

Three new species of *Ancistrus* Kner (Teleostei: Siluriformes: Loricariidae) from the upper Tapajós and Tocantins rivers

Sonia FISCH-MULLER¹, Alexandre R. CARDOSO², José F. P. da SILVA² & Vinicius A. BERTACO²

¹ Muséum d'histoire naturelle, P.O. Box 6434, CH-1211 Geneva 6, Switzerland.

E-mail: sonia.muller@mhn.ville-ge.ch

² Laboratório de Ictiologia, Museu de Ciências e Tecnologia, Pontifícia Universidade Católica do Rio Grande do Sul. Av. Ipiranga, 6681, 90619-900 Porto Alegre, RS, Brazil. E-mail: alexrc@pucrs.br, pezzi@pucrs.br — ubertaco@pucrs.br

Three new species of *Ancistrus* Kner (Teleostei: Siluriformes: Loricariidae) from the upper Tapajós and Tocantins rivers. - Three new species of *Ancistrus* are described: *Ancistrus tombador* sp. n. from the upper rio Tapajós basin, and *Ancistrus reisi* sp. n. and *Ancistrus jataiensis* sp. n. from the upper rio Tocantins basin. The three species differ from their congeners by the absence of an adipose fin. Loss of the adipose fin was only rarely observed in Ancistrini. In the three new species it is replaced by a series of small unpaired platelets forming a low crest. *Ancistrus tombador* further differs from all congeners by a unique combination of characters: naked margin of snout large and tentacles usually absent in both sexes; body very narrow (cleithral width 27.5-31.2% SL); long caudal peduncle particularly depressed (depth 8.3-9.2% SL). *Ancistrus reisi* is distinguished from *A. jataiensis* by measurements, including: predorsal length (respectively: 43.8-46.4% SL versus 47.5-49.3% SL); occipital depth (14.9-17.0% SL versus 17.0-19.5% SL); and caudal peduncle length (27.7-30.9% SL, versus 24.6-27.1% SL).

Keywords: Ancistrini - new species - Amazon River drainage - Brazil - catfishes - taxonomy.

INTRODUCTION

With 53 valid species plus numerous undescribed forms (Fisch-Muller, 1999, 2003), *Ancistrus* Kner, 1854 is the type genus and the most speciose genus of the Ancistrini Kner, 1853. This latter taxon was recently moved from subfamily to tribe rank in subfamily Hypostominae by Armbruster (2004). *Ancistrus* exhibits a wide distribution in the Neotropical Region with highest species diversity observed in the Amazon system. It was found to be monophyletic on the basis of osteological (Schaefer, 1987), molecular (Montoya-Burgos *et al.*, 1997, 1998), and biochemical (Fisch-Muller, 1999) data.

During a field expedition of the Laboratory of Ichthyology of PUCRS (MCP) to Central Brazil in January 2002, with the exploration of upper rio Tapajós basin, a very distinct new species of *Ancistrus* was discovered. This new species is peculiar in the absence of the adipose fin, which is replaced by median platelets forming a low crest, a character never described for *Ancistrus* until present. In the same year, the MCP received some fishes from the upper Tocantins basin collected by the Centro de Biologia Aquática (UCG) for identification, and surprisingly two additional and new species of *Ancistrus* with a similar loss of the adipose fin were recognized. The objective of this paper is to describe these recently discovered species, while contributing to the advancement of the "All Catfish Species Inventory".

MATERIAL AND METHODS

Measurements and counts follow Fisch-Muller *et al.* (2001). Morphometric characters other than standard length (SL) are expressed as percentages of SL, except for sub-units of the head, which are expressed as percentages of head length (HL). Specimens are deposited in the Museu de Ciências e Tecnologia, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre (MCP) and in the Muséum d'histoire naturelle, Geneva (MHNG). Vertebrae counts, including Weberian and ural complexes, were done on radiographs of type specimens, and the plates replacing the adipose fin were examined on cleared and stained specimens (c&s) prepared according to the method of Taylor & Van Dyke (1985). Comparative material includes the primary type specimens of all but six described *Ancistrus* species.

DESCRIPTIONS OF NEW SPECIES

Ancistrus tombador sp. n.

Fig. 1; Table 1

Holotype. MCP 33000, male, 62.8 mm SL; Brazil: Mato Grosso: Porto dos Gaúchos: Igarapé Ribeirão Preto, on the road MT-338, about 26 km SE from Porto dos Gaúchos (11°39'27"S, 57°12'7"W), a tributary of rio Arinos, upper rio Tapajós basin; coll. R. E. Reis, L. R. Malabarba, E. H. Pereira, V. A. Bertaco, and A. R. Cardoso, 19 Jan 2002.

Paratypes. Brazil: Mato Grosso: rio Arinos basin, rio Tapajós drainage. MCP 33001, 11 (10 measured; 1 c&s), 24.9-57.6 mm SL; MHNG 2647.55, 5, 35.1-55.6 mm SL; collected with the holotype. MCP 33002, 2 (1 measured), 13.7-52.9 mm SL, stream on the road MT-338, about 39 km N from Tapurah (12°1'49"S, 56°33'59"W), Tapurah, same collectors, 19 Jan 2002. MCP 33004, 1, 52.0 mm SL; stream in the road between the ferryboat of rio Arinos and Tapurah, about 6 km E from Tapurah, same collectors, 18 Jan 2002.

DIAGNOSIS. *Ancistrus tombador* is easily distinguished from all congeners except *A. reisi* and *A. jataiensis* by the absence of an adipose fin. A series of 3 to 5 median, unpaired platelets forming a low crest is present in place of the adipose fin. These platelets are followed by at least two dermal plates (more often three) of the dorso-lateral series that join dorsally, while in *A. reisi* and *A. jataiensis* they are nearly immediately followed by the plate-like procurrent caudal rays. *Ancistrus tombador* further differs from all described *Ancistrus* species by the unique combination of the following characters: naked margin of snout large and tentacles usually absent in both sexes, body very narrow (cleithral width 27.5-31.2% SL, mean 29.4), and long caudal peduncle particularly depressed (depth 8.3-9.2% SL, mean 8.7).



FIG. 1

Ancistrus tombador sp. n., holotype, MCP 33000, male, 62.8 mm SL; Brazil: Mato Grosso: igarapé Ribeirão Preto, upper Tapajós basin.

DESCRIPTION. Morphometrics and meristics presented in Table 1. Possibly small-sized species; body very narrow at origin of dorsal fin, narrowing progressively and regularly to caudal peduncle end; head and body strongly depressed, postoccipital elevation weak when present, caudal peduncle very low.

Snout rounded with large naked margin in both sexes. Tentacles absent in both sexes except in one specimen (male, 52.9 mm SL) with single small tentacle on dorso-lateral extremity of naked area.

Eye medium-sized, dorsal margin of orbit elevated, interorbital area slightly concave. Exposed part of opercle roughly triangular with posterior part elongated; dermal plates of postopercular area never numerous, generally large and contiguous with pterotic-supracleithrum, leaving large naked area around opercle. Evertible cheek odontodes short, not reaching posterior margin of opercle, with fleshy base variable in length and thickness.

Oral disk roughly circular, lips covered with minute papillae. Lower lip large but not reaching pectoral girdle, its border with very small papillae. Maxillary barbel short, about as long as buccal papilla. Mandibular tooth row short, premaxillary tooth row slightly wider; teeth numerous, bifid, with main cusp large; lateral cusp minute, pointed, never reaching more than one third mesial cusp length.

Supraoccipital plate usually well delimited from surrounding plates, particularly from central plate of first predorsal row. Curved to triangular nuchal plate always present before dorsal-fin spinelet. Five series of lateral plates; mid-dorsal, and mid-ventral series ending at level of small median platelets replacing the adipose fin. Last plate in median series usually of similar size and shape that penultimate plate. Odontodes present on body plates except along dorsal-fin base and on widely extended area below anal fin; odontodes generally short, only very slightly longer on ventral margin of opercle and on pectoral-fin spine of males. Abdomen entirely devoid of plates. Presence of small preanal platelet (first anal-fin pterygiophore) covered with odontodes.

Dorsal-fin origin slightly anterior to pelvic-fin origin; dorsal fin short, when laid back its tip not reaching series of median platelets replacing adipose fin. Adipose fin absent, replaced by series of 3 to 5 small median platelets between lateral scutes, forming slightly raised crest. These platelets separated from usual median platelets preceding caudal fin (procurrent caudal rays) by 2 or 3 plates of dorso-lateral series that join dorsally. Pectoral spine reaching anterior third of ventral spine. Anal fin short. Caudal fin short, slightly concave. Fin-ray formulae: D i,7; P i,6; V i,5; A i,4; C i, 13, i (1 ex.) or C i,14, i (16 ex.).

Vertebrae: 28 (holotype and one paratype)

COLORATION IN ALCOHOL. Head brownish; body dorsally and laterally brownish with four or five weak ill-defined paler bands; inferior part of caudal peduncle paler. Inconspicuous small round spots on naked margin of snout only, or up to dorsal-fin origin. These spots generally whitish and sprinkled with dark chromatophores; dark chromatophores sometimes numerous on whitish area, thus resulting in dark spots instead of light spots (more often in small specimens). Lips yellowish. Ventral surface of head and abdomen pale brown to yellowish. Fin rays generally brown spotted whitish to orange; membranes hyaline, unpigmented at least in their middle. Spots sometimes forming bands on dorsal and caudal fins, with tips yellowish to orange-colored (Fig. 1).

DISTRIBUTION. *Ancistrus tombador* was collected in small rivers of the rio Arinos basin, upper rio Tapajós drainage, in Mato Grosso state (Fig. 2).

TABLE 1. Morphometric and meristic data of the holotypes (H) and paratypes of *Ancistrus tombador* sp. n., *Ancistrus reisi* sp. n. and *Ancistrus jataiensis* sp. n.

	<i>Ancistrus tombador</i>			<i>Ancistrus reisi</i>			<i>Ancistrus jataiensis</i>					
	H	n	Mean	H	n	Mean	H	n	Mean			
Standard length (mm)	62.8	17	34.8-62.8	46.9	60.8	13	35.6-60.8	45.4	54.0	6	40.5-54.0	45.9
PERCENTS OF STANDARD LENGTH												
Predorsal length	44.1	17	42.7-45.1	44.3	45.7	13	43.8-46.4	44.9	49.3	6	47.5-49.3	48.1
Occipital depth	16.2	17	15.6-16.9	16.2	16.9	13	14.9-17.0	16.0	19.5	6	17.0-19.5	18.1
Cleithral width	28.7	17	27.5-31.2	29.4	34.5	13	31.6-34.5	33.1	35.4	6	33.6-35.6	34.9
Head length	34.0	17	34.0-37.6	35.8	37.5	13	34.7-37.5	36.4	40.2	6	36.2-40.2	38.9
Dorsal spine length	23.8	17	22.8-26.5	24.6	23.6	10	22.7-25.3	24.2	24.3	6	21.7-24.3	22.9
Dorsal fin base length	23.0	17	19.5-23.0	21.4	22.5	13	20.4-22.7	22.1	22.1	6	21.2-23.2	22.2
Pectoral spine length	28.5	17	25.7-29.4	27.8	28.2	13	25.8-28.3	27.3	27.8	5	25.3-27.8	26.4
Pelvic spine length	24.3	17	23.9-26.2	24.9	25.0	13	23.0-26.0	24.7	25.9	6	23.2-25.9	24.0
Thoracic length	24.1	17	22.5-24.8	23.5	23.4	13	23.2-24.5	23.8	25.0	6	22.3-26.6	24.5
Abdominal length	22.2	17	19.1-22.5	20.9	22.2	13	20.4-22.5	21.5	20.9	6	20.6-22.7	21.5
Caudal peduncle length	29.4	17	29.4-32.4	30.9	28.1	13	27.7-30.9	28.7	26.1	6	24.6-27.1	26.3
Caudal peduncle depth	8.4	17	8.3-9.2	8.7	10.2	13	9.6-10.7	10.2	10.7	6	10.1-10.7	10.4
Anal fin length	11.2	17	9.8-11.4	10.7	13.1	13	9.8-13.1	11.3	14.4	6	11.0-14.4	12.2
Upper caudal spine length	22.3	12	22.2-26.8	24.8	25.0	6	25.0-28.0	26.8	27.6	5	23.1-27.6	25.4
Lower caudal spine length	28.4	14	26.5-32.5	29.8	33.2	10	32.7-37.5	35.2	34.8	6	31.9-34.8	33.1
Body width at dorsal fin origin	26.2	17	22.8-26.9	25.6	27.6	13	25.8-29.2	27.0	29.0	6	27.5-30.5	28.9
PERCENTS OF HEAD LENGTH												
Supracleithral width	79.4	17	70.6-80.1	76.9	87.9	13	81.3-88.0	84.8	86.4	6	80.8-90.0	84.8
Snout length	60.2	17	56.9-60.8	58.6	57.7	13	57.1-60.8	58.9	58.5	6	57.7-61.3	59.7
Interorbital width	38.9	17	34.2-41.9	38.3	42.3	13	37.5-42.3	39.1	43.3	6	36.2-43.3	40.2
Plated internostril distance	19.4	17	16.6-20.5	18.6	14.9	13	14.3-16.7	15.4	16.8	6	16.0-18.0	16.9
Orbital diameter	17.1	17	16.6-18.8	17.7	14.3	13	14.3-17.5	16.0	13.6	6	13.4-15.4	14.3
Opercle length	16.4	17	13.9-17.0	15.4	11.0	13	11.0-15.1	13.5	11.8	6	11.8-14.4	13.0
Mandibular tooth row length	15.0	17	13.6-16.4	14.8	20.8	13	20.7-23.2	22.3	19.4	6	19.4-24.0	21.6
Interbranchial distance	54.8	17	45.0-54.8	51.0	57.2	13	54.8-58.6	57.2	50.0	6	50.0-55.6	53.4
COUNTS												
Total lateral median plates	24	17	24-25	24.2	24	13	24-25	24.2	24	6	23-25	24.2
Plates along dorsal-fin base	6	17	6-7	6.2	7	13	7	7	7	6	7	7
Plates between anal and caudal fins	11	17	11-12	11.1	11	13	10-11	10.6	10	6	10-11	10.4
Postopercular plates	4	15	3-5	4.3	12	13	5-12	7.6	8	6	5-8	6.8
Dentary teeth	54	17	41-72	53.6	78	13	64-79	72.6	72	6	62-80	73.8
Premaxillary teeth	60	17	39-65	56.1	74	13	61-75	67.0	72	6	68-78	72.8
Interopercular spines	13	17	10-16	13.0	18	13	12-18	14.3	18	6	14-18	15.8

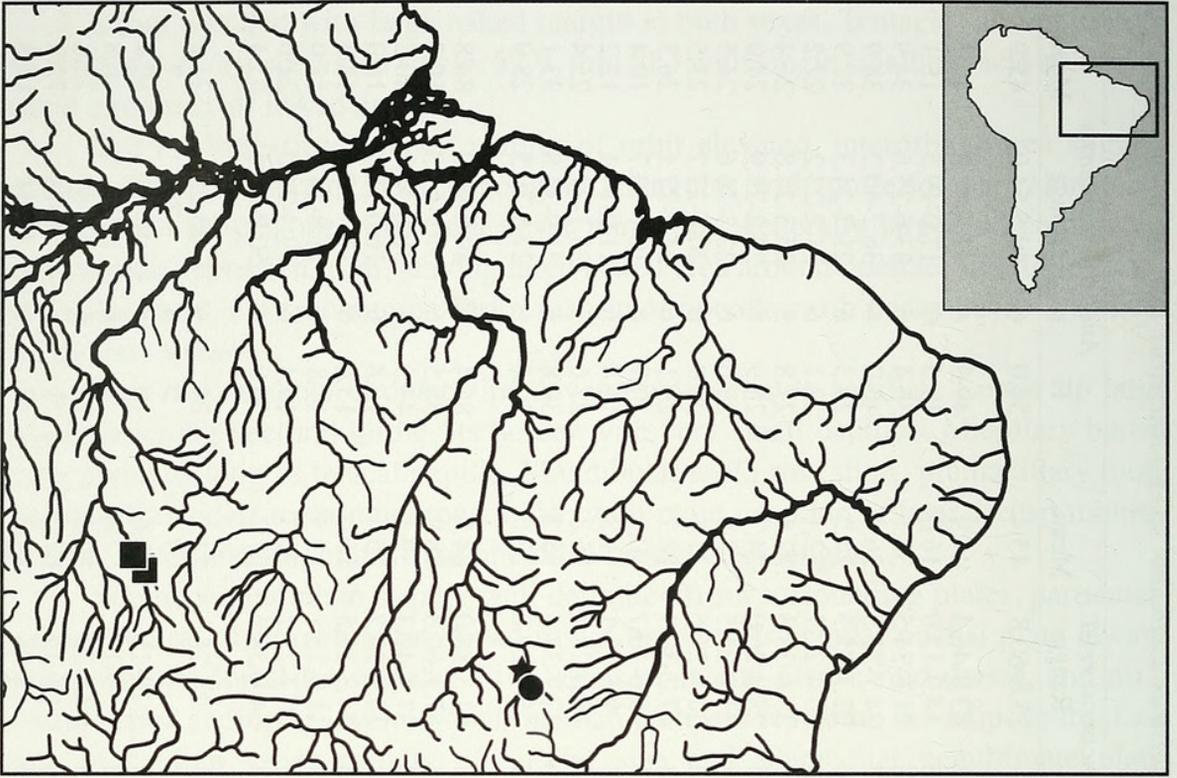


FIG. 2

Collection localities of *Ancistrus tombador* sp. n. (squares) from upper Tapajós basin, *Ancistrus reisi* sp. n. (circle) and *Ancistrus jataiensis* sp. n. (star) from upper Tocantins basin. Symbols may represent more than one locality.

ETYMOLOGY. The specific name *tombador* (a noun in apposition) refers to the Serra do Tombador, where the type locality is situated, in Mato Grosso.

Ancistrus reisi sp. n.

Fig. 3; Table 1

Holotype. MCP 34818, male, 60.8 mm SL; Brazil: Goiás: Mambaí: córrego das Dores, tributary of the rio Vermelho (14°29'S, 46°6'W), rio Tocantins basin; coll. Centro de Biologia Aquática - UCG, 15 Dec 2002.

Paratypes. Brazil: Goiás: Mambaí: rio Tocantins basin. MCP 33924, 4 (2 measured), 19.8-49.8 mm SL, collected with the holotype. MCP 33922, 5 (4 measured; 1 c&s), 35.6-54.5 mm SL; MHNG 2652.91, 4 (3 measured), 22.4-37.8 mm SL; same locality and collector as holotype, 9 Sep 2002. MCP 33925, 7 (2 measured), 15.9-47.9 mm SL; ribeirão das Araras, tributary of rio Vermelho (14°29'S, 46°6'W); same collector as holotype, 14 Dec 2002.

DIAGNOSIS. *Ancistrus reisi* differs from all congeners except *A. tombador* and *A. jataiensis* by the absence of an adipose fin. A series of 2 to 4 median unpaired platelets forming a low crest replaces the adipose fin. These platelets are nearly immediately followed by the plate-like procurrent caudal rays, while in *A. tombador* they are followed by at least two lateral plates that join dorsally before the procurrent caudal rays. *Ancistrus reisi* further differs from *A. tombador* by several morphometric and meristic characters, by the coloration pattern, and by the snout bearing tentacles (see under diagnosis of *A. tombador*). It is distinguished from *A. jataiensis* by the following morphometric characters: predorsal length (43.8-46.4% SL, mean 44.9,



FIG. 3

Ancistrus reisi sp. n., holotype, MCP 34818, male, 60.8 mm SL. Brazil: Goiás: córrego das Dores, upper Tocantins basin.

versus 47.5-49.3% SL, mean 48.1), occipital depth (14.9-17.0% SL, mean 16.0, versus 17.0-19.5% SL, mean 18.1), and caudal peduncle length (27.7-30.9% SL, mean 28.7, versus 24.6-27.1% SL, mean 26.3).

DESCRIPTION. Morphometrics and meristics presented in Table 1. Small species; body large, narrowing regularly to caudal peduncle end; head strongly depressed, postoccipital elevation weak when present.

Snout rounded with naked margin generally ill-delimited by posterior dermal plates; these plates not regular in size and shape, and rarely joined together. Naked area in males large but never reaching nostrils (narrower in females), with fleshy tentacles (up to 20, in holotype). Tentacles restricted to dorso-lateral portion of naked area in small males (from 36.5 mm SL); also present on anterior portion of snout in larger males (from 54.3 mm SL); present in one row bordering snout as well as dorsally in largest specimen (holotype). Tentacles not branched.

Eye small, dorsal margin of orbit not elevated, interorbital area slightly convex. Exposed part of opercle variable in shape but never very long; dermal platelets of postopercular area variable in shape, some large and contiguous with pterotic-supracleithrum, smaller anteriorly. Evertible cheek odontodes long respective to size of specimens, posterior one reaching often far beyond posterior margin of opercle, with fleshy base sometimes long and thick.

Oral disk enlarged, widened laterally; lips covered with minute papillae. Lower lip large but not reaching pectoral girdle, its border formed by unequal small flaps and smooth. Maxillary barbel short. Mandibular tooth row wide, premaxillary tooth row equal in length or slightly shorter; teeth numerous, bifid, with main cusp large and long; lateral cusp minute, pointed, never reaching more than one third mesial cusp length.

Supraoccipital plate usually well delimited from surrounding plates, particularly from central plate (or two plates) of first predorsal row. Odontodes very short on head; central part of supraoccipital slightly granular. Exposed part of nuchal plate minute or totally covered with skin and dorsal-fin spinelet often reduced. Five series of lateral plates; mid-dorsal and mid-ventral series ending at level of median platelets replacing adipose fin. Last plate of median series sometimes smaller than penultimate plate. Odontodes present on body plates except along dorsal-fin base and on widely extended area below anal fin; odontodes slightly longer on ventral margin of opercle and on pectoral-fin spine of males. Abdomen entirely devoid of plates. First anal-fin pterygiophore totally covered by skin.

Dorsal-fin origin slightly anterior to pelvic-fin origin; dorsal fin short, when laid back its tip not reaching median platelets replacing adipose fin. Adipose fin absent, replaced by 2 to 4 small median platelets between lateral scutes, forming slightly raised crest. These platelets immediately followed by smaller and unraised median platelets (procurrent caudal rays) preceding caudal fin. Pectoral spine reaching anterior third of ventral spine. Anal fin short. Caudal fin short, slightly concave. Fin-ray formulae: D i,7; P i,6; V i,5; A i,4; C i, 13, i (4 specimens, including holotype) or more generally i,14, i.

Vertebrae: 28 (holotype and one paratype)

COLORATION IN ALCOHOL. Dorsal surface brown, with undefined brown-reddish or brown-yellowish areas; small and rounded lighter spots often present on snout but never very contrasted (including holotype; Fig. 2). Ventral surface lighter; lips yellowish; belly yellowish (rarely) to light brown; when pigmented, chromatophores present on its entire surface including central part, and unspotted. Fin rays generally brown, finely spotted with whitish to orange, membranes hyaline, unpigmented at least in their middle. Except in largest specimens, spots usually forming narrow bands on caudal fin; caudal fin with lower and upper tips often yellowish to orange.

DISTRIBUTION. *Ancistrus reisi* was collected in small rivers of the upper Tocantins drainage in Tocantins State (Fig. 2).

ETYMOLOGY. The new species is named after Roberto Reis for his active contribution to the knowledge of the Neotropical ichthyofauna.

Ancistrus jataiensis sp. n.

Fig. 4; Table 1

Holotype. MCP 35244, male, 54.0 mm SL; Brazil: Goiás: Mambaí: córrego Jataí, tributary of the rio Vermelho (14°29'S, 46°6'W), rio Tocantins basin; coll. Centro de Biologia Aquática - UCG, 8 Sep 2002.

Paratypes. MCP 33921, 3 (1 c& s), 41.6-50.6 mm SL; MHNG 2652.92, 1, 44.2 mm SL; collected with the holotype. MCP 33923, 1, 40.5 mm SL; same locality and collector as holotype, 15 Dec 2002.

DIAGNOSIS. *Ancistrus jataiensis* differs from all congeners except *A. tombador* and *A. reisi* by the absence of an adipose fin. A series of 2 to 4 median unpaired platelets forming a low crest replaces the adipose fin. These platelets are nearly immediately followed by the plate-like procurrent caudal rays, while in *A. tombador* they are followed by at least two lateral plates that join dorsally before the procurrent caudal rays. *Ancistrus jataiensis* further differs from *A. tombador* by several morphometric and meristic characters, by the coloration pattern, and by the snout bearing tentacles (see under diagnosis of *A. tombador*). It is distinguished from *A. reisi* by the following morphometric characters: predorsal length (47.5-49.3% SL, mean 48.1, versus 43.8-46.4% SL, mean 44.9), occipital depth (17.0-19.5% SL, mean 18.1, versus 14.9-17.0% SL, mean 16.0), and caudal peduncle length (24.6-27.1% SL, mean 26.3, versus 27.7-30.9% SL, mean 28.7).

DESCRIPTION. Morphometrics and meristics presented in Table 1. Small species; body thickset, predorsally long and large, with short caudal peduncle; head moderately depressed, weak postoccipital elevation.

Snout rounded with naked margin generally ill-delimited by posterior dermal plates; these plates not regular in size and shape, and rarely joined together. Naked area relatively large in males (narrower in females), with fleshy tentacles (up to 27, in holotype). Tentacles present at dorso-lateral portion of naked area and on anterior portion of snout in males from 41.6 mm SL; in one row bordering snout as well as dorsally in largest specimens (from 50.6 mm SL). Some tentacles branched in larger males (including holotype).

Eye very small, dorsal margin of orbit not elevated; interorbital large, particularly in large specimens, and slightly convex. Exposed part of opercle of variable shape but never very long; dermal platelets of postopercular area variable in shape, generally large and contiguous with pterotic-supracleithrum. Evertible cheek odontodes strong and numerous, long respective to size of specimens, posterior one reaching far beyond posterior end of opercle in largest specimens (including holotype), with fleshy base sometimes long, thick and branched.

Oral disk enlarged, widened laterally; lips covered with minute papillae. Lower lip reaching or almost reaching anterior margin of pectoral girdle, its border formed by unequal small flaps, and smooth. Maxillary barbel short. Mandibular tooth row wide, premaxillary tooth row equal in length or slightly shorter; teeth numerous, bifid, with

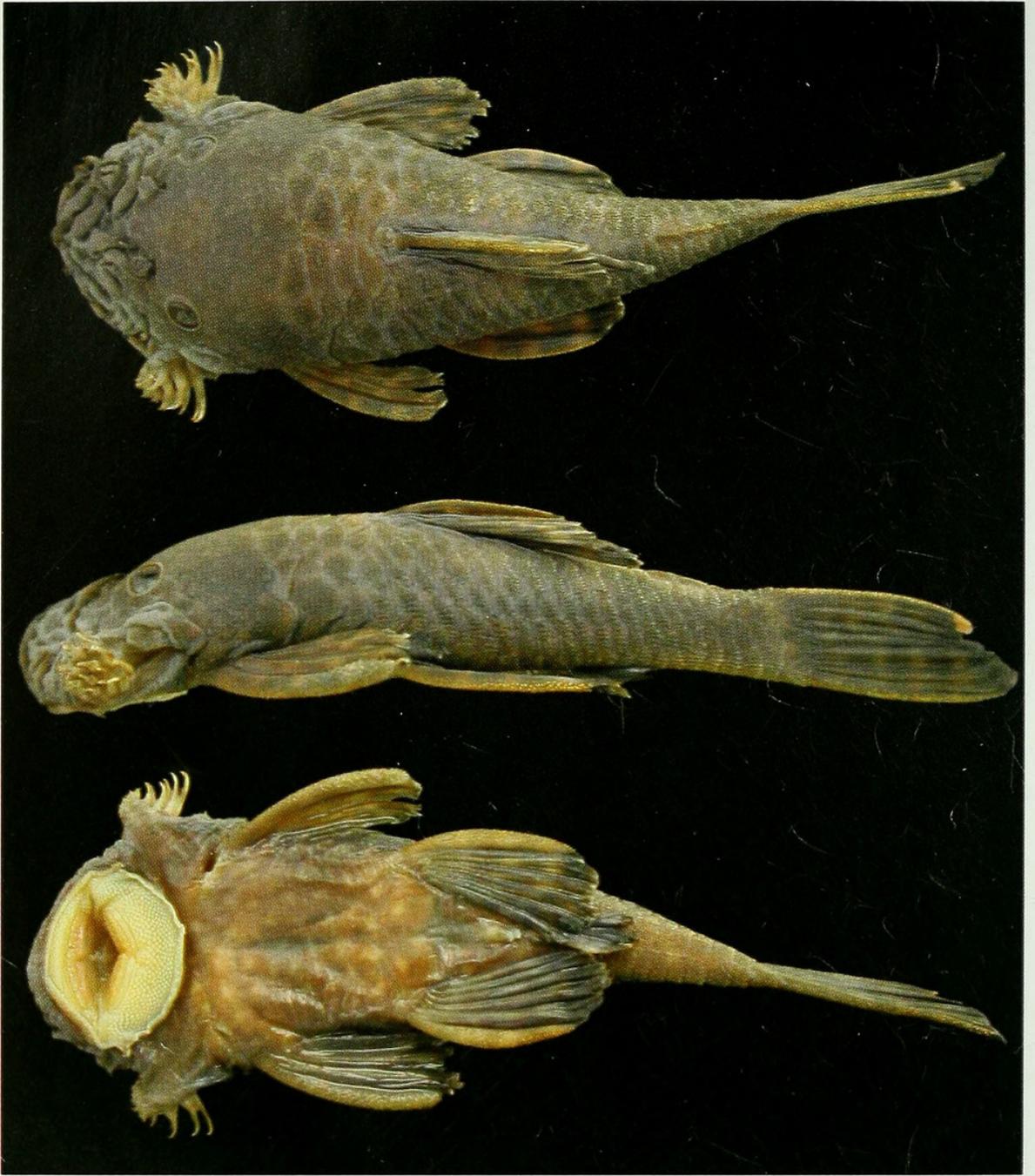


FIG. 4

Ancistrus jataiensis sp. n., holotype, MCP 35244, male, 54.0 mm SL. Brazil: Goiás: córrego Jataí, upper Tocantins basin.

main cusp large and long; lateral cusp minute, pointed, never reaching more than one third mesial cusp length.

Supraoccipital plate usually hardly delimited from surrounding head plates; well delimited from central plate (or two plates) of first predorsal row. Odontodes very short on head; central part of supraoccipital slightly granular. Exposed part of nuchal plate minute or totally covered with skin and dorsal-fin spinelet often reduced. Five series of lateral plates; mid-dorsal and mid-ventral series ending at level of median platelets replacing adipose fin. Last plate of median series rarely smaller than penul-

imate plate. Odontodes present on body plates except along dorsal-fin base and on widely extended area below anal fin; odontodes slightly longer on ventral margin of opercle and on pectoral-fin spine of males. Abdomen entirely devoid of plates. First anal-fin pterygiophore totally covered by skin.

Dorsal-fin origin slightly anterior to pelvic-fin origin; dorsal fin short, when laid back its tip not reaching median platelets replacing adipose fin. Adipose fin absent, replaced by 2 to 4 small median platelets between lateral scutes, forming slightly raised crest. These platelets immediately followed by smaller and unraised median platelets (procurrent caudal rays) preceding caudal fin. Pectoral spine reaching anterior third of ventral spine. Anal fin short. Caudal fin short, slightly concave. Fin-ray formulae: D i,7; P i,6; V i,5; A i,4; C i,14, i.

Vertebrae: 28 (holotype and one paratype)

COLORATION IN ALCOHOL. Dorsal surface light reddish-brown to dark brown (including holotype; Fig. 4); small and rounded lighter spots present on snout or on entire head (holotype), rarely very contrasted. Ventral surface slightly lighter; lips yellowish; belly light brown to dark brown, with chromatophores present on its entire surface including central part, and usually covered with light spots of variable shape. Fins brownish similar to dorsal surface, spotted with whitish to orange, membranes variably pigmented; spots usually forming bands on caudal fin, with upper and lower tips often yellowish to orange.

DISTRIBUTION. *Ancistrus jataiensis* was found only at the type locality, a small tributary of the rio Vermelho, upper Tocantins basin (Fig. 2).

ETYMOLOGY. The specific epithet *jataiensis* (an adjective) is derived from Jataí, the name of the only river where the species was found, in Goiás state.

DISCUSSION

The absence of an adipose fin is known for several loricariids but it is quite rare for Ancistrini, where it is characteristic of the few species of the genera *Acanthicus* Spix & Agassiz, 1829, *Leptoancistrus* Meek & Hildebrand, 1916, *Lipopterichthys* Norman, 1935, and of two species of *Lithoxus* (*L. pallidimaculatus* Boeseman, 1982; *L. surinamensis* Boeseman, 1982). The adipose fin is also absent occasionally in *Chaetostoma anomalum* Regan, 1903 and in *C. venezuelae* (Schultz, 1944). The loss of the adipose fin was never observed before in *Ancistrus*. All described species of the genus have an adipose fin formed by a raised and curved spine and by a membrane, that often extends beyond the end of the spine. This adipose fin is preceded by one or more small median unpaired bony plates, named pre-adipose scutes in Schaefer (1987). In the three *Ancistrus* species described here, a series of unpaired median platelets replacing the adipose fin forms a slightly raised crest. Replacement of the adipose fin by such plates was described for *Lipopterichthys*, and in Hypostomini tribe for species of *Corymbophanes* Eigenmann, 1909 and *Hemipsilichthys vestigipinnis* Pereira & Reis, 1992.

Ancistrus is characterized by a naked anterior snout margin with fleshy tentacles that develop during growth. The width of the naked margin, as well as the distribution,

number, and size of tentacles vary between sexes and, to a lesser extent, between species (Muller, 1990; Sabaj *et al.*, 1999). In all species but *A. bolivianus* (Steindachner, 1915), *A. aguaboensis* Fisch-Muller, Mazzoni & Weber, 2001, *A. minutus* Fisch-Muller Mazzoni & Weber, 2001, and an undescribed Peruvian species, the naked area is very narrow along the entire snout margin in females while it is much wider at least laterally on the snout in both small and large males, allowing for sex identification. *Ancistrus tombador* is thus one additional described *Ancistrus* species for which sex cannot be easily determined on the basis of this character. The possibility that specimens described here are all immatures, and that this species grows to a much larger size than observed cannot be excluded. However, in comparison to all examined material, it is evident that it is characterized by the poor development of these fleshy protuberances. The genus name *Xenocara* Regan, 1904, a synonym of *Ancistrus* which is still sometimes found in the aquarium trade, was used by some authors to include species without tentacles, as proposed by Eigenmann (1905, 1910). However, we have never observed any *Ancistrus* species [including *Ancistrus latifrons* (Günther, 1869), type species of *Xenocara*] completely without tentacles.

Ancistrus reisi and *A. jataiensis* from the upper Tocantins basin are quite similar to each other in appearance, as they are also to *A. aguaboensis* and *A. minutus*. The latter two are very likely endemic from the upper rio Tocantins basin and were collected at the Serra da Mesa dam. However, while they were found to be cryptic, *A. reisi* and *A. jataiensis* can be distinguished by several morphometric characters. The body of *A. jataiensis* is more elongated anteriorly and shortened at the caudal peduncle; it is deeper and larger than in *A. reisi*, it shows a larger interorbital and inter-nostril, a smaller eye relative to head length, and has shorter paired and unpaired fins except for the anal fin. In addition to the absence of the adipose fin, the two new species each differ from *A. aguaboensis* and *A. minutus* by several measurements, counts, and the color pattern. Other known *Ancistrus* species from the upper Tocantins basin are *Ancistrus cryptophthalmus* Reis, 1989, a blind species living in caves of the rio Angélica-Bezerra system, and at least one undescribed epigeal species found in the same area (Fisch-Muller *et al.*, 2001).

Reports on the ichthyofaunal composition of the Tocantins and Tapajós rivers are rare (e.g. Santos *et al.*, 1984; Merona, 1987; Miranda & Mazzoni, 2003) and the ichthyofauna of the upper reaches of these basins is still poorly known. However the Tocantins river basin was pointed out as an area of endemism for several Neotropical freshwater fish groups by different authors (e.g. Vari, 1988; Menezes & Lucena, 1998; Lima & Moreira, 2003). In its upper part especially, it also appears to represent an area of high endemism for the Ancistrini as shown by the presence of three recently discovered *Hemiancistrus* species (Cardoso & Lucinda, 2003), and by at least six distinct and apparently endemic species of *Ancistrus* including those described here.

ACKNOWLEDGEMENTS

The Central Brazil Expedition was supported by the project "Conhecimento, conservação e utilização racional da diversidade da fauna de peixes do Brasil" (PRONEX/CNPq, proc. 661058/1997-2), coordinated by Naércio A. Menezes. We also thank Francisco L. T. Garro (UCG), who first collected the specimens of *Ancistrus reisi*

and *A. jataiensis* during research on the upper streams of the Tocantins basin. We are particularly grateful to Heraldo Britski, Volker Mahnert, Roberto Reis, and Claude Weber for their useful comments on the manuscript, to Bernard Landry and Andreas Schmitz for reading the proof, and to Florence Marteau for appreciation of the figures.

REFERENCES

- ARMBRUSTER, J. W. 2004. Phylogenetic relationship of the suckermouth armoured catfishes (Loricariidae) with emphasis on the Hypostominae and the Ancistrinae. *Zoological Journal of the Linnean Society* 141: 1-80.
- CARDOSO, A. R. & LUCINDA, P. H. F. 2003. Three new species of *Hemiancistrus* (Teleostei: Siluriformes: Loricariidae) from the rio Tocantins basin with comments on the genus. *Ichthyological Exploration of Freshwaters* 14(1): 73-84.
- EIGENMANN, C. H. 1905. The mailed catfishes of South America (Loricariidae). *Science* 21: 792-795.
- EIGENMANN, C. H. 1910. Catalogue of the fresh-water fishes of tropical and South temperate America (pp. 375-511). In: SCOTT, W. B. (ed.). Reports of the Princeton University expeditions to Patagonia, 1896-1899, *Zoology* 3 (4).
- FISCH-MULLER, S. 1999. Systématique du genre *Ancistrus* Kner (Teleostei, Loricariidae): approches morphologique et génétique. *Unpublished Ph.D. Dissertation, University of Geneva*, 300 pp., 26 pls.
- FISCH-MULLER, S. 2003. Subfamily Ancistrinae (pp. 373-400). In: REIS, R. E., KULLANDER, S. O. & FERRARIS Jr., C. J. (eds). Check list of the freshwater fishes of South and Central America. *Edipucrs, Porto Alegre*, 729 pp.
- FISCH-MULLER, S., MAZZONI, R. & WEBER, C. 2001. Genetic and morphological evidences for two new sibling species of *Ancistrus* (Siluriformes: Loricariidae) in upper rio Tocantins drainage, Brazil. *Ichthyological Exploration of Freshwaters* 12(4): 289-304.
- KNER, R. 1854. Die Hypostomiden. Zweite Hauptgruppe der Familie der Panzerfische (Loricata vel Goniodontes). *Denkschriften der kaiserlichen Akademie der Wissenschaften* 7: 251-286, pls 1-5.
- LIMA, F. C. T. & MOREIRA, C. R. 2003. Three new species of *Hyphessobrycon* (Characiformes: Characidae) from the upper rio Araguaia basin in Brazil. *Neotropical Ichthyology* 1(1): 21-33.
- MENEZES, N. A. & LUCENA, C. A. S. 1998. Revision of the subfamily Roestinae (Ostariophysi: Characiformes: Cynodontidae). *Ichthyological Exploration of Freshwaters* 9(3): 279-291.
- MERONA, B. de. 1987. Aspectos ecológicos da ictiofauna no baixo Tocantins. *Acta Amazonica* 16-17: 109-124.
- MIRANDA, J. C. & MAZZONI, R. 2003. Composição da ictiofauna de três riachos do alto rio Tocantins - GO. *Biota Neotropica* 3 (1): 1-11.
- MONTOYA-BURGOS, J.-I., MULLER, S., WEBER, C. & PAWLOWSKI, J. 1997. Phylogenetic relationships between Hypostominae and Ancistrinae (Siluroidei: Loricariidae): First results from mitochondrial 12S and 16S rRNA gene sequences. *Revue suisse de Zoologie* 104: 185-198.
- MONTOYA-BURGOS, J.-I., MULLER, S., WEBER, C. & PAWLOWSKI, J. 1998. Phylogenetic relationships of the Loricariidae (Siluriformes) based on mitochondrial rRNA gene sequences (pp. 363-374). In: MALABARBA, L. R., REIS, R. E., VARI, R. P., LUCENA, Z. M. S. & LUCENA, C. A. S. (eds). Phylogeny and Classification of Neotropical Fishes. *Edipucrs, Porto Alegre*, 603 pp.
- MULLER, S. 1990. Étude méristique et morphométrique d'*Ancistrus piriformis* Muller et *Ancistrus pirareta* Muller (Pisces, Siluriformes, Loricariidae). *Revue suisse de Zoologie* 97: 153-168.

- SABAJ, M. H., ARMBRUSTER, J. W. & PAGE, L. M. 1999. Spawning in *Ancistrus* (Siluriformes: Loricariidae) with comments on the evolution of snout tentacles as a novel reproductive strategy: larval mimicry. *Ichthyological Exploration of Freshwaters* 10: 217-229.
- SANTOS, G. M. DOS, JÉGU, M. & MERONA, B. DE 1984. Catálogo de peixes comerciais do baixo rio Tocantins. *Eletronorte/CNPq/INPA, Manaus*, 83 pp.
- SCHAEFER, S. A. 1987. Osteology of *Hypostomus plecostomus* (Linnaeus), with a phylogenetic analysis of the loricariid subfamilies (Pisces: Siluroidei). *Contributions in Science* 394: iii-iv, 1-31.
- TAYLOR, W. R. & VAN DYKE, G. C. 1985. Revised procedures for staining and clearing small fishes and other vertebrates for bone and cartilage study. *Cybium* 9 (2): 107-119.
- VARI, R. P. 1988. The Curimatidae, a lowland neotropical fish family (Pisces: Characiformes): Distribution, endemism, and phylogenetic biogeography (pp. 343-377). In: VANZOLINI, P. E. & HEYER, W. R. (eds). Proceedings of a workshop on Neotropical distribution patterns. *Academia brasileira de Ciências, Rio de Janeiro*, 488 pp.



Fisch-Muller, Sonia. et al. 2005. "Three new species of Ancistrus." *Revue suisse de zoologie* 112, 559–572. <https://doi.org/10.5962/bhl.part.80314>.

View This Item Online: <https://www.biodiversitylibrary.org/item/128361>

DOI: <https://doi.org/10.5962/bhl.part.80314>

Permalink: <https://www.biodiversitylibrary.org/partpdf/80314>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder

Rights Holder: Muséum d'histoire naturelle - Ville de Genève

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://www.biodiversitylibrary.org/permissions/>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.