



NOTA

## First record of *Oligosarcus itau* (Characiformes: Characidae) outside the type locality, and second after the description

Primer registro de *Oligosarcus itau* (Characiformes: Characidae) fuera de la localidad tipo, y segundo desde su descripción

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### ABSTRACT

Specimens of *Oligosarcus itau* Mirande, Aguilera Azpelicueta, 2011 were collected in different environments in the province of Jujuy, expanding the distribution of the species to the San Francisco River basin, a tributary of the Bermejo River. It is the second record of the species (there were only four specimens known to date that correspond to the Type series and one additional specimen) and the first outside the type locality.

**Palabras clave** — Range extension, upper Bermejo River, Las Pavas River.

### RESUMEN

Se colectaron ejemplares de *Oligosarcus itau* Mirande, Aguilera & Azpelicueta, 2011 en distintos ambientes de la provincia de Jujuy, ampliando la distribución de la especie a la cuenca del Río San Francisco, afluente del Río Bermejo. Es el segundo registro de la especie (cuatro ejemplares registrados, serie Tipo y un ejemplar adicional) y el primero fuera de la localidad tipo.

**Keywords** — Extensión de rango, Cuenca alta del Bermejo, Río Las Pavas.

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## INTRODUCTION

The order Characiformes includes 3,990 valid species, of which the family Characidae is the most diverse, with more than 1250 species (Fricke, Eschmeyer, Van der Laan, 2023). Within this family, the genus *Oligosarcus* Günther 1864, included in the subfamily Stethaprioninae is composed of 22 valid species (Froese and Pauly, 2023). The genus has a wide distribution in different South American river basins below a latitude of 14° S, covering high Andean areas of Bolivia and Argentina, the crystalline shield of Brazil, lowlands of the Paraná-Paraguay basin, and coastal rivers of the southern and southeastern South America (Menezes, 1988; Ribeiro and Menezes, 2015).

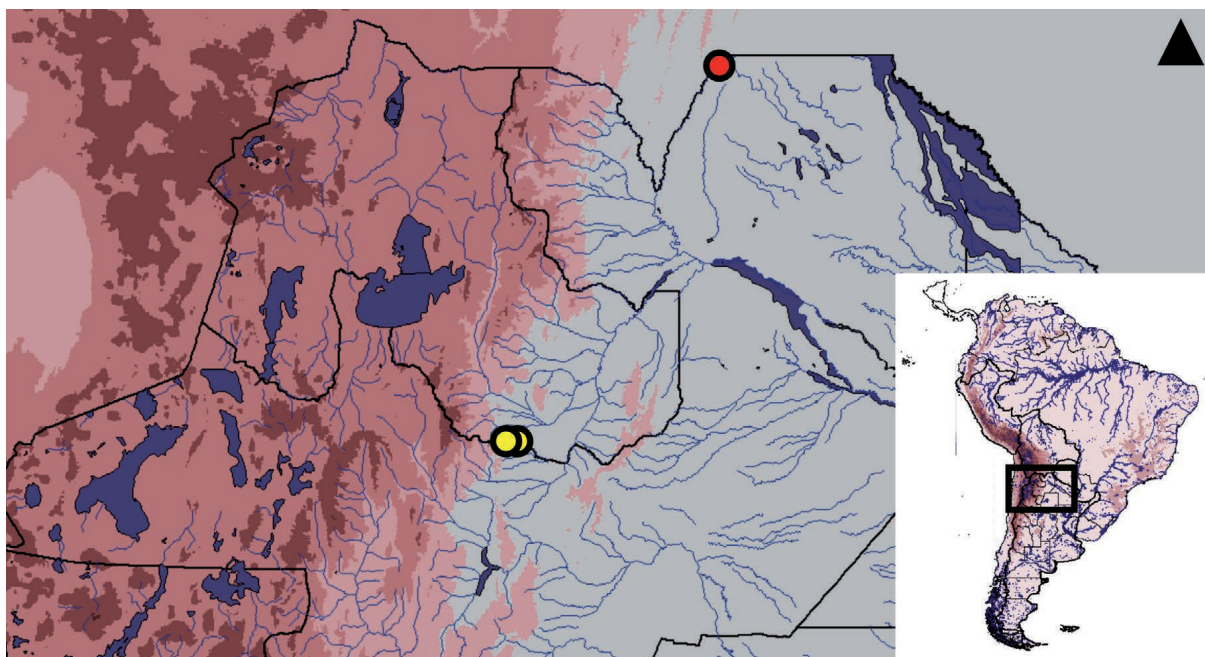
*Oligosarcus* is a morphologically homogeneous genus, with species sharing several features associated with predation, such as long snout and acute and numerous teeth (Mirande, Aguilera, Azpelicueta, 2011). Species are characterized by the presence of only one series of conical or slightly tricuspidate premaxillary teeth, excepting three species, which present two series of multicuspidate premaxillary teeth. Those three species have very restricted distributions and are very rare in their known localities (Mirande et al., 2011; Almirón, Casciotta, Piálek, Doubnerova, Rican, 2015). In addition to these three species, Mirande et al. (2011) mentioned that *O. menezesi* and *O. pintoii* have also two premaxillary series of teeth but condensed into a single row. The observation of *the latter* is consistent with the findings of Almirón, Bogan, Cardoso et al. (2019).

In recent collection campaigns to the Bermejo River basin in the province of Jujuy, Argentina (Figure 1), we collected specimens of *Oligosarcus* that were identified by as *Oligosarcus itau*. In this contribution we report the new locality for the species, which is also an addition to the known fish fauna of Jujuy.

## MATERIALS AND METHODS

Morphometric measurements were taken following Mirande et al. (2011). Measurements represent straight lines between two points, taken with caliper to the nearest 0.1 mm and expressed as percent of standard length (SL) or head length (HL) for the respective subunits. The specimens were collected in Río Las Pavas and in La Ciénaga dam, El Carmen Department, Jujuy Province, and were collected during field work with hand nets, castnets and electro-fishing. Specimens were euthanized by an overdose in benzocaine solution, fixed in 10% formalin solution for seven days and preserved in 70% ethanol. Collection permit was granted by Secretary of Biodiversity and Sustainable Development (Ministry of Environment and Climate Change (Government of Jujuy) No 1103-201-R/2019; Resolución No 078/2019-SB; Res N° 007/2022.

**Institutional abbreviations:** CI-FML: Colección Ictiológica, Fundación Miguel Lillo, Tucumán, Argentina.



**Figure 1.** Known geographical distribution of *Oligosarcus itau*, Río Bermejo basin in Salta, and Jujuy province, northwestern Argentina. Red circle is the type locality, yellow circles are new records herein reported.

## RESULTS

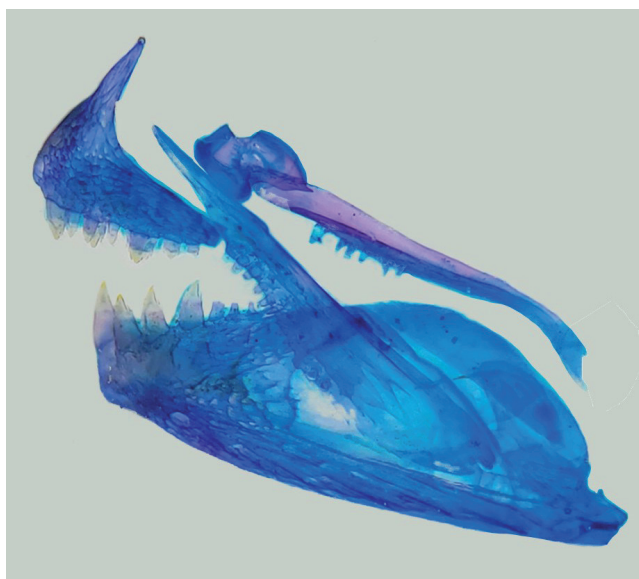
*Oligosarcus itau* Mirande, Aguilera & Azpelicueta 2011.  
Figures 2, 3.

Argentina, Jujuy CI-FML 8079 1 ex., 49.7 mm SL. El Carmen Department, Las Pavas River (24°26'37.7"S, 65°13'01.3"W) (Figure 4). Bermejo River basin. Coll. F. Cancino and G. Ramallo. March 2022. CI-FML 8080 11 ex. 55.21 – 42.5 mm SL. El Carmen Department, La Ciénaga dam (24°25'50.10"S, 65°16'41.0"W) (Figure 5). Bermejo River basin. Coll. F. Cancino and G. Ramallo. November 2022.

The specimens collected in Jujuy province, present the following diagnostic characters: a) presence of two well-distinct rows of premaxillary teeth; b) presence of pentacuspitate dentary teeth c) presence of 8–13 maxillary teeth; d) 21–23 branched anal-fin rays; e) 18–19 circumpeduncular scales; f) 41–42 lateral-line scales; g) transverse scale: 9/5–7. This combination of characters allow the identification of these specimens as *Oligosarcus itau*.



**Figure 2.** Specimens of *Oligosarcus itau* reported herein. CI-FML 8080 (first and second) CI-FML 8079 (below). 49.7- 51.7 mm SL.



**Figure 3.** Jaws, palatine and ectopterygoid of *Oligosarcus itau* CI-FML 8080. 49.8 mm SL. Anterior to left. Lateral view.



**Figure 4.** Las Pavas River at 24°26'37.7"S, 65°13'01.3"W , El Carmen Department, Jujuy Province.

## DISCUSSION

The type locality of *Oligosarcus itau* is in the Northwest of the San Martín Department, Salta province. This species was not collected in other localities of the Bermejo River basin despite intense fieldwork made by several ichthyologists in the latter 20 years. Previous to this report, that species was known only by the holotype, two paratypes (all of them collected at the type locality), and a single additional specimen, collected several years after the description of the species, in an artificial lagoon nearby the type locality (Terán, Benitez, Mirande 2020). As stated by Almirón et al.



Figure 5. La Ciénaga dam 24°25'50.10''S, 65°16'41.0''W. El Carmen Department, Jujuy Province.

(2015), *Oligosarcus itau* Mirande, Aguilera & Azpelicueta, 2011, *O. platensis* (Messer, 1962) and *O. amome* Almirón, Casciotta, Piálek, Doubnerová and Řičan, 2015, have very restricted distributions, and they are very rare in their collected localities. Ribeiro and Menezes (2015) suggested that the generic status of these species is controversial. However, the phylogenetic studies that included these species showed that they belong to the genus *Oligosarcus* (Mirande *et al.*, 2011; Almirón *et al.*, 2015; and Terán *et al.*, 2020).

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**Comparative material:** *Oligosarcus itau*. Holotype. **CI-FML 3856**, male, 62.1 mm SL, Argentina, Salta, General San Martín, Río Bermejo basin, small tributary to Río Itaú, near Campo Largo, 22° 01' 34'' S, 63° 56' 06'' W, 690 m a.s.l. coll. J. M. Mirande, G. Aguilera and C. Aguirre. November 2005. Paratypes. **CI-FML 3857**, 1 ex., female, 66.2 mm SL, collected with holotype. **CI-FML 3858**, 1 ex., male, C,S, 61.4 mm SL, collected with holotype. **CI-FML 5925**, 1ex, Argentina, Salta, General San Martín, Río Bermejo basin, small lagoon close to Río Itaú, near Campo Largo. Mirande, Alonso and Terán. January 2014.

## FUNDING

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## PARTICIPATION

All authors contributed equally to the idealization, analysis, and writing.

## CONFLICTS OF INTEREST

Authors declare no conflict of interest.

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