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# *DENTECTUS BARBARMATUS*, A NEW GENUS AND SPECIES OF MAILED CATFISH FROM THE ORINOCO BASIN OF VENEZUELA (PISCES, SILURIFORMES, LORICARIIDAE)

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ABSTRACT

*Dentectus barbarmatus*, a new genus and species of mailed catfish of the subfamily Loricariinae, tribe Loricariini, is described from tributaries of the northern margin of the Orinoco River in Venezuela. Morphometric and meristic data of several specimens are presented and illustrations are given. The relationships of the new genus with other genera of the tribe are discussed. It is assigned to the subtribe Planiloricariina, together with *Pseudohemiodon* Bleeker, 1862, *Rhadinoloricaria* Isbrücker & Nijssen, 1974, *Crossoloricaria* Isbrücker, 1979, and *Planiloricaria* Isbrücker, 1971.

RESUMEN

Se describe *Dentectus barbarmatus* un nuevo género y especie de Loricárido de la subfamilia Loricariinae, tribu Loricariini, proveniente de tributarios de la márgen norte del Río Orinoco, en Venezuela. Se incluyen datos morfométricos y merísticos de varios specímenes así como ilustraciones del holotipo y algunos paratipos. Se discuten las relaciones de este nuevo género con otros de la misma tribu; y se lo agrupa, junto con *Pseudohemiodon* Bleeker, 1862, *Rhadinoloricaria* Isbrücker & Nijssen, 1974, *Crossoloricaria* Isbrücker, 1979, y *Planiloricaria* Isbrücker, 1971, en la subtribu Planiloricariina.

## INTRODUCTION

The late Agustín Fernández Yépez and the senior author of the present publication initiated as early as in 1968 a study on the Loricariinae represented in the collection of Fernández Yépez. Unfortunately, for different reasons this study was interrupted during a long period. Ten years later, when they were preparing to finish the work, Fernández Yépez died.

Last year the senior author restarted the study in collaboration with Isbrücker and Nijssen.

This is the first of a series of papers dealing mainly with the species of Loricariinae in the Fernández Yépez collection. He left numerous unpublished very accurate drawings and sketches of his specimens. In addition to the general benefit gained by publishing these

the senior author where still necessary) together with the data and identification of his specimens, we also want to honour Fernández Yépez as an outstanding South American Ichthyologist and the pioneer of Ichthyological Studies in Venezuela.

In 1968, Fernández Yépez and the senior author sorted out two groups of fishes originating from the Salinas River (a tributary of the Portuguesa River, which flows into the Orinoco). Both groups were very similar to one another in appearance, such as in general shape of body, head and snout. One of these groups had no visible teeth on neither the premaxillae nor on the dentaries and had remarkably long and slender filamentous barbels on both upper and lower lips. It was obvious then that these two groups represented two species. They apparently were closely related with a group of species of *Loricaria* Linnaeus, 1758, assigned to the subgenus *Loricaria* as defined by Regan (1904), viz.: *"Loricaria" platycephala* (Kner, 1854), *"Loricaria" laticeps* Regan, 1904, *"Loricaria" lamina* Günther, 1868, and *"Loricaria" macromystax* Günther, 1869.

Together with these species, the two forms collected in Río Salinas seem to represent a distinct and easily identifiable group, different from the other species of *Loricaria* as defined by Regan (1904). The first group was recognized as a new species, herein described as the representative of a new genus: *Dentectus barbarmatus*. The second group of specimens were initially labelled as "aff. cf. *Loricaria laticeps* and *L. lamina*"; it represents a species of *Pseudohemiodon* which will be described in a forthcoming paper.

Since 1968 several publications appeared, dealing with the species included by Regan (1904: 274, in key, couplet IV, B) in the nominate subgenus of *Loricaria* (viz.: *"Loricaria" variegata*, *"L." macromystax*, *"L." lamina*, *"L." laticeps*, and *"L." platycephala*). Initially, it was pointed out especially that *Pseudohemiodon* was distinct at generic level from *Loricaria* sensu lato, and successively different taxonomic assignments have been proposed, next to the establishment of new genera and to the description of some new species (cf. Isbrücker, 1971, 1973, 1975, 1979, 1980, and 1981; Isbrücker & Nijssen, 1974a, 1974b, 1976, and 1978). As a result of the present study, the *Pseudohemiodon*-group, previously placed in the subtribe Loricariina, is now assigned to the subtribe Planiloricariina.

In this paper, those specimens in the collection of Fernández Yépez are considered which at first sight apparently had no teeth at all. Two specimens were cleared and stained and after this treatment they proved to have few very minute teeth in both jaws and very small premaxillae. These characters as well as the structure of the lips, and the peculiar armature of the maxillary barbels and at the base of some of the filamentous barbels of the upper lip, are unknown in any genus of the *Pseudohemiodon*-group, in *Planiloricaria*, or in any other genus of the family Loricariidae. However, the new genus seems to be closely related with both the *Pseudohemiodon*-group and the genus *Planiloricaria*.

## ACKNOWLEDGEMENTS

Thanks to the kindness of Dr Francisco Mago Leccia, who provided the senior author facilities to work in his laboratory at the Instituto de Zoología Tropical of the Universidad Central de Venezuela and who gave access to the extensive collection under his care, we have been able to locate additional specimens of the same species as in the collection of Fernández Yépez.

The senior author likes to thank the Decanato de Investigaciones of the Universidad Simón Bolívar for the financial support given to spend a few weeks in the Instituut voor Taxonomische Zoölogie of the Universiteit van Amsterdam.

The drawings in figs. 1 and 2 were first sketched by Agustín Fernández Yépez and completed by F. J. Martín Salazar. Figs. 3-4 were made by Mr L. A. van der Laan (ZMA).

## MATERIAL AND METHODS

Specimens are deposited in collections of the Museo de Biologia, Universidad Central de

Venezuela (MBUCV) and of the Instituut voor Taxonomische Zoölogie, Zoölogisch Museum, Universiteit van Amsterdam (ZMA).

The methods of taking morphometric and meristic data are largely the same as those proposed by Isbrücker & Nijssen (1978: 180-182); for specimens with a produced, anterioventrally ossified snout (or ventrorostral extension) Isbrücker et al. (in press) have proposed to subtract this elongation from all measurements in which it is included, before calculating the various ratios. Subtraction of this part enables a better way for comparison.

In table I some morphometric data are additional to those referred to above, as follows:

abdominal length/pelvic spine (character 40 in table I): ratio of pelvic fin spine, expressed in abdominal length,—

abdominal scutelets (character 44): number of scutelets in posterior + anterior transverse series,—

distance snout to anus (character 9): from tip of snout to center of anal papilla; ratios expressed in SL,—

distance snout to pelvic (character 10): from tip of snout to outer base of pelvic fin spine; ratios expressed in SL,—

interorbital/max. orb. diam. (character 36): ratio of maximum orbital diameter, expressed in least interorbital width,—

interorbital/orbital diam. (character 37): ratio of orbital diameter excluding anterior and posterior notches, expressed in least interorbital width,—

maxillary barbel (character 21): = rictal barbel,—

orbital diameter (character 25): orbital diameter excluding anterior and posterior notches; ratios expressed in HL,—

postanal/body width at anal (character 38): ratio of body width at anal, expressed in postanal length,—

preanal length (character 7): from tip of snout to base of anal fin spine; ratios expressed in SL,—

thoracic length/pectoral spine (character 39): ratio of pectoral fin spine length, expressed in thoracic length.

## SYSTEMATIC DESCRIPTIONS

### **Dentectus** new genus

Type-species: *Dentectus barbarmatus* new species

Diagnosis. — A genus of the subfamily Loricariinae, tribe Loricariini (sensu Isbrücker & Nijssen, 1978: 179), with the following distinguishing characters:

(1) Upper and lower lip with numerous long, filamentous barbels in several rather irregular rows. Externo-lateral base of filaments of the upper lip and almost the entire margin of the maxillary barbel provided with dermal ossifications bearing odontodes.

(2) Barbels along the margin of the lower lip reach to the height of the branchiostegal membrane; usually these barbels have enlarged papillae laterally, whereas the other barbels (except for the maxillary barbel) are smooth.

(3) Premaxillaries very small, widely separated from each other and from the maxillary. In each premaxillary up to three small, elongate teeth with expanded crowns are present. Dentaries likewise widely separated from each other, distally incasing up to three teeth each, which teeth are similar to the ones in the premaxillary. The teeth and jaws are invisible in normally preserved specimens: they can be easily observed in specimens which are cleared and stained.

Additional characters are given below in a comparison with related genera and in the description of the only known species.

Fin-ray counts as in other genera of the Loricariini: dorsal fin with I, 6, i rays, the last one split to its base; pectoral fin with I, 6 rays; pelvic fin with I, 5 rays; caudal fin with I, 10, I rays; in nine specimens, five have I, 5 anal fin rays and four have I, 4, i rays, the last one split to its base.

Etymology. — *Dentectus* is from the Latin *dens* meaning tooth, and from the Latin *tectus* meaning covered, concealed, disguised, an allusion to the unique dentition.

## Comparison

*Dentectus* on the one hand seems to be closely related with *Pseudohemiodon* Bleeker, 1862, *Rhadinoloricaria* Isbrücker & Nijssen, 1974, and *Crossoloricaria* Isbrücker, 1979 (these latter three constitute the *Pseudohemiodon*-group of genera within the subtribe Loricariina, as defined by Isbrücker, 1981). On the other hand, it also possesses some characters (indicated below) pointing to a relationship with *Planiloricaria* Isbrücker, 1971, hitherto the only genus of the subtribe Planiloricariina (cf. Isbrücker, 1979).

*Dentectus* shares most characters with the *Pseudohemiodon*-group genera: head very much depressed, broad in dorsal view, snout profile more or less disc-like to triangular (*Rhadinoloricaria* has the snout profile tapering, relatively acute), teeth reduced in size and in number, presence of an orbital notch (some species of *Pseudohemiodon* have an anterior and a posterior orbital notch), usually a small flap extending dorsally downward from the pupil, a rather large labial fold, rather prominent ridges on dorsal surface of head and snout, outer (unbranched) rays or 'spines' of caudal fin produced and often with an extremely long filament.

*Dentectus*, the *Pseudohemiodon*-group of genera, and *Planiloricaria* show differences in various morphometric and meristic characters. In the following comparison, standard lengths of measured *Dentectus* specimens are between 62.5 and 141.6 mm, of the various species of the *Pseudohemiodon*-group genera the standard lengths are between 63 and 246.5 mm; the only known specimen of *Planiloricaria* is 214 mm.

*Dentectus* has the dorsal fin spine contained 3.1-4.0 times in SL, *Pseudohemiodon* et al. 4.5-6.6, and *Planiloricaria* 2.4. It has the first branched dorsal fin ray contained 4.2-5.1 in SL, against 5.1-7.3 in *Pseudohemiodon* et al., and 5.5 in *Planiloricaria*.

The upper caudal fin 'spine' is 0.3-0.5 in SL in *Dentectus*, 0.4-6.9 in *Pseudohemiodon* and related genera, and 0.6 in *Planiloricaria*. The lower caudal fin 'spine' is 1.6-4.7 in SL in *Dentectus* against 6.1-9.9 in *Pseudohemiodon* et al., and 5.5 in *Planiloricaria*.

*Dentectus* has the maximum orbital diameter contained 5.6-6.4 times in head length, in the *Pseudohemiodon*-group it is 4.3-7.2, in *Planiloricaria* 13.1.

The interorbital width of *Dentectus* is 4.2-4.6 in head length, 4.3-6.1 in *Pseudohemiodon* et al., and 5.2 in *Planiloricaria*.

*Dentectus* has 16-18 coalescing lateral body

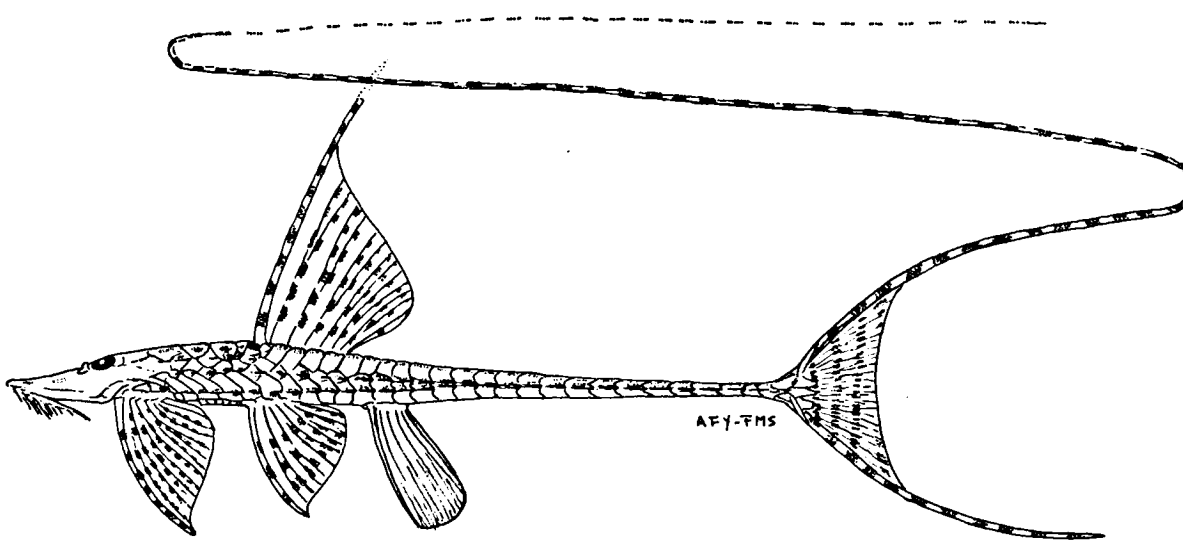

Fig. 1. *Dentectus barbarmatus* n. gen. et n. sp., holotype in lateral view.

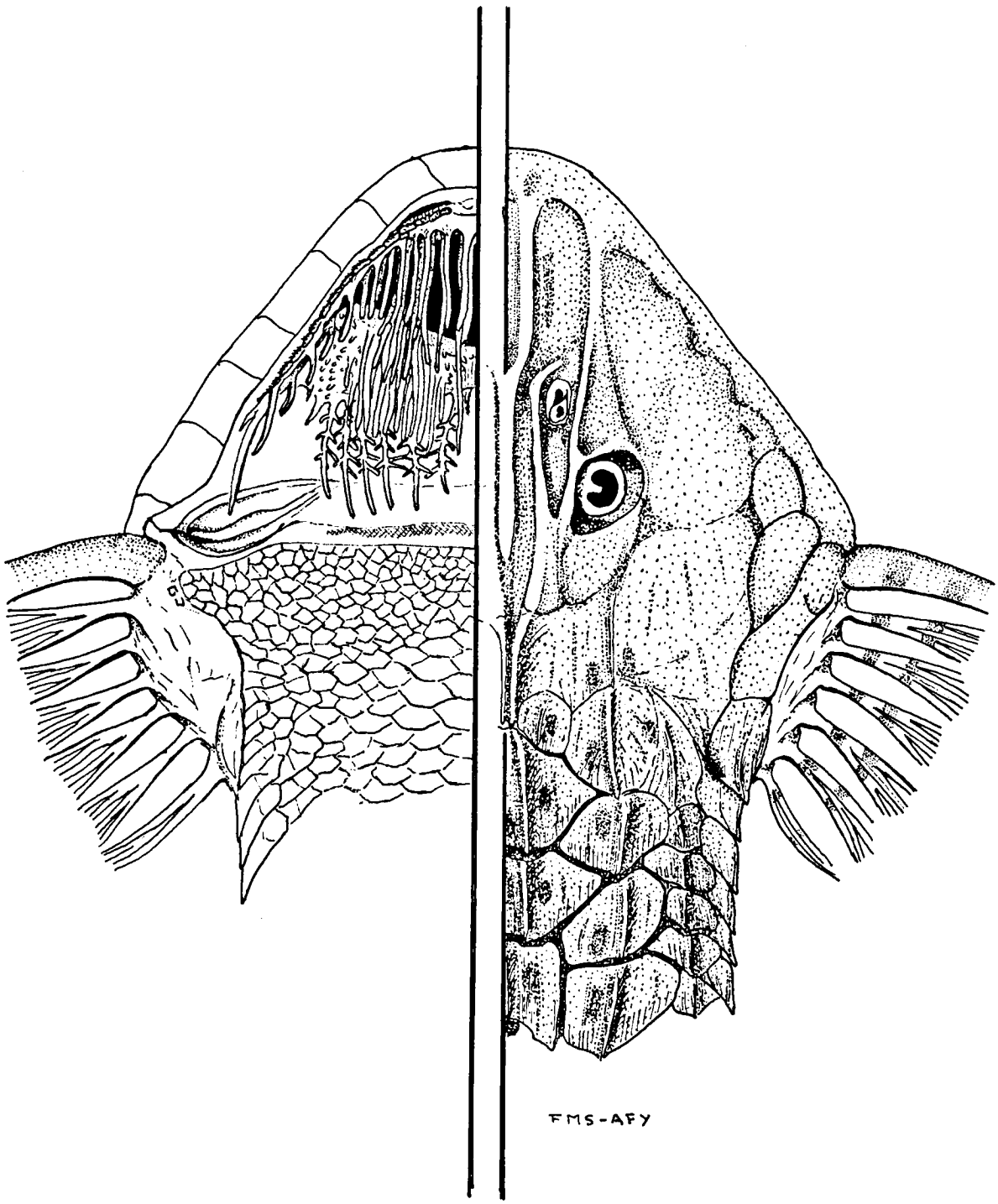


Fig. 2. *Dentectus barbarmatus* n. gen. et n. sp., details of anterior part of holotype in ventral (left half) and in dorsal (right half) view, respectively.

scutes, *Pseudohemiodon* et al. have 13-21, *Planiloricaria* 19-20. There are 31-33 lateral body scutes in *Dentectus*, 31-34 in *Pseudohemiodon*-group genera, and 40 in *Planiloricaria*.

As pointed out above, simply preserved specimens of *Dentectus barbarmatus* have invisible teeth. Only after clearing and staining, 3 teeth in both the premaxillae and in the dentaries proved to be present. Neither specimens of the *Pseudohemiodon*-group genera, nor of *Planiloricaria* have been cleared and stained. In the former genus-group, up to 9 teeth were counted in the premaxilla, and up to 11 in the dentary. The only specimen of *Planiloricaria* (holotype of *P. cryptodon*) at hand has no visible premaxillary teeth, whereas it has 3 teeth in each dentary, like *Dentectus*.

## Systematic position

The presence of dermal ossifications (small scutelets) on barbels, and the structure of the lips, jaws and teeth of *Dentectus* are unique characters, absent in all other Loricariidae. However, there are many similarities and various overlapping characters in this genus as compared to the three genera of the *Pseudohemiodon*-group and to *Planiloricaria*. These similarities indicate a rather close mutual relationship. As a consequence, it now seems appropriate to assign *Dentectus*, the *Pseudohemiodon*-group of genera, and *Planiloricaria* to a single subtribe of Loricariini. For this assignment the subtribe Planiloricariina appears to be the best place.

The Planiloricariina thus expanded are characterized above all by the possession of small jaws with a reduced dentition (small and few teeth), and by the presence of numerous long barbels along and on the upper and lower lips and in the buccal cavity. Secondary sexual dimorphism is unknown.

The subtribe is easily distinguished from the subtribe Loricariina (in a more restricted sense than previously), also possessing a large number of barbels and relatively few teeth; in the Loricariina (comprising the genera *Loricaria* Linnaeus, 1758, *Brochiloricaria* Isbrücker & Nijssen, in Isbrücker, 1979, and *Paraloricaria* Isbrücker, 1979) the teeth are firm and usually very long in both or in one of the jaws. Two subtribes with invisible teeth in the premaxillae (Reganellina and Hemiodontichthyina) differ from the Planiloricariina among others by the lack of conspicuous barbels. The subtribe Ricolina with numerous branched barbels, has a well-developed dentition (cf. Isbrücker, 1979 and 1981).

## **Dentectus barbarmatus** new species

(figs. 1-5; table I)

Material examined (fig. 6).—

Holotype, MBUCV-v-12780, SL 136.5 mm, Venezuela, Estado Cojedes, Río Salinas, a tributary of Río Pao Viejo, N.E. of El Baul (09°13′ N, 68°07′ W), coll. Agustín Fernández Yépez, 25-II-1950;— paratypes, MBUCV-v-12985, six, SL 59.5-120.5 mm, ZMA 116.638, one, SL 136.8 mm, same data as holotype (two of these paratypes, SL 59.5 and 99 mm, cleared and stained);— paratypes, MBUCV-v-12920, two, SL 140.8-141.6 mm, Venezuela, Estado Barinas, Río Masparro at the Puente Libertad (08°21′ N, 69°38′ W), coll. F. Provenzano, O. Castillo & L. Aguana, 31-VII-1981; paratypes, MBUCV-v-13173, one, SL 89.1 mm, ZMA 116.648, one, SL 88.9 mm, Venezuela, Estado Portuguesa, Río Boconó at Puerto Sum Sum (08°41′ N, 69°50′ W), coll. F. Mago Leccia, J. N. Baskin, O. Silva & L. Aguana, 2-VIII-1974; paratype, MBUCV-v-12940, one, SL 67.3 mm, Venezuela, Estado Portuguesa, Río Guanare, upriver from Guanarito (08°42′ N, 69°12′ W), coll. F. Provenzano, O. Castillo & L. Aguana, 28-VII-1981.

Description.—

Morphometric and meristic data are presented in table I. Illustrations of the holotype and of some of the paratypes are given in figs. 1-5.

Dermal ossifications, fin-spines and rays with moderate odontodes, which are more prominent on the coalescing and the parallel lateral body scutes. Two ridges on the supraoccipital and

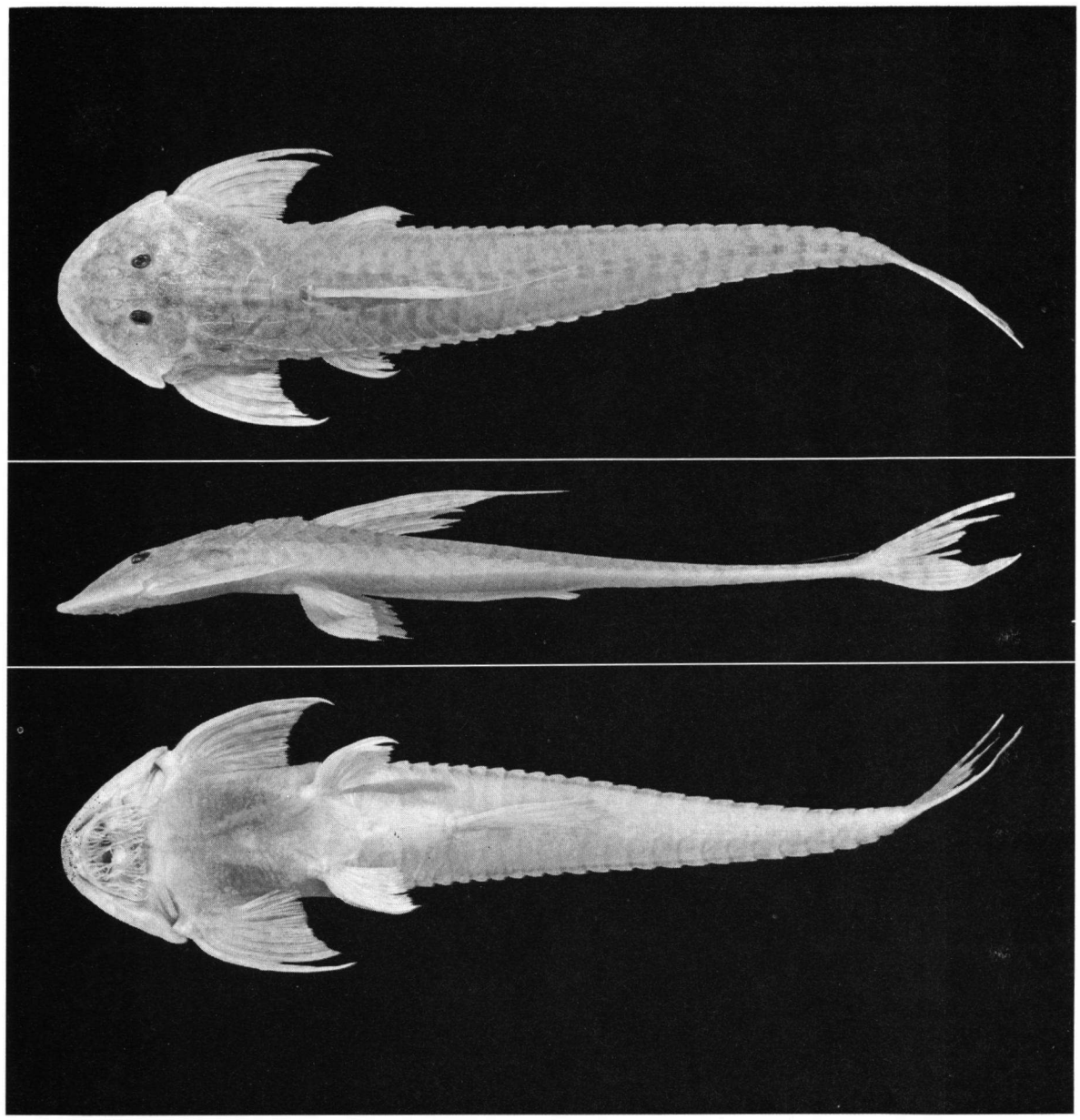

Fig. 3. *Dentectus barbarmatus* n. gen. et n. sp., paratype in ZMA 116.638 in dorsal, lateral and ventral view.

on the two adjacent predorsal scutes, a single ridge on the third predorsal scute. A small nuchal plate with a ridge at either side of the supraoccipital. Adjacent to the nuchal plate is a larger scute with a ridge, posteriorly continued by 6 anterio-dorsolateral scutes, each of which with a ridge.

Orbital rim oval, with a conspicuous though small and shallow posterior notch and with a more prominent anterior notch.

Dorsal surface of head with a ridge along the interorbital and internasal areas. This ridge diverges in front of the nostrils into two closely parallel ridges extending to near the tip of the snout. At either side between these ridges and the orbital rim is another ridge, being an

Fig. 4. *Dentectus barbarmatus* n. gen. et n. sp., details of anterior part of paratype in ZMA 116.638 in ventral (left) and in dorsal (right) view.

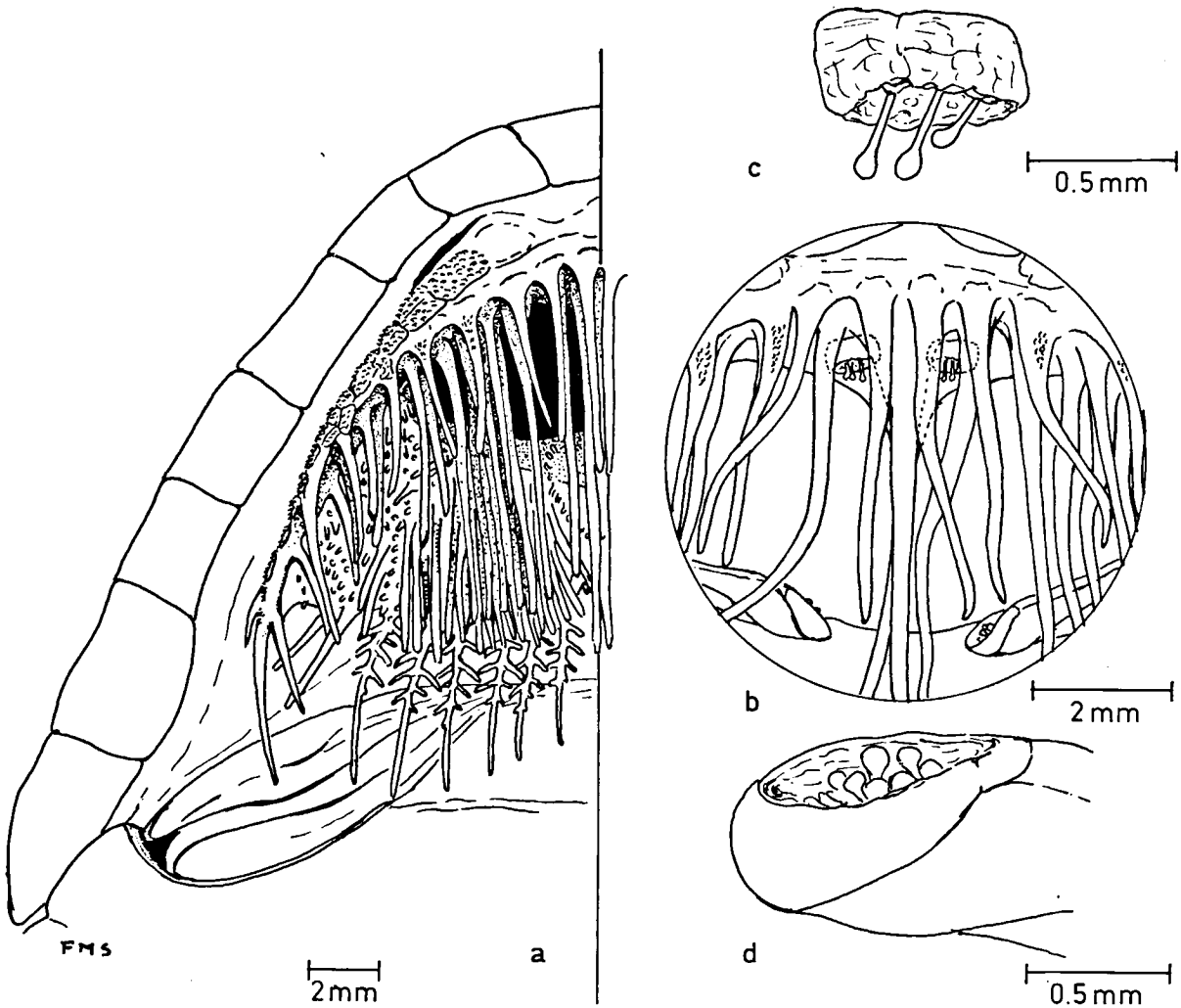


Fig. 5. *Dentectus barbarmatus* n. gen. et n. sp.; — (a) right half of head of holotype in ventral view; — (b-d) details of a cleared and stained paratype in MBUCV-v-12985, SL 99 mm; — (b) central area of mouth, showing position of the jaws; — (c) premaxilla; — (d) distal part of dentary.

anterior continuation of the supraoccipital ridges; it diverges at the height of the posterior orbital notch, one branch embracing the nostril, the other bordering the orbital rim. At the anterior edge it diverges into two branches, one anteriorly stretching beyond the outer margin of the nostrils, the other embracing the anterior border of the orbit and continuing to converge and merge with the first branch.

Ventral surface of head naked, except for a marginal series of somewhat rectangular scutelets.

Preanal area covered with small irregularly shaped scutelets, arranged into 7 irregular series, the outer series consisting of smaller scutelets. This complex of scutelets is separated from the anus by a narrow naked strip, which merges into a much wider naked area surrounding the pelvic fins.

Abdominal and thoracic areas covered by a rather irregular pattern of scutelets, which decrease in size anteriorly, reaching to the height of the branchiostegal membrane. Posteriorly there are 5 to 9 scutelets in a transverse

Table I. — Morphometric and meristic data of *Dentectus barbarmatus* n. gen. et n. sp.; — (A), measurements of holotype in mm; — A, data of holotype; — B, data of paratype in ZMA 116.638; — C-E, data of 3 paratypes in MBUCV-v-12985; — F, data of a paratype in MBUCV-v-12920; — G, data of paratype in MBUCV-v-13173; — H, data of paratype in ZMA 116.648; — J, data of paratype in MBUCV-v-12940. Characters 1-3 are in mm, characters 4-17 are ratios of SL, characters 18-35 are ratios of HL, and characters 41-44 are counts. Arrows indicate identical figures as in the adjacent column; asterisk in column H indicates the high number of small, widely scattered scutelets.

| | specimen | (A) | A | B | C | D | E | F | G | H | J |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | standard length | 136.5 | 136.5 | 136.8 | 120.5 | 92.3 | 62.5 | 141.6 | 89.1 | 88.9 | 67.3 |
| 2 | axial length | — | — | 150.6 | — | — | — | — | — | 99.9 | — |
| 3 | total length | 493.5 | 493.5 | >195.8 | >200.5 | 362.3 | >178.5 | 507.1 | — | 267.3 | — |
| 4 | head length | 29.3 | 4.7 | 4.8 | 4.8 | 4.4 | 4.2 | 4.6 | 4.3 | 4.1 | 4.2 |
| 5 | predorsal length | 43.5 | 3.1 | 3.2 | 3.2 | 3.0 | 2.9 | 3.1 | 2.9 | 2.9 | 3.0 |
| 6 | postdorsal length | 78.1 | 1.7 | 1.7 | 1.7 | 1.7 | 1.8 | 1.7 | 1.8 | 1.8 | 1.8 |
| 7 | preanal length | 65.0 | 2.1 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.1 |
| 8 | postanal length | 66.5 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 |
| 9 | distance snout to anus | 50.4 | 2.7 | 2.8 | 2.7 | 2.6 | 2.6 | 2.7 | 2.5 | 2.4 | 2.6 |
| 10 | distance snout to pelvic | 42.6 | 3.2 | 3.3 | 3.2 | 3.1 | 3.0 | 3.1 | 2.9 | 2.8 | 2.9 |
| 11 | dorsal spine length | 43.2 | 3.2 | 3.2 | 3.1 | 3.1 | <3.9 | — | 4.0 | <4.5 | 4.0 |
| 12 | first dorsal ray length | 30.0 | 4.6 | 4.4 | 4.7 | 4.9 | 5.1 | 4.6 | 4.3 | 4.2 | 4.9 |
| 13 | anal spine length | 22.3 | 6.1 | 6.1 | 6.3 | 6.3 | 6.4 | 6.4 | 6.0 | 5.5 | 6.4 |
| 14 | pectoral spine length | 28.4 | 4.8 | 4.9 | 4.9 | 4.9 | 4.5 | 5.3 | 4.7 | 4.6 | 4.8 |
| 15 | pelvic spine length | 20.5 | 6.7 | 7.1 | 6.9 | 6.8 | 6.9 | 6.9 | 6.9 | 5.9 | 6.4 |
| 16 | upper caudal spine length | 357.0 | 0.4 | <2.2 | <1.5 | 0.3 | <0.5 | 0.4 | 0.5 | 0.5 | <0.5 |
| 17 | lower caudal spine length | 60.0 | 2.3 | <5.1 | 2.6 | 3.4 | <8.9 | 1.6 | 4.2 | 4.5 | 4.7 |
| 18 | snout length | 16.0 | 1.8 | 1.9 | 1.8 | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 1.8 |
| 19 | lower lip | — | — | 10.2 | — | — | — | — | — | 6.4 | — |
| 20 | lower lip barbel | — | — | 8.6 | — | — | — | — | — | 6.4 | — |
| 21 | maxillary barbel | — | — | 2.1 | — | — | — | — | — | 2.2 | — |
| 22 | thoracic length | 26.1 | 1.1 | 1.2 | 1.1 | 1.3 | 1.4 | 1.2 | 1.2 | 1.2 | 1.4 |
| 23 | abdominal length | 23.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 1.3 | 1.5 | 1.6 | 1.4 |
| 24 | maximum orbital diameter | 4.7 | 6.2 | 6.1 | 6.4 | 5.9 | 6.0 | 6.3 | 5.8 | 5.6 | 6.2 |
| 25 | orbital diameter | 3.6 | 8.1 | 7.9 | 8.0 | 7.9 | 7.5 | 8.1 | 7.7 | 7.5 | 7.6 |
| 26 | interorbital width | 6.4 | 4.6 | 4.5 | 4.2 | 4.3 | 4.2 | 4.4 | 4.3 | 4.6 | 4.2 |
| 27 | cleithral width | 31.7 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 28 | supracleithral width | 21.0 | 1.4 | 1.4 | 1.4 | 1.4 | 1.7 | 1.4 | 1.4 | 1.5 | 1.7 |
| 29 | head width | 32.8 | 0.9 | 0.9 | 0.9 | 0.9 | 1.0 | 0.9 | 0.9 | 0.9 | 1.0 |
| 30 | head depth | 10.8 | 2.7 | 2.8 | 2.8 | 2.8 | 2.7 | 2.7 | 2.6 | 2.8 | 2.6 |
| 31 | body depth at dorsal | 12.8 | 2.4 | 2.4 | 2.5 | 2.4 | 2.4 | 2.4 | 2.3 | 2.5 | 2.5 |
| 32 | body width at dorsal | 22.1 | 1.3 | 1.3 | 1.4 | 1.5 | 1.7 | 1.3 | 1.3 | 1.4 | 1.5 |
| 33 | body width at anal | 19.8 | 1.5 | 1.5 | 1.6 | 1.7 | 1.8 | 1.5 | 1.7 | 1.7 | 1.8 |
| 34 | depth caudal peduncle | 2.7 | 10.9 | 11.0 | 10.4 | 11.8 | 11.5 | 11.3 | 11.0 | 11.4 | 11.4 |
| 35 | width caudal peduncle | 5.0 | 5.9 | 6.1 | 5.9 | 6.6 | 6.8 | 5.5 | 6.5 | 7.0 | 6.7 |
| 36 | interorbital/max. orb. diam. | — | 1.4 | 1.3 | 1.5 | 1.4 | 1.4 | 1.4 | 1.3 | 1.2 | 1.5 |
| 37 | interorbital/orbital diam. | — | 1.8 | 1.8 | 1.9 | 1.8 | 1.8 | 1.8 | 1.8 | 1.6 | 1.9 |
| 38 | postanal/body width at anal | — | 3.3 | 3.6 | 3.7 | 3.6 | 3.6 | 3.3 | 3.3 | 3.1 | 3.7 |
| 39 | thoracic length/pectoral spine | — | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.9 | 0.9 | 0.9 | 0.8 |
| 40 | abdominal length/pelvic spine | — | 1.1 | 1.1 | 1.1 | 1.2 | 1.1 | 1.2 | 1.1 | 0.9 | 1.1 |
| 41 | lateral scutes | → | 32/32 | 33/33 | 32/31 | 32/32 | 31/31 | 33/33 | 32/32 | 32/32 | 31/32 |
| 42 | coalescing scutes | → | 18/17 | 17/17 | 18/17 | 18/18 | 17/17 | 18/18 | 17/17 | 16/16 | 17/18 |
| 43 | thoracic scutes | → | 7/6 | 5/7 | 6/7 | 6/6 | 6/5 | 7/6 | 6/6 | 7/7 | 5/6 |
| 44 | abdominal scutelets | → | 7+11 | 7+11 | 9+6 | 7+3 | 5+2 | 7+11 | 7+3 | 6+15* | 6+3 |

series, anteriorly—between the base of the pectoral fins—there are up to 15 scutelets in a transverse series. A wide naked area at the base of the pectoral fins. There is a narrow naked strip behind the pectoral fin, separating the thoracic scutes from the lateral scutes.

Upper lip narrow, anteriorly with a row of 8 filamentous barbels which reach the anterior margin of lower lip. Behind two central barbels a broader and much longer (in fact, the longest) bifid filament is present, which reaches beyond the posterior edge of lower lip. Behind the 2nd and 3rd filament, at either side, a longer filament, and behind the 4th filament there are three rows with 2, 3, and 3 filaments, respectively, all of these longer than the outer filaments, reaching beyond the anterior border of lower lip. There is a total of 29 filaments on the upper lip.

Maxillary barbel continuous with the upper and lower lips, with a long free distal extension. It bears an outer, a median and an inner row of up to 5 subbarbels each; these subbarbels decrease in size posteriorly, the more anterior ones being as long as the outer filaments of upper lip. The barbels distally with a free filamentous extension, reaching the inner angle of the gill-openings. The externo-lateral border of the maxillary barbel and of the upper lip covered with platelets bearing odontodes; similar platelets are also present at the base of the two most externo-lateral barbels of the upper lip.

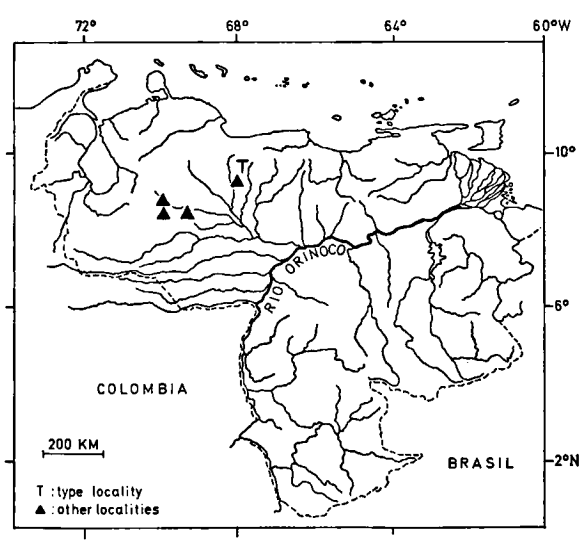


Fig. 6. Map of Venezuela, showing localities where *Dentectus barbarmatus* n. gen. et n. sp. was collected.

Lower lip rather narrow, its surface covered with 26 filaments arranged into 3 or 4 rather irregular rows, the outer filaments longer than the inner, all reaching beyond the posterior border of the lip; between the barbels some sparce, somewhat enlarged papillae. Lateral surfaces of lip without filaments, provided with somewhat enlarged papillae; a naked, rather circular, central area bordered by papillae. Posterior border of lip with 12 long filamentous barbels which bear enlarged papillae on both sides and reach to the height of the inner side of the gill-openings.

As observed in the cleared and stained specimens only, the premaxillae are located in the buccal cavity between the base of the long central filament and the first lateral filament present at either side. Its characteristics, as well as those of the teeth and of the dentary have already been indicated in the generic diagnosis.

Dorsal spine filamentous, one third longer than the first branched dorsal fin ray. Pectoral fins reaching the first third of the pelvic fins; the pelvic fins hardly reaching base of anal fin. Pectoral and pelvic fins little produced. In the holotype for example, the produced tip of the pectoral fin is 2.5 mm and of the pelvic fin 1.4 mm; they are conspicuously curved toward the rays. Outer (unbranched) rays of caudal fin filamentous, the upper about two and a half times longer than SL, the lower much shorter, less than half the SL.

A small pectoral pore is present in the naked area dorsal to base of pectoral fin, just below the junction of cleithrum and first lateral body scute.

Colour in alcohol.—
Ventrally yellowish.
Dorsally pale tan with darker round or oval spots along the middorsal line beyond the dorsal fin; two rows of spots at each side of

dorsal fin, likewise along lateral margins of body and coalescing scutes. One spot on each predorsal scute, on the small and on the large nuchal plates.

Pectoral and pelvic fin rays with 4 rows of brown spots. A dark brown spot at base of dorsal fin spine, this spine and the dorsal fin rays with brown spots along their length. Anal rays brown distally. Caudal fin rays with spots forming 4 vertical rows, the anterior row running through the posterior edge of the basal triangular caudal fin scutelet. The posterior row is at the distal end of the rays. Lower and upper unbranched rays with alternate brown spots along their length.

The description of the colour pattern is based upon notes taken 12 years ago. At present, the specimens from Río Salinas have a general pale tan colour and most spots and other markings are faded. However, the specimens from Ríos Masparro, Boconó and Guanare very clearly show the pattern as described, on a pale grey ground colour dorsally, whitish ventrally. They also show spots on dorsal surface of head and the posterior region of the head is darker than the rest of the body.

Further variability in the paratypes.—

In specimens less than 100 mm in SL the preanal and abdominal scutelets are smaller and fewer than in specimens over 100 mm; three longitudinal series are widely separated from the thoracic scutes by a naked area with small isolated scutelets. In the smaller specimens there are only two longitudinal series widely separated by a naked area from the thoracic scutes. The thoracic scutes are less numerous and especially those near to the pectoral fins are separated from each other by naked strips. The naked area behind the pectoral fin, separating the lateral from the thoracic scutes is wider. The anterior part of the thoracic area is almost completely devoid of scutelets, except for a few at the sides, near to the origin of the pectoral fins. The preanal scutelets are isolated and still few in number: 3 or 4 only. The dorsal fin spine in these specimens is not produced. Specimens less than 100 mm in SL from Río Salinas have the pelvic fins without spots; the anal fin is yellowish, without markings.

The larger specimen from Río Masparro in MBUCV-v-12920, SL 141.6 mm, has a somewhat triangular naked area between the abdominal scutelets and the thoracic scutes. This specimen and the one from the same locality, SL 140.8 mm, have the produced tip of pectoral and pelvic fin spines longer than in the holotype. Their dorsal fin spine is broken, but there is no doubt that it was previously filamentous.

Etymology.—

The specific name *barbarmatus* is from the Latin *barba* meaning beard and from the Latin *armatus* meaning furnished with weapons, in allusion to the unique cover of several of the barbels.

## REFERENCES


BLEEKER, P., 1862. Atlas ichthyologique des Indes orientales néêrlandaises, pub.ié sous les auspices du Gouvernement co.onial néêrlandaises: Siluroïdes, Chacoïdes et Hétérobranchoïdes, **2**: 1-112, pls. 49-101 (Fr. Muller, Amsterdam).

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].

——, 1973. 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.

——, 1975. Pseudohemiodon thorectes, a new species of mailed catfish from the Rio Mamoré system, Bolivia (Pisces, Siluriformes, Loricariidae). Beaufortia, **23** (300): 85-92.

——, 1979. Descriptions préliminaires de nouveaux taxa de la famille des Loricariidae, Poissons-Chats cuirassés néotropicaux, avec un catalogue critique de la sous-famille nominale (Pisces, Siluriformes). — Rev. fr. Aquariol. Herpétol., **5** (4): 86-116, cover.

——, 1980. Classification and catalogue of the mailed Loricariidae (Pisces, Siluriformes). — Versl. Techn. Geg., Inst. Taxon. Zoöl. (Zoöl. Mus.), Univ. Amsterdam, **22**: 1-181.

——, 1981. Revision of Loricaria Linnaeus, 1758 (Pisces, Siluriformes, Loricariidae). — Beaufortia, **31** (3): 51-96.

ISBRÜCKER, I. J. H., H. A. BRITSKI, H. NIJSSEN & H. ORTEGA, in press, [A. m.], a new species and genus of mailed catfish, tribe Farlowellini Fowler, 1958, from the Ucayali River Basin, Peru (Pisces, Siluriformes, Loricariidae). Rev. fr. Aquariol. Herpétol. (due to be issued in 1982).

ISBRÜCKER, I. J. H. & H. NIJSSEN, 1974a. Rhadinoloricaria gen. nov. and Planiloricaria, two genera of South American mailed catfishes (Pisces, Siluriformes, Loricariidae). Beaufortia, **22** (290): 67-81.

——, 1974b. On Hemiodontichthys acipenserinus and Reganella depressa, two remarkable mailed catfishes from South America (Pisces, Siluriformes, Loricariidae). — Beaufortia, **22** (294): 193-222.

——, Rineloricaria heteroptera, a new species of mailed catfish from Rio Amazonas near Manaus, Brazil (Pisces, Siluriformes, Loricariidae). — Zool. Anz. Jena, **196** (1-2): 109-124.

——, 1978. Two new species and a new genus of neotropical mailed catfishes of the subfamily Loricariinae Swainson, 1838 (Pisces, Siluriformes, Loricariidae). — Beaufortia, **27** (339): 177-206.

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

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