

ISSN 2307-8235 (online) IUCN 2022: T1866A176549381

Scope(s): Global Language: English



Aplochiton marinus

Assessment by: Cussac, V.



View on www.iucnredlist.org

Citation: Cussac, V. 2022. *Aplochiton marinus*. *The IUCN Red List of Threatened Species* 2022: e.T1866A176549381. https://dx.doi.org/10.2305/IUCN.UK.2022-2.RLTS.T1866A176549381.en

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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Osmeriformes	Galaxiidae

Scientific Name: Aplochiton marinus Eigenmann, 1928

Taxonomic Source(s):

Fricke, R., Eschmeyer, W.N. and Van der Laan, R. (eds). 2020. Eschmeyer's Catalog of Fishes: genera, species, references. Updated 04 May 2020. Available at: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp.

Taxonomic Notes:

Aplochiton marinus was synonymized with A. taeniatus (Fowler 1945, McDowall 1971, McDowall and Nakaya 1987) but Dyer (2000) regards it as a potentially good species. Aló et al. (2013) identified A. marinus unambiguously (100% accuracy) both from the genetic and morphological viewpoints.

Assessment Information

Red List Category & Criteria: Vulnerable D2 <u>ver 3.1</u>

Year Published: 2022

Date Assessed: May 30, 2022

Justification:

This species is known only from three localities along the Chilean coast. It has an area of occupancy (AOO) of 12 km². Escapees from industrial salmon cage culture are a potential source of competition and predation. This threat could push the species to becoming Critically Endangered or Extinct in a very short time period. Therefore, it is assessed as Vulnerable.

Previously Published Red List Assessments

1996 – Data Deficient (DD)

https://dx.doi.org/10.2305/IUCN.UK.1996.RLTS.T1866A8504998.en

1994 - Insufficiently Known (K)

Geographic Range

Range Description:

Eigenmann (1928), McDowall (1971a) and Cussac *et al.* (2004) only indicated one locality for this species: Estero Cutipay. Aló *et al.* (2013) added and documented two other localities, one in Chiloe island and one more in Baker river estuary.

Country Occurrence:

Native, Extant (resident): Chile

Distribution Map





Compiled by: IUCN (International Union for Conservation of Nature) 2020





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Population

This species has been rarely recorded (known from 13 individuals), and its taxonomic validity has been questioned ever since its original description. Aló *et al.* (2013) resurrected the species on the basis of genetic and morphological viewpoints considering only three localities along the Chilean coast.

Current Population Trend: Unknown

Habitat and Ecology (see Appendix for additional information)

This species is known from estuarine environments. There is little information on its habitats and ecology.

Systems: Freshwater (=Inland waters), Marine

Use and Trade (see Appendix for additional information)

There is no use or trade information for this species.

Threats (see Appendix for additional information)

Escapees from industrial salmon cage culture are a potential source of competition and predation.

Conservation Actions (see Appendix for additional information)

There are no conservation actions in place for this species.

Taxonomic research is recommended. The taxonomic validity of this species has been questioned ever since its original description. Aló *et al.* (2013) resurrected the species on the basis of genetic and morphological viewpoints.

Credits

Assessor(s): Cussac, V.

Reviewer(s): Lyons, T.J.

Partner(s) and

ABQ BioPark

Institution(s):

Bibliography

Alo, D., Correa, C., Arias, C. and Leyla Cardenas, L. 2013. Diversity of *Aplochiton* Fishes (Galaxiidea) and the Taxonomic Resurrection of *A. marinus*. *PLoS ONE* 8(8): e71577.

Dyer, B.S. 2000. Systematic review and biogeography of the freshwater fishes of Chile. *Estudios Oceanológicos* 19: 77 - 98.

Fowler, H.W. 1945. Fishes of Chile – Systematic Cata-log. Revista Chilena de Historia Natural: 1–171.

Groombridge, B. (ed.). 1994. 1994 IUCN Red List of Threatened Animals. IUCN, Gland, Switzerland and Cambridge, UK.

IUCN. 2022. The IUCN Red List of Threatened Species. Version 2022-2. Available at: www.iucnredlist.org. (Accessed: 08 December 2022).

McDowall, R.M. 1971. Fishes of the family Aplochitonidae. *Journal of the Royal Society of New Zealand* 1(1): 31-52.

McDowall, R.M. and Nakaya, K. 1987. Identity of the galaxioid fishes of the genus *Aplochiton* Jenyns from southern Chile. *Japanese Journal of Ichthyology* 34(3): 377-383.

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External Resources

For <u>Supplementary Material</u>, and for <u>Images and External Links to Additional Information</u>, please see the Red List website.

Appendix

Habitats

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

Habitat	Season	Suitability	Major Importance?
5. Wetlands (inland) -> 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	Resident	Suitable	Yes
9. Marine Neritic -> 9.10. Marine Neritic - Estuaries	-	Suitable	-

Threats

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

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.4. Marine & freshwater aquaculture -> 2.4.2. Industrial aquaculture	Ongoing	Whole (>90%)	Unknown	Unknown
	Stresses:	 Ecosystem stresses -> 1.3. Indirect ecosystem effects Species Stresses -> 2.1. Species mortality 		
		2. Species Stresses -> 2.1. Species disturbance		
		2. Species Stresses -> 2.3. Indirect species effects ->		
		2.3.2. Competition		

Conservation Actions in Place

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

Conservation Action in Place	
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: No	
Invasive species control or prevention: No	
place species management	
Harvest management plan: No	
Successfully reintroduced or introduced benignly: No	

Conservation Action in Place

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

Research Needed

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

Research Needed

1. Research -> 1.1. Taxonomy

Additional Data Fields

Distribution

Estimated area of occupancy (AOO) (km2): 12

Continuing decline in area of occupancy (AOO): Unknown

Extreme fluctuations in area of occupancy (AOO): Unknown

Estimated extent of occurrence (EOO) (km2): 28564

Continuing decline in extent of occurrence (EOO): Unknown

Extreme fluctuations in extent of occurrence (EOO): Unknown

Number of Locations: 3

Continuing decline in number of locations: Unknown

Extreme fluctuations in the number of locations: Unknown

Lower elevation limit (m): 0

Upper elevation limit (m): 100

Habitats and Ecology

Continuing decline in area, extent and/or quality of habitat: Unknown

Movement patterns: Full Migrant

Congregatory: Congregatory (and dispersive)

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<u>Programme</u>, the <u>IUCN Species Survival Commission</u> (SSC) and <u>The IUCN Red List Partnership</u>.

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