

# NEW RECORDS OF THE MAILED CATFISH *PLANILORICARIA CRYPTODON* FROM THE UPPER AMAZON IN PERU, BRAZIL AND BOLIVIA, WITH A KEY TO THE GENERA OF THE PLANILORICARIINA

by

I. J. H. ISBRÜCKER & H. NIJSSEN

*Institute of Taxonomic Zoology, University of Amsterdam, P.O. Box 20125, 1000 HC Amsterdam, The Netherlands*

## ABSTRACT

The mailed catfish *Planiloricaria cryptodon* (Isbrücker, 1971) was hitherto only known from the holotype from Río Ucayali, Peru. New material from Río Purus (Est. Acre, Brazil) and from Río Mamoré (Prov. Beni, Bolivia) is described and compared with the holotype. One of the new specimens is illustrated. A key to the genera of the subtribe Planiloricariina (tribe Loricariini of the subfamily Loricariinae) is added.

## RÉSUMÉ

Seulement l'holotype du Poisson-Chat cuirassé *Planiloricaria cryptodon* (Isbrücker, 1971) était connu, en provenance du Río Ucayali, Pérou. Des exemplaires supplémentaires sont maintenant décrits et comparés à l'holotype; ils proviennent du Río Purus (Est. Acre, Brésil) et du Río Mamoré (Prov. Beni, Bolivie). Un des nouveaux exemplaires est illustré. On présente une clé pour les genres de la sous-tribu Planiloricariina (tribu des Loricariini de la sous-famille Loricariinae).

## INTRODUCTION

*Planiloricaria cryptodon* (Isbrücker, 1971) was originally described, based upon the single holotype from the Río Ucayali, Peru, collected in 1966. During a visit to the Museu de Zoologia da Universidade de São Paulo the first author encountered two specimens from the Río Purus, Brazil, collected in 1973. Quite recently, we received four additional specimens from the Río Mamoré, Bolivia, obtained in 1983.

Examination of this material revealed the variability of various morphometric and meristic characters of *Planiloricaria*. More abundant material—particularly also from the type-locality—is still necessary to obtain insight in

the variability of certain characters. Illustrations of a representative specimen are given. A key to the genera forming the subtribe Planiloricariina (sensu Martín Salazar et al., 1982) is included.

## MATERIAL AND ABBREVIATIONS

Specimens are deposited in the collections of the Muséum National d'Histoire Naturelle, Paris (MNHN); Museu de Zoologia da Universidade de São Paulo, São Paulo (MZUSP); Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn (ZFMK); and Zoologisch Museum, Amsterdam (ZMA). Standard length is abbreviated as SL, head length as HL.

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## PLANILORICARIINA

The type-genus of this subtribe of the tribe Loricariini was originally established as a subgenus of *Pseudohemiodon* Bleeker, 1862. It was ranked as a genus of the so-called *Pseudohemiodon* group by Isbrücker & Nijssen (1974 a & b), which also included *Hemiodontichthys* Bleeker, 1862, *Reganella* Eigenmann,

1905, and *Rhadinoloricaria* Isbrücker & Nijssen, 1974a.

Isbrücker (1979a) established Planiloricariina, Reganellina, and Hemiodontichthyina as distinct, monotypic, subtribes, retaining *Pseudohemiodon* and *Rhadinoloricaria* in the subtribe Loricariina, in which an additional genus, *Crossoloricaria*, was erected.

In 1981, Isbrücker informally subdivided the Loricariina into two genus groups, one being the *Pseudohemiodon* group, now consisting of *Pseudohemiodon*, *Rhadinoloricaria*, and *Crossoloricaria*.

Martín Salazar et al. (1982) established an additional genus, *Dentectus*, which evidently linked the *Pseudohemiodon*-group genera with the Planiloricariina.

Finally, Isbrücker & Nijssen (1984) established an additional genus, *Pyxiloricaria*, which was assigned to the Planiloricariina.

Of the six genera now included in this subtribe, four are monotypic, viz., *Planiloricaria*, *Rhadinoloricaria*, *Dentectus*, and *Pyxiloricaria*. *Pseudohemiodon* contains seven described species (several new species remain to be described), whereas four species of *Crossoloricaria* are known (Isbrücker & Nijssen, 1983).

**Distinctions.** — The Planiloricariina can be distinguished at once from the subtribe Loricariina (cf. Martín Salazar et al., 1982; = *Loricaria*-group of Isbrücker, 1981: 56) particularly by the reduced, inconspicuous teeth. The six genera may be distinguished from one another by the characters indicated in the key, as follows:

#### KEY TO THE PLANILORICARIINA

- 1a) Teeth visible in both upper and lower jaws .... 2
- b) Teeth not visible in upper jaws of normally preserved specimens ..... 5
- 2a) Lateral body scutes 31-34; no fleshy flap on branchiostegal membrane ..... 3
- b) Lateral body scutes 29-30; a large, transverse, fleshy wrinkled flap originates from anterior margin of branchiostegal membrane ..... *Pyxiloricaria*
- 3a) Abdomen naked except for a single median strip of small, roundish scutelets (holotype of *C. rhami*, however, has the abdomen completely covered) ..... *Crossoloricaria*

- b) Abdomen covered by scutelets, not arranged into a single median strip ..... 4
- 4a) Sides of head and snout more or less triangular in dorsal view; cleithral width 0.8-1.1 in HL; supracleithral width 1.3-1.7 in HL; head depth 2.5-3.3 in HL; maxillary barbel 1.4-2.4 in HL; depth caudal peduncle 12.3-12.7 in HL ... *Pseudohemiodon*
- b) Sides of head tapering, of snout narrow and somewhat concave in dorsal view; cleithral width 1.2 in HL; supracleithral width 1.9 in HL; head depth 3.5 in HL; maxillary barbel 1.1 in HL; depth caudal peduncle 9.7 in HL ..... *Rhadinoloricaria*
- 5a) Upper lip with about 30 filaments; maxillary barbel anteriorly covered with dermal ossifications bearing odontodes; lateral body scutes 31-33; maximum orbital diameter 5.6-6.4 in HL ..... *Dentectus*
- b) Upper lip with about 4 filaments; maxillary barbel without dermal ossifications; lateral body scutes 37-40; maximum orbital diameter 12.2-14.5 in HL ..... *Planiloricaria*

#### Planiloricaria Isbrücker, 1971

*Pseudohemiodon* (*Planiloricaria*) Isbrücker, 1971: 276-278 (original diagnosis; type-species, by original designation and monotypy, *Pseudohemiodon* (*Planiloricaria*) *cryptodon* Isbrücker, 1971).

*Planiloricaria*; Isbrücker & Nijssen, 1974a: 74-76 (elevation to generic rank).

*Planiloricaria* can be easily distinguished from the other genera of the subtribe Planiloricariina by the characters indicated in the above key.

Nowadays, the genus is represented in museum collections by seven specimens from three areas (fig. 4), all tributaries to the Amazon River, viz., Río Ucayali (Dept. Ucayali, Peru), Río Purus (Est. Acre, Brazil), and Río Mamoré (Prov. Beni, Bolivia).

Several (often slight) differences exist between the Peruvian, Brazilian, and Bolivian specimens available. However, the samples are too small to permit an explanation of the differences. Hence, the six specimens found subsequent to the description of the holotype of *P. cryptodon* are identified with that species, awaiting the collection of more abundant material. While preparing the description, the larger specimen from Río Purus was used first, and the differences with the remaining material are given.

In addition to the references to *P. cryptodon* given below, the genus *Planiloricaria* was compared or mentioned by Isbrücker & Nijssen (1974b: 196; 1976: 118, table 4; 1978: 179; 1979: 192; and 1984: 163) and by Isbrücker et al. (1983: 41, table II). All these references were based upon the hitherto only known specimen, holotype of the species.

***Planiloricaria cryptodon* (Isbrücker, 1971)**  
(Figs. 1-4; table I)

*Pseudohemiodon* (*Planiloricaria*) *cryptodon* Isbrücker, 1971: 278-281, figs. 2b-c, 3-8 (original description; type-locality: "Peru: Río Ucayali near Pucallpa"; holotype, "ZFMK/I/66/1717"); Isbrücker, 1972: 175 (comparison); Isbrücker, 1973: 188 (listed; on p. 186 listed as *Pseudohemiodon cryptodon*); Busse, 1984: 219 (holotype listed; reg. no. ZFMK 1865).

*Planiloricaria cryptodon*; Isbrücker & Nijssen, 1974a: 68, 78, figs. 3, 4c-d, table I (data and figures of holotype); Isbrücker, 1975: 90 (comparison); Isbrücker, 1979a: 87 (listed); Isbrücker, 1979b: 111, fig. 4 (holotype); Isbrücker, 1980: 122-123 (listed); Rapp Py-Daniel, 1981: 14 (comparison); Isbrücker, 1981: 55 (comparison); Martín Salazar et al., 1982: 130 (comparison).

**Material examined. —**

PERU: ZFMK 1865 (previously ZFMK/I/66/1717), holotype, Dept. Ucayali, Río Ucayali near Pucallpa (08°21'S 74°33'W), coll. K. H. Lüling, VII/VIII-1966.

BRAZIL: MZUSP 24514, Est. Acre, Rio Purus system, acima da boca do Iaco (perto de Sena Madureira, 09°05'S 68°41'W), coll. P. E. Vanzolini, 23-IX-1973; ZMA 119.129, Est. Acre, Rio Purus system, Seringal Santo Antônio, perto de Manoel Urbano (08°53'S 69°18'W), coll. P. E. Vanzolini, 18-IX-1973.

BOLIVIA: ZMA 119.550, MNHN 1985-92, Prov. Beni, Boca Ibaré, at confluence of Río Ibaré into Río Mamoré (about 15°S), south of Trinidad (14°46'S 64°50'W), coll. L. Lauzanne & G. Loubens, 26-VIII-1983; ZMA 119.555, Prov. Beni, Río Mamoré near Trinidad, coll. L. Lauzanne & G. Loubens, 29/30-IX-1983; MNHN 1985-91, Prov. Beni, Río Mamoré basin, at the level of Laguna Capital, near Trinidad, coll. L. Lauzanne & G. Loubens, 30-IX-1983.

**Description. —** Morphometric and most of the meristic data are presented in table I. Data of the holotype are included again for two reasons: (1) to facilitate comparison with the new material; (2) to record some slight dif-

ferences obtained while taking measurements and counts according to the methods described by Isbrücker & Nijssen (1978: 180-182).

Predorsal area slightly shorter in the holotype than in the other specimens (3.5 in SL against 3.2-3.4); filamentous dorsal fin spine much longer in the holotype (2.4 in SL against 2.7-2.9 in specimens with a complete dorsal filament); thoracic area slightly shorter in the holotype (1.3 in HL against 1.1-1.2); abdominal area slightly shorter in the Río Purus specimens (1.7-1.9 in HL against 1.5-1.6); maximum orbital diameter smaller in the Río Mamoré specimens (13.8-14.5 in HL against 12.2-13.4); caudal peduncle more depressed in the Río Mamoré specimens (14.3-16.4 in HL against 12.6-14.0); the holotype and the Río Purus specimens have slightly more lateral body scutes (39-40 against 37-38); the Río Mamoré specimens tend to have slightly fewer coalescing scutes (18 in 3 specimens, 19-20 in the fourth specimen, against 19-21 in the holotype plus the Río Purus specimens).

Fin ray counts: dorsal fin I,6,i; anal fin I,4,i; pectoral fin I,6; pelvic fin I,5; caudal fin I,10,I, in the seven specimens at hand.

Number of subbarbels along maxillary barbel: holotype with a total of (left/right) 18/20 subbarbels; Río Purus specimens with 14-18 outer and 9-10 inner maxillary subbarbels; Río Mamoré specimens with 12-14 outer and 8-11 inner maxillary subbarbels.

Dermal ossifications, fin spines and rays covered with minute odontodes, which are more prominent on the coalescing and the parallel lateral body scutes. On the first three scutes along the dorsal fin base prominent odontodes form a longitudinal ridge at either side. Other prominent odontodes are shown in fig. 1. The holotype and the larger Río Purus specimen (both being virtually identical in SL) are less smooth than the remaining five specimens, in which the 'prominent' odontodes are conspicuously smaller.

The pattern of scutes between the head and dorsal fin is peculiar and characteristic of the species. Those anterior to the predorsal scute

TABLE I

Morphometric and meristic data of *Planiloricaria cryptodon* (Isbrücker, 1971): A, ZFMK 1865 (holotype); B, MZUSP 24514; C, ZMA 119.129; D, ZMA 119.555; E, MNHN 1985-91; F, ZMA 119.550; G, MNHN 1985-92. Standard length through total length (including upper caudal fin filament) in mm; head length through lower caudal spine are expressed as ratios of SL; snout length through lower lip barbel are expressed as ratios of HL.

Specimen	A	B	C	D	E	F	G
Standard length	214.0	214.5	111.2	177.0	173.2	152.5	136.8
Axial length	234.9	235.3	123.9	192.5	188.6	167.2	—
Total length	561.0	692.5	261.2	372.7	—	242.5	—
Head length	4.3	4.3	4.0	4.2	4.2	4.3	4.1
Predorsal length	3.5	3.4	3.2	3.4	3.4	3.4	3.2
Postdorsal length	1.6	1.6	1.7	1.7	1.7	1.7	1.7
Postanal length	2.2	2.1	2.2	2.2	2.2	2.2	2.3
Dorsal spine length	2.4	2.7	2.8	—	2.9	2.8	<3.7
First dorsal ray length	5.5	5.3	5.3	5.2	5.8	5.3	5.4
Anal spine length	6.8	6.6	6.6	7.1	6.7	6.8	6.9
Pectoral spine length	5.0	4.9	5.3	5.6	5.1	5.2	5.5
Pelvic spine length	7.5	7.6	7.5	8.0	7.8	7.3	8.1
Upper caudal spine length	0.6	0.4	0.7	<0.9	—	<1.7	—
Lower caudal spine length	5.5	5.6	5.7	—	—	6.2	—
Snout length	1.8	1.8	1.8	1.9	1.9	1.8	1.8
Lower lip length	11.5	13.8	12.7	12.7	13.2	10.2	10.1
Thoracic length	1.3	1.1	1.2	1.2	1.2	1.2	1.2
Abdominal length	1.6	1.7	1.9	1.5	1.6	1.6	1.6
Max. orbital diameter	13.1	13.4	12.2	14.5	14.1	14.3	13.8
Interorbital width	5.2	5.2	5.0	5.8	5.5	5.1	5.4
Cleithral width	1.0	1.0	1.0	1.1	1.1	1.0	1.1
Supracleithral width	1.6	1.5	1.6	1.6	1.6	1.6	1.6
Head width	1.0	1.0	1.0	1.1	1.0	1.0	1.0
Head depth	3.1	3.0	3.1	3.1	3.1	3.1	3.0
Body depth at dorsal	2.8	2.8	3.1	2.8	2.8	2.8	2.8
Body width at dorsal	1.4	1.3	1.5	1.4	1.4	1.5	1.4
Body width at anal	1.6	1.4	1.9	1.7	1.7	1.8	1.8
Depth caudal peduncle	12.7	12.6	14.0	14.5	16.4	14.3	15.1
Width caudal peduncle	7.0	6.4	8.0	6.7	6.3	7.0	6.3
Maxillary barbel length	1.0	1.0	1.0	0.9	1.0	0.9	1.0
Lower lip barbel length	2.6	3.6	2.8	2.9	2.5	2.5	2.3
Lateral scutes	40/40	40/40	39/40	37/37	38/38	37/37	37/37
Coalescing scutes	19/20	19/19	20/21	18/18	18/18	18/18	19/20
Thoracic scutes	9/9	9/10	10/10	10/10	8/9	10/7	8/8
Premaxillary teeth	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Dentary teeth	3/3	2/2	3/2	3/1	3/2	1/1	3/3
Lower lip barbels	12/12	10/11	11/12	12/12	11/12	12/11	12/11

and the adjacent transverse series of dorsal and lateral body scutes form a complex showing a more solid separation from the posterior dorsal and lateral body scutes. The head is postero-dorsally covered by a large dermal ossification, almost without (visible) sutures, reaching considerably beyond the distal tip of the supraoc-

capital. Posterior to the supraoccipital process is a median series of three scutes: the first one is triangular and has two ridges of relatively large odontodes; the second scute (last one of the above-mentioned complex) has a shape which suggests that it actually consists of two fused scutes, with a median depression and with two

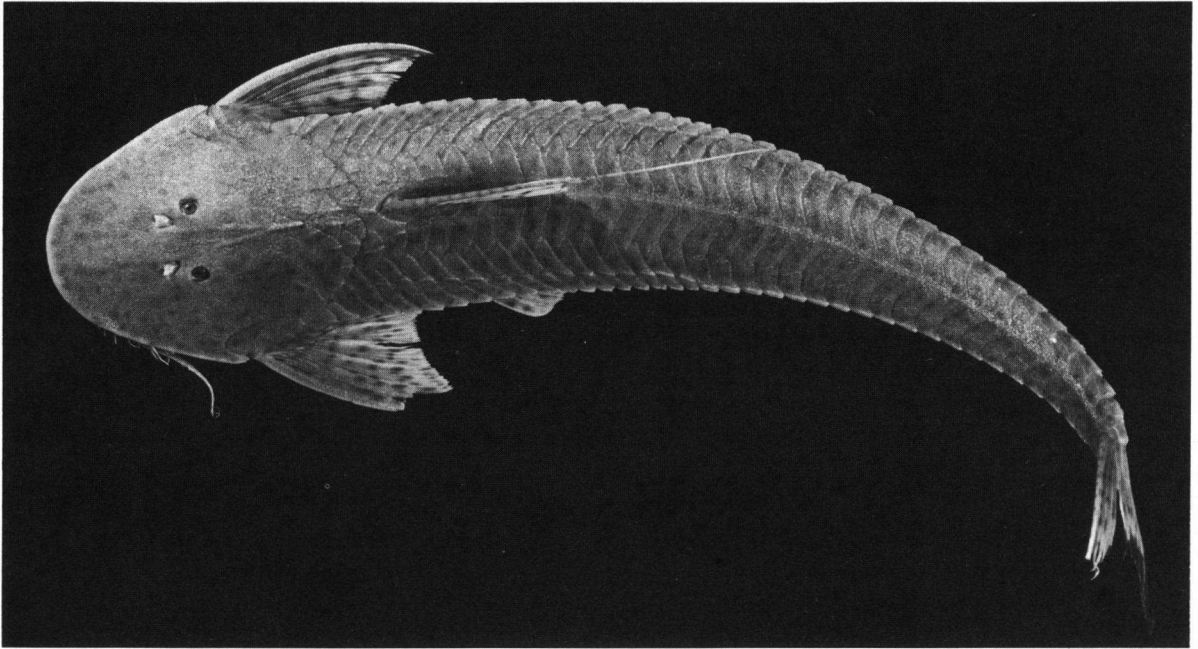


Fig. 1. *Planiloricaria cryptodon* (Isbrücker, 1971) from Rio Purus (MZUSP 24514, SL 214.5 mm); in dorsal view.

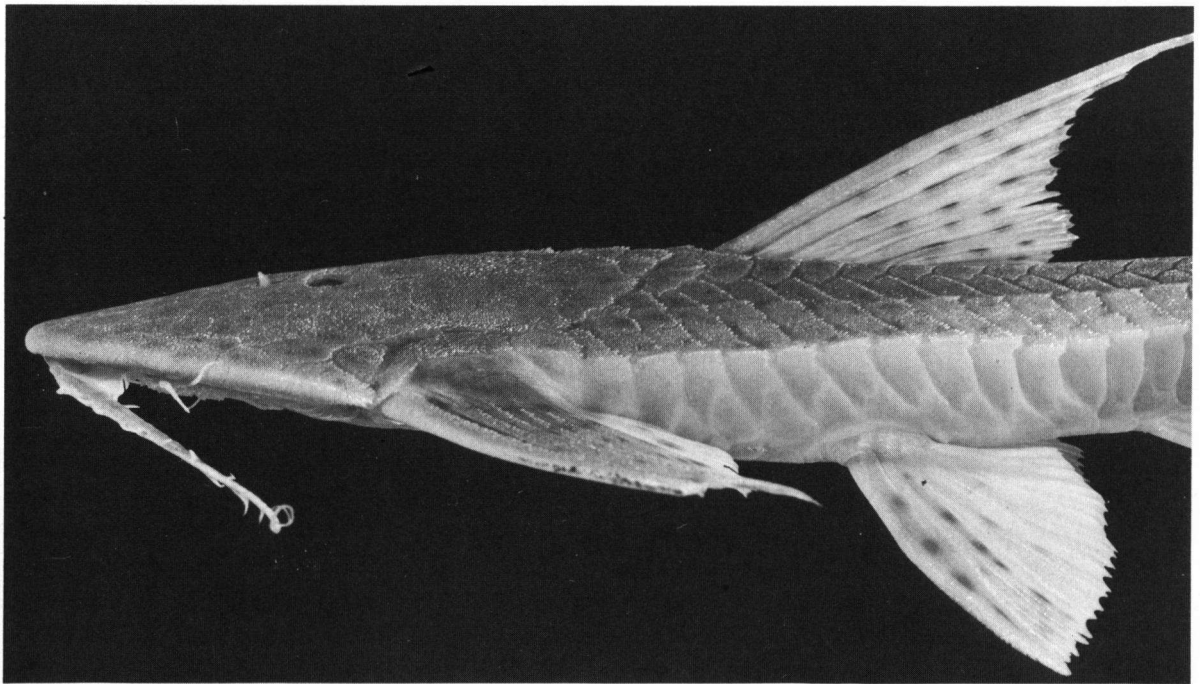


Fig. 2. *Planiloricaria cryptodon* (Isbrücker, 1971), same specimen as in fig. 1; head and anterior part of body in lateral view.

longitudinal ridges; the third is the predorsal scute, which is quite large and has a single median ridge. At either side between the first and second, and between the second and third scute, is another scute.

A small, triangular naked area is present just above the second lateral body scute.

A predorsal fin spinule (part of the dorsal fin spine locking mechanism in several other Loricariidae) is not visible.

Orbital rim oval, with a very small posterior notch and with a prominent anterior notch. Supraorbital rim not raised. Operculum small, rounded anteriorly, almost straight posteriorly, and—except for a small lateral opening—completely fused through skin with the surrounding dermal ossifications of the head. Operculum connected by a wide strip of skin to the cleithrum.

Ventral side of head and snout with a narrow margin of dermal ossifications; no ventrorostral extension.

Anus surrounded by a conspicuous, roundish naked area. Just anterior to the anus is a median strip of very small, polygonal dermal ossifications, reaching to the height of the distal tip of the inner pectoral fin ray. The abdomen between the pelvic fin bases is otherwise largely naked (there are some polygonal scutelets near the thoracic scutes, the scutelets being part of the anterior series), the naked skin anteriorly stretching into an upside-down V-shaped configuration.

Anterior to the last thoracic scute, the remaining part of the abdomen is covered by very small, polygonal scutelets which decrease somewhat in size anteriorly. They form a continuous series reaching the height of about halfway the

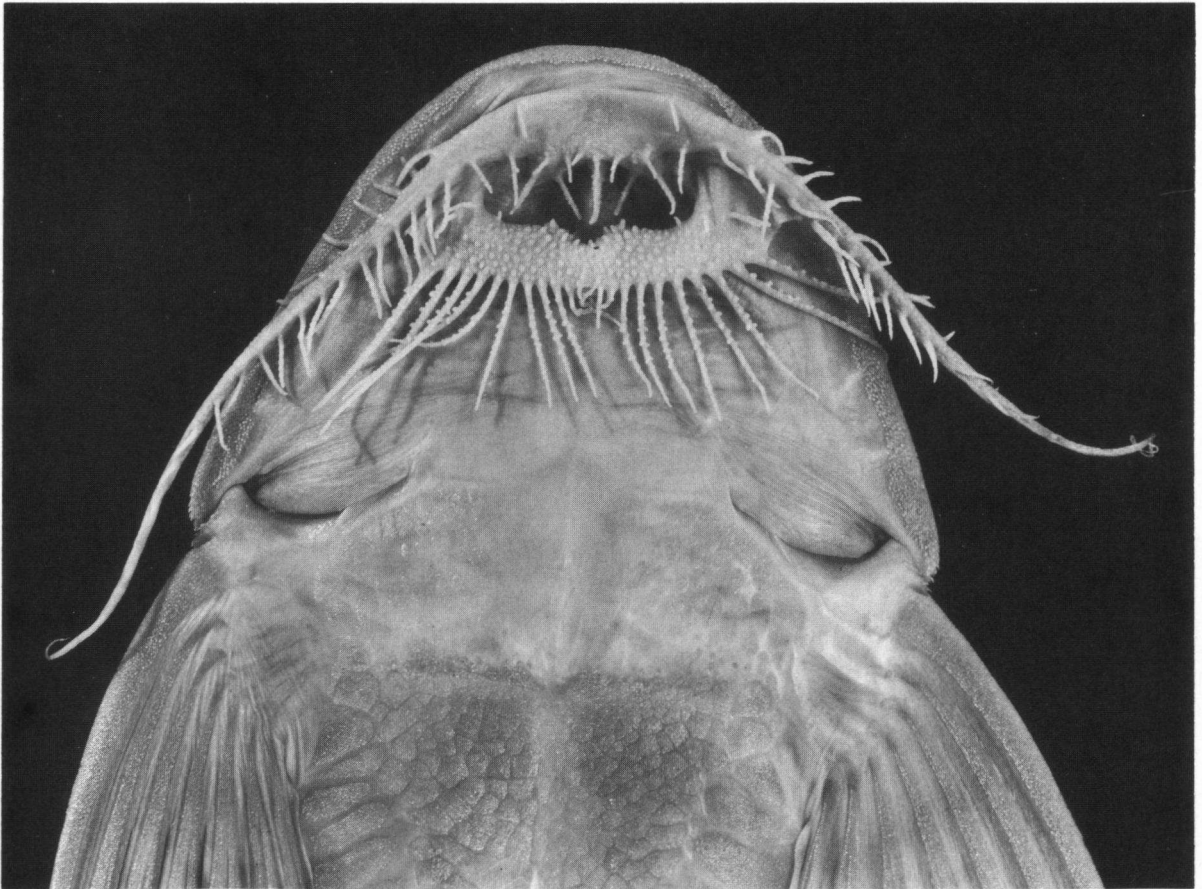


Fig. 3. *Planiloricaria cryptodon* (Isbrücker, 1971), same specimen as in fig. 1; head and adjacent anterior part of body in ventral view.

pectoral fin bases. Between this series of scutelets and posterior to the branchiostegal membrane there is a patch of minute, often isolated, scutelets in an irregular roundish pattern. This pattern of abdominal scutelets is present in the holotype and in the larger Río Purus specimen; in the smaller Río Purus specimen the abdomen is less completely covered by such scutelets, whereas in the specimens from Río Mamoré the anterior abdominal scutelets tend to be relatively larger and less numerous. Larger Río Mamoré specimens have the abdomen more completely covered than smaller ones.

Barbels are shown in fig. 3. The inner maxillary subbarbels are conspicuously longer than the outer ones. The maxillary barbel is free from the ventral head surface (not embedded into a groove), connected to the lower lip by a broad, smooth membrane.

At the symphysis of the upper jaws is a long, medially depressed, triangular, papillose barbel. At either side of this barbel are two long, rounded, papillose barbels with a rather broad base. Posterior to these barbels are six to twelve much smaller, papillose barbels in a (sometimes irregular) transverse series.

Upper lip poorly developed, hardly distinguishable from the broad base of the maxillary barbels. Surface almost entirely smooth, with a few scattered, inconspicuous papillae. Surface of the narrow lower lip with numerous small, round papillae; barbels along posterior margin of lower lip strongly papillose.

A minute pectoral pore (visible as an elongate, horizontal slit in the skin) is present just below the junction of cleithrum and first lateral body scute.

Colour in alcohol (figs. 1-3). — Ground colour of naked parts whitish, of ossified parts tan. When the specimens are drying, though still moisty, a golden hue is visible on those parts covered with odontodes.

Dorsum of head and body with small, indistinct brown spots. Dorsal fin spine and rays with scattered dark brown spots and small blotches. Lower lobe of caudal fin with a broad,

dark brown distal margin; remainder of caudal fin with scattered dark brown spots. Especially dorsum of pectoral fins, and outer half of pelvic fins with irregular, dark brown spots and blotches, which are not all confined to the rays. Anal fin hyaline.

The largest specimen from Río Mamoré has most of the caudal fin damaged, although the distal tips of the rays in the lower lobe have dark brown pigment. The ground colour of the dorsum of body and head is more golden than in the other specimens. The specimen from Río Mamoré in ZMA 119.550 is the only one with a complete caudal fin: it shows no pigment at all.

The holotype (cf. Isbrücker, 1971: 281; Isbrücker & Nijssen, 1974a: 78) has the ground colour dirty white, scutes yellowish brown. In-



Fig. 4. Map of South America, showing the occurrence of *Planiloricaria cryptodon* (Isbrücker, 1971). T indicates the type-locality; spots indicate (from north to south) Río Ucayali, Río Purus, and Río Mamoré, respectively.

distinct brown spots, smaller than the eye, on head, on spine and rays of pectoral fin, dorsal fin (25 on spine), on anal fin, and on dorsal part of body. Ventral edge of caudal fin lobe brown, more conspicuous than all other pigmentation. A rather indistinct brown vertical bar is visible on the middle caudal fin rays.

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