

On the erroneous records of *Crenicichla lacustris* (Castelnau, 1855) from freshwaters of Argentina.

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Abstract

The cichlid species *Crenicichla lacustris* has been reported twice from Argentina. The chronology of the records in literature and the specimens these records were based on were analyzed. The records of *Crenicichla lacustris* from Argentina are considered erroneous and assigned to other species of the genus.

Resumen

El cíclido *Crenicichla lacustris* ha sido citada dos veces de la Argentina. La cronología de las citas en la literatura y los materiales de estas citas fueron analizados. Las citas argentinas de *Crenicichla lacustris* son consideradas erróneas y asignadas a otras especies del género.

Introduction

Perugia (1891) provided the first argentinean record of *Crenicichla lacustris* (fig. 1) from Palermo, today a neighborhood of the city of Buenos Aires, where still some lakes with cichlids can be found in parks (Koerber, 1998). The only other known record was provided by Kullander (1981) from the Patagonian locality of Puerto Madryn. The specimens these records were based on, still available at the Museo Civico di Storia Naturale Giacomo Doria in Genova, Italy (MSNG 41448) and the Muséum d'histoire naturelle de la Ville de Genève, Switzerland (MHNG 2027.87-90), were examined.

Perugia's specimen MSNG 41448 (fig. 3)

132.2 mm SL (all characters as % of SL), body depth 25.2, caudal peduncle length 15.1, caudal peduncle depth 12.5, pectoral fin length 19.5, head length 31.9, head depth 18.6, snout length 9.8, orbital diameter 6.1, interorbital 9.0. 55 scales in row E1, 13/13 transverse scales, III,8 anal-fin rays; ca.XXII,13 dorsal-fin rays 25/14 scales in lateral line system

Body depth and head depth outside the ranges provided by Lucena & Kullander (1992).

Before analyzing the history of both, *Crenicichla lacustris* (Castelnau, 1855) and *Crenicichla scottii* (Eigenmann, 1907), as reported from Argentina, it is helpful to be aware of the taxonomical statuses and synonymies as considered today (Ploeg 1991, Lucena & Kullander 1992, Kullander 2003, Kullander & Lucena 2006):

Crenicichla lacustris (Castelnau, 1855)

Cycla lacustris Castelnau, 1855

Crenicichla dorsocellata Haseman, 1911

Crenicichla biocellata Ihering, 1914

Crenicichla scottii (Eigenmann, 1907)

Batrachops scottii Eigenmann, 1907

Crenicichla multidens Steindachner, 1915

Labrus amarus Larrañaga, 1923

C. lacustris var. *semifasciata* Devincenzi, 1939

As type locality of *Crenicichla scottii* Eigenmann provided 'La Plata', which could refer to either the city, the region, the river or the whole basin. As the title of the paper indicates Buenos Aires we assume that he referred to the banks of La Plata river in this city. In 1910 he confirmed this locality and in the same work restricted the distribution of *Crenicichla lacustris* to Southern and Eastern Brazil, from Bahia to Rio Grande do Sul. Regan (1913) considered *C. lacustris* and *C. scottii* to be conspecific.

Although Lahille (1922) and Marelli (1924) give no reference to Regan's paper, possibly both followed the synonymy proposed by him. MacDonagh (1931) recognized two subspecies as different from Castelnau's *C. lacustris* (fig. 2) and being part of the Argentinean ichthyofauna, *C. lacustris scottii* and *C. lacustris multidens*. A nominal subspecies *Crenicichla lacustris lacustris* was not mentioned in his paper on *Crenicichla* from Buenos Aires province. Pozzi (1945) listed all three, *C. lacustris* as mentioned by Lahille and Marelli and additionally the two subspecies proposed by MacDonagh. Today *C. scottii* is considered a valid species from Argentina, being *C. multidens* a synonym.



Fig. 1. Perugia's comment on specimen MSNG 41448 from Palermo, Buenos Aires

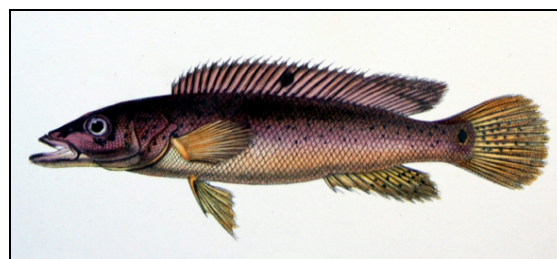


Fig. 2. Castelnau's figure of *C. lacustris* Perugia refers to (from Wikimedia Commons)

Crenicichla lacustris has never been reported from Argentina as explicitly distinct from *Crenicichla scottii* in any paper dealing with cichlid systematics, but only in general works or faunal lists (Lahille 1922, Marelli 1924, Pozzi 1945, Ringuélet & Arámburu 1961, Ringuélet et al. 1967, López et al. 1987, López et al. 2003, López et al. 2005).

The specimen from lot MSNG 41448 identified as *Crenicichla lacustris* by Perugia (1891) in fact is a *C. scottii*. Following Kullander y Lucena (2006), *Crenicichla lacustris* shows 60-75 scales in the E1 series, a short and narrow suborbital lateral band which never passes beyond the middle of the cheek, and the absence of small spots in the head. *Crenicichla scottii* shows 50-59 scales in the E1 row, a broad well developed suborbital lateral band reaching beyond centre of cheek, and no small dark spots in head. Despite the fact that some of these characters could not be observed in this examined specimen possibly due to the long time that has passed since its preservation (e.g. thin lines on the flanks and some morphometric values which were found on the limits or just outside the ranges), we regardless assign this specimen to be a *Crenicichla scottii*.



Fig. 3. *Crenicichla scottii* (MSNG 41448)

Kullander's specimens MHNG 2027.87-90 (fig. 4)

Kullander (1981) reported *C. lacustris* from as far south as the Patagonian locality of Puerto Madryn based on 4 specimens. This collection locality later was assumed erroneous for these specimens (Stawikowski & Werner, 2004). This seems to be indirectly confirmed by Kullander himself, who did not repeat this information in any of his later works, but restricted the distribution of *Crenicichla lacustris* to coastal drainages of Southeastern and Eastern Brazil (Kullander 2003). In the collections of MHNG the collector A.Kovacs is known to have provided wrong localities also for other specimens



Fig. 4. *Crenicichla* aff. *mandelburgeri* (MHNG 2027.87-90)

deposited there and that one could only trust that he collected in Argentina but have to doubt in any further details (Sonia Fisch-Muller, pers. comm.).

From the 4 specimens in lot MHNG 2027.87-90 we could analyze 2 (fig. 4). As already mentioned by Kullander (1981), in both specimens the scales in E1-row are missing. The count of scale pockets showed 44 and 45 respectively. This values and the vertical bars on the flanks do lead us to tentatively determine these specimens as *Crenicichla* aff. *mandelburgeri*.

As this species was recently reported from the Paraná basin in the province of Misiones (Piálek et al. 2010), Kovacs might well have collected this species in this north-eastern region of Argentina. There seems to be no doubt that he has been collecting in the Paraná basin of Misiones as e.g. the AMNH collection contains specimens of the sharpshooter leafhopper *Molomea consolidata* collected by A. Kovacs in Eldorado (Takiya 2012), a town in Misiones. Also, Gordon (1975) has examined 2 species of ladybird beetles and Borowiec (2005) has assigned a specimen as paratype of a new tortoise beetle, both lots collected by A. Kovacs in Eldorado.

Conclusion

As the specimen of Perugia can be assigned to *Crenicichla scottii* and the ones of Kullander tentatively to *Crenicichla* aff. *mandelburgeri*, we hereby consider *C. lacustris* (Castelnau, 1855) not to be distributed in Argentina. This species shall not be included in faunal lists for Argentina until new findings and examinations would confirm undoubtedly its presence in this country. Perugia (1891) should be cited as for having provided the first record of *Crenicichla scottii* from Argentina, even before the species was formally described.

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