened or threatened level at this time. It is listed as Least Concern with a strong recommendation to improve fisheries monitoring and management in areas where it is overexploited.

## Geographic Range

### Range Description:

This species is endemic to the southwestern Atlantic where it occurs from Cabo de São Tomé, Río de

Janeiro, Brazil to Río Colorado, Argentina (41°30'S) (Cousseau and Perrotta 2013). The depth range is 5 to 85 metres (INIDEP Researchers pers. comm. 2020).

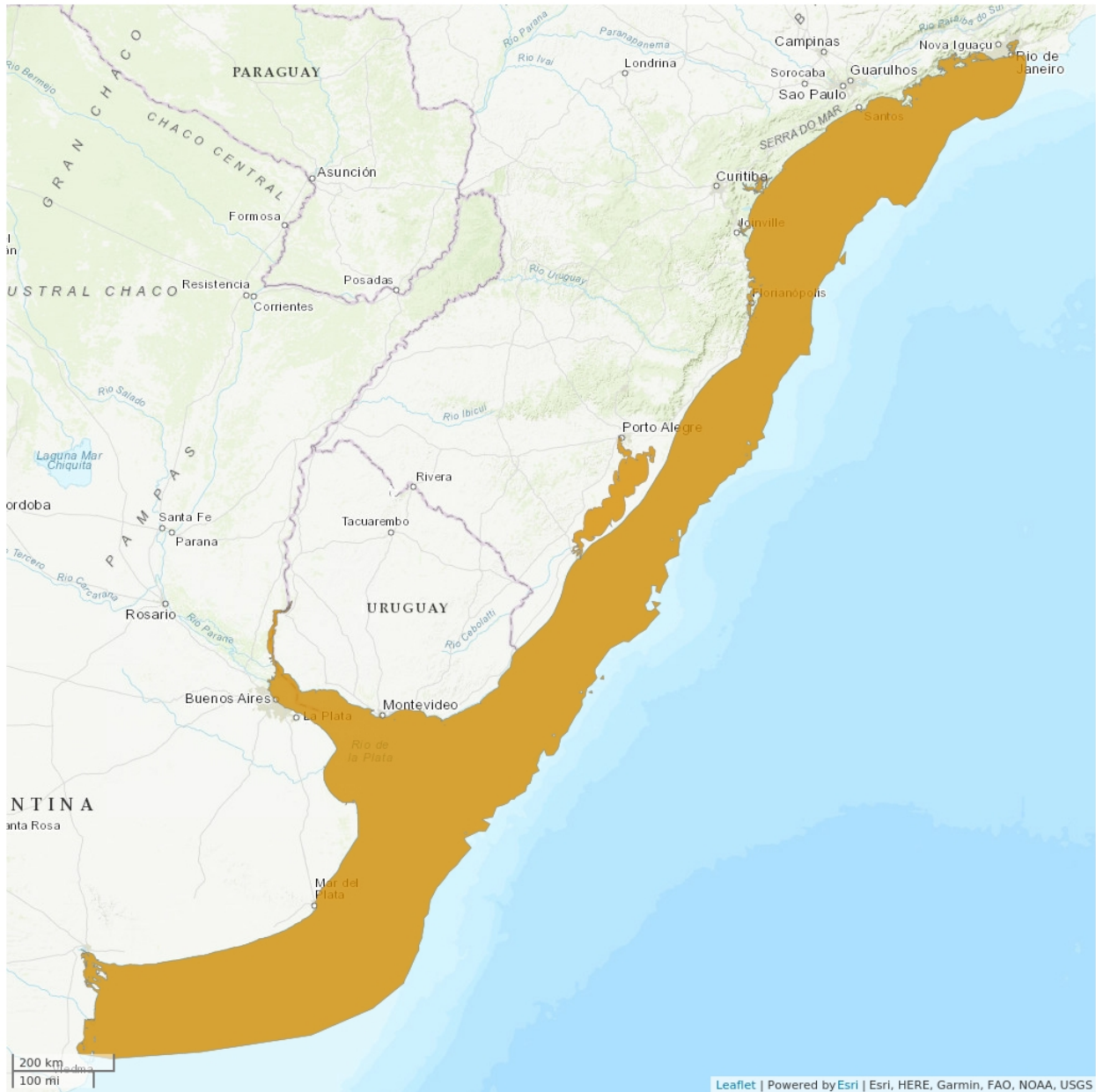
**Country Occurrence:**

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

**FAO Marine Fishing Areas:**

**Native:** Atlantic - southwest

# Distribution Map

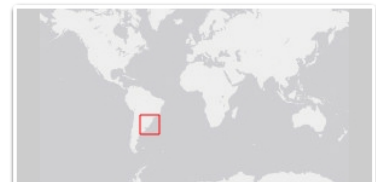


## Legend

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.



## Population

The global population of this species is comprised of two independent stocks: a southern stock occurring from Bahia Blanca in Argentina (41°S) to Santa Marta Grande Cape (29°S) in Brazil and another stock occurring from north of Santa Marta Cape reaching (23°S) in Rio de Janeiro (Canel *et al.* 2019, E.S. Kikuchi pers. comm. 2019). Even though the stocks may be shared between Argentina and Brazil, additional studies are needed on connectivity between waters of Argentina, Uruguay and Brazil (INIDEP Researchers pers. comm. 2020).

**Brazil:** Off São Paulo and Rio de Janeiro, this species is not abundant and its ecology is poorly known. In southeastern Brazil, the species is taken in trawl and gillnet fisheries, but is far less abundant than in its range further to the south. Annual landings in the smaller stock declined from over 1,000 t in the 1990s to a few hundred tonnes in recent years (M. Haimovici pers. comm. 2019). Most of the global landings are taken from the larger southern stock (Haimovici *et al.* 2006).

Landings from the southern stock were over 26,000 t in 1973 and more than 20,200 t of that were landed in Brazil. Landings then gradually declined to a minimum of 5,300 t in 1998, increased to over 15,000 t in the 2000s (Haimovici and Cardoso 2017) and subsequently declined steadily to less than 8,000 t in 2018 (M. Haimovici pers. comm. 2019). In 2012, the Brazilian government discontinued the program that collected national fishery statistics, which includes the areas where most landings of sciaenid fishes occur (Rio Grande and Santa Catarina). The Laboratory of Demersal and Cephalopod Fishing Resources at the Universidade Federal Rio Grande continued to collect data on effort and catch by conducting dockside interviews. According to an analysis of these data, there is no clear trend in catch per unit effort (CPUE) from 1977-2017, but the occurrence of large catches is suspected to have declined (Cardoso *et al.* 2019). Fisheries landings and catch per unit effort (CPUE) data cannot be directly translated to abundance changes because they include vulnerabilities, biases and market factors that influence fishing (M. Haimovici pers. comm. 2020).

Prior to the 1990s, this species was mainly targeted by trawl and gillnet fisheries in southern Brazil, and effort expanded in subsequent decades. Its abundance decreased sharply in the 1990s, but there was some level of recovery in the 2000s (Haimovici *et al.* 2006, M. Haimovici pers. comm. 2020). Mid-water trawlers have been exploiting this species since the late 2000s using sonar-schooling technology that specifically target this species at depths greater than 100 m when it conducts seasonal northward migrations in winter. In the early 2010s, the mid-water trawl fishery captured exceptionally high quantities of large spawning individuals, and while it partially recovered, it is presently considered at risk of collapse (Haimovici and Cardoso 2016). Discards of small individuals in the trawl fishery are high, ca. 30% (Haimovici and Perez Habiaga 1982, L. Cardoso and M. Haimovici pers. comm. 2019). Over the past 30 years, abundance has likely decreased and the stock is likely overexploited (Cardoso *et al.* 2019). Given this species has an early maturation and high fecundity, it is expected the population would recover given the reduction of fishing pressure (M. Haimovici pers. comm. 2020).

**Uruguay and Argentina:** This species is not directly targeted in Uruguay and Argentina, but is taken in coastal, demersal fisheries, including those that target stripped weakfish (*Cynoscion guatucupa*) (Rico 2000). Landings of this species represent a small and variable portion of the total landings in the mixed-species coastal fishery. In association with high landings of stripped weakfish, its landings reached a relatively higher level in 1967 (9,500 t), 1996 (6,800 t) and 2006 (4,700 t). An exception occurred in 1975

when landings of this species were 9,600 t and stripped weakfish were 1,900 t (Sanchez *et al.* 2012). In the 2010 decade, the average landings were 1,900 t, without reaching the maximums observed in previous decades, and landings of stripped weakfish remained stable. Abundance trends cannot be estimated based on landings data in part due to the uncertainty introduced by its migratory behaviour, its frequency observed in scientific surveys and its variable market price. Due to conservation measures that implemented fishing seasonal area closures in 2004 as well as the fishing fleet switching to target other species, such as Patagonian shrimp (*Pleoticus muelleri*), fishing effort has declined, and as a result, landings of demersal species have declined significantly. A stock assessment has not been conducted for this species, but studies on life history parameters have been undertaken (INIDEP Researchers pers. comm. 2020).

**Current Population Trend:** Decreasing

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

This demersal species occurs over sandy and muddy bottoms on the continental shelf. Young individuals feed mainly on amphipods and mysidaceans. The diet includes an increasing proportion of other benthic organisms such as polychaetes, ophiurids, bivalves, gastropods, and decapod crustaceans with increasing size and age (Vazzoler 1975, Haimovici *et al.* 1989). The southern stock is highly migratory, and travels to feeding grounds in Uruguay and northern Argentina and spawning and nursery grounds in Brazil (Gonzalez Alberdi and Nani 1967). Spawning occurs in late winter and late spring beginning north of Río Grande and moving further south in subsequent months. Larger females are the first to start spawning and also the first to migrate south toward the coastal feeding areas of Uruguay and Argentina (Haimovici and Cousin 1989). The southern stock conducts a spawning migration in winter and spring along the coast of Río Grande do Sul followed by a southward migration towards Uruguay and Argentina (Gonzalez Alberdi and Nani 1967). The main breeding ground is off Rio Grande do Sul where young-of-the-year remain in shallow waters and move deeper in their second year of life. They then migrate to north of Río de la Plata and off Río Grande do Sul, which is the most important breeding area for the southern stock.

In the southern stock, the maximum recorded total length in the 1980s was about 45 cm and the maximum age was 26 years (Haimovici and Reis 1984). More recent landings include specimens over 45 cm in length, but individuals over 15 years of age are rare (Haimovici and Cardoso 2016). Natural mortality estimates are 0.15 and 0.25 (Haimovici 1988, Haimovici *et al.* 2005). The size at maturity is 18.4 cm for males and 21.9 cm for females and age at maturity is 2 years (Haimovici and Cousin 1989). In Argentina, size at maturity is about 23 cm total length for males and 25.9 cm for females (Militelli *et al.* 2013). Maximum size is about 43 cm total length with most frequently landed ranging between 23 and 38 cm. The maximum age observed was 20 years (Cousseau and Perrotta 2013). When applying an age at first reproduction of 2 years and longevity of 26 years, its estimated generation length is 14 years based on the following equation recommended by the IUCN Red List methods:  $\text{Age at first reproduction} + (\text{Age at last reproduction} - \text{age at first reproduction})/2$ .

**Systems:** Marine

## Use and Trade

This species is commercially exploited by trawl and gillnet fisheries in Brazil (Haimovici *et al.* 2006). The southern stock is a main target of semi-industrial and industrial gillnet fisheries (Haimovici and Cardoso

2017). In recent years, mid-water trawlers have been exploiting this species using sonar schooling technology which has allowed fishers to target dense shoals of this species during their migration north in winter (Haimovici and Cardoso 2016). Smaller specimens are consumed fresh or salted in Brazil and larger specimens are exported to countries including China and Nigeria. It is not directly targeted in Argentina, but is retained when captured in multi-species, coastal, demersal fisheries. The market price varies from year to year, with some years being profitable and some not (INIDEP Researchers pers. comm. 2020).

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

Overfishing is a major threat to this species in Brazil. Life history characteristics, including predictable aggregate spawning behaviour, cause it to be particularly susceptible to declines under heavy exploitation.

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

In Brazil, all types of motorized bottom trawl fishing were banned up to 12 nautical miles off the coast along 623 km of Rio Grande do Sul by a law implemented in 2018. This law is expected to reduce the catch and discard of young individuals of this species as well as other commercial demersal fishes in the region. Fishing effort should be reduced in all three countries to prevent further decreases in the stock (Haimovici and Cardoso 2017). Conservation measures that include spatial fishing closures, possibly seasonal closures and limitations on effort are highly recommended for Brazil, as well as improving collection of catch data, encouraging stakeholder forums and funding enforcement of fishing regulation compliance (Cardoso *et al.* 2019). Studies are underway on stock identification as well as analyses of changes in size and age structure and mortality coefficients in the southern Brazil fishery (M. Haimovici pers. comm. 2020).

Although there are no specific management measures for this species in Uruguay and Argentina, the measures in place that regulate the coastal fisheries, including fisheries management, fishery independent scientific surveys, total catch limits, gear restrictions, seasonal closed areas and limits on fishing vessels, provide protection to the sustainability of the coastal species assemblage, which includes this species (INIDEP Researchers pers. comm. 2020).

### **Credits**

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**Authority/Authorities:** IUCN SSC Sciaenid Red List Authority

## Bibliography

- Canel, D., Levy, E., Soares, I.A., Braicovich, P.E., Haimovici, M., Luque, J.L. and Timi, J.T. 2019. Stocks and migrations of the demersal fish *Umbrina canosai* (Sciaenidae) endemic from the subtropical and temperate Southwestern Atlantic revealed by its parasites. *Fisheries Research* 214: 10-18.
- Cousseau, M.B., and Perrotta, R. 2013. Peces marinos de Argentina: biología, distribución, pesca. Instituto Nacional de Investigación y Desarrollo Pesquero INIDEP, Mar de Plata, Argentina.
- Gonzalez-Alberdi, P. and Nani, A. 1967. Contribución al conocimiento de la biología del pargo blanco *Umbrina canosai*, de la región de Mar del Plata. *CARPAS Doc. Téc.* 10: 1-36.
- Haimovici, M. 1988. Crecimiento de la pescadilla real (*Macrodon ancylodon*) en el sur de Brasil en el periodo 1984-1986.: Publ. Com. Téc. Mixta Frente Marítimo (Argentina/U).
- Haimovici, M. and Cardoso, L.G. 2016. Stock collapse of *Umbrina canosai* off Southern Brazil due to the introduction of mid-water trawl. *Bol. Inst. Pesca, São Paulo* 42.1: 258-267.
- Haimovici, M. and Cousin, J.C.B. 1989. Reproductive biology of the castanha *Umbrina canosai* (Pisces, Sciaenidae) in Southern Brazil. *Revista brasileira de Biologia* 49(2): 523-537.
- Haimovici, M. and E.G. Reis. 1984. Age and growth determination of *Umbrina canosai*, (Pisces, Sciaenidae) from southern Brazil.: *Atlantica* 7:25-46.
- Haimovici, M. and Perez Habiagà, R.G. 1982. Rejeição a bordo na pesca de arrasto de fundo no litoral de Rio Grande do Sul num cruzeiro de primavera. *Ser. Doc. Tec. Oceanografia* 2(1-14).
- Haimovici, M., Miranda, L.W., Absalonsen, L., and Velasco, G. 2006. Diagnostico e orientações para o ordenamento pesqueiro de *Umbrina canosai*. In: Cergole, M. C., A. O. Ávila-da-Silva, and C. L. D. B. Rossi-Wongtschowski (eds), *Análise das Principais Pescarias Comerciais da Região Sudeste-Sul do Brasil: Dinâmica Populacional das Espécies em Exploração, vol 2.*, Série Documentos Revizee –Score Sul, Instituto Oceanográfico – USP, Sao Paulo.
- Haimovici M., Pereira, S.D. and Vieira, P.C. 1989. La pesca demersal en el sur de Brasil en el periodo 1975-1985. *Frente Marit.* 5: 151-163.
- IUCN. 2021. The IUCN Red List of Threatened Species. Version 2021-1. Available at: [www.iucnredlist.org](http://www.iucnredlist.org). (Accessed: 25 March 2021).
- Militelli, M.I., Macchi, G.J., and Rodrigues, K.A., 2013. Comparative reproductive biology of Sciaenidae family species in the Río de la Plata and Buenos Aires Coastal Zone, Argentina. *Journal of the Marine Biological Association of the United Kingdom* 93(2): 413-423.
- Rico, M.R. 2000. La salinidad y la distribución espacial de la ictiofauna en el estuario del Río de la Plata. Facultad de Ciencias Exactas y Naturales, UNMdP.
- Sanchez, R., Navarro, G., Rozycki, V. 2012. Estadísticas de la pesca marina en la Argentina. Evolución de los desembarques 1898-2010. Ministerio de Agricultura, Ganadería y Pesca de la Nación , Buenos Aires.
- Vazzoler, G. 1975. Distribuição da fauna de peixes demersais e ecologia dos Sciaenidae da plataforma continental brasileira entre as latitudes de 29°21'S (Torres) e 34°44'S (Chuí). *Boletim do Instituto Oceanográfico* 24: 85-169.

## Citation

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## Appendix

### Habitats

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

Habitat	Season	Suitability	Major Importance?
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

### 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 -> 5.4.2. Intentional use: (large scale) [harvest]	Ongoing	Majority (50-90%)	Rapid 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	Minority (50%)	Unknown	Unknown
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

### 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
5. Law & policy -> 5.1. Legislation -> 5.1.2. National level
5. Law & policy -> 5.1. Legislation -> 5.1.3. Sub-national level

### Research Needed

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

<b>Research Needed</b>
1. Research -> 1.2. Population size, distribution & trends
3. Monitoring -> 3.1. Population trends

## Additional Data Fields

<b>Distribution</b>
Lower depth limit (m): 85
Upper depth limit (m): 5
<b>Habitats and Ecology</b>
Generation Length (years): 14

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