

Microglanis cottoides (Boulenger, 1891) (Siluriformes: Pseudopimelodidae): Distribution extension to Salí-Dulce River basin, northwestern Argentina

Luis Fernández^{1,2*} and Gladys Gonzo³

1 CONICET e IBIGEO, Instituto de Bio y Geociencias Museo Ciencias Naturales de Salta. Mendoza 2, 4400 Salta, Argentina.

2 Instituto Miguel Lillo. Miguel Lillo 251, 4000 Tucumán, Argentina.

3 IBIGEO, Instituto de Bio y Geociencias Museo Ciencias Naturales de Salta. Mendoza 2, 4400 Salta, Argentina.

* Corresponding author: E-mail: luis1813@yahoo.com

ABSTRACT: *Microglanis cottoides* (Boulenger 1891) is a known Paraná-Plata River basin catfish. Its geographic distribution is herein extended to a new drainage system, the Salí-Dulce River system, northwestern Argentina, which is a separate drainage from the Paraná-Plata basin.

The Neotropical genus *Microglanis* Eigenmann, 1912, included in the family Pseudopimelodidae, comprises 21 species (Ruiz and Shibatta 2011). *Microglanis* is basically a miniature *Pseudopimelodus*, from which the former can be distinguished mostly on the basis of the shape of the band of premaxillary teeth, the reduction of the posterior portion of the lateral line, and its small body size (Mees 1974; 1978, Mori and Shibatta 2006). *Microglanis* has a relatively small body size 20 mm SL (*M. zonatus* Eigenmann and Allen 1942), and its largest species, *M. parahybae* (Steindachner 1880), reaching a maximum length of about 80 mm SL (Ruiz and Shibatta 2011).

Microglanis presents the widest distribution among pseudopimelodids, ranging from the western slope of the Andes in Perú to the la Plata River basin in Argentina (Shibatta 2003). Among its species, *Microglanis cottoides* (Boulenger 1891) has been recorded for Argentina from the Paraná-Plata basin, Bolivia, Perú and Brazil (Ringuelet *et al.* 1967; Gonzo 2003; Shibatta 2003; Liotta *et al.* 2002; Liotta 2006). In September 2006, we collected a specimen we identified as *M. cottoides* (Figure 1) from the Río Romano (65°29' W, 27°09' S), Tucumán province, 260 m above sea level (Figure 2), a tributary of the Río Salí-Dulce basin. This new record for *M. cottoides* broadens the known geographic distribution of the species (Figure 2). It is also the first record of any species of the genus

Microglanis for the Salí-Dulce River drainage, which increases the number of recorded fish species in the basin to sixty-eight. According to the biogeographical scheme of Ringuelet (1975), Liotta (2006), López *et al.* (2008), the Salí-Dulce drainage, a separated drainage from the Paraná-Plata basin, is located within the Pampean Province.

Following Bertaco and Cardoso (2005) the specimen from the Río Romano was identified as *Microglanis cottoides* (Table 1) based on the following distinguishing characters: premaxillary band teeth with no backwardly projecting lateral edges; laterosensory canal with 10 pores on anteriormost portion, with single terminal pore opening at vertical line slightly posterior to dorsal fin; head large, heavy, and flattened, as wide as long; cranium covered by skin; frontal fontanel slightly extended beyond eyes; minute occipital fontanel present; occipital crest small; eyes without free orbital margins; dorsal and pectoral fin spines well developed, dorsal spine with posterior edges serrated; caudal fin crossed by broad white band near middle; maxillary barbel long, extending beyond pectoral fin origin; dorsum with transverse black band; pectoral, pelvic, and anal fins with scattered chromatophores.

The specimen was caught in dark water, shallow stream with sand, gravel, and woody debris (Figure 3). *Microglanis* is omnivorous and nocturnal, hiding during the day in rocky caves, under driftwood, or buried in the



FIGURE 1. *Microglanis cottoides*, MCN 1514, 41.9 SL mm, Romano River at the intersection with Provincial route 380, Tucumán Province, Argentina.

sand, and becoming more active at evening time or at night (Shibatta 2003; Bertaco and Cardoso 2005).

The examined specimen is deposited at the Museo de Ciencias Naturales de Salta, Argentina (MCN 1514). We also examined comparative material of *Microglanis* from the fish collection of the museum (MCN 015, 134, 378, 861). Measurements to the nearest 0.01 mm were made using a digital caliper following Bertaco and Cardoso (2005), Malabarba and Mahler Jr. (1998), and Mori and Shibatta (2006).

TABLE 1. Morphometric and meristic data for *Microglanis cottoides* MCN 1514, collected in Salí-Dulce River basin, Tucumán Province, Argentina. Standard length is expressed in millimeters; measurements 1-15 are percent of standard length; 16-22 are percent of head length.

Standard length (mm)	41.9
1. Body depth	15.3
2. Body width	28.6
3. Dorsal spine length	10.7
4. Pectoral spine length	17.6
5. Caudal peduncle length	18.1
6. Caudal peduncle depth	9.8
7. Predorsal length	35.6
8. Preanal length	69.4
9. Prepelvic length	49.5
10. Adipose length	14.0
11. Dorsal-fin base length	14.2
12. Anal-fin base length	12.5
13. Head length	28.0
14. Head width	25.9
15. Head depth	14.4
Head length (mm)	11.7
16. Interorbital width	40.6
17. Head width	92.7
18. Head depth	51.5
19. Orbital diameter	9.7
20. Snout length	41.2
21. Maxillary barbel length	65.3
22. Mouth width	61.3

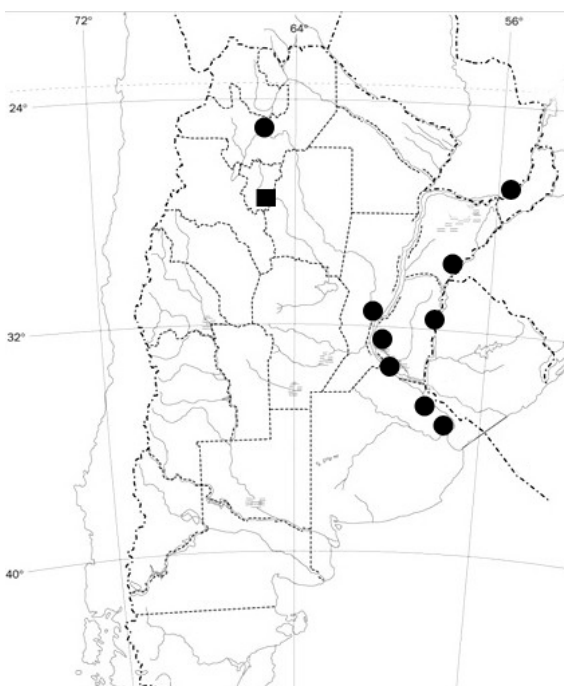


FIGURE 2. Geographic distribution of *Microglanis cottoides* in Argentina. Square, new locality; circles, records published in Liotta (2006).



FIGURE 3. Habitat of *Microglanis cottoides*, Romano River, Salí-Dulce endorheic River basin, Tucumán Province, Argentina.

ACKNOWLEDGMENTS: This study was in partially supported by the research project PIP# 11420090100321 (CONICET).

LITERATURE CITED

- Bertaco, V.A. and A.R. Cardoso. 2005. A new species of *Microglanis* (Siluriformes: Pseudopimelodidae) from the río Uruguay drainage, Brazil. *Neotropical Ichthyology* 3(1): 61-67.
- Boulenger, G.A. 1891. An account of the siluroid fishes obtained by Dr. H. von Ihering and Herr Sebastian Wolff in the province Rio Grande do Sul, Brazil. *Proceedings of the Zoological Society of London* 1891: 231-235.
- Eigenmann, C.H. 1912. The freshwater fishes of British Guiana, including a study of the ecological grouping of species and the relation of the fauna of the plateau to that of the lowlands. *Memoirs Carnegie Museum* 5: 1-578.
- Gonzo, G.M. de. 2003. Peces de los Ríos Bermejo, Juramento y Cuencas Endorreicas de la Provincia de Salta. *Museo Ciencias Naturales y Consejo de Investigación, Universidad Nacional de Salta* 1-243.
- Liotta, J. 2006. *Distribución geográfica de los peces de aguas continentales de la República Argentina*. La Plata: ProBiota, Universidad Nacional de La Plata. 653 p.
- Liotta, J., M. Wagner and B. Giacosa. 2002. Adiciones a la fauna de peces del Delta del río Paraná. *Tercera Jornada Conservación de la Fauna Ictica en el Río Uruguay*. Paysandú. 8 p.
- López, H.L., R.C. Menni, M. Donato and A.M. Miquelarena. 2008. Biogeographical revision of Argentina (Andean and Neotropical Regions): an analysis using freshwater fishes. *Journal of Biogeography* 35: 1564-1579.
- Malabarba, L.R. and J.K.F. Mahler Jr. 1998. Review of the genus *Microglanis* in the rio Uruguay and coastal drainages of southern Brazil (Ostariophysi: Pimelodidae). *Ichthyology Exploration of Freshwaters* 9(3): 243-254.
- Mees, G.F. 1974. The Auchenipteridae and Pimelodidae of Suriname (Pisces, Nematognathi). *Zoologische Verhandlungen* 132: 1-256.
- Mees, G.F. 1978. Two new species of Pimelodidae from Northwestern South America (Pisces, Nematognathi). *Zoologische Mededelingen* 53: 253-261.
- Mori, H. and O.A. Shibatta. 2006. A new species of *Microglanis* Eigenmann, 1912 (Siluriformes, Pseudopimelodidae) from río Sao Francisco basin, Brazil. *Zootaxa* 1302: 31-42.
- Ringuelet, R.A. 1975. Zoogeografía y ecología de los peces de aguas continentales de la Argentina y consideraciones sobre las áreas ictiológicas de América del Sur. *Ecosur* 2: 1-122.
- Ringuelet, R.A., R. Arámburu and A.A. de Arámburu. 1967. *Los peces argentinos de agua dulce*. La Plata: Comisión Investigaciones Científicas. 602 p.
- Ruiz, W. B. G. and O. A. Shibatta. 2011. Two new species of *Microglanis* (Siluriformes: Pseudopimelodidae) from the upper-middle rio Araguaia basin, Central Brazil. *Neotropical Ichthyology* 9(4): 697-707.
- Shibatta, O.A. 2003. Family Pseudopimelodidae (Bumblebee catfishes, dwarf marbled catfishes); p. 401-405. In R.E. Reis, S.O. Kullander and C.J. Ferraris, Jr., (ed.) *Check list of the Freshwater Fishes of South and Central America*. Porto Alegre: Edipucrs.

RECEIVED: May 2011

ACCEPTED: February 2013

PUBLISHED ONLINE: May 2013

EDITORIAL RESPONSIBILITY: Sergio Maia Queiroz Lima