

# Redescription of *Ancistrus greeni* (Siluriformes: Loricariidae), and description of a new species from the río Madre de Dios basin, Peru

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A new species of *Ancistrus* is described from minor tributaries of the río Madre de Dios basin (Cusco – Madre de Dios – Puno), in Peru. The new species shares with *A. greeni* an uncommon unicuspid dentition; but it is distinguished from *A. greeni* by a larger orbital diameter, deeper caudal peduncle, and larger adipose-fin spine. The redescription of *A. greeni* is provided, and its recognition along with the discovery of this new species increases to five the official number of *Ancistrus* species from the río Madre de Dios basin. The lectotype and paralectotype of *A. greeni* are provided.

**Keywords:** Amazon basin, Ancistrini, Armored catfish, Río Inambari basin, Taxonomy.

Uma nova espécie de *Ancistrus* é descrita de pequenos tributários da bacia do rio Madre de Dios (Cusco – Madre de Dios – Puno), no Peru. A nova espécie compartilha com *A. greeni* uma dentição unicuspidada pouco comum e é diagnosticada de *A. greeni* pelo maior diâmetro orbital, maior altura do pedúnculo caudal e maior espinho da nadadeira adiposa. A redescrição de *A. greeni* é fornecida, e seu reconhecimento juntamente com a descoberta dessa nova espécie incrementam para cinco o número oficial de *Ancistrus* registradas para a bacia do rio Madre de Dios. O lectótipo e paralectótipo de *A. greeni* são fornecidos.

**Palavras-chave:** Ancistrini, Bacia amazônica, Bacia do rio Inambari, Cascudo, Taxonomia.

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## INTRODUCTION

Loricariidae is the largest family of the Siluriformes in the Neotropics. Loricariidae is widespread in Central and South America, ranging from Costa Rica in the north to Argentina in the south (Weber, 2003). *Ancistrus* is one of the most species-rich loricariid genera, and diagnosed by having well-developed cheek spines, snout border naked and ornamented with fleshy tentacles. The general taxonomic knowledge of the genus is limited to incomplete descriptions and type material are often either lacking or poorly preserved.

Currently, three valid species are recognized from the río Madre de Dios basin: *Ancistrus marcapatae* (Regan, 1904), *A. megalostomus* Pearson, 1924, and *A. montanus* (Regan, 1904) (Bifi *et al.*, 2019). Regan (1904) also described *Chaetostomus maculatus* from Rozmaiu, Upper Peru, but this type locality has never been found under that name. According to Fish-Muller (2003) “Rozmaiu” means Roz River in Quechua idiom, a language spoken by indigenous people living in Peru, Ecuador, Bolivia, Chile, Colombia and Argentina. However, Roz River was also not located. Therefore, *Chaetostomus maculatus* is only known from syntypes and its geographical distribution remains unknown, solely mentioned as río Roz basin (Fish-Muller, 2003).

Posteriorly, Isbrücker (2001) replaced the name *Chaetostomus maculatus* by *Chaetostoma greeni*, because the epithet was preoccupied by *Chaetostomus* (*Ancistrus*) *cirrhosus* var. *maculata* Steindachner, 1881. In a review of *Chaetostoma*, Lujan *et al.* (2015) transferred *C. greeni* to *Ancistrus greeni* (Isbrücker, 2001) justified by the presence of seven branched dorsal-fin rays, three plate rows at the thinnest portion of the caudal peduncle, and the unplated snout.

During the expeditions to río Madre de Dios basin in Peru, a new species of *Ancistrus* was collected and the material deposited in Museo de Historia Natural de la Universidad Nacional Mayor de San Marcos (Lima, Peru), and is described herein. The new species possesses an uncommon tooth shape among congeners, only shared with *A. greeni* for which we provide a redescription.

## MATERIAL AND METHODS

Measurements were taken using digital calipers to the nearest 0.1 mm, and are presented as percents of standard length (SL) or head length (HL). Counts were made under a stereomicroscope. Measurements and plate counts follow Fisch-Muller *et al.* (2001) and Bifi *et al.* (2009), with addition of occipital-orbital distance (from tip of occipital process to posterior border of orbit). Body plate nomenclature was based on Schaefer (1997), with modifications of Oyakawa *et al.* (2005). The map (Fig. 3) was prepared using both Google Earth v.7.3.2 and Quantum GIS v. 3.6.0, available at <http://qgis.org>. Image of teeth detail using a Leica M205A stereomicroscope coupled with a Leica DMC4500 and a Leica Application Suite V4.10.0 Interactive Measurement, Montage. Institutional acronyms: BMNH, Natural History Museum, London; ZMB, Zoological Museum, Berlin; CAS, California Academy of Sciences, San Francisco; INPA, Instituto Nacional de Pesquisas da Amazônia, Manaus; MCP, Museu de Ciências

e Tecnologia, Pontificia Universidade Católica do Rio Grande do Sul, Porto Alegre; MNRJ, Museu Nacional, Rio de Janeiro; MPUJ, Museo Javeriano de Historia Natural, Bogotá; MUSM, Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima; NMW, Naturhistorisches Museum, Wien; NUP, Coleção Ictiológica do Núcleo de Pesquisas em Limnologia, Ictiologia e Aquicultura (Nupélia), Universidade Estadual de Maringá, Maringá.

## RESULTS

### *Ancistrus greeni* (Isbrücker, 2001)

(Figs. 1–2, Tab. 1)

*Chaetostomus maculatus* Regan, 1904:246, pl.14 (Fig. 4) [original description; type locality: Rozmaiu, Upper Peru].

*Chaetostoma maculatum*. —Isbrücker, 1980:62 [check list]. —Ortega, Vari, 1986:17 [check list]. —Burgess, 1989:436 [check list]. —Isbrücker, 2001:26 [check list].

*Chaetostoma greeni* Isbrücker in Isbrücker *et al.*, 2001:24 [replacement name for *Chaetostomus maculatus* Regan 1904, preoccupied by *Chaetostomus* (*Ancistrus*) *cirrhosus* var. *maculata* Steindachner 1881]. —Isbrücker 2001:26 [check list]. —Fish-Muller, 2003:380 [check list]. —Ferraris, 2007:228 [check list].

*Ancistrus greeni*. —Lujan *et al.*, 2015:673 [comments; new combination].

**Diagnosis.** *Ancistrus greeni* is diagnosed from all congeners, except *A. maldonadoi*, by having unicuspid teeth (*vs.* bicuspid). *Ancistrus greeni* is diagnosed from *A. maldonadoi* by smaller eye (orbital diameter 8.8–13.0% of HL, *vs.* 13.8–20.6%); a slender caudal peduncle (depth of caudal peduncle 8.4–10.6% of SL, *vs.* 12.2–14.0%); smaller adipose-fin spine (adipose spine length 3.7–6.3% of SL, *vs.* 7.2–9.5%). Furthermore, *A. greeni* can be distinguished from the species described from río Madre de Dios basin by having 4–8 preadipose plates (*vs.* 2–3 in *A. montanus*); and smaller orbital diameter (8.8–13.0% of HL *vs.* 14.0–16.7% in *A. marcapatae*; and 16.9–20.1% in *A. megalostomus*).

**Description.** Morphometric data and counts in Tab. 1. Head and trunk moderately depressed with greatest body depth at supraoccipital. Dorsal profile of body convexly raising from tip of snout to dorsal-fin origin, then straight or slightly convex to adipose fin, and concave from that point to caudal fin. Ventral profile of body straight, slightly convex on caudal peduncle. Caudal peduncle compressed; slightly flattened ventrally.

Head moderately large and wide; snout large and rounded in dorsal view, with large naked margin bordered by dermal platelets on lateral portion in males. Adult males with middle- to large-sized tentacles, sometimes branched on dorsal region of snout. Females usually with two small tentacles on each side of snout border. Evertible cheek plates supporting (8–19) hypertrophied odontodes (cheek spines).

Eye small-sized, 8.6–11.9% of HL, dorsal orbit not raised; dorsolaterally positioned. Interorbital region slightly concave. Exposed portion of opercle roughly triangular,



**FIGURE 1** | Dorsal, lateral and ventral views (left to right) of *Ancistrus greeni*: BNHM 1903.10.12.3, female, 51.4 mm SL, lectotype; BNHM 1903.10.12.4, female, 44.8 mm SL, paralectotype.

supporting odontodes; supra-opercular region with few platelets near compound pterotic.

Oral disk circular covered with small papillae; lower lip large almost reaching pectoral girdle, with papillae reducing in size toward its margin; maxillary barbel short, attached to lip by membrane and with reduced free tip. Branchial opening small. Premaxillary and dentary tooth rows from moderate to large width; teeth short, thin, numerous, unicuspid (Fig. 3A), curved inward. Only one small central buccal papilla positioned between premaxillae.

Head covered by dermal bones; dorsum covered by dermal plates, except at dorsal-fin base. Supraoccipital process limited posteriorly by first pair of predorsal plates and posterolaterally by the first plate of the mid-dorsal series. Trunk with five series of lateral plates, three lateral series on the narrowest portion of caudal peduncle. Mid-dorsal and



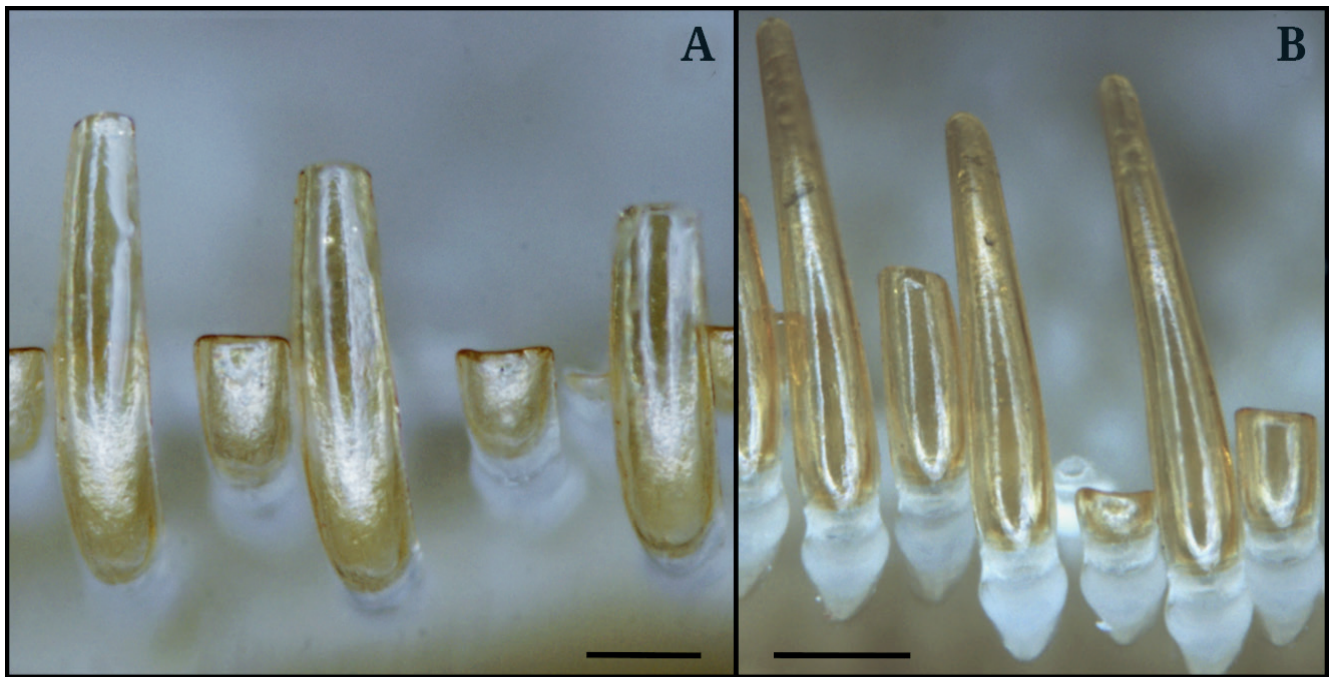
**FIGURE 2** | *Ancistrus greeni*, MUSM 57798, 74.8 mm SL, male, río Tono; MUSM 56232, 67.6 mm SL, female, quebrada San Isidro.

mid-ventral series not surpassing adipose fin. Median series supporting lateral line. Short odontodes on fin rays and body plates. Ventral surface devoid of plates from snout tip to anal-fin insertion. Base of first anal-fin pterygiophore covered by skin.

Dorsal-fin origin situated slightly anterior to vertical through pelvic-fin origin; dorsal fin usually reaching preadipose plate when adpressed; dorsal-fin spine flexible, shorter than head length. Adipose-fin spine short, with small membrane. Pectoral-fin spine inflexible and slightly curved inward, with hypertrophied odontodes and tentacles on distal portion; pectoral fin reaching or slightly surpassing pelvic-fin origin when adpressed. Pelvic fin flexible and curved inward, depressed pelvic-fin unbranched ray surpassing origin of anal fin. Anal fin short. Caudal-fin margin obliquely truncate with ventral unbranched ray longer than dorsal one. Fin-ray formula: dorsal II,7; pectoral I,6; pelvic i,5; anal i,3–4; caudal i,14,i.

**Color in alcohol.** Body background color yellowish-brown to dark brown. Dorsal surface of head and trunk with rounded light small spots. Ventral surface of head and abdomen yellowish to light brown, brown on ventral surface of caudal peduncle. All fins with alternating dark and light spots on the rays, sometimes organized into transverse bands.

**Sexual dimorphism.** Largest male and female with 85.2 mm and 74.5 mm SL,



**FIGURE 3** | Details of the teeth showing lack of lateral cusp in **A.** *Ancistrus greeni* and **B.** *Ancistrus maldonadoi*. Bars = 0.1mm.

respectively. Mature males have small- to middle-sized tentacles on dorsal region and border of snout. Females sometimes with fewer and shorter tentacles than males limited to one series on lateral border of snout, usually two to four on each side of snout. Males have smaller dentary length 21.8–27.1% of HL (mean = 25.0%) than females 26.1–31.4 % of HL (mean= 27.9%).

**Geographical distribution.** *Ancistrus greeni* is only known from the río Madre de Dios and río Inambari basins (Fig. 5).

**Conservation status.** *Ancistrus greeni* occurs along a well-conserved region, with good water quality and little or no human pressure. Thus, considering the good environmental conditions of the known area of occurrence for the species, we suggest that *A. greeni* be classified as LC (Least Concern) in the International Union for Conservation of Nature (IUCN) categories and criteria (IUCN, 2019) of extinction risk.

**Material examined.** All from Peru: **Lectotype [designated here]:** BMNH 1903.10.12.3, female, 51.4 mm SL, syntype of *Chaetostomus maculatus* Regan, 1904, “Rozmaiu, Upper Peru”, Kalinowski. **Paralectotype [designated here]:** BMNH 1903.10.12.4, female, 44.8 mm SL, syntype of *Chaetostomus maculatus* Regan, 1904, “Rozmaiu, Upper Peru”, Kalinowski. **Non-type specimens: río Madre de Dios basin:** INPA 58909, 8, 30.1–61.9 mm SL (4, 55.1–61.9 mm SL), Cuzco, río Inambari basin, tributary of río Araza, main road crossing vicinity of Quincemil, 13°18'52"S

**TABLE 1** | Morphometric and meristic data of *Ancistrus greeni*. SD= standard deviation, N= number (including types)

Characters	Lectotype	Paralectotype	N	Range	Mean	SD
Standard length (mm)	51.4	44.8	25	44.8–85.2	62.0	
<b>Percents of standard length</b>						
Predorsal length	44.5	44.9	25	44.5–49.3	46.8	1.4
Head length	34.4	36.0	25	34.3–39.6	36.8	1.7
Occipital depth	15.4	14.6	25	14.6–17.7	16.4	0.8
Cleithral width	32.6	33.5	25	30.9–35.9	33.5	1.3
Dorsal-fin base length	17.8	18.7	25	17.8–22.4	20.4	1.2
Interdorsal length	20.6	19.1	24	17.6–22.9	20.2	1.3
Prepectoral length	27.2	28.3	25	27.2–32.5	30.1	1.5
Prepelvic length	52.0	54.4	25	49.9–54.4	52.2	1.3
Dorsal-fin spine length	23.0	-	24	19.3–25.4	22.5	1.5
Pectoral-fin spine length	23.4	23.5	25	21.5–26.6	23.9	1.3
First pelvic-fin ray length	25.9	28.5	25	22.8–28.5	25.6	1.4
Adipose-fin spine length	5.6	-	22	3.7–6.3	5.1	0.7
First anal-fin ray length	5.7	8.4	25	5.5–8.7	7.1	0.9
Thoracic length	26.0	29.2	25	23.7–29.2	25.8	1.4
Abdominal length	18.9	18.4	25	16.6–21.3	18.5	1.2
Upper caudal-fin ray length	25.5	-	20	20.7–26.7	23.8	1.6
Lower caudal-fin ray length	31.2	-	22	27.8–33.7	30.2	1.7
Caudal peduncle length	-	-	23	26.8–33.2	29.1	1.3
Caudal peduncle depth	8.7	9.0	25	8.4–10.6	9.5	0.6
Adipose-fin to caudal-fin length	14.6	14.9	24	10.2–14.9	11.9	1.3
Anal-fin to caudal-fin length	32.2	31.8	25	30.8–36.8	33.0	1.5
<b>Percents of head length</b>						
Supracleithral width	80.6	78.9	25	73.2–82.1	78.0	2.5
Snout length	63.4	60.7	25	55.1–63.4	58.1	3.0
Interorbital distance	36.4	34.9	25	32.3–40.3	36.0	1.9
Orbital diameter	11.2	11.7	25	8.8–13.0	11.0	0.9
Occipital-orbital distance	38.4	37.9	25	37.9–48.6	41.3	2.6
Dentary width	28.5	31.4	25	21.8–31.4	26.4	2.1
<b>Counts</b>						
Lateral median series	24	24	25	24–25	24.5	0.5
Dorsal-fin base	6	6	25	6–7	6.8	0.4
Between dorsal and adipose	7	8	25	7–9	7.6	0.6
Between adipose and caudal	6	6	25	4–6	5.2	0.6
Between anal and caudal	13	13	25	12–14	12.8	0.7
Preadipose plates	4	4	25	4–8	6.2	1.2
Premaxillary teeth	-	-	23	51–96	67.4	11.2
Dentary teeth	86	-	23	55–109	78.9	15.1
Cheek spines	11	8	21	8–19	13.2	2.4

70°49'13"W, 25 Jul 2004, M. Sabaj, N. Salcedo, B. Rengifo, M. Arce; MUSM 25426, 12, 31.2–55.6 mm SL (1, 55.6 mm SL), Tambopata, río Inambari basin, quebrada Miraflores, 13°21'41"S 70°53'40"W, 25 Jul 2004, M. Hidalgo; MUSM 26312, 2, 31.9–85.2 mm SL (1, 85.2 mm SL); Quispicanchi, Camanti, río Araza basin, quebrada Sirihua, 13°23'46"S 70°53'59"W, 17 Out 2005, M. Hidalgo; MUSM 56232, 7, 34.0–74.5 mm SL (5, 51.6–74.5 mm SL), Carabaya, Ollachea, San Gaban, río Inambari basin, quebrada San Isidro, 13°37'45"S 70°26'46"W, 12 Out 2006, M. Hidalgo; MUSM 56233, 1, 82.8 mm SL, Carabaya, Ollachea, San Gaban, río Inambari basin, quebrada San Isidro, 13°37'45"S 70°26'46"W, 12 Out 2006, M. Hidalgo; MUSM 57367, 1, 73.6 mm SL, Carabaya, San

Gaban, río Inambari basin, quebrada Yuri Yuri, 13°33'09"S 70°26'15"W, 13 Oct 2006, M. Hidalgo; MUSM 57771, 8, 39.0–62.4 mm SL (4, 51.9–62.4 mm SL), Paucartambo, Kosñipata, río Quita Calzon, 13°02'01"S 71°31'32"W, 11 May 2006, M. Hidalgo; MUSM 57776, 1, 53.6 mm SL, Paucartambo, Kosñipata, quebrada Euaraya, 13°02'05"S 71°31'01"W, 11 May 2006, M. Hidalgo; MUSM 57794, 15, 27.5–64.8 mm SL (4, 54.6–64.8 mm SL), Paucartambo, Pillcopata, río Tono, 12°57'31"S 71°31'45"W, 13 May 2006, M. Hidalgo; MUSM 57798, 74.8 mm SL, Cusco Department, Paucartambo Province and District of Pillcopata, río Tono, 12°57'31"S 71°31'45"W, 13 May 2006, M. Hidalgo. **Non-measured material:** río Madre de Dios basin: MUSM 25428, 36, 24.7–55.6 mm SL, Tambopata, río Inambari basin, tributary of río Araza, 13°18'52"S 70°49'13"W, 25 Jul 2004, M. Hidalgo; MUSM 57372, 24, 24.5–40.0 mm SL, Carabaya, San Gaban, río Inambari basin, quebrada Prodocarpa, 13°25'50"S 70°19'45"W, 17 Oct 2006, M. Hidalgo; MUSM 57750, 1, 37.5 mm SL, Paucartambo, Kosñipata, río San Pedro, 13°03'18"S 71°32'49"W, 10 May 2006, M. Hidalgo; MUSM 57758, 1, 42.4 mm SL, Paucartambo, Kosñipata, río Kosñipata, 13°03'23"S 71°32'40"W, 10 May 2006, M. Hidalgo; MUSM 58517, 11, 30.7–48.4 mm SL, Paucartambo, Kosñipata, quebrada km 160 AMD 16, 13°02'03"S 71°30'55"W, 12 May 2006, M. Hidalgo.

#### *Ancistrus maldonadoi*, new species

urn:lsid:zoobank.org:act:ED1397C7-5087-4EB8-94D8-326A42AEEE2D

(Fig. 4, Tab. 2)

**Holotype.** MUSM 57733, 114.7 mm SL, male, Peru, Manu District, Manu Province, río Madre de Dios basin, río Salvación, 12°55'05"S 71°27'36"W, 21 May 2006, M. Hidalgo.

**Paratypes. Peru: río Madre de Dios basin:** INPA 58921, 10, 40.6–101.9 mm SL (2, 68.6–101.9 mm SL), Manu, Parque Nacional del Manu, quebrada Culli, ca. 12°10'S 71°00'W, 5 Sep 1988, H. Ortega *et al.*; MPUJ 14358, 2, 68.9–72.7 mm SL, same data from holotype; MUSM 3763, 1, 87.0 mm SL, Manu, Salvación, quebrada Culli, 12°51'S 71°23'W, 5 Sep 1988, H. Ortega; MUSM 11620, 1, 77.5 mm SL, Sandia, Zona Reservada Tambopata Candamo, río Ebehua-baeji basin, río Beshuajali, 13°14'45"S 70°00'02"W, 25 Jul 1997, F. Chang; MUSM 11665, 2, 68.3–81.1 mm SL, Sandia, Zona Reservada Tambopata Candamo, río Ebehua-baeji basin, río Explorada, 13°14'34"S 70°00'01"W, 28 Jul 1997, F. Chang; MUSM 57732, 4, 58.0–64.2 mm SL (2, 61.6–64.2 mm SL), same data from holotype; MUSM 57832, 5, 61.5–147.2 mm SL (4, 74.5–147.2 mm SL), Paucartambo, Pillcopata, Tono, río Huacarya, 12°55'05"S 71°27'36"W, 13 May 2006, M. Hidalgo; MUSM 58079, 2, 47.6–74.4 mm SL (1, 74.4 mm SL), Paucartambo, Pillcopata, río Queros, 12°56'41"S 71°21'22"W, 17 May 2006, M. Hidalgo; MUSM 58521, 6, 49.5–76.3 mm SL (2, 65.6–67.6 mm SL), Paucartambo, Pillcopata, Queros, río Sabaluyoc, 12°56'38"S 71°21'09"W, 17 May 2006, M. Hidalgo; MUSM 58671, 4, 40.9–83.0 mm SL (1, 83.0 mm SL), Quispicanhis, Camanti, río Inambari basin, stream without name, 13°11'29"S 70°33'16"W, 7 Aug 2010, M. Hidalgo; MZUSP 125014, 2, 85.1–85.4 mm



SL, Paucartambo, Pillcopata, Queros, río Sabaluyoc, 12°56'38"S 71°21'09"W, 17 May 2006, M. Hidalgo; NUP 21719, 2, 70.4–75.6 mm SL, Paucartambo, Pillcopata, Queros, río Sabaluyoc, 12°56'38"S 71°21'09"W, 17 May 2006, M. Hidalgo.



**FIGURE 4 |** *Ancistrus maldonadoi*, MUSM 57733, holotype, 114.7 mm SL, male, Peru, Manu, río Madre de Dios basin, río Salvación.

**Diagnosis.** *Ancistrus maldonadoi* is diagnosed from congeners, except *A. greeni*, by having unicuspid teeth (*vs.* bicuspid). *Ancistrus maldonadoi* is diagnosed from *A. greeni* by larger orbital diameter 13.8–20.6% of HL (*vs.* 8.8–13.0%); and longer adipose-fin spine (adipose spine length 7.2–9.5% of SL *vs.* 3.7–6.3%). Furthermore, *A. maldonadoi* is distinguished from the species described from rio Madre de Dios basin by larger dentary width 25.9–31.4 % of HL (*vs.* 18.0–21.3% in *A. montanus*); deeper caudal peduncle (12.2–14.0% of SL; *vs.* 9.4–11.2% in *A. marcapatae*, 9.6–10.5% in *A. megalostomus*, and 10.1–10.7% in *A. montanus*).

**Description.** Morphometric data and counts in Tab. 2. Head and trunk moderately depressed with body depth greatest at supraoccipital. Dorsal profile of body convexly raising from tip of snout to dorsal-fin origin, then straight or slightly convex to adipose fin, and concave from that point to caudal fin. Ventral profile of body straight, slightly convex on caudal peduncle. Caudal peduncle compressed; slightly flattened ventrally.

Head moderately large and wide; snout large and rounded in dorsal view, with large naked margin bordered by dermal platelets on lateral portion in males. Adult males with middle- to large-sized tentacles, sometimes branched on dorsal region of snout. Females usually with two small tentacles on each side of snout border. Evertible cheek plates supporting (14–26) hypertrophied odontodes (cheek spines).

Eye mid-sized, 13.8–20.6% of HL, dorsal orbit not raised; dorsolaterally positioned. Interorbital region slightly concave. Exposed portion of opercle roughly triangular, supporting odontodes; supra-opercular region with few platelets near compound pterotic.

Oral disk circular covered with small papillae; lower lip not reaching pectoral girdle, with papillae reducing in size toward margin; maxillary barbel short, attached to lip. Branchial opening small. Premaxillary and dentary tooth rows mid- to large; teeth short, thin, numerous, unicuspid (Fig. 3b), curved inward. Three specimens having tiniest lateral cusp, almost imperceptible (MUSM 11665, 2, 68.3–81.1 mm SL; MUSM 57732, 1, 59.6 mm SL). Only one small buccal papilla positioned between premaxillae.

Head covered by dermal bones; dorsum covered by dermal plates, except at dorsal-fin base. Supraoccipital process limited posteriorly by first pair of predorsal plates and posterolaterally by the first plate of the mid-dorsal series. Trunk with five series of lateral plates, three lateral series on the narrowest portion of caudal peduncle. Mid-dorsal and mid-ventral series not surpassing adipose fin. Median series supporting lateral line. Short odontodes on fin rays and body plates. Ventral surface devoid of plates from snout tip to anal-fin insertion. Base of first anal-fin pterygiophore covered by skin.

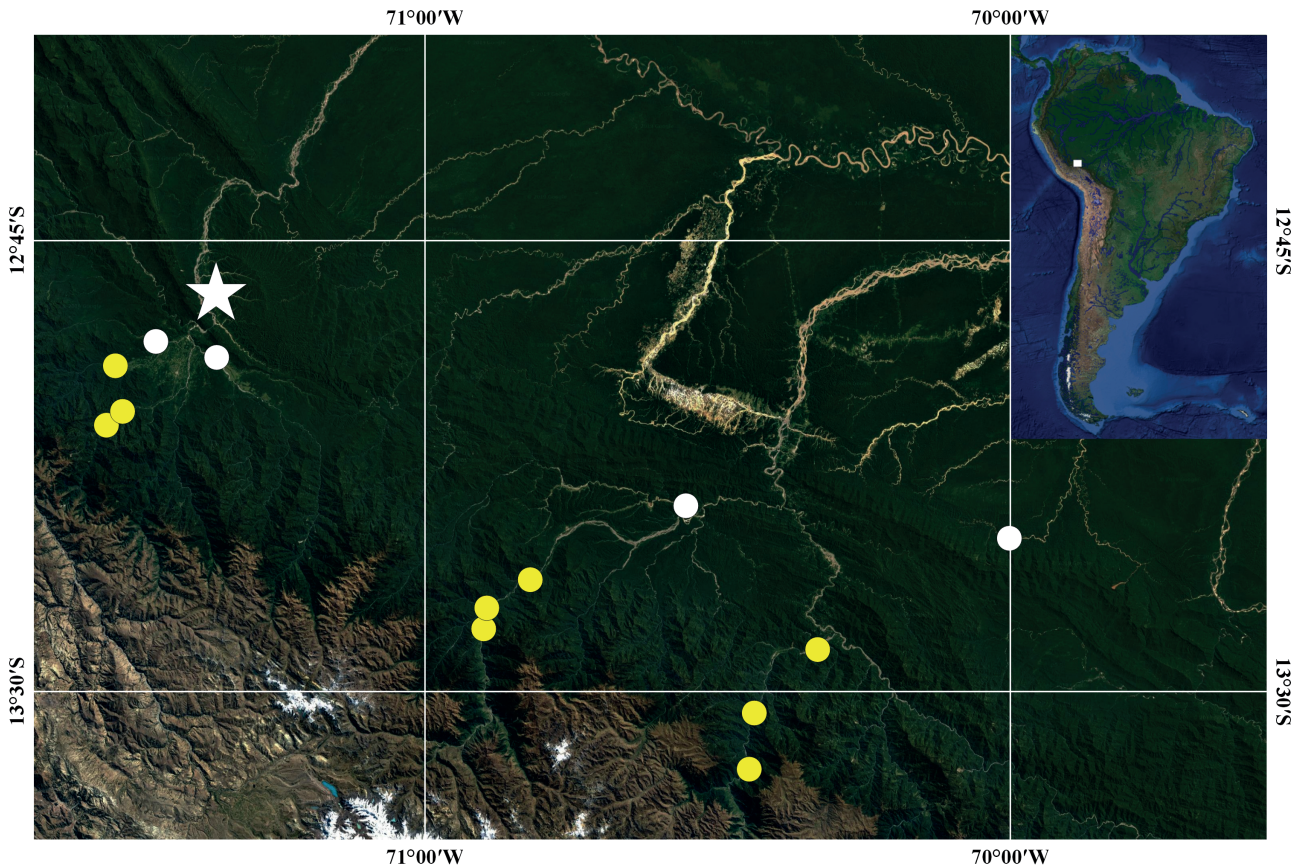
Dorsal-fin origin situated slightly anterior to vertical through pelvic-fin origin; dorsal fin usually reaching preadipose plate when adpressed; dorsal-fin spine flexible, shorter than head length. Adipose-fin spine short. Pectoral-fin spine inflexible and slightly curved inward, with hypertrophied odontodes and tentacles on its distal portion; pectoral fin surpassing pelvic-fin origin when adpressed. Pelvic fin flexible and curved inward, depressed pelvic-fin unbranched ray surpassing origin of anal fin. Anal fin short. Caudal-fin margin obliquely truncate with ventral unbranched ray longer than dorsal one. Fin-ray formula: dorsal II,7; pectoral I,6; pelvic i,5; anal i,4; caudal i,14,i.

**TABLE 2** | Morphometric and meristic data of *Ancistrus maldonadoi*. SD= standard deviation, N= number (including holotype).

Characters	Holotype	N	Range	Mean	SD
Standard length (mm)	114.7	21	61.6–147.2	80.9	-
<b>Percents of standard length</b>					
Predorsal length	45.7	21	42.9–46.3	44.5	1.0
Head length	35.1	21	32.2–36.2	34.5	1.1
Occipital depth	19.1	21	16.4–19.1	17.6	0.7
Cleithral width	33.8	21	30.4–36.0	32.7	1.3
Dorsal-fin base length	20.3	21	18.4–21.3	19.8	0.9
Interdorsal length	19.9	21	17.9–23.8	20.4	1.6
Prepectoral length	29.2	21	25.8–30.0	28.3	1.1
Prepelvic length	51.5	21	48.9–53.5	50.4	1.1
Dorsal-fin spine length	25.3	21	24.1–27.6	26.0	1.0
Pectoral-fin spine length	29.2	21	25.2–30.5	26.6	1.4
First pelvic-fin ray length	25.9	21	22.6–27.6	25.4	1.2
Adipose-fin spine length	7.2	21	7.2–9.5	8.4	0.7
First anal-fin ray length	9.2	19	7.1–10.8	8.7	0.9
Thoracic length	25.0	21	24.4–27.6	25.9	0.9
Abdominal length	17.9	21	17.5–20.1	18.6	0.7
Upper caudal-fin ray length	26.1	13	24.1–30.3	27.9	1.8
Lower caudal-fin ray length	27.0	14	26.3–35.4	31.2	2.7
Caudal peduncle length	29.3	21	28.7–32.2	30.1	0.9
Caudal peduncle depth	13.1	21	12.2–14.0	12.7	0.4
Adipose-fin to caudal-fin length	13.5	21	13.4–17.7	15.3	1.3
Anal-fin to caudal-fin length	33.8	21	32.0–37.0	35.2	1.2
<b>Percents of head length</b>					
Supracleithral width	86.3	21	78.0–92.7	85.1	3.3
Snout length	56.2	21	54.5–60.7	57.2	1.7
Interorbital distance	41.7	21	37.3–41.7	39.3	1.1
Orbital diameter	14.8	21	13.8–20.6	17.8	1.7
Occipital-orbital distance	41.7	21	39.4–43.2	41.4	1.2
Dentary width	26.7	21	25.9–31.4	27.9	1.4
<b>Counts</b>					
Lateral median series	24	21	24–25	24.0	0.2
Dorsal-fin base	6	21	6–7	6.1	0.3
Between dorsal and adipose	8	21	6–8	7.2	0.5
Between adipose and caudal	6	21	5–7	5.8	0.5
Between anal and caudal	13	21	12–13	12.6	0.5
Preadipose plates	2	21	2–4	3.2	0.6
Premaxillary teeth	84	20	71–105	83.8	9.1
Dentary teeth	110	20	75–115	94.3	10.7
Cheek spines	26	21	14–26	19.0	3.3

**Color in alcohol.** Body background color yellowish–brown to greenish. Dorsal surface of head and trunk with rounded mid size spots, diameter similar or larger than pupil. Ventral surface of head and abdomen yellowish to light brown, brown on ventral surface of caudal peduncle. All fins with alternating dark and light spots on the rays, sometimes organized into transverse bands.

**Sexual dimorphism.** Largest male and female with 114.7 mm and 147.2 mm SL, respectively. Mature males have small- to middle-sized tentacles on dorsal region and border of snout. Females sometimes with fewer and shorter tentacles than males limited to one series on lateral border of snout, usually two to four on each side of snout.



**FIGURE 5** | Partial map of Peru, showing the collecting sites of *Ancistrus greeni* (yellow) and *Ancistrus maldonadoi* (white). Star indicates type locality. Both symbols can represent more than one lot and/or locality.

**Geographical distribution.** *Ancistrus maldonadoi* is only known from the río Madre de Dios and río Inambari basins (Fig. 5).

**Etymology.** The specific name *maldonadoi* is a special dedication *in memoriam* to professor Dr. Javier Maldonado-Ocampo, Pontificia Universidad Javeriana in Bogotá, Colombia for his great contribution to the Neotropical Ichthyology.

**Conservation status.** *Ancistrus maldonadoi* occurs along a well-conserved region, with good water quality and little or no human pressure. Thus, considering the good environmental conditions of the known area of occurrence for the species, we suggest that *A. maldonadoi* be classified as LC (Least Concern) under the International Union for Conservation of Nature (IUCN) categories and criteria (IUCN Standards and Petitions Subcommittee, 2019) of extinction risk.

## DISCUSSION

Regan (1904) described *Chaetostomus maculatus* (= *A. greeni*) using interorbital width

36.4–37.5% of HL and orbital diameter 11.1% of HL as diagnostic characters. Another character mentioned by Regan was the presence of 3 to 4 preadipose plates, a state not common in *Ancistrus*. However, an analysis of the syntypes revealed a presence of unicuspid tooth, a rare characteristic in members of the genus. We were not able to determine the type locality, because in the original description of *A. greeni* it was mentioned as “Upper Peru”, making it difficult to establish the true original sampling site of the types.

Eight valid species of *Ancistrus* were recorded from the rio Madeira basin (Fish-Muller, 2003; Ferraris, 2007; Bifi *et al.*, 2019): *A. dubius* Eigenmann, Eigenmann, 1889; *A. hoplogenyis* (Günther, 1864); *A. dolichopterus* Kner, 1854; *A. marcapatae*; *A. megalostomus*; *A. miracollis* Bifi, de Oliveira, Rapp Py-Daniel, 2019; *A. montanus*, and *A. verecundus* Fisch-Muller, Cardoso, Silva, Bertaco, 2005; and three additional species probably new to science: *Ancistrus* sp. “sideral”; *Ancistrus* sp.1 “baixinho” and *Ancistrus* sp.2 “sotério” (Zawadzki, Chamon, 2013). We added other two records to this river basin: *A. greeni* and *A. maldonadoi*, which share a unique feature among mentioned congeners: the unicuspid teeth.

In addition, *Ancistrus greeni* shares the presence of a keel formed by four or more preadipose plates with *A. bufonius*, *A. marcapatae*, *A. tolima*, and *A. vericaucanus*, but as already mentioned can be diagnosed from them by tooth shape (unicuspid *vs.* bicuspid). Furthermore, *A. greeni* can be distinguished from the most similar looking congener, *A. maldonadoi*, by having a colour pattern of small pale dots on a dark background (*vs.* large); dorsal-fin spine length 19.3–25.4% of SL, mean= 22.5% (*vs.* 24.1–27.6%, mean= 26.0%); and pectoral-fin spine length 21.5–26.6% of SL, mean= 23.9% (*vs.* 25.2–30.5%, mean= 26.6%). The sharing of unicuspid teeth suggests a close relationship between *A. greeni* and *A. maldonadoi*, as do the presence of three to eight preadipose plates, which is a state present in many species from the Andes, suggesting a close relationship among the *Ancistrus* species of the region.

The genus has many unsolved taxonomic problems and a complete study is necessary for fully understand this taxon. Similarly, there are few published studies that advance the taxonomic understanding of the loricariids from Peru. Moreover, we suggest that redescription of species poorly known, with improvement of diagnostic characters should be developed for the better comprehension of the taxonomy of *Ancistrus*, and the phylogenetic relationship within it.

**Comparative material examined.** *Ancistrus abillhoai*. **Brazil:** MZUSP 104116, 99.3 mm SL, holotype of *A. abillhoai* Bifi, Pavanelli, Zawadzki, 2009. *Ancistrus agostinhoi*. **Brazil:** MZUSP 104118, 96.1 mm SL, holotype of *A. agostinhoi* Bifi, Pavanelli, Zawadzki, 2009. *Ancistrus aquaboensis*. **Brazil:** INPA 377612, 1, 61.9 mm SL. *Ancistrus alga*. **Peru:** ANSP 8298, 1, 115.6 mm SL, syntype of *Chaetostomus tectirostris* Cope, 1872; ANSP 8300, 1, 110.0 mm SL, syntype of *Chaetostomus tectirostris* Cope, 1872; ANSP 16461–62, 2, 93.0–125.6 mm SL, syntypes of *Chaetostomus alga* Cope, 1872. *Ancistrus amaris*. **Colombia:** MPUJ 9369, 7, 52.2–77.1 mm SL. *Ancistrus brevipinnis*. **Brazil:** BMNH 1891.3.16.76, 78.8 mm SL, holotype of *Xenocara brevipinnis* Regan, 1904. *Ancistrus bufonius*. **Peru:** MNHN 2227, 2, 109.9–112.5 mm SL, syntypes of *Hypostomus calamita*, 1840; MNHN 2228, 2, 103.1–104.3 mm SL, syntypes of *Hypostomus bufonius* Valenciennes, 1840. *Ancistrus centrolepis*. **Colombia:** ANSP 71709, 180.0 mm SL,

holotype of *A. baudensis* Fowler, 1945; ANSP 71710, 179.9 mm SL, holotype of *Pristiancistrus eustictus* Fowler, 1945; BMNH 1910.7.11.122, 150.2 mm SL, syntype of *A. centrolepis* Regan 1913; BMNH 1913.10.1.58, 113.7 mm SL, syntype of *A. centrolepis* Regan, 1913; **Panama**: FMNH 9842, 165.6 mm SL, holotype of *A. spinosus* Meek, Hildebrand, 1916. *Ancistrus cirrhosus*. **Argentina**: MNHN B.0603, 82.6 mm SL, lectotype of *Hypostomus cirrhosus* Valenciennes, 1836, subsequent designation by Isbrücker (1980); MNHN A.9565, 2, 66.2–79.5 mm SL, paralectotypes of *H. cirrhosus* Valenciennes, 1836, subsequent designation by Isbrücker (1980); MNHN 4845, 4, 46.2–51.9 mm SL, paralectotypes of *H. cirrhosus* Valenciennes, 1836, subsequent designation by Isbrücker (1980). *Ancistrus claro*. **Brazil**: MCP 28667, 67.8 mm SL, holotype of *A. claro* Knaack, 1999. *Ancistrus cryptophthalmus*. **Brazil**: MCP 10523, 1, 49.2 mm SL, paratype of *A. cryptophthalmus* Reis, 1987. *Ancistrus cuiabae*. **Brazil**: MCP 28671, 112.8 mm SL, holotype of *A. cuiabae* Knaack, 1999; NUP 933, 7 of 74, 64.4–92.2 mm SL; NUP 3441, 8 of 14, 66.0–81.1 mm SL. *Ancistrus* cf. *dubius*. **Brazil**: INPA 19071, 1, 91.1 mm SL. *Ancistrus galani*. **Venezuela**: MCP 15634, 1, 55.9 mm SL, paratype of *A. galani* Peres, Vilória, 1994. *Ancistrus damasceni*. **Brazil**: NMW 43489, 4, 29.3–41.4 mm SL, syntypes of *Xenocara damasceni* Steindachner, 1907; NMW 43490, 7, 25.6–35.8 mm SL, syntypes of *Xenocara damasceni* Steindachner, 1907. *Ancistrus dolichopterus*. **Brazil**: NMW 46276, 2, 80.9–90.7 mm SL, syntypes of *A. dolichopterus* Kner, 1854; NMW 47164, 2, 86.2–101.0 mm SL, syntypes of *A. dolichopterus* Kner, 1854. *Ancistrus erinaceus*. **Chile?**: MNHN A.9568, 74.9 mm SL, holotype of *H. erinaceus* Valenciennes, 1840. *Ancistrus falconensis*. **Venezuela**: ANSP 189316, 2, 95.5–121.7 mm SL, paratypes of *A. falconensis* Taphorn *et al.*, 2010. *Ancistrus fulvus*. **Brazil**: NMW 57203, 87.5 mm SL, holotype of *Xenocara fulva* Holly, 1929. *Ancistrus gymnorrhynchus*. **Venezuela**: BMNH 1904.11.9.27–31, 5, 83.8–134.0 mm SL, syntypes of *Xenocara rothschildi* Regan, 1905; NMW 43495, 111.3 mm SL, holotype of *A. gymnorrhynchus* Kner, 1854. *Ancistrus hoplogenyis*. **Brazil**: BMNH 1849.11.8.89–91, 3, 74.3–99.7 mm SL, syntypes of *Chaetostomus hoplogenyis* Günther, 1864. *Ancistrus jataiensis*. **Brazil**: MCP 35244, 54.0 mm SL, holotype of *A. jataiensis* Fisch-Muller, Cardoso, da Silva, Bertaco, 2005. *Ancistrus karajas*. **Brazil**: INPA 57583, 39.0 mm SL, holotype of *A. karajas* de Oliveira *et al.*, 2016. *Ancistrus krenakarore*. **Brazil**: INPA 34155, 46.7 mm SL, holotype of *A. krenakarore* de Oliveira *et al.*, 2016. *Ancistrus latifrons*. **Peru**: BMNH 1869.5.21.4, 122.6 mm SL, holotype of *Chaetostomus latifrons* Günther, 1869. *Ancistrus leoni*. **Brazil**: INPA 49622, 3, 46.8–105.6 mm SL. *Ancistrus leucostictus*. **Guyana**: BMNH 1864.1.21.85, 49.3 mm SL, holotype of *Chaetostomus leucostictus* Günther. *Ancistrus lithurgicus*. **British Guiana**: BMNH 1911.10.31.107–108, 1, 35.6 mm SL (plus one specimen of *Ancistrus* sp. with 58.3 mm SL), paratype of *A. lithurgicus* Eigenmann, 1912; FMNH, 53091, 69.3 mm SL, holotype of *A. lithurgicus* Eigenmann, 1912; FMNH, 64613, 4, 35.0–63.7 mm SL, paratype of *A. lithurgicus* Eigenmann, 1912. *Ancistrus macrophthalmus*. **Venezuela**: MNHN 1887–0650, 1, 76.7 mm SL, holotype of *Xenocara macrophthalma* Pellegrin, 1912. *Ancistrus maculatus*. **Brazil**: NMW 47290, 1, 106.1 mm SL, syntype of *Chaetostomus (Ancistrus) cirrhosus* var. *maculatus* Steindachner, 1881. *Ancistrus malacops*. **Colombia**: ANSP 70517, 90.8 mm SL, holotype of *A. lineolatus* Fowler, 1943; **Peru**: ANSP 8299, 2, 72.0 mm SL (one specimen broken), syntype of *Chaetostomus malacops* Cope, 1872; MUSM 38968, 1, 81.2 mm SL; **Ecuador**: BMNH 1880.12.8.69–74, 6, 60.2–85.4 mm SL, syntypes of

*Xenocara occidentalis* Regan, 1904; **Brazil**: INPA 2393, 2, 55.0–69.1 mm SL; INPA 49272, 7, 29.3–110.8 mm SL. *Ancistrus marcapatae*. **Peru**: BMNH 1902.5.29.211, 79.1 mm SL, holotype of *Chaetostomus marcapatae* Regan, 1904; BMNH 1911.12.20.35–36, 2, 45.7–63.2 mm SL, syntypes of *Xenocara heterorhynchus* Regan, 1912; MUSM 10087, 1, 88.5 mm SL; MUSM 57498, 1, 66.6 mm SL; MUSM 58097, 2, 57.9–59.9 mm SL. **Bolivia**: NMW 43475, 2, 40.8–58.0 mm SL, syntypes of *Xenocara boliviana* Steindachner, 1915; NMW 43476, 27, 31.2–65.6 mm SL, syntypes of *Xenocara boliviana* Steindachner, 1915. *Ancistrus martini*. **Venezuela**: USNM 121064, 82.3 mm SL, holotype of *A. triradiatus martini* Schultz, 1944; USNM 121065, 1, 51.4 mm SL, paratype of *A. triradiatus martini* Schultz, 1944; USNM 121066, 61.4 mm SL, holotype *Ancistrus brevifilis bodenhameri* Schultz, 1944; USNM 121069, 2, 27.3–52.1 mm SL, paratypes *A. brevifilis bodenhameri* Schultz, 1944. *Ancistrus maximus*. **Brazil**: INPA 35952, 4, 91.4–147.6 mm SL, paratypes of *A. maximus* de Oliveira *et al.*, 2015. *Ancistrus megalostomus*. **Bolivia**: CAS 64614, 2, 81.7–83.5 mm SL, syntypes of *A. megalostomus* Pearson, 1924; **Peru**: MUSM 10366, 1, 64.9 mm SL; MUSM 11606, 2, 70.5–85.5 mm SL. *Ancistrus miracollis*. **Brazil**: INPA 57624, 66.7 mm SL, holotype of *A. miracollis* Bifi, de Oliveira, Rapp Py-Daniel, 2019. *Ancistrus montanus*. **Bolivia**: BMNH 1902.12.18.4, 81.3 mm SL, holotype of *Xenocara montana* Regan, 1904; **Peru**: MUSM 57817, 1, 82.0 mm SL; MUSM 57830, 1, 48.5 mm SL. *Ancistrus mullerae*. **Brazil**: MZUSP 104121, 119.1 mm SL, holotype of *A. mullerae* Bifi, Pavanelli, Zawadzki, 2009. *Ancistrus multispinis*. **Brazil**: BMNH 1910.7.26.31, 74.6 mm SL, lectotype of *Xenocara multispinis* Regan, 1912, subsequent designation by Muller (1989); BMNH 1910.7.26.32–33, 2, 86.7–98.5 mm SL, paralectotypes of *Xenocara multispinis* Regan, 1912; MNRJ 1078, 15 of 70, 61.1–89.9 mm SL. *Ancistrus nudiceps*. **Brazil**: INPA 58328, 1, 141.6 mm SL. *Ancistrus occloui*. **Peru**: CAS 66847, 89.3 mm SL, holotype of *A. occloui* Eigenmann, 1928; MUSM 41133, 1, 119.9 mm SL. *Ancistrus parecis*. **Brazil**: MCP 35570, 59.5 mm SL, holotype of *A. parecis* Fisch-Muller, Cardoso, da Silva, Bertaco, 2005. *Ancistrus pirareta*. **Paraguay**: NUP 3425, 7 of 14, 72.0–104.9 mm SL. *Ancistrus piriformis*. **Paraguay**: MCP 13703, 2, 63.4–65.0 mm SL, paratype of *A. piriformis* Muller, 1989; USNM 307766, 1, 64.9 mm SL, paratype of *A. piriformis* Muller, 1989. *Ancistrus ranunculus*. **Brazil**: INPA 9509, 93.5 mm SL, holotype of *A. ranunculus* Muller, Rapp Py-Daniel, Zuanon, 1994. *Ancistrus cf. shuar*. **Peru**: MUSM 21930, 8, 41.5–86.6 mm SL. *Ancistrus tamboensis*. **Peru**: ANSP 71643, 79.2 mm SL, holotype of *A. tamboensis* Fowler, 1945; MUSM 13602, 7 of 10, 57.1–83.7 mm SL. *Ancistrus taunay*. **Brazil**: MCP 18783, 11, 56.2–98.0 mm SL. *Ancistrus trinitatis*. **Trinidad**: ANSP 71723, 81.8 mm SL, holotype of *A. maracasae* Fowler, 1946, neotype of *A. trinitatis* by subsequent designation by Souza *et al.* (2019: 48). *Ancistrus triradiatus*. **Colombia**: CAS 60164, 88.3 mm SL, holotype of *A. triradiatus* Eigenmann, 1918. *Ancistrus verecundus*. **Brazil**: MCP 35572, 53.7 mm SL, holotype of *A. verecundus* Fisch-Muller, Cardoso, da Silva, Bertaco, 2005. *Ancistrus variolus*. **Peru**: ANSP 21284–21285, 2, 46.8 mm SL (one specimen broken), syntypes of *Chaetostomus variolus* Cope, 1872. *Ancistrus tombador*. **Brazil**: MCP 33001, 10, 24.9–57.6 mm SL, paratypes of *A. tombador* Fisch-Muller, Cardoso, da Silva, Bertaco, 2005.

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## REFERENCES

- **Bifi AG, Pavanelli CS, Zawadzki CH.** Three new species of *Ancistrus* Kner, 1854 (Siluriformes: Loricariidae) from the rio Iguacu basin, Paraná State, Brazil. *Zootaxa*. 2009; 2275(1):41–59.
- **Bifi AG, de Oliveira RR, Py-Daniel LR.** A new species of *Ancistrus* Kner, 1854 (Siluriformes: Loricariidae) from rio Madeira basin, Amazonas State, Brazil. *Neotrop Ichthyol*. 2019; 17(2):e180135. <http://dx.doi.org/10.1590/1982-0224-20180135>
- **Burgess WE.** An atlas of freshwater and marine catfishes. A preliminary survey of the Siluriformes. New Jersey: T.F.H. Publications; 1989.
- **Ferraris CJ.** Checklist of catfishes, recent and fossil (Osteichthyes: Siluriformes), and catalogue of siluriform primary types. *Zootaxa*. 2007; 1418(1):1–628. <http://dx.doi.org/10.11646/zootaxa.1418.1.1>
- **Fish-Muller S.** Subfamily Ancistrinae (Armored catfishes). In: Reis RE, Kullander SO, Ferraris CJ, Jr., organizers. Check list of the freshwater fishes of South and Central America. Porto Alegre: Edipucrs; 2003. p.373–400.
- **Fisch-Muller S, Mazzoni R, Weber C.** Genetic and morphological evidences for two new sibling species of *Ancistrus* (Siluriformes: Loricariidae) in upper rio Tocantins drainage, Brazil. *Ichthyol Explor Freshw*. 2001; 12(4):289–304.
- **International Union for Conservation of Nature (IUCN).** Standards and petitions subcommittee. Guidelines for using the IUCN Red List categories and criteria. Version 14 [Internet]. Gland; 2019. Available from: <http://cmsdocs.s3.amazonaws.com/RedListGuidelines.pdf>
- **Isbrücker IJH.** Classification and catalogue of the mailed Loricariidae (Pisces, Siluriformes). Amsterdam: Instituut voor Taxonomische Zoölogie, Universiteit van Amsterdam; 1980.
- **Isbrücker IJH, Seidel I, Michels JP, Schraml E, Werner A.** Diagnose vierzehn neuer Gattungen der Familie Loricariidae Rafinesque, 1815 (Teleostei, Ostariophysi). *DATZ-Sonderheft Harnischwelse*. 2001; 2:17–24.



- **Lujan NK, Armbruster JW, Lovejoy N, Lopez-Fernandez H.** Multilocus molecular phylogeny of the suckermouth armored catfishes (Siluriformes: Loricariidae) with a focus on subfamily Hypostominae. *Mol Phylogenet Evol.* 2015; 82:269–88. <https://doi.org/10.1016/j.ympev.2014.08.020>
- **Muller, S.** Description de deux nouvelles espèces paraguayennes du genre *Ancistrus* Kner, 1854 (Pisces, Siluriformes, Loricariidae). *Rev Suisse Zool.* 1989; 96: 885–904.
- **Ortega H, Vari RP.** Annotated checklist of the freshwater fishes of Peru. Washington (DC): Smithsonian Institution Press; 1986.
- **Oyakawa OT, Akama A, Zanata AM.** Review of the genus *Hypostomus* Lacépède, 1803 from rio Ribeira de Iguape basin, with description of a new species (Pisces, Siluriformes, Loricariidae). *Zootaxa.* 2005; 921(1):1–27. <http://dx.doi.org/10.11646/zootaxa.921.1.1>
- **Regan CT.** A monograph of the fishes of the family Loricariidae. *Trans Zool Soc London.* 1904; 17(3):191–350.
- **Schaefer SA.** The Neotropical cascudinhos: systematics and biogeography of the *Otocinclus* catfishes (Siluriformes: Loricariidae). *P Acad Nat Sci Phila.* 1997; 148:1–120.
- **Weber C.** Subfamily Hypostominae (Armored catfishes). In: Reis RE, Kullander SO, Ferraris CJ, Jr., organizers. Check list of the freshwater fishes of South and Central America. Porto Alegre: Edipucrs; 2003. p.351–72.
- **Zawadzki CH, Chamon CC.** **Hypostominae.** In: Queiroz LJ, Torrente-Vilara G, Ohara WM, Pires THS, Zuanon J, Doria CRC, organizers. Peixes do rio Madeira. São Paulo: Diaeto Latin American Documentary; 2013. p.302–37.

#### AUTHOR CONTRIBUTIONS

**Alessandro Gasparetto Bifi:** Conceptualization, Data curation, Writing (original draft).

**Hernán Ortega:** Conceptualization, Data curation, Writing (original draft).

#### ETHICAL STATEMENT

Not applicable.

#### COMPETING INTERESTS

The authors declare no competing interests.

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## Neotropical Ichthyology



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