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RINELORICARIA CASTROI, A NEW SPECIES OF MAILED CATFISH FROM RIO TROMBETAS, BRAZIL (PISCES, SILURIFORMES, LORICARIIDAE)

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ABSTRACT

Rineloricaria castroi n. sp. from Rio Trombetas, Est. Pará, Brazil, is described and illustrated. It is compared with *R. phoxocephala* (Eigenmann & Eigenmann, 1889) from Rio Amazonas at Coari, Est. Amazonas, Brazil, which species is here illustrated for the first time.

INTRODUCTION

During a visit of the first author to the Museu de Zoologia da Universidade de São Paulo (MZUSP), Brazil, Mr Ricardo Castro showed him a specimen of the genus *Rineloricaria* which was collected in Rio Trombetas. It has a most remarkable colour pattern, which distinguishes the species at once from the numerous other known species of this genus. In spite of having only this single specimen at hand, the colour pattern plus other characters indicate that it represents an undescribed species. A comparison with most of the 40-odd described *Rineloricaria* species revealed that Mr Castro's specimen is related to *Rineloricaria phoxocephala* (Eigenmann & Eigenmann, 1889). This species is known from two specimens only, collected about 120 years ago. We examined both specimens, and recognised that *R. phoxocephala* had no close relatives within the genus, whereas most *Rineloricaria* spp. can easily be assigned to a so-called *R. platyura*- or to a *R. lima*-group.

Work on the genus is still in progress, but we think it appropriate to publish the description and illustration of the new species here, along with illustrations and a comparison with *R. phoxocephala*. The lectotype and paralectotype of the latter are in the Museum of Comparative Zoology (MCZ), Cambridge, Mass. Mr L. A. van der Laan (Instituut voor Taxonomische Zoölogie, Amsterdam) made the photographs. The methods of taking morphometric and meristic data are the same as those proposed by Isbrücker & Nijssen (1978: 180-182).

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Rineloricaria castroi n. sp.
(Fig. 1; Table I)

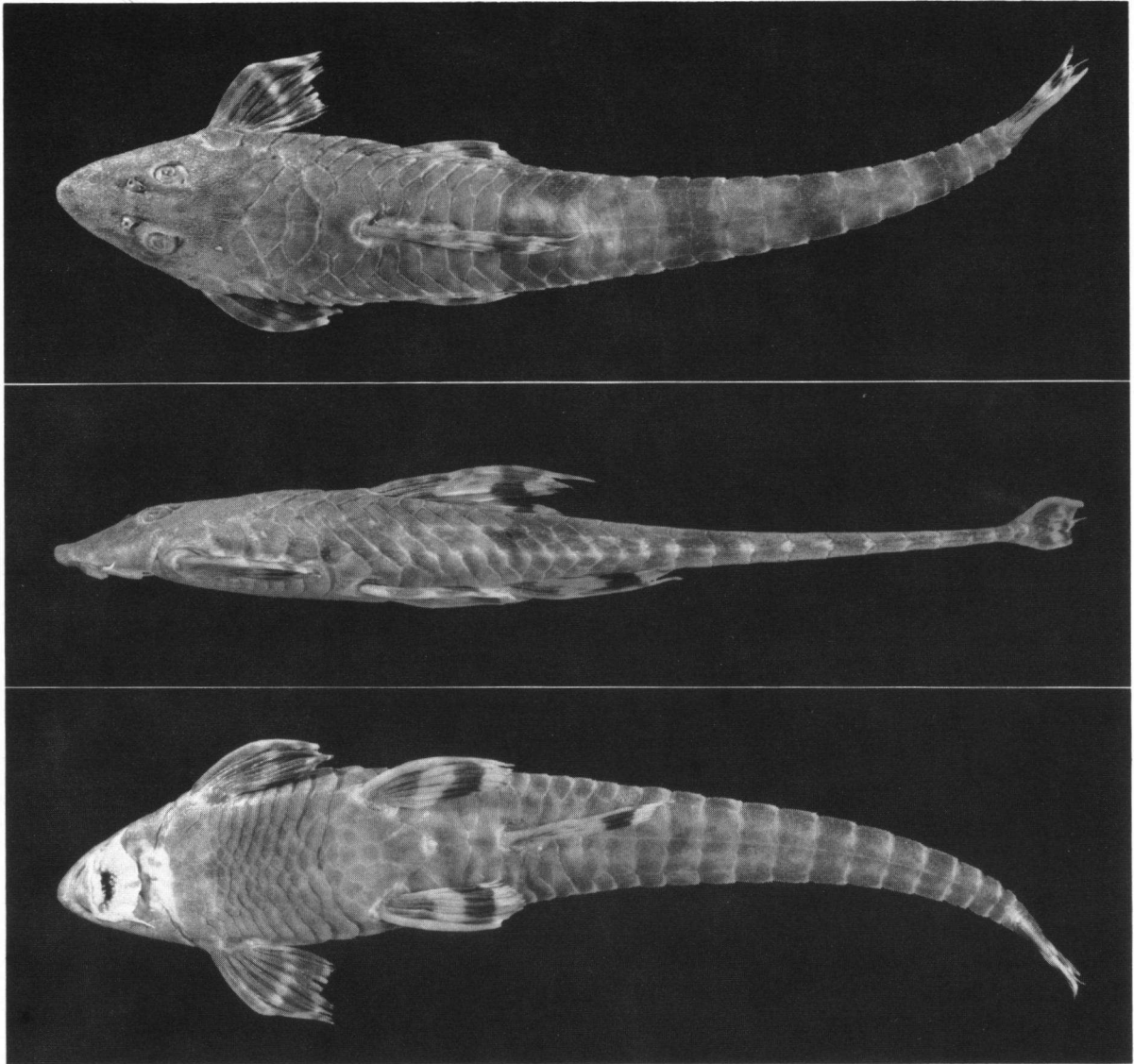


Fig. 1. *Rineloricaria castroi* n. sp., holotype in dorsal, lateral, and ventral view.

Etymology.—Named in honour of Mr Ricardo Macedo Correa e Castro, the collector of the holotype.

Material examined.—Holotype, MZUSP 15731, Brazil, Est. Pará, Trapiche da Reserva Biológica de Trombetas, Rio Trombetas, coll. R. M. C. Castro, 16-VII-1979.

DESCRIPTION

Morphometric and meristic data are given in Table I (a and c).

Abdomen completely covered with scutes in three complexes, as follows:

(1) A posterior complex, consisting of a well-developed preanal plate, preceded by three polygonal scutes, of which the median one is much smaller than those at either side. Anterior to these scutes are two transverse rows with seven and six scutelets, respectively, reaching the posterior thoracic scute. All these elements form an inflexible plate.

(2) The posterior complex is preceded by a flexible median complex, consisting of small,

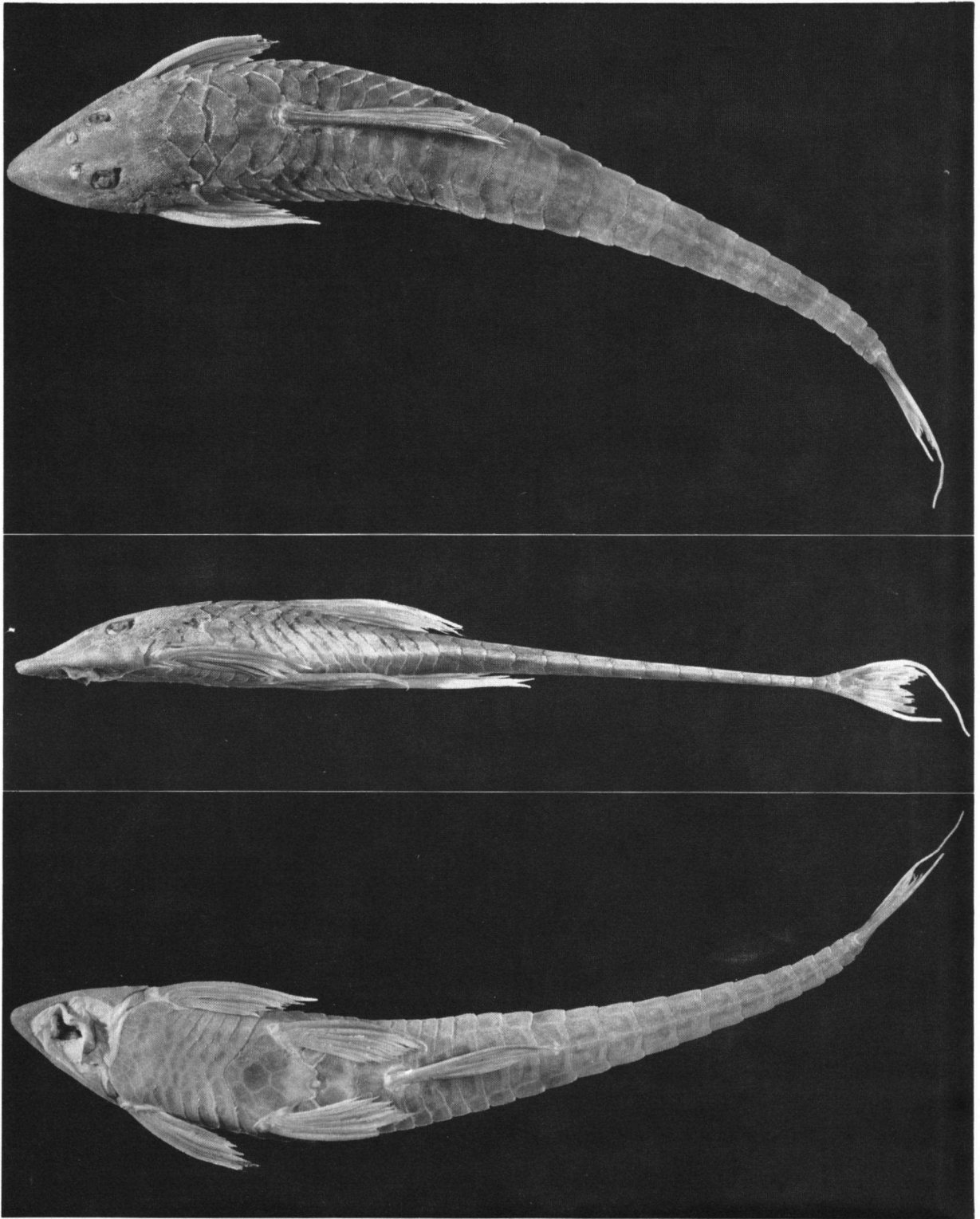


Fig. 2. *Rineloricaria phoxocephala* (Eigenmann & Eigenmann, 1889), lectotype in dorsal, lateral, and ventral view.

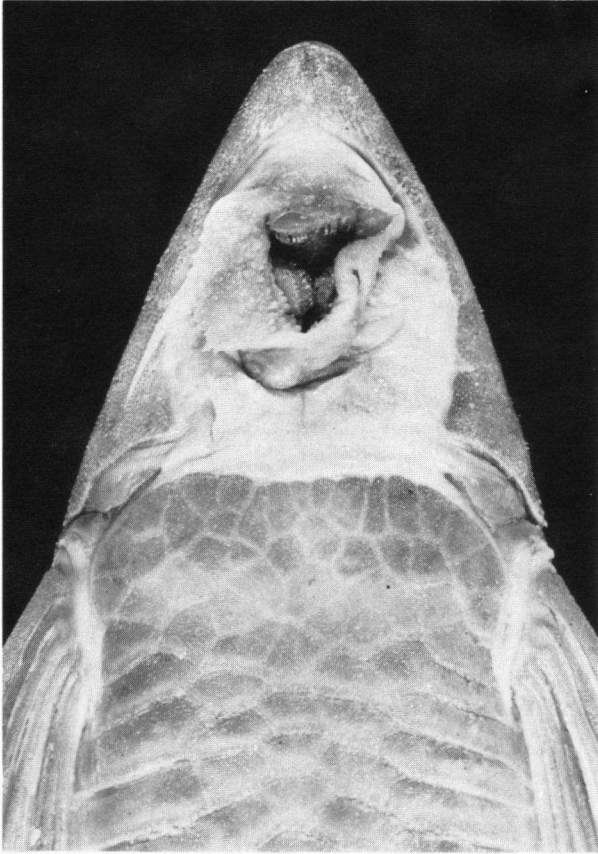


Fig. 3. *Rineloricaria phoxocephala* (Eigenmann & Eigenmann, 1889), head of lectotype in ventral view.

irregular polygonal scutelets reaching the ventral edges of the thoracic scutes; a median longitudinal series with eight scutelets and the transverse series with posteriorly three and anteriorly seven scutelets.

(3) An anterior inflexible complex of still smaller, polygonal scutelets in front of the median complex. This immovable plate is more or less rounded anteriorly and almost reaches to the height of a ventral extension of the dermal ossification of the head margin, at its broadest part.

The head has ventrally a rather broad marginal dermal ossification, with a more or less triangular extension anterior to the branchiostegal membrane (similar to that in *R. phoxocephala*, Fig. 3). All dermal ossifications—including tip of snout, scutes, scutelets, fin

spines, and rays—are covered with minute, acute odontodes. Somewhat more prominent odontodes are present in two longitudinal rows along the lateral body scutes. A longitudinal series of inconspicuous ridges is visible on first three scutes between the lateral and the dorsal scutes. A double longitudinal, low ridge is present on the first two predorsal scutes. Dorsal snout margin and supraorbital edges are hardly raised. Posterior tip of supraoccipital process rounded.

A conspicuous posterior orbital notch is present. A pectoral pore is not found. Pores of the sensory canal system inconspicuous.

The shape and structure of the lips are similar to those in other *Rineloricaria* spp.; the rictal barbels are relatively long.

Teeth in premaxillae somewhat smaller than teeth in dentaries. Teeth with a bilobate crown, the outer lobe much smaller and lower than the inner lobe. Distal tip of inner lobe of premaxillary teeth acute, that of the dentary teeth slightly rounded.

Pattern in alcohol (Fig. 1).—Ground colour of ossified parts tan and of naked parts whitish pink. Dorsum and sides of head and predorsal area brown, posteriorly lighter except for five poorly defined dark brown transverse stripes. The first of these stripes is quite vague and commences at the height of the dorsal fin spine origin, running obliquely forward between the ridges of odontodes along the coalescing lateral body scutes. The second stripe commences at the 13th lateral body scute, the third at the 19th, the fourth halfway the 22nd, and the fifth halfway the 26th lateral body scute.

Abdomen and ventral side of caudal peduncle dark tan.

Dorsal fin with some small dark spots on spine and rays, and with a broad dark stripe at about three-quarters of the length of spine and rays, leaving a wide unpigmented distal margin.

Anal fin with ill-defined pigmentation near the base of the spine and first two rays, and a broad dark stripe similar to the stripe on the dorsal fin.

Pectoral fin dark brown, except for a light tan

Table I.—Morphometric and meristic data of *Rineloricaria castroi* n. sp. (a and c) and of *Rineloricaria phoxocephala* (Eigenmann & Eigenmann, 1889) (b, d and e). a) data of holotype in mm; b) data of lectotype in mm; c) data of holotype; d) data of lectotype; e) data of paralectotype. c-e) head length through lower caudal spine as ratios of standard length; snout length through rictal barbel as ratios of head length. The three specimens have fin ray counts as in most other Loricariini (Isbrücker, Britski, Nijssen & Ortega, 1983: 41): D I,6,i; A I,4,i; P₁ I,6; P₂ I,5; C I,10,I.

specimen	a	b	c	d	e
standard length	160.0	144.5	160.0	144.5	130.0
axial length	173.8	155.1	173.8	155.1	139.6
total length	>177.0	>175.0	>177.0	>175.0	—
head length	33.5	29.9	4.8	4.8	5.1
predorsal length	50.7	46.6	3.2	3.1	3.2
postdorsal length	92.8	87.4	1.7	1.7	1.6
postanal length	79.7	76.5	2.0	1.9	1.8
dorsal spine length	36.7	>33.7	4.4	<4.3	4.3
first dorsal ray	31.9	32.3	5.0	4.5	4.7
anal spine length	28.6	28.5	5.6	5.1	5.3
pectoral spine length	23.4	26.8	6.8	5.4	5.5
pelvic spine length	24.9	21.1	6.4	6.8	5.8
upper caudal spine	>15.3	—	<10.5	—	—
lower caudal spine	>15.7	—	<10.2	—	—
snout length	18.0	16.1	1.9	1.9	1.8
lower lip	4.4	2.0	7.6	15.0	—
thoracic length	27.9	20.0	1.2	1.5	1.4
abdominal length	23.2	21.8	1.4	1.4	1.4
max. orbital diameter	7.0	6.1	4.8	4.9	5.1
interorbital width	7.5	6.8	4.5	4.4	4.2
cleithral width	26.4	20.6	1.3	1.5	1.4
supracleithral width	19.4	15.5	1.7	1.9	1.8
head width	23.3	20.0	1.4	1.5	1.4
head depth	14.5	12.6	2.3	2.4	2.3
body depth at dorsal	16.5	14.6	2.0	2.0	2.0
body width at dorsal	26.7	21.6	1.3	1.4	1.4
body width at anal	21.8	18.5	1.5	1.6	1.5
depth caudal peduncle	2.1	2.0	16.0	15.0	14.1
width caudal peduncle	5.5	4.4	6.1	6.8	6.4
rictal barbel	10.1	9.3	3.3	3.2	3.3
lateral scutes	—	—	31/31	30/30	30/30
coalescing scutes	—	—	17/17	14/14	14/14
thoracic scutes	—	—	10/10	8/8	9/8
premaxillary teeth	—	—	12/12	8/7	10/10
dentary teeth	—	—	15/?	6/9	>7/>7

stripe in the middle of the rays and along the distal margin.

Pelvic fin dark brown, with a wide unpigmented stripe in the middle and at the distal margin.

Caudal fin with a broad dark base, followed by a rather broad unpigmented vertical stripe in the middle, and a narrower dark vertical stripe just anterior to the distal tip of the rays.

Comparison. See under *Rineloricaria phoxocephala*, below.

Rineloricaria phoxocephala (Eigenmann & Eigenmann, 1889)
(Figs. 2-3; Table I)

Loricaria phoxocephala Eigenmann & Eigenmann, 1889: 37-38 (original description; in subgenus *Parahemiodon*; type-locality: "Coary"; two syntypes).

Material examined.—Lectotype (designated by Isbrücker, 1979: 112), MCZ 8030; paralectotype, MCZ 49057, Brazil, Est. Amazonas, Coari, 04°05' S, 63°08' W, coll. L. Agassiz, Thayer Expedition to Brazil 1865-1866.

COMPARISON WITH *RINELORICARIA CASTROI*

Morphometric and meristic data of the two type-specimens of *Rineloricaria phoxocephala* are given in Table I (b and d-e). *R. phoxocephala* has a longer first dorsal fin ray, a longer anal fin spine, a much longer pectoral fin spine, a shorter thoracic area, less numerous coalescing lateral body scutes, and less numerous teeth in the dentaries than *R. castroi*.

The scute in front of the preanal plate is much larger in *R. phoxocephala* than in *R. castroi*, and the remaining scutelets of the posterior complex are less numerous and larger. Likewise, the abdominal scutelets in the flexible, median complex are—especially anteriorly—fewer and larger in *R. phoxocephala* than in *R. castroi* (see Figs. 1 and 2).

Eigenmann & Eigenmann (1889: 37-38; 1890: 373-374) stated in their original and in their almost verbatim subsequent description that *R. phoxocephala* has the tip of the snout naked (it is covered in *R. castroi*). Furthermore, they note that *R. phoxocephala* has a narrow orbital notch (the notch is conspicuous in *R. castroi*), and the outermost caudal rays produced (see Fig. 2); in the holotype of *R. castroi* the caudal fin spines are broken off somewhat anterior to the distal tip of the adjacent rays, but in all probability they have been filamentous as well.

Eigenmann & Eigenmann noted that *R. phoxocephala* "... can readily be distinguished by its pointed snout and by the black bars on the head." The lectotype and the paralectotype no longer show a distinct colour pattern. This pattern was described (1890: 374) as: "Light brown with six broad cross-bands, the first on the nape, the second under origin of dorsal fin; a dark band extending forward from eye, a narrower one downward; head and anterior portion of body with black pores; dorsal slightly

dusky, obscurely spotted, its base with a few spots; base of caudal and a band parallel to its margin dark brown; anal and ventral fins light; pectoral similar to the dorsal." Except for the colour pattern of the caudal fin, this description does not fit with the colour pattern of *R. castroi*, and together with the several other differences we have no hesitation to describe *R. castroi* as a new species, based on the single holotype.

DISCUSSION

Subsequent to Eigenmann & Eigenmann's description of *Rineloricaria phoxocephala*, no additional specimens have been recorded from Rio Amazonas near Coari. The species has been recorded from Posadas, Rio Paraná by Regan (1904: 276-277), who compared one specimen with the present paralectotype. La Monte (1935: 7) recorded the species from Rio Purus, Meinken (1937: 77) from the middle Paraná region, Fowler (1940: 45) from Rio Lipeo, Bolivia, and Ringuélet, Arámburu & Alonso de Arámburu (1967: 411) recorded numerous specimens from localities in Argentina. The identity of all these additional specimens still need verification.

Originally, *R. phoxocephala* was assigned to *Parahemiodon* Bleeker, 1862 (which Eigenmann & Eigenmann considered to be a subgenus of *Loricaria* Linnaeus, 1758). *Parahemiodon* is a junior synonym of *Loricariichthys* Bleeker, 1862. Regan (1904: 196, 271) assigned the species to "*Rhineloricaria*" (= *Rineloricaria* Bleeker, 1862), which he regarded as a subgenus of *Loricaria*. Fowler (1954: 120) was the first author who used the name combination *Rineloricaria phoxocephala* (Eigenmann & Eigenmann, 1889).

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