BEAUFORTIA

SERIES OF MISCELLANEOUS PUBLICATIONS

INSTITUTE OF TAXONOMIC ZOOLOGY (ZOOLOGICAL MUSEUM)

UNIVERSITY OF AMSTERDAM

No. 290 Volume 22 July 31, 1974

Rhadinoloricaria gen. nov. and *Planiloricaria*, two genera of South American Mailed Catfishes (Pisces, Siluriformes, Loricariidae)

I. J. H. ISBRÜCKER & H. NIJSSEN

ABSTRACT

This paper deals with two genera of loricariid fishes: *Rhadinoloricaria* gen. nov., and *Planiloricaria* Isbrücker, 1971. *Rhadinoloricaria* is established for the species *macromystax*, described by Günther (1869: 426) in the binomen *Loricaria macromystax*. *Planiloricaria*, elevated to generic rank in the present paper, was described by Isbrücker as a subgenus of the genus *Pseudohemiodon* Bleeker, 1862, for the new species *cryptodon* (Isbrücker, 1971: 278). Diagnoses of these two monotypic genera are given, together with redescriptions and figures of their type-species. The relationships with other genera within the subfamily Loricariinae are discussed. A provisional subdivision into six genus-groups is given, and a new subfamily name, Acestridiinae, is proposed for the genus *Acestridium* Haseman, 1911. A key to the genera of the *Pseudohemiodon*-group (to which *Rhadinoloricaria* and *Planiloricaria* are ascribed) is provided.

INTRODUCTION

The two genera established in the present paper, *Rhadinoloricaria* gen. nov., and *Planiloricaria* Isbrücker, 1971 are both (at least superficially) related to a small group of genera within the subfamily Loricariinae. This subfamily consists of the following six groups:

1) the *Loricaria*-group,

consisting only of *Loricaria* Linnaeus, 1758 (syn. *Fusiloricaria* Fowler, 1940; established as a subgenus of *Loricaria*, but indistinguishable at subgeneric level), —

2) the *Rineloricaria*-group,

consisting of *Rineloricaria* Bleeker, 1862 (syn. *Hemiloricaria* Bleeker, 1862), and *Spatuloricaria* Schultz, 1944 (syn. *Euacanthagenys* Fowler, 1945a), —

3) the *Loricariichthys*-group,

Received: April 29, 1974

consisting of *Loricariichthys* Bleeker, 1862 (syn. *Parahemiodon* Bleeker, 1862), and *Pseudoloricaria* Bleeker, 1862, —

4) the *Pseudohemiodon*-group,
consisting of *Pseudohemiodon* Bleeker, 1862, *Hemiodontichthys* Bleeker, 1862, *Reganella* Eigenmann, 1905 (syn. *Hemiodon* Kner, 1853, preoccupied), *Planiloricaria* Isbrücker, 1971, and *Rhadinoloricaria* gen. nov., —

5) the *Sturisoma*-group,
consisting of *Sturisoma* Swainson, 1838 (syn. *Oxyloricaria* Bleeker, 1862, and *Parasturisoma* A. de Miranda Ribeiro, 1911), *Harttia* Steindachner, 1876, *Lamontichthys* P. de Miranda Ribeiro, 1939, and *Harttiella* Boeseman, 1971, —

6) the *Farlowella*-group,
consisting only of *Farlowella* Eigenmann & Eigenmann, 1889 (syn. *Acestra* Kner, 1853, preoccupied).

Acestridium Haseman, 1911, in our opinion, does not belong to the Loricariinae, but represents a distinct subfamily, the Acestridiinae subfam. nov.

Apart from this annotation of genera of Loricariinae, we are well aware of the possibility of future additions to this list of genera. The above conclusions are abstracted from a review of the genera of Loricariinae which is in preparation. However, since this review may still occupy some time, we believe it desirable to publish our results on *Rhadinoloricaria* and on *Planiloricaria* now. Both genera are represented by a single species, and both of these species are each represented by unique specimens.

The *Pseudohemiodon*-group, in which we assemble *Planiloricaria* and *Rhadinoloricaria*, consists of ten nominal species and subspecies: *Pseudohemiodon* with six described species and subspecies, and *Hemiodontichthys*, *Reganella*, *Planiloricaria*, and *Rhadinoloricaria* each with a single known species.

Rhadinoloricaria macromystax (Günther, 1869) was originally described as *Loricaria macromystax* from the Peruvian Amazon (without further indications of its provenance). The only generic transfer was proposed by Isbrücker (1973b), who listed it as *Pseudohemiodon macromystax* and suggested a connection of this species with *Reganella depressa* (Kner, 1854). Recent direct comparisons of these and other species have demonstrated that Günther's species is sufficiently different to ascribe it to a separate genus.

Planiloricaria was originally proposed as a monotypic subgenus of *Pseudohemiodon* in 1971. However, further data furnished by examination of all species (except *Pseudohemiodon platycephalus*) of the *Pseudohemiodon*-group indicate that *Planiloricaria cryptodon* (Isbrücker, 1971) is sufficiently distinct from all these species at full generic level.

Redescriptions of *Rhadinoloricaria macromystax* and of *Planiloricaria cryptodon* have been prepared from their respective holotypes. Figures of both species are added. A key to the genera of the *Pseudohemiodon*-group is given to facilitate easy recognition of these two remarkable species, which are rarely represented in collections.

The authors are much obliged to Dr. P. H. Greenwood (British Museum

(Natural History), London, BMNH), and to Dr. K. H. Lüling (Zoologisches Forschungsinstitut und Museum "Alexander Koenig", Bonn, ZFMK) for the loan of the holotypes of *Rhadinoloricaria macromystax* and *Planiloricaria cryptodon*, respectively. Mr. G. J. Howes (BMNH) read the manuscript; we gratefully acknowledge his criticism. Mr. Howes made figure 4a-b. Mr. L. A. van der Laan (Instituut voor Taxonomische Zoölogie (Zoölogisch Museum), Amsterdam, ZMA) made the photographic illustrations for this paper. One of the authors (I.J.H.I.) wishes to express his sincere thanks to the staff of the Fish Section of the British Museum (Natural History) for their hospitality and cooperation in making all facilities available during his stay in 1973.

Definition of the *Pseudohemiodon*-group

The five genera included in the *Pseudohemiodon*-group share characteristic teeth; they are spoon-shaped, either simple or bilobed. In size they are about intermediate between those of *Loricaria, Rineloricaria, Spatuloricaria, Pseudoloricaria, Sturisoma, Harttia, Lamontichthys, Harttiella,* and *Farlowella* on the one hand, and those of *Loricariichthys* on the other. The teeth of *Loricaria* species belonging to the *Loricaria cataphracta*-group are solid, twice as long in the upper jaw as those in the lower jaw. Other *Loricaria* species and the species of *Rineloricaria, Spatuloricaria* and *Pseudoloricaria* generally have solid teeth, more or less equal in length in both jaws. *Sturisoma, Harttia, Lamontichthys, Harttiella,* and *Farlowella* have supernumerous, slender, filiform teeth (like *Hypostomus, Ancistrus, Hypoptopoma, Otocinclus,* and so on), whereas *Loricariichthys* is easily distinguished by its rudimentary small teeth. In some genera sexual dimorphism in tooth shape occurs.

We are aware that the dental characters of the *Pseudohemiodon*-group might prove to be of significance only as a means of identification and would carry no or little weight as a character of phylogenetic importance. The structure of the lips and the shape of the rostrum is quite different in the five genera. *Hemiodontichthys* has sexually dimorphic lips like *Pseudoloricaria* and *Loricariichthys.* The lips of *Reganella* resemble those of *Hemiodontichthys* in shape. However, only a limited number of specimens of *Reganella depressa* are available to us; therefore it remains unknown as to whether the male of this species develops a large lower lip. *Pseudohemiodon, Planiloricaria,* and *Rhadinoloricaria* have a large number of barbels along the edge of the lower lip, indicating that no enlargement of this lip in the male occurs; the same condition as in *Loricaria* and all other genera in the subfamily Loricariinae except *Loricariichthys, Pseudoloricaria* and *Hemiodontichthys.*

Hemiodontichthys, Reganella and *Rhadinoloricaria* possess acute snouts, of which the former genus often bears an expansion at the tip. The shape of the snout of the latter two genera resemble one another. The snout of *Pseudohemiodon* species is quite triangular, whereas in *Planiloricaria* the shape is semicircular.

In *Pseudohemiodon* and in *Rhadinoloricaria* teeth are present in both

upper and lower jaws. In *Hemiodontichthys, Reganella,* and *Planiloricaria* the upper jaws are presumably rudimentarily developed and devoid of teeth.

Which of the above-mentioned characters is indicative of the phylogenetic origin of the genera remains to be solved. It is quite probable that the group proposed in the present paper as the *Pseudohemiodon*-group will prove to consist of several smaller groups, viz.: *Pseudohemiodon*-group (*Pseudohemiodon* + *Rhadinoloricaria*), *Hemiodontichthys*-group (*Hemiodontichthys*), *Reganella*-group (*Reganella*), and *Planiloricaria*-group (*Planiloricaria*). The paucity of material does not enable us to solve such problems at present.

Some meristic and morphometric characters of the *Pseudohemiodon*-group

Counts

All specimens examined have the same fin spine and ray counts: dorsal fin I, 6, last ray split to its base (with the exception of two specimens: the holotype of *Pseudohemiodon variegatus venezuelae* has D I, 6, ii, or I, 7, i; a specimen of *Reganella depressa* —IRScNB 17870— has D I, 5, i); anal fin I, 4, last ray split to its base; pectoral fin I, 6; pelvic fin I, 5; caudal fin I, 10, I.

Longitudinal lateral body scutes 27 to 29 in *Hemiodontichthys,* 29 to 30 in *Reganella,* 32 to 34 in *Pseudohemiodon* (30 to 31 in *P. platycephalus,* according to Kner, 1854: 90, 13—14+17), 33 in *Rhadinoloricaria,* and 40 in *Planiloricaria.*

Coalescing denticle ridges on first 11 to 14 longitudinal lateral body scutes in *Hemiodontichthys,* 14 to 15 in *Reganella,* 13 to 16 in *Pseudohemiodon,* 17 to 18 in *Rhadinoloricaria,* and 19 to 20 in *Planiloricaria.*

Thoracic scutes 3 to 5 (usually 4) in *Hemiodontichthys,* 4 to 5 in *Reganella,* 6 to 10 in *Pseudohemiodon,* 9 to 10 in *Rhadinoloricaria,* and 9 in *Planiloricaria.*

Teeth in the upper jaws none in *Hemiodontichthys, Reganella,* and *Planiloricaria,* 2 to 6 in *Pseudohemiodon,* and 4 to 6 in *Rhadinoloricaria.* Teeth in the lower jaws up to 16 in *Hemiodontichthys,* up to 18 in *Reganella,* up to 11 in *Pseudohemiodon,* up to 7 in *Rhadinoloricaria,* and up to 3 in *Planiloricaria.* These figures are for either the left or the right half of the jaws.

Dimensions

Maximum standard length: 248.5 mm in *Pseudohemiodon,* 213.4 mm in *Planiloricaria,* approximately 170 mm (estimated) in *Reganella* (specimen with regenerated snout tip, 153.0 mm total length), 142.0 mm in *Rhadinoloricaria,* 134.0 mm in *Hemiodontichthys.*

The following data are given as ratios as expressed in either standard length (sl), or in head length (hl).

Predorsal length in sl is 2.3 to 2.4 in *Reganella,* 2.5 to 2.6 in *Hemiodontichthys,* 2.7 in *Rhadinoloricaria,* 3.0 to 3.5 in *Pseudohemiodon,* and 3.5 in *Planiloricaria.*

Peduncular length in sl is 2.0 to 2.1 in *Pseudohemiodon*, 2.0 to 2.2 in *Hemiodontichthys*, 2.2 in *Rhadinoloricaria* and in *Planiloricaria*, and 2.5 in *Reganella*.

Head length in sl is 3.0 to 3.2 in *Reganella*, 3.3 to 3.7 in *Hemiodontichthys*, 3.9 in *Rhadinoloricaria*, 4.1 to 5.2 in *Pseudohemiodon*, and 4.3 in *Planiloricaria*.

Snout length in sl is 4.5 to 4.8 in *Reganella*, 5.6 to 6.5 in *Hemiodontichthys*, 6.8 in *Rhadinoloricaria*, 7.1 to 9.8 in *Pseudohemiodon*, and 7.7 in *Planiloricaria*; snout length in hl is 1.5 in *Reganella*, 1.6 to 1.8 in *Hemiodontichthys*, 1.6 to 1.9 in *Pseudohemiodon*, and 1.8 in *Rhadinoloricaria* and in *Planiloricaria*.

Ventrorostral length in hl is 2.6 in *Reganella*, 3.2 to 4.2 in *Hemiodontichthys*, 6.0 to 17.6 in *Pseudohemiodon*, 7.6 in *Rhadinoloricaria*, and 55.1 in *Planiloricaria*.

Orbital diameter plus notch, in hl, is 4.8 to 8.2 in *Pseudohemiodon*, 5.0 to 6.3 in *Hemiodontichthys*, 6.1 to 7.2 in *Reganella*, 6.3 in *Rhadinoloricaria*, and 13.1 in *Planiloricaria*.

Head width in hl is 0.9 to 1.3 in *Pseudohemiodon*, 1.0 in *Planiloricaria*, 1.4 in *Rhadinoloricaria*, 1.6 to 2.0 in *Hemiodontichthys*, and 1.7 to 1.8 in *Reganella*.

Cleithral width in hl is 1.0 in *Planiloricaria*, 1.0 to 1.3 in *Pseudohemiodon*, 1.4 in *Rhadinoloricaria*, 1.5 to 2.0 in *Hemiodontichthys*, and 1.9 to 2.0 in *Reganella*.

Supracleithral width in hl is 1.5 to 1.9 in *Pseudohemiodon*, 1.6 in *Planiloricaria*, 2.0 to 2.7 in *Hemiodontichthys*, 2.2 in *Rhadinoloricaria*, and 2.5 to 2.6 in *Reganella*.

Interorbital width in hl is 4.9 to 6.1 in *Pseudohemiodon*, 4.9 to 6.3 in *Hemiodontichthys*, 5.2 in *Planiloricaria*, 6.6 in *Rhadinoloricaria*, and 10.0 to 10.2 in *Reganella*.

Head depth in hl is 2.5 to 3.4 in *Pseudohemiodon*, 3.1 in *Planiloricaria*, 3.3 to 4.4 in *Hemiodontichthys*, 4.0 in *Rhadinoloricaria*, and 5.1 to 5.6 in *Reganella*.

Relationships

Of the genera here contained in the *Pseudohemiodon*-group, we have examined the following described species: *Pseudohemiodon lamina* (Günther, 1868)*), *Pseudohemiodon variegatus* (Steindachner, 1879) —and the supposed subspecies *Pseudohemiodon variegatus venezuelae* (Schultz, 1944)—, *Pseudohemiodon laticeps* (Regan, 1904), and *Pseudohemiodon amazonum* (Delsman, 1941), *Hemiodontichthys acipenserinus* (Kner, 1854), and *Reganella depressa* (Kner, 1854); the only species we did not examine was the type-species of *Pseudohemiodon*, *Pseudohemiodon platycephalus* (Kner, 1854)

*) This species was described on two occasions in 1868, as in the case of *Rineloricaria lanceolata* (see Isbrücker, 1973a).

of which the holotype is no longer extant (Isbrücker, 1971: 276, based on information from Dr. P. Kähsbauer, in litt., January 8, 1970). We doubt whether Kner's (1854: 90) observation of the lack of teeth in the upper jaws in his holotype (a stuffed specimen) of *Pseudohemiodon platycephalus* is valid for the species. This statement was later used by Bleeker (1862: 3) in his original diagnosis of *Pseudohemiodon*. All species of *Pseudohemiodon* we examined had teeth in both upper and lower jaws, and we presume this is also the case in *Pseudohemiodon platycephalus* (they were probably lost from the holotype).

As already stated above, *Rhadinoloricaria* seems most closely related to *Pseudohemiodon*, as its dentition and the morphology of the lips are similar. The rictal barbels of *Pseudohemiodon* species are shorter than in *Rhadinoloricaria macromystax*. This species is rather similar to *Reganella depressa* in general morphology, especially in shape of snout and head.

Planiloricaria was originally believed to be so related to *Pseudohemiodon* as to merit subgeneric recognition only. *Planiloricaria* has the lip structure more or less in common with *Pseudohemiodon* and *Rhadinoloricaria*. However, *Planiloricaria* shares the lack of teeth in the upper jaws with *Hemiodontichthys* and *Reganella*. This lack of teeth may well prove to be correlated with a rudimentarily developed pair of upper jaws (which cannot be observed externally) in these three genera. The fact that upper jaws bearing teeth are easily observed in *Pseudohemiodon* and in *Rhadinoloricaria* induces us to give *Planiloricaria* full generic rank; however, it is not possible at the present time to come to any definite conclusions on the relationships of the five genera mentioned here as taxa of the *Pseudohemiodon*-group until studies on the phylogenetic importance of certain characters have been completed.

Methods of taking data

In the descriptions (table I), measurements and counts are taken in accordance with the methods adopted for a redescriptive procedure with *Pseudohemiodon* species. In the forthcoming publication on this genus, these methods are fully explained.

Key to the genera of the *Pseudohemiodon*-group

1a Teeth present in both upper and lower jaws 2
1b Teeth absent in upper jaws 3
2a Snout little produced, triangular in shape in dorsal and ventral view, rictal barbels of moderate length . . *Pseudohemiodon* Bleeker, 1862
2b Snout produced, acute in shape, rictal barbels long . . . . . *Rhadinoloricaria* gen. nov.
3a Snout not produced, semicircular in shape, lower lip narrow, with numerous barbels and subbarbels, orbital notch minute or absent . . . . . *Planiloricaria* Isbrücker, 1971
3b Snout produced, lower lip broad, without barbels and subbarbels, orbital notch conspicuous 4

4a Abdomen covered with large, well-developed plates, snout often with an expansion at the tip, dermal denticles well-developed . . . . . *Hemiodontichthys* Bleeker, 1862

4b Abdomen covered with small, mosaic-like dermal platelets, developed fully in adult specimens only, snout without an expansion, dermal denticles weakly developed . . . . . *Reganella* Eigenmann, 1905

Rhadinoloricaria new genus

Type-species: *Rhadinoloricaria macromystax* (Günther, 1869) = *Loricaria macromystax* Günther, 1869.

Diagnosis: A genus of the subfamily Loricariinae with *Pseudohemiodon* Bleeker, 1862 as its nearest relative, distinguished by its acute snout, slightly concave on the sides, and long rictal barbels. Head very much depressed. Eye moderate, orbital notch present. Lips with many long, fringed barbels (of poor shape in holotype of *Rhadinoloricaria macromystax*). No anal plate; small scutes on the abdomen from anus to posterior margin of gill-openings, leaving a narrow naked median notch anteriorly; anteriormost scutelets little smaller than posterior ones. Upper lips very narrow. Teeth slender spoon-shaped,almost simple (see fig. 4a-b), outer lobe minute or absent; teeth in both upper and lower jaws. Ventrally the tip of the snout resembles that of *Sturisoma*. *Rhadinoloricaria* is very similar to *Reganella* in shape of snout, head and body, but differs in dentition and in lip structure. Upper caudal simple ray, according to Günther (1869: 426) produced.

Dorsal fin I, 6, last ray split to its base; anal fin I, 4, last ray split to its base; pectoral fin I, 6; pelvic fin I, 5; caudal fin I, 10, I.

Etymology: *Rhadinoloricaria* is from the Greek "rhadinos" meaning slender, tapering, and from the Latin "lorica" meaning armour, with reference to the type-genus of the family Loricariidae.

Rhadinoloricaria macromystax (Günther, 1869)
(figs. 1—2, 4a-b; table I)

Loricaria macromystax Günther, 1869: 426, figs. 5—6 (original description; type locality: Peru, "river Amazons"; holotype in British Museum (Natural History), London, BMNH 1869.5.21.8); — Eigenmann & Eigenmann, 1889: 37 (listed; name only; in subgenus *Loricaria*); — 1890: 385 (listed; upper Amazon; in subgenus *Loricaria* in key on: 365, data taken from Günther, 1869); — 1891: 39 (listed; Marañon; in subgenus *Loricaria*); — Regan, 1904: 294 (description of the holotype; Peruvian Amazon; in subgenus *Loricaria* in key on: 274); — Eigenmann, 1910: 415 (listed; Peruvian Amazon; in subgenus *Loricaria*); — Fowler, 1942: 86 (listed; Perú, Amazonas peruano); — Eigenmann & Allen, 1942: 208 (listed; Peruvian Amazon); — Gosline, 1945: 107 (listed; Amazonas peruano; in subgenus

FIG. 1. *Rhadinoloricaria macromystax* (Günther, 1869), holotype in dorsal, ventral and lateral view.

Loricaria); — Fowler, 1945: 105 (listed; reprint of Fowler, 1942); — Fowler, 1954: 96—97, fig. 698 (references; figure copied from Günther, 1869).

Pseudohemiodon macromystax; Isbrücker, 1973b: 186 (note), 187—188 (listed; note).

Material examined. — BMNH 1869.5.21.8, holotype, standard length 142.0 mm, Peru, Peruvian Amazon, further data on locality unknown, coll. E. Bartlett.

Description. — Morphometric and meristic data are given in table I; in addition, figures 1—2, 4a-b give information on shape, teeth structure, and so on.

Colour (in alcohol). — Uniform (after Günther, 1869).

Note. — The holotype is in poor condition, the soft parts of the mouth especially are in bad shape, and the caudal peduncle is broken near the base of the caudal fin.

Planiloricaria Isbrücker, 1971

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

Diagnosis: A genus of the subfamily Loricariinae without known close relative, here placed in the *Pseudohemiodon*-group because of the combina-

FIG. 2. *Rhadinoloricaria macromystax* (Günther, 1869), head of holotype in dorsal and ventral view.

TABLE I. Morphometric and meristic data of the holotypes of *Rhadinoloricaria macromystax* and of *Planiloricaria cryptodon*, respectively.

	Rhadinoloricaria macromystax			*Planiloricaria cryptodon*		
morphometric data in:	mm	sl	hl	mm	sl	hl
standard length	142.0			213.4		
axial length	155.1			244.1		
total length	162.2			562.6		
predorsal length	52.5	2.7		61.8	3.5	
head length	36.7	3.9		49.6	4.3	
head width	25.5	5.6	1.4	48.2	4.4	1.0
head depth	9.2	15.4	4.0	15.8	13.5	3.1
snout length	20.8	6.8	1.8	27.7	7.7	1.8
ventrorostral length	4.8	29.6	7.6	0.9	237.1	55.1
orbital diameter, minus notch	4.1		9.0	2.6		19.1
orbital diameter, plus notch	5.8		6.3	3.8		13.1
interorbital width	5.6		6.6	9.5		5.2
internasal width	4.2		8.7	7.8		6.4
dorsal spine length	22.8	6.2	1.6	88.2	2.4	0.6
length 1st dorsal ray	18.8	7.6	2.0	38.7	5.5	1.3
length 6th dorsal ray	12.5	11.4	2.9	14.8	14.4	3.4
dorsal fin base	14.0	10.1	2.6	20.8	10.3	2.4
anal spine length	10.4	13.7	3.5	31.6	6.8	1.6
pectoral spine length	23.4	6.1	1.6	42.5	5.0	1.2
pelvic spine length	17.2	8.3	2.1	28.5	7.5	1.7
upper caudal spine	-			349.0		
lower caudal spine	-			39.1		
cleithral width	26.5	5.4	1.4	48.0	4.4	1.0
supra-cleithral width	16.7	8.5	2.2	32.0	6.7	1.6
thoracic length	24.1	5.9	1.5	39.6	5.4	1.3
abdominal length	22.2	6.4	1.7	32.0	6.7	1.6
peduncular length	64.2	2.2		98.5	2.2	
depth caudal peduncle	3.3		11.1	3.9		12.7
width caudal peduncle	3.3		11.1	7.1		7.0
anus-anal fin origin	12.5	11.4	2.9	18.0	11.9	2.6
length rictal barbel	30.0	4.7	1.2	50.0	4.3	9.9
axial length lower lip	-			4.3	49.6	11.5
longest barbel lower lip	-			19.0	11.2	2.6
meristic data:						
lateral scutes (left/right)	33/33			40/40		
coalescing scutes (left/right)	17/18			19/20		
thoracic scutes (left/right)	10/9			9/9		
teeth upper jaws (left/right)	6/4			0/0		
teeth lower jaws (left/right)	6/7			3/3		
number of barbels	many			24		

tion of the following characters: Head very much depressed, broad in dorsal view, snout profile more or less disc-like; eyes very small; orbital notch absent or most inconspicuously present; no flap on pupil; a narrow lower lip with many long, fringed barbels; long rictal barbels with numerous (about 20) subbarbels: no teeth in upper jaw (see note on *Pseudohemiodon platycephalus* above); three small, simple, spoon-shaped teeth in each of the lower jaws; no prominent ridges of denticles on dorsal parts of snout and head; long dorsal filament; very long caudal filament; pelvic spines not prolonged.

Dorsal fin I, 6, last ray split to its base; anal fin I, 4, last ray split to its base; pectoral fin I, 6; pelvic fin I, 5; caudal fin I, 10, I.

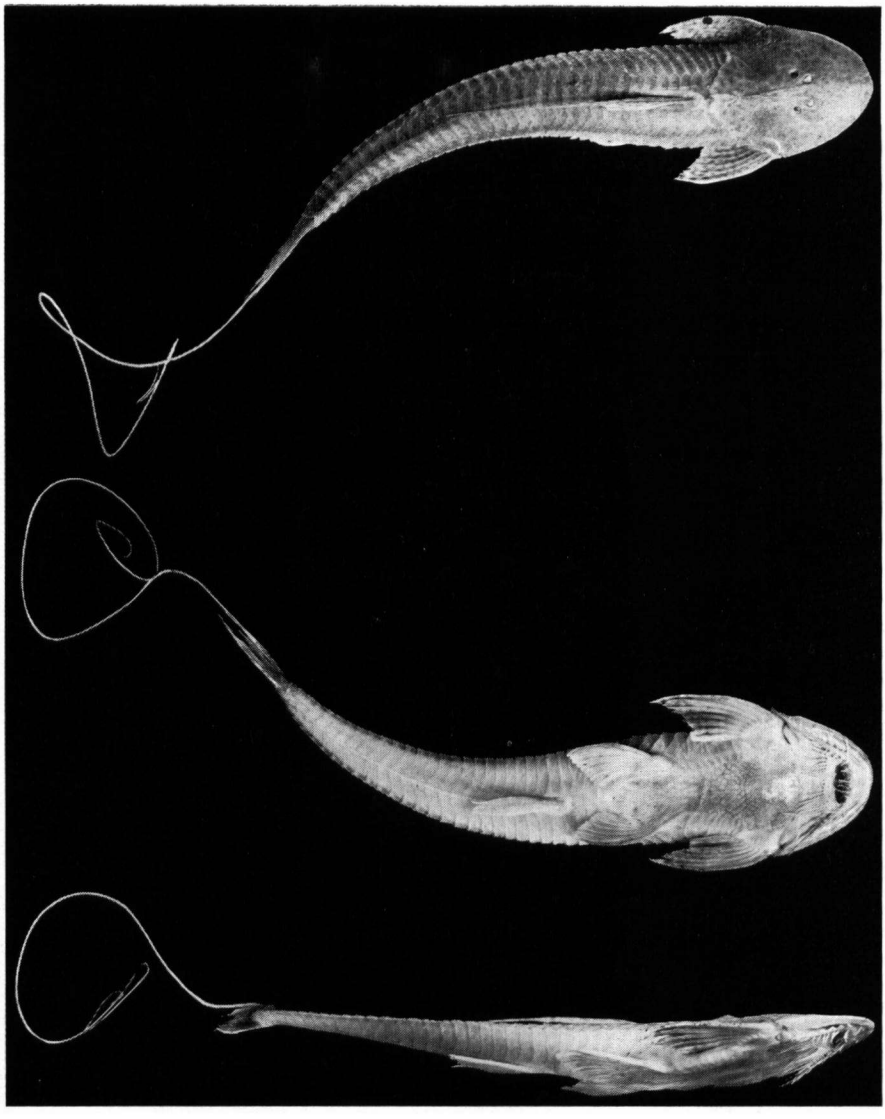

FIG. 3. *Planiloricaria cryptodon* (Isbrücker, 1971), holotype in dorsal, ventral, and lateral view.

Planiloricaria cryptodon (Isbrücker, 1971)
(figs. 3, 4c-d; table I)

Pseudohemiodon (*Planiloricaria*) *cryptodon* Isbrücker, 1971: 278—281, figs. 2b-c, 3—8 (original description; type-species of subgenus *Planiloricaria*; type locality: "Peru: Río Ucayali near Pucallpa"; holotype in "Zoologisches Forschungsinstitut und Museum Alexander Koenig", Bonn, ZFMK /1/66/1717); — Isbrücker, 1973b: 186 (note), 188 (listed).

Material examined. — ZFMK /1/66/1717, holotype, 213.4 mm standard length, Peru, Río Ucayali near Pucallpa, coll. K. H. Lüling, July/August 1966 (specimen re-examined for this study).

Description. — Morphometric and meristic data are given in table I; in addition, figures 3, 4c-d give information on shape, teeth structure, and so on.

Colour (in alcohol). — Ground colour dirty white, scutes yellowish brown. Indistinct brown spots, smaller than eye, on head, on spine and rays of pectoral fin, dorsal fin (25 on spine), and 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 on middle caudal fin rays.

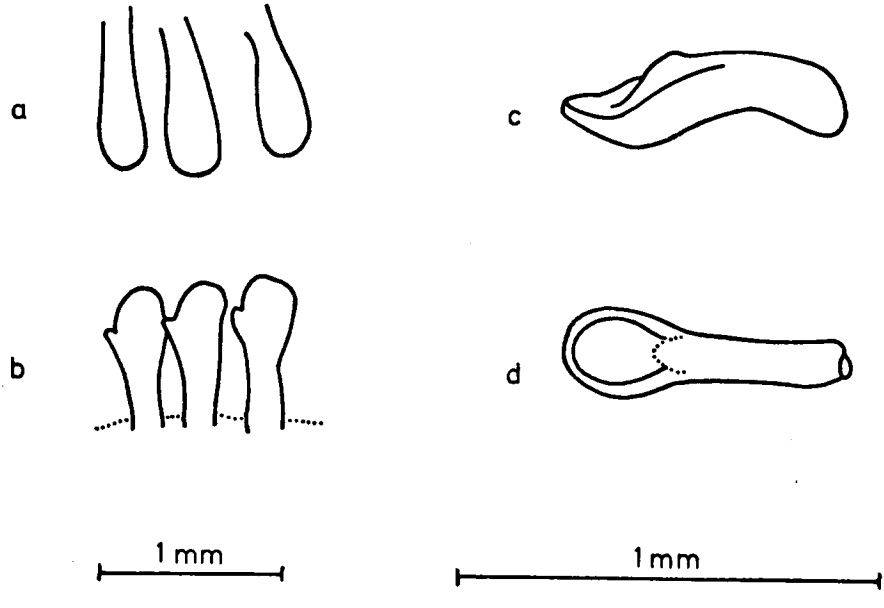

Fig. 4. a - teeth from upper jaw, and b - teeth from lower jaw of *Rhadinoloricaria macromystax*; c - tooth in lateral view, and d - tooth in dorsal view, from lower jaw of *Planiloricaria cryptodon*.

References

BLEEKER, P.
1862 Atlas ichthyologique des Indes Orientales Néêrlandaises: Siluroïdes, Chacoïdes et Hétérobranchoïdes, **2**: 1—112, pls. 49—101 (Fr. Muller, Amsterdam).

BOESEMAN, M.
1971 The "comb-toothed" Loricariinae of Surinam, with reflections on the phylogenetic tendencies within the family Loricariidae (Siluriformes, Siluroidei). — Zool. Verh. Leiden, **116**: 1—56, 8 pls.

DELSMAN, H. C.
1941 Résultats scientifiques des croisières du Navire-École Belge "Mercator". III. Pisces. — Mém. Mus. roy. Hist. nat. Belgique, (2) **3** (21): 47—82.

EIGENMANN, C. H.
1905 The mailed catfishes of South America. — Science, Friday May 19, n. s., **21** (542): 792—795.

1910 Catalogue and bibliography of the fresh water fishes of the Americas south of the tropic of Cancer. Catalogue of the fresh-water fishes of tropical and South temperate America. — Rep. Princeton Univ. Exped. Patagonia, 1896—1899, **3** (zool. 4): 375—511.

EIGENMANN, C. H. & W. R. ALLEN
1942 Fishes of western South America: 1—494, 22 pls., 1 map (Univ. Kentucky, Lexington).

EIGENMANN, C. H. & R. S. EIGENMANN
1889 Preliminary notes on South American nematognathi II. — Proc. California Acad. Sci., (2) **2**: 28—56.

1890 A revision of the South American nematognathi, or cat-fishes. — Occ. Pap. California Acad. Sci., **1**: 1—105, 1 map.

1891 A catalogue of the fresh-water fishes of South America. — Proc. U. S. nation. Mus., **14**: 1—81.

FOWLER, H. W.
1940 A collection of fishes obtained by Mr. William C. Morrow in the Ucayali River Basin, Peru. — Proc. Acad. nat. Sci. Philadelphia, **91**: 219—289.

1942 Los peces del Peru. Catálogo sistemático de los peces que habitan en aguas peruanas. — Bol. Mus. Hist. nat. "Javier Prado", Lima, Univ. San Marcos, **6** (20): 71—91.

1945a Colombian zoological survey. Part I. — The fresh-water fishes obtained in 1945. — Proc. Acad. nat. Sci. Philadelphia, **97**: 93—135.

1945b Los peces del Peru. Catálogo sistemático de los peces que habitan en aguas peruanas. — Bol. Mus. Hist. nat. "Javier Prado", Lima, Univ. San Marcos: 1—298 (Reprinted from the sections appearing under the above title in the Boletin from 1941-1944).

1954 Os peixes de água doce do Brasil 4. — Arq. zool. Est. São Paulo, **9**: i-ix, 1—400.

GOSLINE, W. A.
1945 Catálogo dos nematognathos de água-doce da América do Sul e Central. — Bol. Mus. nac. Rio de Janeiro, (n.s.), zool., **33**: 1—138.

GÜNTHER, A. [C. L. G.]

1868a Diagnoses of some new freshwater fishes from Surinam and Brazil, in the collections of the British Museum. — Ann. Mag. nat. Hist., (4) **1** (6): 475—481.

1868b Descriptions of freshwater fishes from Surinam and Brazil. — Proc. zool. Soc. London, 1868: 229—247, pls. 20—22.

1869 Descriptions of some species of fishes from the Peruvian Amazons. — Proc. zool. Soc. London, 1869: 423—429.

HASEMAN, J. D.

1911 Descriptions of some new species of fishes and miscellaneous notes on others obtained during the expedition of the Carnegie Museum to central South America. — Ann. Carnegie Mus., **7** (3—4): 315—328, pls. 46—52.

ISBRÜCKER, I. J. H.

1971 Scientific results of the Peru-Bolivia-expedition Dr. K. H. Lüling 1966. Pseudohemiodon (Planiloricaria) cryptodon, a new species and subgenus from Peru (Pisces, Siluriformes, Loricariidae). — Bonn. zool. Beitr., **21** (3/4): 274—283 (in the volume for 1970).

1973a Redescription and figures of the South American Mailed Catfish Rineloricaria lanceolata (Günther, 1868) (Pisces, Siluriformes, Loricariidae). — Beaufortia, **21** (278): 75—89.

1973b Status of the primary homonymous South American catfish Loricaria cirrhosa Perugia, 1897, with remarks on some other loricariids (Pisces, Siluriformes, Loricariidae). — Ann. Mus. St. nat. Genova, **79**: 172—191.

KNER, R.

1853 Die Panzerwelse des k. k. Hof-Naturalien-Cabinetes zu Wien. — Sitzungsber. k. Akad. Wiss. Wien, mathem.-naturwiss. Cl., **10** (1): 113—116.

1854 Die Panzerwelse des k. k. Hof-Naturalien-Cabinetes zu Wien. I. Abtheilung: Loricarinae. — Denkschr. k. Akad. Wiss. Wien, mathem.-naturwiss. Cl., **6**: 65—98, 8 pls.

LINNAEUS, C.

1758 Systema naturae per regna triae naturae, [etc.] [ed. 10], **1**: 1—824 (L. Salvii, Holmiae).

MIRANDA RIBEIRO, A. DE

1911 Fauna Brasiliense. Peixes IV. Eleutherobranchios Aspirophoros (A). Physostomos Scleracanthos. — Arch. Mus. nac. Rio de Janeiro, **16**: 1—504, pls. 22—54.

MIRANDA RIBEIRO, P. DE

1939 Sóbre o gênero Harttia, Steind. (Peixes: Loricariidae). — Bol. Biol. São Paulo (n.s.), **4** (1): 11—13, pl. 2.

REGAN, C. T.

1904 A monograph of the fishes of the family Loricariidae. — Trans. zool. Soc. London, **17** (3): 191—350, pls. 9—21.

SCHULTZ, L. P.

1944 The catfishes of Venezuela, with descriptions of thirty-eight new forms. — Proc. U. S. nation. Mus., **94**: 173—338, 14 pls.

STEINDACHNER, F.
1876 Die Süsswasserfische des südöstlichen Brasilien (III). — Sitzungsber. k. Akad. Wiss. Wien, mathem.-naturwiss. Cl., **74**: 1—136, 13 pls.

1879 Beiträge zur Kenntniss der Flussfische Südamerika's. — Denkschr. k. Akad. Wiss. Wien, mathem.-naturwiss. Cl., **41**: 151—172, 4 pls.

SWAINSON, W.
1838 The natural history of fishes, amphibians, & reptiles, or monocardian animals, **1**: i-vi, 1—368 (Cabinet Cyclopedia) (Longman, Orme, Brown, Green & Longmans, and Taylor, London).

I. J. H. ISBRÜCKER & Dr. H. NIJSSEN
Instituut voor Taxonomische Zoölogie (Zoölogisch Museum)
Universiteit van Amsterdam
Plantage Middenlaan 53
Amsterdam 1004 — the Netherlands