The IUCN Red List of Threatened Species™
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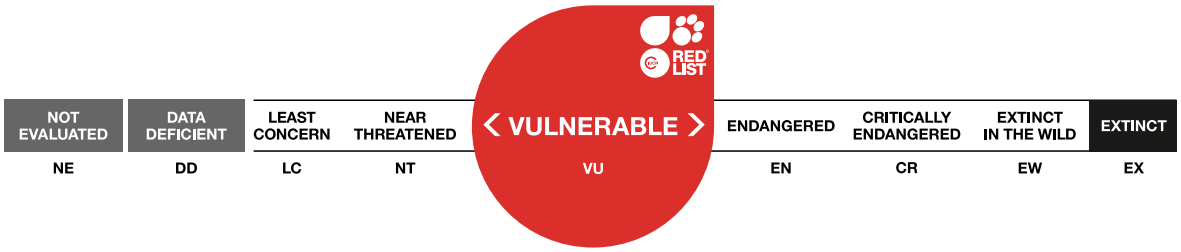
IUCN 2022: T176512235A176512353
Scope(s): Global
Language: English

Austrolebias monstrosus

Assessment by: Alonso, F.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Cyprinodontiformes	Rivulidae

Scientific Name: *Austrolebias monstrosus* (Huber, 1995)

Synonym(s):

- *Cynolebias monstrosus* Huber, 1995
- *Megalebias monstrosus* (Huber, 1995)

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.

Identification Information:

Austrolebias monstrosus can be identified by presenting transverse series of small scales on anal-fin base in males; contact organs on the outer surface of the pectoral fin and on caudal fin in males; long jaws (lower jaw 29.3–36.4% head length in males); numerous gill-rakers on the first branchial arch (5–6 + 14–16); and minute scales on pectoral-fin and caudal-fin bases in older males. A*ustrolebias monstrosus* differs from *A. elongatus* by having gray bars on the flanks in males and fewer dorsal-fin rays in males (16–18 vs. 18–20).

Assessment Information

Red List Category & Criteria: Vulnerable D2 ver 3.1

Year Published: 2022

Date Assessed: December 16, 2020

Justification:

This species is considered as Vulnerable D2. Many of the seasonal ponds that this species inhabits have disappeared and many are suspected to have disappeared given that most of its distribution is within areas with extensive agriculture that severely affect seasonal killifish species and many of those records are previous to the intense agricultural expansion that affected the Chacoan region, one of the most deforested regions in the world in the last decades. Seasonal killifish are very vulnerable to agricultural expansion and many populations disappear as those seasonal ponds are commonly dried or filled for agriculture. Also, herbicides and pesticides and other chemicals from near crops end up in those ponds that are in the lower portions of the terrain resulting in severe negative impacts of these activities in this particular group of fish. This could push the species to becoming Critically Endangered or Extinct in a very short time period.

Geographic Range

Range Description:

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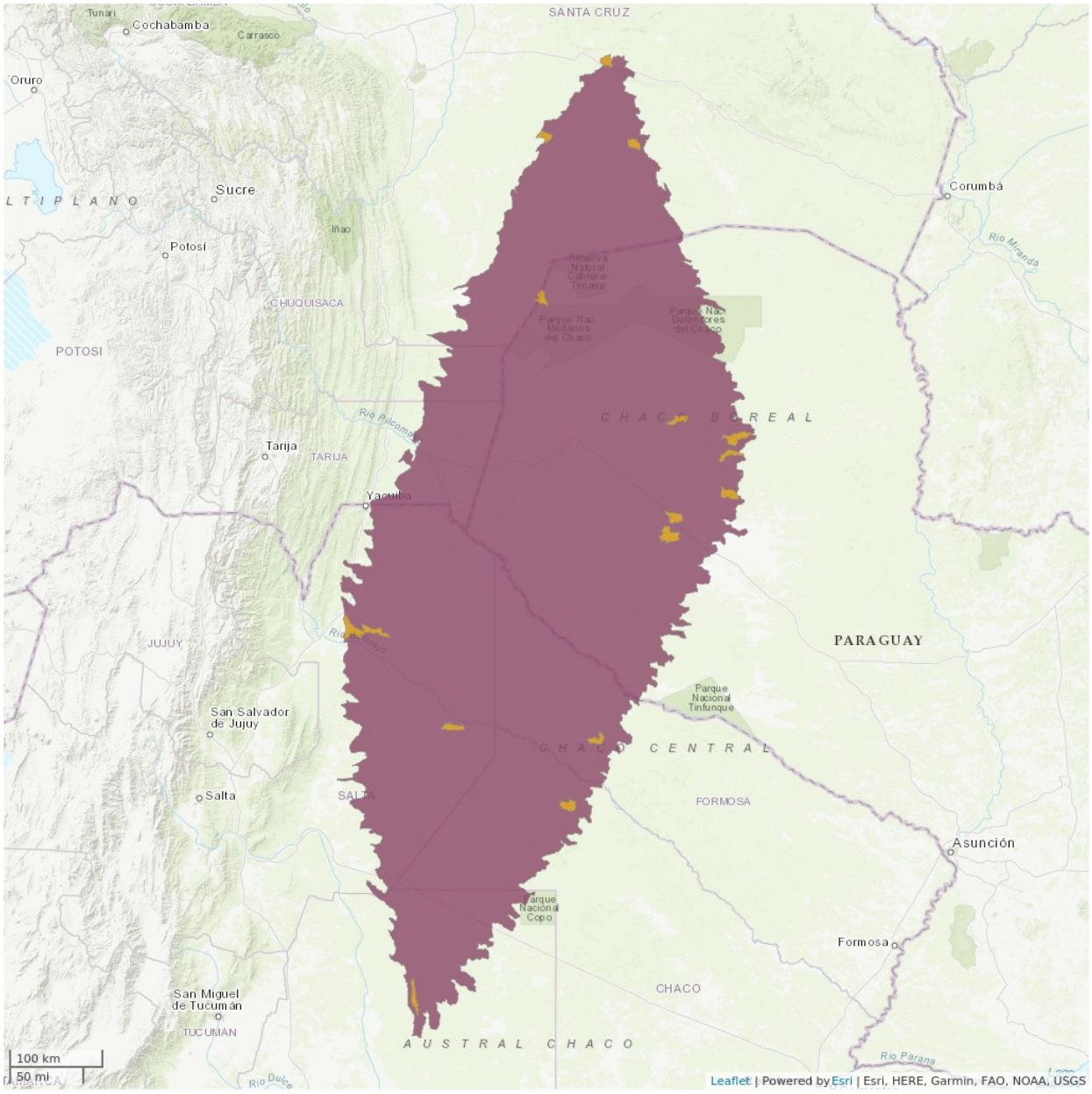
Austrolebias monstrosus is endemic to the western Chacoan Region in the Paraguay river Basin, in Argentina, Paraguay and Bolivia (Alonso *et al*. 2016).

Country Occurrence:

Native, Extant (resident): Argentina (Chaco, Formosa, Salta, Santiago del Estero); Bolivia, Plurinational States of; Paraguay

Distribution Map



Legend

- EXTANT (RESIDENT)
- POSSIBLY EXTANT (RESIDENT)

Compiled by:

IUCN (International Union for Conservation of Nature) 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

No data on the population trend of this species are available, although most of the known records of this species are in deforested areas with intensive agriculture and many populations may be extinct in the wild as seasonal killifish are particularly affected by these activities.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Austrolebias monstrosus inhabits seasonal ponds in the western Chacoan region that are filled with rains in summer, around December, and dry up in Autumn, around March or April, depending on the year. This is an ichthyophagus species that probably incorporates small tadpoles and invertebrates on its diet. It inhabits with other seasonal killifish such as *Austrolebias vandenbergi*, *A. wichi*, *Trigonectes aplocheiloides*, *Neofundulus paraguayensis* and *Papiliolebias bitteri* (Alonso *et al*. 2016)

Systems: Freshwater (=Inland waters)

Use and Trade

This species is an object of the aquarium trade.

Threats (see Appendix for additional information)

Seasonal killifish are very vulnerable to agricultural expansion and many populations disappear as the seasonal ponds they inhabit are commonly dried or filled for agriculture. Also pesticides and other chemicals from near crops end up in the ponds that are in the lower portions of the terrain resulting in severe negative impacts of these activities in this particular group of fish.

Conservation Actions (see Appendix for additional information)

No conservation actions are directed towards this species.

Credits

Assessor(s): Alonso, F.

Reviewer(s): Serra, W.S.

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Bibliography

Alonso, F., Calviño, P.A., Terán, G.E. and García, I. 2016. Geographical distribution of *Austrolebias monstrosus* (Huber, 1995), *A. elongatus* (Steindachner, 1881) and *A. vandenbergi* (Huber, 1995)(Teleostei: Cyprinodontiformes), with comments on the biogeography and ecology of Rivulidae in Pampasic and Chaco floodplains. *Check List* 12(4): 1945.

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

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?
5. Wetlands (inland) -> 5.8. Wetlands (inland) - Seasonal/Intermittent Freshwater Marshes/Pools (under 8ha)	-	Suitable	-

Use and Trade

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

End Use	Local	National	International
13. Pets/display animals, horticulture	No	Yes	Yes

Threats

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

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	-	Very rapid declines	Medium impact: 6
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.3. Agro-industry farming	Ongoing	Majority (50-90%)	Very rapid declines	High impact: 8
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	Majority (50-90%)	Slow, significant declines	Medium impact: 6
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.3. Agro-industry grazing, ranching or farming	Ongoing	-	-	Low impact: 3
4. Transportation & service corridors -> 4.1. Roads & railroads	Ongoing	-	-	Low impact: 3
4. Transportation & service corridors -> 4.2. Utility & service lines	Ongoing	-	-	Low impact: 3
7. Natural system modifications -> 7.1. Fire & fire suppression -> 7.1.1. Increase in fire frequency/intensity	Ongoing	-	-	Low impact: 3
7. Natural system modifications -> 7.3. Other ecosystem modifications	Ongoing	-	-	Low impact: 3

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9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.1. Nutrient loads	Ongoing	-	-	Low impact: 3
9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.2. Soil erosion, sedimentation	Ongoing	-	-	Low impact: 3
9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.3. Herbicides and pesticides	Ongoing	-	-	Low impact: 3
11. Climate change & severe weather -> 11.1. Habitat shifting & alteration	Ongoing	-	-	Low impact: 3
11. Climate change & severe weather -> 11.2. Droughts	Ongoing	-	-	Low impact: 3
11. Climate change & severe weather -> 11.3. Temperature extremes	Ongoing	-	-	Low impact: 3

Conservation Actions in Place

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

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
Percentage of population protected by PAs: 0
Occurs in at least one protected area: No
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

Additional Data Fields

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Distribution
Estimated area of occupancy (AOO) (km²): 4264
Estimated extent of occurrence (EOO) (km²): 232985
Number of Locations: 5
Lower elevation limit (m): 134
Upper elevation limit (m): 357
Population
Population severely fragmented: Unknown
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Movement patterns: Not a Migrant

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: ABQ BioPark; Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; Missouri Botanical Garden; NatureServe; Re:wild; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.