

New species of *Curimatopsis* from the río Caroni, Orinoco basin, Venezuela, with comments on *C. macrolepis* (Characiformes: Curimatidae)



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A new species of *Curimatopsis* is described from the highlands of the western Guiana Shield in the río Carapo and río Paragua, tributaries of the río Caroni in the Orinoco basin, southeastern Venezuela. The new species belongs to the *Curimatopsis macrolepis* clade due to its possession of a long lower jaw that projects past the anterior margin of the upper jaw, and separate first and second hypurals. The new species is diagnosed from remaining species of the *Curimatopsis macrolepis* clade by having a small-sized inconspicuous dark spot on the midlateral surface of the caudal peduncle, by details of body and fin pigmentation, and by additional morphometric characters. The distribution of *C. macrolepis* in the Amazon and Orinoco basins is updated based on the examination of museum specimens.

Keywords: Gran Sabana, Guiana Shield, Ostariophysi, Teleostei

Uma nova espécie de *Curimatopsis* é descrita da porção oeste do Escudo das Guianas dos rios Carapo e Paragua, tributários do rio Caroni, bacia do Orinoco no sudeste da Venezuela. A nova espécie pertence ao clado *Curimatopsis macrolepis* por possuir uma maxila inferior longa que se projeta além da margem anterior da maxila superior e primeiro e segundo hipurais separados. A nova espécie é diagnosticada das demais espécies do clado *Curimatopsis macrolepis* por possuir uma mácula escura pequena, inconspícua na superfície lateral do pedúnculo caudal, por detalhes de pigmentação do corpo e nadadeiras, e por dados morfométricos adicionais. A distribuição geográfica de *C. macrolepis* nas bacias do rio Amazonas e rio Orinoco é atualizada baseada na análise de espécimes depositados em museus.

Palavras-chave: Gran Sabana, Escudo das Guianas, Ostariophysi, Teleostei

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INTRODUCTION

The 115 extant species of the Neotropical fish family Curimatidae (Fricke *et al.*, 2020) are broadly distributed in all major river systems of South America, Panama and Costa Rica (Vari, 2003). Those species are currently assigned to eight genera: *Curimatopsis* Steindachner, 1876 (10 species), *Curimata* Bosc, 1817 (13 species), *Potamorhina* Cope, 1878 (five species), *Psectrogaster* Eigenmann, Eigenmann, 1889 (eight species), *Pseudocurimata* Fernández-Yépez, 1948 (six species), *Curimatella* Eigenmann, Eigenmann, 1889 (five species), *Steindachnerina* Fowler, 1906 (24 species), and *Cyphocharax* Fowler, 1906 (44 species). Fourteen new curimatid species have been described in the last 10 years (Fricke *et al.*, 2020), five of them belonging to the genus *Curimatopsis* (Melo *et al.*, 2016a; Melo, Oliveira, 2017; Dutra *et al.*, 2018).

Curimatopsis is supported by 16 synapomorphies (Vari, 1982, 1989) and can be diagnosed by the distinctly rounded anterior margin of the maxilla, the absence of the laterosensory canal segment in the first infraorbital, and a reduced laterosensory system on the body, with pores restricted to only the anterior portion thereof (Vari, 1982, 1989). Two main clades of *Curimatopsis* are well defined by morphological and molecular evidence: the *C. macrolepis* clade supported by three anatomical synapomorphies and the *C. evelynae* clade supported by five such synapomorphies (Vari, 1982, 1989; Melo *et al.*, 2018). Five species are assigned to each clade distributed along lowlands of the Orinoco, Amazon, and Paraguay river basins, and coastal Atlantic rivers from the Guianas to northeastern Brazil (Vari, 1982; Melo, Oliveira, 2017; Dutra *et al.*, 2018).

One species of each clade occurs in the Orinoco basin: *Curimatopsis macrolepis* (Steindachner, 1876), which is also distributed along the Amazon basin (type-locality: Tabatinga, rio Solimões), and *C. evelynae* Géry, 1964, which also occurs along the rio Negro downstream to Manaus (type locality: rio Manacacías, rio Meta) (Steindachner, 1876; Géry, 1964; Vari, 1982). At the time of the last revision (Vari, 1982), only a few records of both species were available in museum collections. Subsequent field collections showed that some species, such as *C. macrolepis*, have broader distributions than originally documented by Vari (1982). Here, a new species of *Curimatopsis* collected in tributaries of the rio Caroni of the Orinoco basin is formally described and updated information on the distribution of *C. macrolepis* is provided based on examination of museum specimens.

MATERIAL AND METHODS

Counts and measurements follow Vari (1982) and Melo *et al.* (2016a). Measurements are point-to-point linear distances taken with digital calipers to a precision of 0.1 mm. In the description, parentheses indicate the number of examined specimens for a particular count and an asterisk designates the value for the holotype. Radiographs (rd) were obtained for the holotype and 16 paratypes. Fused PU1+U1 is considered a single bone, and the vertebrae associated with the Weberian apparatus are counted as four elements. *Curimatopsis microlepis* Eigenmann, Eigenmann, 1889, was originally hypothesized as a member of the *C. macrolepis* clade (Vari, 1982), however, ongoing genetic studies by the author demonstrated that it does not belong to the clade; for this reason, the species was

not included in the distribution map. Efforts to deposit type specimens in the country of origin were not successful. Institutional abbreviations are: American Museum of Natural History, New York (AMNH); Auburn University Museum of Natural History, Auburn (AUM); Colección Zoológica, Facultad de Ciencias, Universidad del Tolima, Ibagué (CZUT-IC); Departamento de Zoología e Botânica, Universidade Estadual Paulista, São José do Rio Preto (DZSJRP); Instituto Nacional de Pesquisas da Amazônia, Manaus (INPA); Laboratório de Biologia e Genética de Peixes, Universidade Estadual Paulista, Botucatu (LBP); Museum of Comparative Zoology, Harvard University, Cambridge (MCZ), Museu Paraense Emílio Goeldi, Belém (MPEG), and Museu de Zoologia da Universidade de São Paulo, São Paulo (MZUSP).

RESULTS

Curimatopsis sabana, new species

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(Fig. 1, Tab. 1)

Holotype. AMNH 274996, 36.5 mm SL, rd, female, Venezuela, Bolívar, río Paragua, above second rapid upriver from the río Carapo mouth, río Caroni, Orinoco basin, approximately 5°35'35"N 63°42'19"W, 26 Feb 1990, C. J. Ferraris & A. Machado-Allison.

Paratypes. All from río Caroni, Orinoco basin, Bolívar, Venezuela. AMNH 91174, 7, females, rd, 29.4–43.1 mm SL, collected with holotype. AMNH 91175, 6, females, rd, 32.4–39.5 mm SL, río Carapo, near mouth, on right bank at sand beach, approximately 5°36'45"N 63°41'28"W, 19 Feb 1990, A. Machado-Allison & S. Ramirez. AMNH 91186, 2, females, 40.5–41.4 mm SL, río Paragua, at second rapid above río Carapo mouth, near right bank, approximately 5°35'33"N 63°42'18"W, 26 Feb 1990, C. J. Ferraris *et al.* AUM 36458, 1, male, rd, 43.6 mm SL, río Paragua, drying pool, 10.3 km E of La Paragua, 6°50'21"N 63°14'14"W, 8 Jun 2003, O. León, P. Pera & N.K. Lujan. LBP 29208, 2, females, rd, 31.4–34.1 mm SL, collected with holotype.

Diagnosis. *Curimatopsis sabana* belongs to the *C. macrolepis* clade (*C. jaci* Melo, Oliveira, 2017, *C. maculosa* Melo, Vari, Oliveira, 2016, *C. macrolepis*, and *C. melanura* Dutra, Melo, Netto-Ferreira, 2018) and can be easily diagnosed from species of the *C. evelynae* clade (*C. cryptica* Vari, 1982, *C. evelynae*, *C. guaporensis* Melo, Oliveira, 2017, *C. myersi* Vari, 1982, and *C. pallida* Melo, Oliveira, 2017) by having a longer lower jaw that projects past the anterior margin of the upper jaw (*vs.* lower jaw shorter and not overlapping the upper jaw), and by separate (*vs.* fused) first and second hypurals. Within the *C. macrolepis* clade, *C. sabana* is diagnosed from *C. melanura* by the absence (*vs.* presence) of the dark pigmentation on the entire lower lobe of the caudal fin. It differs from *C. jaci* by the absence (*vs.* presence) of a distinctly reticulate color pattern on the flanks of females. It is diagnosed from *C. maculosa* by the possession of a round



FIGURE 1 | *Curimatopsis sabana*, AMNH 274996, holotype, 36.5 mm SL, female, Venezuela, Bolívar, río Paragua, río Caroni, Orinoco basin (top). AUM 36458, paratype, 43.5 mm SL, male, Venezuela, Bolívar, río Paragua, río Caroni, Orinoco basin (bottom).

spot of black pigmentation, sometimes very faint, on the midlateral surface of the caudal peduncle (*vs.* a small posteriorly pointed spot overlapping the posterior midlateral scales), by the absence (*vs.* presence) of a gap of two or three scales separating the pigmentation of the midlateral stripe and the dark spot on caudal peduncle, by a deeper body, 34.1–39.9% of SL (*vs.* 26.0–31.6% of SL), and deeper caudal peduncle, 13.7–17.4% of SL (*vs.* 9.0–13.7% of SL). It differs from *C. macrolepis* by the possession of a circular and weakly pigmented spot on the caudal peduncle (*vs.* horizontally elongated and strongly pigmented dark spot on caudal peduncle). Finally, it differs from *C. microlepis* by 26–28 (*vs.* 57–63) scales in the longitudinal series from the supracleithrum to the hypural joint.

Description. Morphometric data in Tab. 1. Body relatively short. Dorsal profile of head slightly convex from tip of snout to dorsal-fin origin; gradually descending and nearly straight from dorsal-fin origin to adipose-fin origin and then gently concave to origin of anterior dorsal caudal-fin procurent ray. Ventral profile more or less evenly convex from chin to terminus of anal-fin base, then gently concave to origin of anterior ventral procurent ray of caudal fin. Prepelvic region somewhat flattened transversely. Postpelvic region of body transversely rounded.

TABLE 1 | Morphometric data for holotype and 18 paratypes of *Curimatopsis sabana*. Range includes holotype and all paratypes. SD = standard deviation.

	Holotype	Mean	Range	SD
Standard length (mm)	36.5	36.0	29.4–43.5	–
Percentages of standard length				
Greatest body depth	37.4	36.4	34.1–39.9	1.7
Snout to dorsal-fin origin	53.1	53.7	50.0–57.2	1.6
Snout to pectoral-fin origin	36.1	36.2	33.8–38.8	1.4
Snout to pelvic-fin origin	61.6	60.5	57.7–63.6	1.6
Snout to anal-fin origin	85.5	82.8	78.4–85.5	2.0
Dorsal-fin origin to hypural joint	55.2	53.2	50.8–57.9	1.8
Dorsal-fin origin to anal-fin origin	45.9	44.3	40.9–46.6	1.6
Dorsal-fin origin to pelvic-fin origin	37.6	36.1	33.9–39.0	1.5
Dorsal-fin origin to pectoral-fin origin	38.4	37.9	34.9–40.4	1.5
Caudal-peduncle depth	14.9	14.9	13.7–17.4	0.8
Pectoral-fin length	19.8	20.3	17.3–24.5	1.7
Pelvic-fin length	22.6	21.6	18.5–23.8	1.2
Dorsal-fin length	37.2	35.2	29.3–42.5	2.8
Head length	34.0	35.4	31.6–37.2	1.4
Percentages of head length				
Snout length	26.5	23.5	19.4–26.5	2.3
Orbital diameter	36.2	35.3	32.4–42.2	2.3
Postorbital length	44.0	45.0	40.6–48.5	1.8
Interorbital width	33.7	34.4	29.6–39.9	2.4

Head profile acutely triangular with bluntly pointed snout. Lower jaw longer than and projecting past the anterior to limit of upper jaw. Mouth subsuperior, horizontally aligned with center of orbit. Nostrils close; anterior nostrils circular to ovoid, posterior nostrils crescent-shaped with aperture not closed by thin flap of skin separating nares. Adipose eyelid slightly developed anterior to orbit.

Dorsal fin pointed, with distal margin straight and first and second branched rays longest. Distal margin of pectoral fin pointed. Tip of adpressed pectoral fin reaches three or four scales short of vertical through pelvic-fin origin. Pelvic fin profile slightly rounded. Tip of adpressed pelvic fin reaches two to four scales short of anal-fin origin. Caudal fin forked in females and middle caudal-fin rays elongated in males. Adipose fin present. Anal fin emarginate, anterior branched rays one-third length of ultimate ray. Tip of adpressed anal fin reaches two scales short of origin of ventral caudal-fin ray.

Lateral line longitudinal scales from supracleithrum to hypural joint 26 (8), 27* (6) or 28 (5). Pored scales 4 (3), 5* (5), 6 (10), or 7 (1). Continuous series of scales posterior to hypural joint 3 (1), 4* (17) or 5 (1). Scales in transverse series from dorsal-fin origin to pelvic-fin origin 11 (11), 12* (7), or 13 (1). Middorsal series of scales from tip of supraoccipital to dorsal-fin origin 9 (5), 10 (6), 11 (5), or 12* (2). Circumpeduncular scales 16* (19).

Dorsal-fin rays iii,9* (19), first unbranched ray very short. Anal-fin rays iii,7* (19), first ray very short. Pelvic-fin rays i,8* (15), or i,9 (4). Pectoral-fin rays i,12 (2), i,13* (6), i,14 (7), i,15 (3), or i,16 (1). Total vertebrae 27 (4), 28* (11), or 29 (2).

Coloration in alcohol. Ground coloration tan to yellowish. Upper lip, snout, and dorsal portion of head and opercle with small, dark chromatophores; lower jaw with field of dark chromatophores, more so along margin of lower lip. Margins of scales along lateral, dorsolateral, and dorsal surface of body outlined by series of small dark chromatophores, but not forming a clear reticulate pattern; more diffuse pattern of small chromatophores on dorsal and dorsolateral regions of body. Dark pigmentation absent on scales over lateral surface and ventral region of the body. Thin-lying dusky stripe along midlateral surface of body from vertical through dorsal-fin origin to caudal peduncle. Dark concentration of chromatophores covering posterior midlateral scales and anterior portions of middle caudal-fin rays. Rays of dorsal, caudal, and anal fins distinctly outlined by small, dark chromatophores. Pectoral and pelvic fins with scattered, small, dark chromatophores. Adipose fin hyaline with small chromatophores concentrated on distal margin.

Sexual dimorphism. Only one male specimen (AUM 36458) was identified by its pronounced sexual dimorphism that is typical of species of *Curimatopsis* (Vari, 1982). The specimen has a deeper caudal peduncle (17.4% of SL) than females (13.7–16.2% of SL), slightly elongate middle caudal-fin rays, and a clear enlargement of the penultimate principal ray of the caudal-fin lower lobe. These features are consistent with other species of *Curimatopsis* presenting sexual dimorphism (Vari, 1982; Melo, Oliveira, 2017).

Distribution. *Curimatopsis sabana* is only known from the Carapo and Paragua rivers, which are tributaries of the río Caroni, itself a right-bank tributary of the río Orinoco basin, in the western Guiana Shield in Venezuela (Fig. 2). Various specimens were collected in the region of the río Carapo, near Cerro Guaiquinima (4 km along the river, 300–310 m asl), and one specimen was collected in a drying pool of the lower río Paragua (272 m asl) (Fig. 3). The distribution suggests that *C. sabana* is restricted to higher elevations of the western Guiana Shield.

Etymology. The specific name *sabana* refers to the Gran Sabana, a major ecoregion in the western Guiana Shield of southeastern Venezuela, which encompasses the río Caroni basin. A noun in apposition.

Conservation status. Based on Armbruster, Taphorn (2013) who described *Neblinichthys peniculatus* from the río Carapo, the type locality of *Curimatopsis sabana*, the region is sparsely populated and difficult to access, which suggests a lack of significant threats for the species. In addition, another relatively recent expedition found one male specimen in the lower río Paragua, increasing the extent of the known occurrence for the species. Although the species lives in a relatively small area of occurrence, this factor alone does not qualify it for a threatened status. Given the available information, *C. sabana* is herein recommended to be categorized as Least Concern (LC) under the categories and criteria of the International Union for Conservation Nature (IUCN Standards and Petitions Subcommittee, 2019).

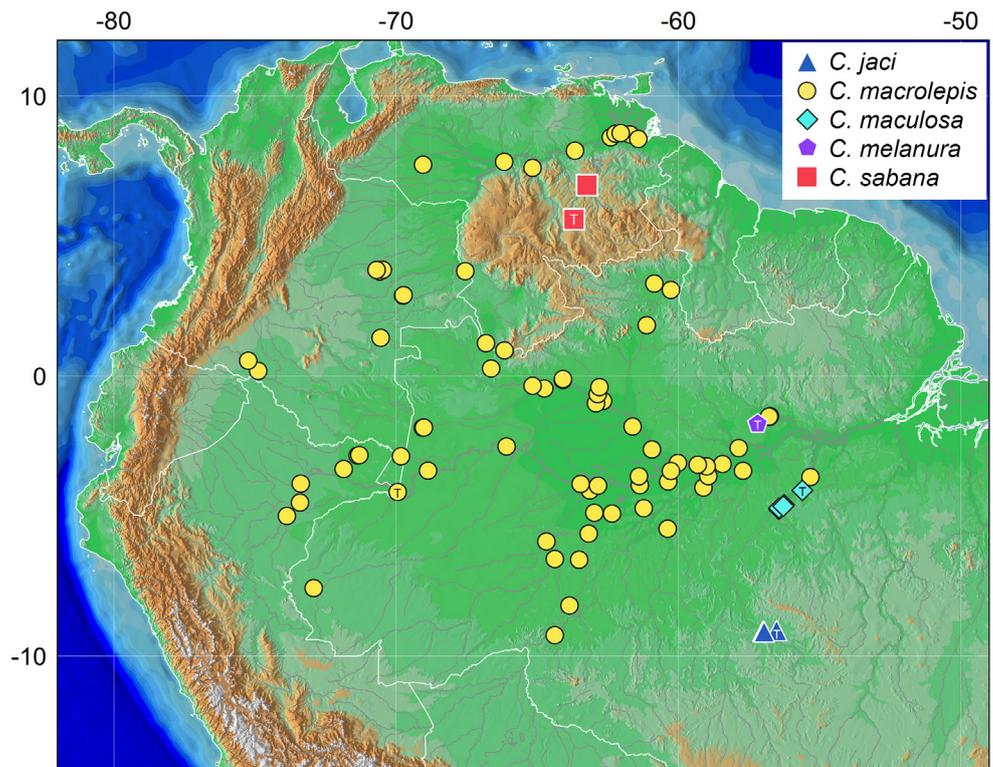


FIGURE 2 | Map of northern South America showing the collection localities of species of the *Curimatopsis macrolepis* clade in the Orinoco and Amazon basins. Note the distribution of *C. sabana* in highlands of the Guiana Shield. T = type locality.



FIGURE 3 | Habitat of *Curimatopsis sabana*, AUM 36458, a drying pool of the río Paragua, tributary of the río Caroni. Photograph by J.W. Armbruster.

DISCUSSION

Curimatopsis sabana is hypothesized to be a member of the *C. macrolepis* clade on the basis of one synapomorphy: the possession of an elongate lower jaw that projects past the anterior margin of the upper jaw (Vari, 1982, 1989). In addition, the species has the first and second hypurals separated, and the third hypural separated from the autogenous plate of the first and second hypurals. The alternative conditions with first and second hypurals fused and a connection of the third hypural with the autogenous plate represent synapomorphies of the *C. evelynae* clade (Vari, 1982: figs. 1–4, 1989). Relationships within the *C. macrolepis* clade are still unclear although a recent molecular study (Melo *et al.*, 2016b) provided a hypothesis in which a cryptic species referred to *C. macrolepis* (rio Negro) represents the earliest split, followed by *C. maculosa* (rio Tapajós), and three other lineages of *C. macrolepis* corresponding to the Juruá, Madeira, and Nanay river basins, respectively. Ongoing research using genomic data also suggests that the distinctive *C. microlepis*, described from Jatuarana along the rio Amazonas below Manaus, does not belong to the *C. macrolepis* clade, and further research aim to redescribe and clarify the phylogenetic position of the species (Melo *et al.*, unpublished).

Prior to this study, two species of *Curimatopsis* were known to occur in the Orinoco basin, one for each clade: *C. evelynae*, a very distinctive species of the *C. evelynae* clade, and *C. macrolepis*, described from Tabatinga, rio Solimões at the border of Brazil and Colombia (Steindachner, 1876). Vari (1982) examined five lots of *C. macrolepis* (AMNH 45092, USNM 226911, USNM 226975, USNM 226976, and USNM 226910) from the main río Orinoco, downriver of Caicara, in the Venezuelan states of Monagas and Delta Amacuro (Vari, 1982: fig. 12). Those specimens along with others from the Orinoco examined here, possess a densely pigmented, horizontally elongate spot on the caudal peduncle, a unique pattern within the *C. macrolepis* clade (Vari, 1982), and clearly distinct from that of *C. sabana* (Fig. 4). In fact, no other species in the clade possess such a densely pigmented spot on the caudal peduncle (Melo *et al.*, 2016a; Melo, Oliveira, 2017; Dutra *et al.*, 2018) suggesting that such pattern can be used as a diagnostic feature of *C. macrolepis stricto sensu*.

The distribution of *Curimatopsis macrolepis* is herein updated (see Fig. 2 and Material examined). In the Amazon basin, the species is distributed along the rio Solimões/ Amazonas, and the tributaries Aripuanã, Branco, Japurá, Juruá (cryptic), Madeira (cryptic), Nanay, Negro (cryptic), Purus, Putumayo, Solimões, Takutu, Tapajós, Trombetas, Uatumã, Ucayali, Uiraricoera, and Vaupés rivers. It is noteworthy that populations of *C. macrolepis* from the Juruá, Madeira, and Negro river basins represent cryptic species (Melo *et al.*, 2016b). In the Orinoco basin, *C. macrolepis* occurs in the main channel of the río Orinoco and the tributaries Apure, Atabapo, Caura, Delta Amacuro, and Orocopiche rivers. While *C. macrolepis* is commonly found in lowland portions of those basins, *C. sabana* is allopatrically endemic to the highlands of the Guiana Shield (>270 m asl) in the Carapo and Paragua rivers, río Caroni basin (Fig. 2).

The río Caroni drains into the Gran Sabana of eastern Venezuela and its headwaters come from the highlands of tepuis on the borders of Brazil, Guyana and Venezuela (Lasso *et al.*, 1989). Several fish species are endemic to the río Caroni, for example *Brycon coquenani* Steindachner, 1915, *Lebiasina uruyensis* Fernández-Yépez, 1967,

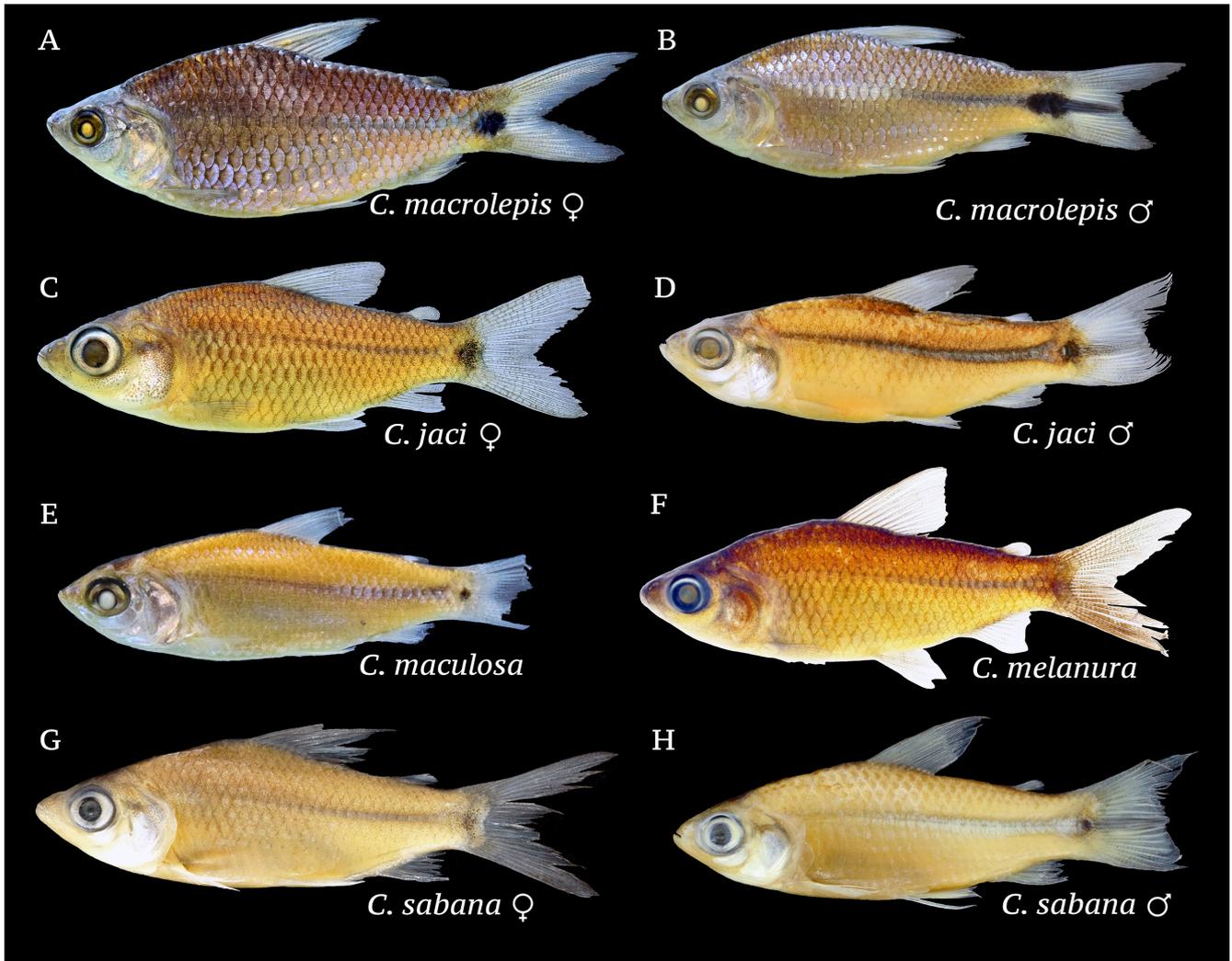


FIGURE 4 | Species of the *Curimatopsis macrolepis* clade: **A–B)** *C. macrolepis*, LBP 22425, rio Solimões, Letícia, Colombia; **C)** *C. jaci*, female, MZUSP 121197, holotype, rio Cristalino, upper Tapajós basin; **D)** *C. jaci*, male, MZUSP 116668, paratype, rio São Benedito, upper Tapajós basin; **E)** *C. maculosa*, LBP 13907, paratype, middle rio Tapajós; **F)** *C. melanura*, MPEG 15335, holotype, rio Nhamundá; **G)** *C. sabana*, female, AMNH 274996, holotype, rio Caroni basin; **H)** *C. sabana*, male, AUM 36458, paratype, rio Caroni basin. Photos by Bruno Melo (**A–E**, **G–H**) and Guilherme Dutra (**F**).

and *Neblinichthys peniculatus* Armbruster, Taphorn, 2013 (Fernández-Yépez, 1967; Armbruster, Taphorn, 2013; Lima, 2017). Interestingly, Armbruster, Taphorn (2013) described *N. peniculatus* based on the material collected by Carl Ferraris, Antonio Machado-Allison, and colleagues in 1990 in the río Carapo, which also yielded the specimens of *Curimatopsis sabana* described here. Those authors pointed out that the río Carapo is located in a remote region near tepui Cerro Guaiquinima above Salto Uraima, a large waterfall of the río Paragua (Armbruster, Taphorn, 2013). *Curimatopsis sabana* appeared at first to be another endemic to that remote region, but a single paratype extends the distribution of the species to the río Paragua in the Caroni basin.

Comparative material examined. *Curimatopsis cryptica*: **Guyana**: USNM 226872, holotype, 26.9 mm SL, AMNH 45094, 1, 40.0 mm SL, AMNH 45095, paratypes, 2, 27.6–28.9 mm SL. **Brazil**: AMNH 45096, 1, 33.3 mm SL, USNM 226880, 11, 21.2–27.6 mm SL, MZUSP 15974, 2, 26.2–29.6 mm SL, MZUSP 15976, paratypes, 2, 34.5–34.6 mm SL. *Curimatopsis evelynae*: **Colombia**: USNM 198644, holotype, 22.3 mm SL, USNM 198638, 1, 27.6 mm SL, AMNH 43099, paratypes, 54, 30.7–33.0 mm SL. *Curimatopsis guaporensis*: **Brazil**: MZUSP 121189, holotype, 24.0 mm SL, DZSJRP 19418, 9, 20.3–25.7 mm SL, LBP 22725, paratypes, 4, 19.9–24.7 mm SL. *Curimatopsis jaci*: **Brazil**: MZUSP 121197, holotype, 28.1 mm SL, LBP 22726, 1, paratype, 31.2 mm SL, MZUSP 118861, paratypes, 4, 28.3–31.3 mm SL. *Curimatopsis macrolepis*: **Venezuela**: AMNH 45092, 1, 29.2 mm SL, AMNH 74564, 6, 48.6–61.7 mm SL, AMNH 74565, 6, 32.4–38.2 mm SL, MZUSP 77811, 2, USNM 226910, 1, 31.9 mm SL, USNM 226911, 2, 28.0–28.3 mm SL, USNM 226975, 3, 30.9–34.1 mm SL, USNM 226976, 10, 22.7–41.9 mm SL, USNM 235467, 1, 29.7 mm SL, USNM 235475, 1, 25.4 mm SL, USNM 258086, 2, 27.4–27.8 mm SL, USNM 295587, 5, 33.2–35.8 mm SL. **Colombia**: AMNH 32946, 6, 37.1–47.8 mm SL, CZUT-IC 4507, 3, CZUT-IC 4850, 4, CZUT-IC 9019, 4, CZUT-IC 10873, 5, CZUT-IC 14172, 1, CZUT-IC 14113, 2, CZUT-IC 14679, 30, CZUT-IC 14390, 1, CZUT-IC 14759, 1, LBP 22425, 11, Leticia. **Peru**: AMNH 45088, 2, 30.2–38.9 mm SL, AMNH 45089, 3, 32.5–33.4 mm SL, AMNH 45090, 1, 51.9 mm SL, AMNH 45093, 1, 41.7 mm SL, AMNH 78116, 6, 23.4–27.2 mm SL, LBP 12426, 6, 32.1–33.2 mm SL. **Brazil**: AMNH 45091, 1, 45.8 mm SL, AMNH 221368, 7, 25.7–33.1 mm SL, LBP 4087, 25, 30.0–37.4 mm SL, LBP 4489, 11, 22.8–46.5 mm SL, LBP 7038, 6, LBP 12064, 3, 24.1–30.9 mm SL, LBP 19768, 2, INPA 4801, 5, INPA 4802, 2, INPA 9786, 1, INPA 16532, 10, INPA 17438, 1, INPA 24489, 36, INPA 26610, 11, INPA 28698, 3, INPA 29242, 1, INPA 30666, 3, INPA 33206, 38, INPA 33299, 8, INPA 33233, 3, INPA 33248, 12, INPA 33301, 2, INPA 33375, 1, INPA 34916, 1, INPA 35083, 7, INPA 35314, 1, INPA 35435, 1, INPA 36393, 71, INPA 37139, 4, INPA 39071, 12, INPA 39210, 3, INPA 39350, INPA 39637, 2, INPA 41467, 5, INPA 41987, 2, INPA 42103, 1, INPA 42743, 1, INPA 44216, 4, INPA 46843, 1, INPA 48316, 6, INPA 49156, 3, INPA 49349, 2, INPA 50050, 13, INPA 50071, 13, INPA 50170, 23, INPA 50471, 1, INPA 51200, 14, INPA 51319, 5, rio Daraá. INPA 51491, 6, INPA 51713, 4, INPA 51750, 12, INPA 51978, 1, INPA 52630, 14, INPA 52712, 177. *Curimatopsis maculosa*: **Brazil**: MZUSP 118659, holotype, 24.6 mm SL, MZUSP 22038, 9, 24.1–27.8 mm SL, MZUSP 25412, paratypes, 23, 18.0–26.3 mm SL. *Curimatopsis melanura*: **Brazil**: MPEG 15335, holotype, 41.0 mm SL, MPEG 35300, paratypes, 4, 34.1–38.2 mm SL, LBP 19556, 1, paratype, 37.9 mm SL. *Curimatopsis microlepis*: **Brazil**: MCZ 20344, holotype, 83.7 mm SL, INPA 37441, 1, 58.1 mm SL, INPA 41825, 1, 75.7 mm SL. *Curimatopsis myersi*: **Paraguay**: USNM 233602, holotype, 37.4 mm SL, USNM 233601, paratypes, 6, 31.6–38.7 mm SL, MZUSP 20659, 1, paratype, 36.6 mm SL. *Curimatopsis pallida*: **Brazil**: MZUSP 121192, holotype, 36.7 mm SL, MZUSP 95267, paratypes, 4, 33.1–36.8 mm SL.

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Bruno F. Melo: Conceptualization, Data curation, Funding acquisition, Formal analysis, Investigation, Methodology, Resources, Writing–original draft, Writing–review & editing.

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The author declares no competing interests.

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