

NOTES ON GEOGRAPHIC DISTRIBUTION

**Fish, Gymnotiformes, Apterontidae, *Apterontus magdalenensis* (Miles, 1945): Distribution extension of an endangered endemic knifefish, in northern Colombia**

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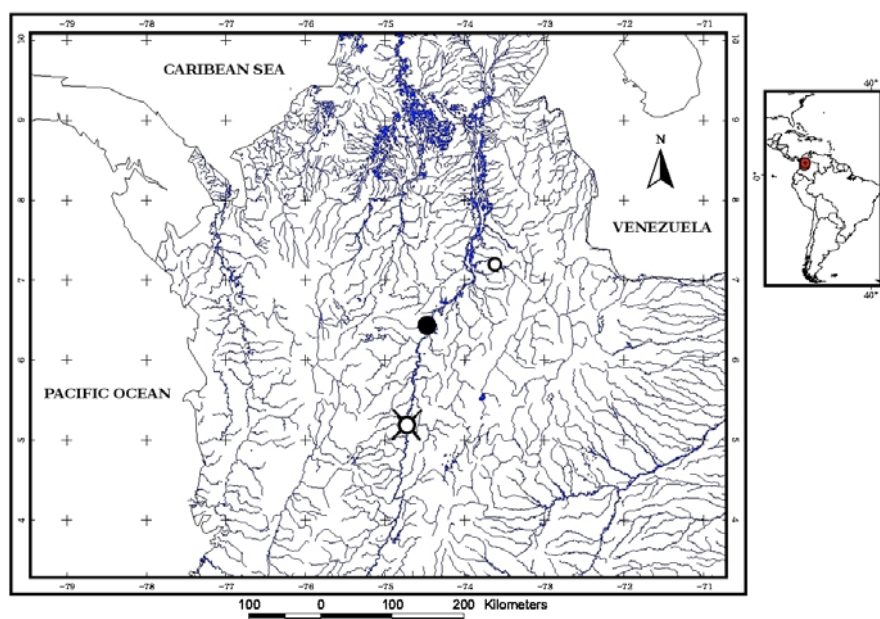
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The family Apterontidae Jordan 1823 has recently been reviewed and currently has 60 species recognized as valid (Albert and Crampton 2009). This family has a widespread distribution in South America from Panama to Argentina (Albert 2003) and is the most diverse family of knifefishes in the Amazon basin (Albert 2001; Albert and Campos-da-Paz 1998). Maldonado-Ocampo et al. (2008) documented thirty species of Apterontidae from Colombia, eight endemic species from trans-Andean drainages and four species restricted to the Magdalena river basin (*A. eschmeyeri* de Santana et al 2004, *A. magdalenensis*, *A. mariae* (Eigenmann & Fisher 1914), and *A. milesi* de Santana & Maldonado-Ocampo 2005). However, our knowledge about the freshwater fishes of northern

Colombia is still incomplete, and many areas have not been ichthyologically explored even today.

Until 2002 the scant ecological information available for *A. magdalenensis* came from the original description of Miles (1945), and from Mojica and Castellanos (2002), who categorized this species as Vulnerable in the Redbook of freshwater fishes of Colombia. Information included in Maldonado-Ocampo et al. (2005), refers to the type locality in the Magdalena river at the rapids of Honda, department of Tolima, Colombia. Recently the authors captured three additional individuals from other localities of the lower part of the middle Magdalena river basin (Figure 1).



**Figure 1.** Distribution map of *Apterontus magdalenensis* in the Magdalena basin. □: Type locality; ●: Site 1 and 2; ○: Site 3.

These new localities reported here extend the known range of distribution of the species (Figure 1). Site 1 is on an island of the Magdalena river, 6°31'28.23" N, 74°24'25.72" W, 20 July 2008, Pelayo-Villamil, P and Ochoa-Orrego, L.; Site 2 is at the mouth of La Malena stream in front of site 1, 6°31'25.46" N, 74°24'36.92" W, October 2009, Alvarez et al.; Site 3 is from the Sogamoso river at Puerto Cayumba, municipality of Puerto Wilches, 7°13'35.41" N, 73°39'19.70" W, 27 October 2009, Pelayo-Villamil, P. and Mantilla, E. We collected this species from sand and pebble beaches from shallow, slow moving waters along shore, similar to reports of Miles (1947) and Maldonado-Ocampo et al. (2005) but differing from the original description and other observations which stated that they were collected from running waters and in deep river channels (Mojica and Castellanos 2002; Crampton pers. obs.). The specimen CIUA – 959 (Figure 2) (site 1) was caught in a shallow (80 cm) area, and specimen CIUA – 1168 (site 2) was caught just a few meters away in a stream tributary to the Magdalena river. The third specimen is deposited at the Industrial University of Santander (UIS) but has no catalog number. Habitat characteristics were evaluated using the methodology of Bain (1999). Site 1 and 3 were riverine pebble beaches (~ 32 mm), mixed with very coarse sand and mud (Figure 3). Site 2 was a left-bank tributary stream of the Magdalena river with a bottom of sand, silt, clay and mud in a shallow area. The water type was white (heavy sediment load) with a pH of 7.78 and Total Dissolved Solids of 4.82 g/l. The

shores in this part of the river were grassy with primary forests of about 10 m canopy.

The local fishermen who helped us collect these specimens call *A. magdalenensis* "el original perro" (which translated means "original dog"). In other parts of the river it is called "caballo" (horse) or "perrita" (little dog). They told us that it is a rare but not unknown fish. In the town of Berrio they reported that very large ones are sometimes eaten, but in the Sogamoso river they are used for bait to catch large Tiger Catfish (*Pseudoplatystoma magdaleniatum* Buitrago-Suarez & Burr 2007). Additional field work will probably reveal that some fish we now consider to be rare, especially those described long ago such as this one, are more abundant than is commonly thought. However, although more extensive collecting is needed to find populations of seemingly scarce fishes, the Magdalena basin desperately needs efforts to guarantee its conservation. Poor land management practices associated with agriculture, cattle ranching and urban development have led to heavy erosion and sedimentation of the river (Galvis and Mojica 2007), and high levels of contamination from sewage, fertilizers and toxic chemicals. *Apteronotus magdalenensis* populations have undoubtedly suffered, but their population numbers remain unknown (Mojica and Castellanos 2002). The few specimens known of this species indicate that it remains one of the most vulnerable species endemic to the basin.



**Figure 2.** *Apteronotus magdalenensis*, CIUA 959 (SL 364 mm) on an island of the Magdalena river. Photo by Juan Ospina-Pabon and H. Agudelo-Zamora.



**Figure 3.** Habitat where the **CIUA 959** was captured in the Magdalena river. Photo by P. Pelayo-Villamil and L. E. Ochoa-Orrego

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