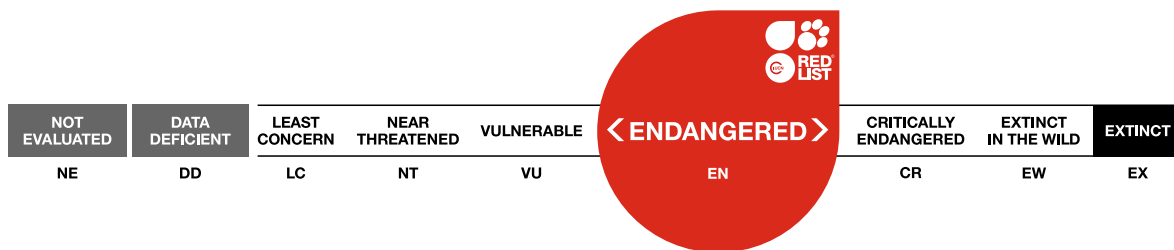


Gymnogeophagus jaryi

Assessment by: Alonso, F.



View on www.iucnredlist.org

Citation: Alonso, F. 2022. *Gymnogeophagus jaryi*. *The IUCN Red List of Threatened Species 2022*: e.T177559403A177559407. <https://dx.doi.org/10.2305/IUCN.UK.2022-2.RLTS.T177559403A177559407.en>

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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Perciformes	Cichlidae

Scientific Name: *Gymnogeophagus jaryi* Alonso, Terán, Aguilera, Říčan, Casciotta, Serra, Almirón, Benítez et al., 2019

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 June 2020. Available at: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>.

Identification Information:

It can be distinguished from all other members of the genus, except from *G. australis* and *G. caaguazuensis*, by the presence of a hyaline to grey anterior portion of the dorsal fin. *Gymnogeophagus jaryi* differs from *G. caaguazuensis* by a longer caudal peduncle, caudal fin not lyrate, central portion of scales on dorsal portion of trunk light iridescent blue and by white spots in soft portion of dorsal fin in adult males, and from *G. australis* by the light iridescent blue coloration of central portion of scales on the dorsal portion of trunk and tail, and by the lack of scales on the soft portion of the dorsal fin. Additionally, it can be diagnosed by the following unique combination of characters: 10–11 dorsal-fin branched rays, 27–30 E1 scales, absence of lips thickening, and, in males, by the possession of a hump in adults, caudal fin not lyrate, presence of large white spots forming transversal stripes distally and in anterior area of the dorsal fin's soft portion, central area of scales on the dorsal portion of the trunk light iridescent blue, lack of scales on the base of the dorsal fin's soft portion, absence of a conspicuous and oblique dark band from the eye to the anterior border of the head, anterior portion of dorsal fin hyaline to grey, scales of the midlateral spot each bearing a semicircular light blue blotch, head hump starting at the horizontal through the eyes, concave anterior profile in lateral view, base of unpaired fins yellow, and whitish hyaline spots on caudal fin.

Assessment Information

Red List Category & Criteria: Endangered B1ab(iii) [ver 3.1](#)

Year Published: 2022

Date Assessed: December 16, 2020

Justification:

This species is considered Endangered according to B1ab(iii) criteria. The extent of occurrence (EOO) is estimated to be 1,499 km², it is known to exist in three locations, and there is a continuing decline in area, extent and/or quality of habitat due to deforestation, agriculture and other human activities in the area.

Geographic Range

Range Description:

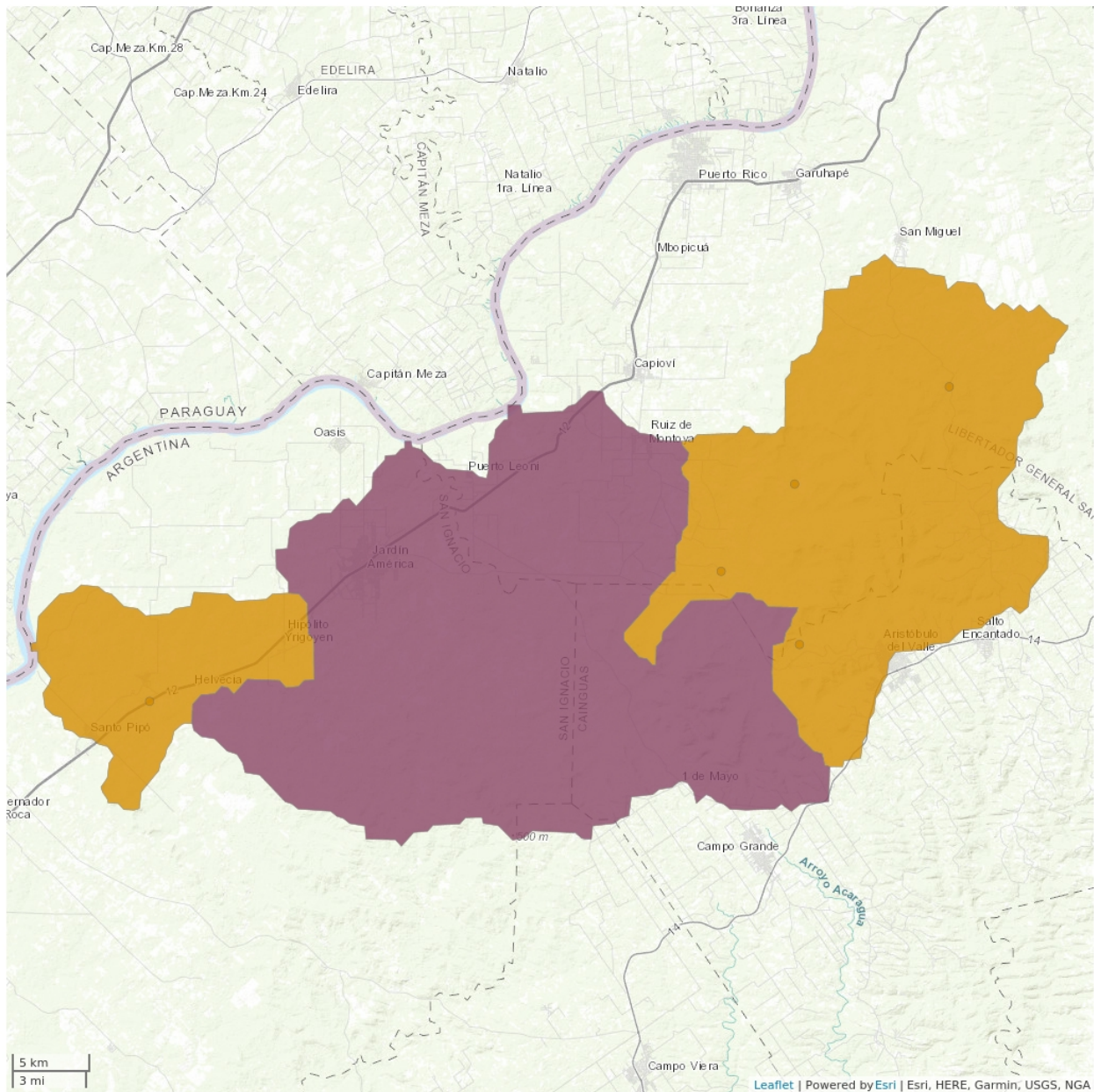
Gymnogeophagus jaryi is known from several tributaries of the southern middle Paraná: the Cuña Pirú basin, the Garuhapé basin, and the Ñacanguazú basin in Argentina, Misiones. Based on photographs and mtDNA sequences it may also be present in the Manduviyú, Pirapó and Ype Curú basins in Paraguay (Alonso *et al.* 2019) but these records require confirmation and are not considered here.

Country Occurrence:

Native, Extant (resident): Argentina (Misiones)

Native, Presence Uncertain: Paraguay

Distribution Map

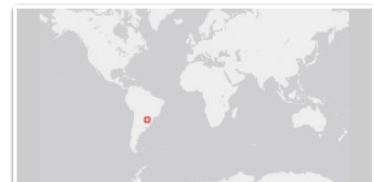


Legend

- 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.

Population

No data on the population trends of this species are available.

Current Population Trend: Unknown

Habitat and Ecology (see Appendix for additional information)

Gymnogeophagus jaryi inhabits streams with sandy and rocky bottom and abundant marginal vegetation. The climate on the mountain ridge in Aristóbulo del Valle is classified as warm and temperate. There is significant rainfall throughout the year in this area (average per year is 1,678 mm), and even the month with lowest precipitation, August, still has a considerable amount of rain (111 mm). The lowest precipitation months are July, August, and September, but the driest period and lowest water levels are in December, January, and February due to the marked seasonal change in temperature. The peaks in precipitation occur in May and October. The annual average temperature is 19.1°C, with 23.9°C monthly average temperature in January and 14.3°C in June. Water level in the stream can have important changes. Water turbidity is variable among the year with peaks of turbidity after rains and increases in water visibility the rest of the year. Specimens are frequently found in the rocky areas or associated with marsh and marginal vegetation. This species was observed with fry in November (Alonso *et al.* 2019).

Systems: Freshwater (=Inland waters)

Use and Trade

This species could be object of aquarium trade as other similar species of the same genus.

Threats (see Appendix for additional information)

Most of this species' distribution is environments in highly modified by agriculture, deforestation, timber, crops and the influence of human populations.

Conservation Actions (see Appendix for additional information)

There are no actions particularly directed towards the conservation of this species, although it is present in some protected areas in the region.

Credits

Assessor(s): Alonso, F.

Reviewer(s): Serra, W.S.

Bibliography

Alonso, F., Terán, G.E., Aguilera, G., Ričan, O., Casciotta, J., Serra, W.S., Almiron, A., Benitez, M.F., Garcia, I. and Mirande, J.M. 2019. Description of a new species of the Neotropical cichlid genus *Gymnogeophagus* Miranda Ribeiro, 1918 (Teleostei: Cichliformes) from the Middle Paraná basin, Misiones, Argentina. *PLoS ONE* 14 (2): e0210166.

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) -> 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	-	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
1. Residential & commercial development -> 1.1. Housing & urban areas	Ongoing	-	-	Low impact: 3
1. Residential & commercial development -> 1.2. Commercial & industrial areas	Ongoing	-	-	Low impact: 3
1. Residential & commercial development -> 1.3. Tourism & recreation areas	Ongoing	-	-	Low impact: 3
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	-	-	Low impact: 3
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.3. Agro-industry farming	Ongoing	-	-	Low impact: 3
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.1. Small-holder plantations	Ongoing	-	-	Low impact: 3
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.2. Agro-industry plantations	Ongoing	-	-	Low impact: 3
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	-	-	Low impact: 3
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.3. Agro-industry grazing, ranching or farming	Ongoing	-	-	Low impact: 3

2. Agriculture & aquaculture -> 2.4. Marine & freshwater aquaculture -> 2.4.1. Subsistence/artisinal aquaculture	Ongoing	-	-	Low impact: 3
2. Agriculture & aquaculture -> 2.4. Marine & freshwater aquaculture -> 2.4.2. Industrial aquaculture	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
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.3. Unintentional effects: (subsistence/small scale) [harvest]	Ongoing	-	-	Low impact: 3
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.1. Intentional use: (subsistence/small scale) [harvest]	Ongoing	-	-	Low impact: 3
6. Human intrusions & disturbance -> 6.1. Recreational activities	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 -> 7.2. Dams & water management/use -> 7.2.1. Abstraction of surface water (domestic use)	Ongoing	-	-	Low impact: 3
7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.2. Abstraction of surface water (commercial use)	Ongoing	-	-	Low impact: 3
7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.3. Abstraction of surface water (agricultural use)	Ongoing	-	-	Low impact: 3
7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.5. Abstraction of ground water (domestic use)	Ongoing	-	-	Low impact: 3
7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.6. Abstraction of ground water (commercial use)	Ongoing	-	-	Low impact: 3
7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.7. Abstraction of ground water (agricultural use)	Ongoing	-	-	Low impact: 3
7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.9. Small dams	Ongoing	-	-	Low impact: 3
7. Natural system modifications -> 7.3. Other ecosystem modifications	Ongoing	-	-	Low impact: 3

8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.2. Named species (Oreochromis niloticus)	Ongoing	-	-	Low impact: 3
9. Pollution -> 9.1. Domestic & urban waste water -> 9.1.1. Sewage	Ongoing	-	-	Low impact: 3
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
9. Pollution -> 9.4. Garbage & solid waste	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: 11-20
Area based regional management plan: No
Occurs in at least one protected area: Yes
Invasive species control or prevention: No
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
1. Land/water protection -> 1.1. Site/area protection
1. Land/water protection -> 1.2. Resource & habitat protection
2. Land/water management -> 2.1. Site/area management
2. Land/water management -> 2.2. Invasive/problematic species control
2. Land/water management -> 2.3. Habitat & natural process restoration
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management
3. Species management -> 3.1. Species management -> 3.1.2. Trade management
4. Education & awareness -> 4.1. Formal education
4. Education & awareness -> 4.2. Training
4. Education & awareness -> 4.3. Awareness & communications
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>)

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.4. Harvest, use & livelihoods
1. Research -> 1.5. Threats
1. Research -> 1.6. Actions
2. Conservation Planning -> 2.2. Area-based Management Plan
2. Conservation Planning -> 2.3. Harvest & Trade Management Plan
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.2. Harvest level trends
3. Monitoring -> 3.3. Trade trends
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km ²): 928
Estimated extent of occurrence (EOO) (km ²): 1499
Number of Locations: 3
Continuing decline in number of locations: Unknown
Extreme fluctuations in the number of locations: Unknown
Lower elevation limit (m): 109
Upper elevation limit (m): 210
Population
Population severely fragmented: Unknown
Extreme fluctuations in subpopulations: Unknown
All individuals in one subpopulation: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Movement patterns: Not a Migrant

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