

# BEAUFORTIA

INSTITUTE OF TAXONOMIC ZOOLOGY (ZOOLOGICAL MUSEUM)  
UNIVERSITY OF AMSTERDAM

Vol. 33 no. 5

November 18, 1983

## REVIEW OF THE GENUS *CORYDORAS* FROM COLOMBIA, WITH DESCRIPTIONS OF TWO NEW SPECIES (PISCES, SILURIFORMES, CALLICHTHYIDAE)

H. NIJSSEN & I. J. H. ISBRÜCKER

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

### ABSTRACT

This paper contains records and /or descriptions of twelve species of the Callichthyid catfish genus *Corydoras* Lacepède, 1803, including two new species, from Colombian rivers, Rio Amazonas excluded: *Corydoras trilineatus* Cope, 1872, *C. delphax* n. sp., *C. leucomelas* Eigenmann & Allen, 1942, *C. aeneus* (Gill, 1858), *C. melanotaenia* Regan, 1912, *C. metae* Eigenmann, 1914, *C. melini* Lönnberg & Rendahl, 1930, *C. reynoldsi* Myers & Weitzman, 1960, *C. axelrodi* Rössel, 1962, *C. loxozonus* n. sp., *C. elegans* Steindachner, 1877, and *C. simulatus* Weitzman & Nijssen, 1970. The relationships of the new species with other species of *Corydoras* are discussed. A key to the species is provided. A Colombian representative of each species is illustrated.

### INTRODUCTION

Twelve species of the Callichthyid catfish genus *Corydoras* Lacepède, 1803, are recorded in this paper from Colombian rivers, the Rio Amazonas excluded. Of this Colombian material, morphometric and meristic data are given, according to the methods described for the species of the genus *Aspidoras* Von Ihering, 1907 (cf. Nijssen & Isbrücker, 1976: 108).

Of these twelve species, six have been originally described from Colombia: *Corydoras melanotaenia* Regan, 1912, *C. metae* Eigenmann, 1914, *C. melini* Lönnberg & Rendahl, 1930 (from the Brazilian/Colombian border), *C. reynoldsi* Myers & Weitzman, 1960, *C. axelrodi* Rössel, 1962, and *C. simulatus* Weitzman & Nijssen, 1970.

Two species are herein described as new to science: *C. delphax* and *C. loxozonus*.

The remaining four species were originally described from elsewhere, viz.: *C. aeneus* (Gill, 1858) from Trinidad, *C. trilineatus* Cope, 1872, and *C. leucomelas* Eigenmann & Allen, 1942, from Peru (*Corydoras caquetae* Fowler, 1943, a junior synonym of *C. leucomelas*, was described originally from Colombia), and *C. elegans* Steindachner, 1877, from Brazil.

Of all these species a Colombian specimen is illustrated. A key to the species is provided.

Only those specimens which we have actually examined have been included in this paper.

Of the twelve recorded species only one, *Corydoras melini*, is found both in tributaries to Río Orinoco and in tributaries to Rio Amazonas (fig. 1).

The following species occur in tributaries to Río Orinoco (Río Meta, Río Guaviare, Río Inírida): *C. delphax*, *C. aeneus*, *C. melanotaenia*, *C. metae*, *C. melini*, *C. axelrodi*, *C. loxozonus*, and *C. simulatus*.

In tributaries to Río Amazonas (Río Vaupés, Río Caquetá) the following species are found: *C. trilineatus*, *C. leucomelas*, *C. melini*, *C. reynoldsi*, and *C. elegans*.

It is reasonable to expect that several more species occur in Colombia, since the ichthyofauna of this country is poorly known. Cala (1977: 12) listed seven species of *Corydoras* from the Orinoco Basin of Colombia, without exact locality data or records of deposited specimens. Among these are *Corydoras agassizii* Steindachner, 1877, *C. reticulatus* Fraser-Brunner, 1938, and *C. arcuatus* Elwin, 1939.

Although we rather expected these three species to occur in tributaries to Río Amazonas, no specimens were available to justify confirmation of their occurrence in Colombian waters.

Although *Corydoras melanotaenia* was originally described from the Río Magdalena Basin (Honda), we were unable to find any *Corydoras* specimen from this river system in museum collections. Subsequent to its original description, *C. melanotaenia* was found only in the upper Río Meta.

A sample with 17 specimens (SL 13.2-16.1 mm) of *Corydoras hastatus* Eigenmann & Eigenmann, 1888 (type-locality: Brazil, Amazonas, Villa Bella = Parintins) was examined in Frankfurt (SMF 4970). They are said to be collected by Baumert in 1955 in Colombia, Bolívar, Río Carnavales near Espiritu. We are unable to trace this river, and do not trust this record. From Departamento de Bolívar, Colombia, no specimens of *Corydoras* are known to us.

#### ACKNOWLEDGEMENTS

For the loan and/or exchange of specimens, and for information received, we wish to express our gratitude to the following museums and colleagues: Academy of Natural Sciences (ANSP),

Philadelphia, Penn. (the late Dr. J. E. Böhlke), British Museum (Natural History) (BMNH), London (Dr. P. H. Greenwood & Mr. G. J. Howes), California Academy of Sciences (CAS), San Francisco, Cal. (Dr. W. N. Eschmeyer & Mrs. P. M. Sonoda), Museum of Comparative Zoology (MCZ), Cambridge, Mass. (Dr. W. L. Fink), Muséum National d'Histoire Naturelle (MNHN), Paris (Dr. M. L. Bauchot), Naturhistorisches Museum Wien (NMW), Vienna (Dr. P. Kähsbauer & Dr. R. Hacker), Senckenberg Museum (SMF), Frankfurt (Dr. W. Klausewitz), Naturhistoriska Riksmuseet (NRM), Stockholm (Mr. S. O. Kullander), National Museum of Natural History (USNM), Washington D. C. (Dr. S. H. Weitzman).

Mr. M. L. Allender (USNM) made fig. 7, Mrs. M. P. Bakry (USNM) figs. 2, 5 and 14, Mr. D. Sminia (ZMA) fig. 11, Dr. S. H. Weitzman (USNM) figs. 8, 9 and 10, and Mr. J. Zaagman (ZMA) fig. 1. Mr. L. A. van der Laan (ZMA) made the photographic illustrations figs. 3 and 12, and Dr. H. Nijssen figs. 6 and 13.

This study has been made possible with financial support of the University of Amsterdam (UvA), the Netherlands Organization of Pure Research (ZWO), The Hague, and of the Smithsonian Institution, Washington D. C.

- IUM = Indiana University Museum (material partly in CAS)  
 SU = Stanford University (material now in CAS)  
 ZMA = Zoölogisch Museum, Amsterdam

#### KEY TO THE SPECIES OF *CORYDORAS* FROM COLOMBIA

- 1a Pectoral fin spine with a strongly serrated medial border..... 11  
 1b Pectoral fin spine without a strongly serrated medial border..... 2  
 2a Dorsolateral body scutes with a prominent oblique dark stripe..... 8  
 2b Dorsolateral body scutes without a prominent oblique stripe ..... 3  
 3a Body with distinct markings..... 4  
 3b Body with even brownish to greyish pigment, not forming distinct markings..... 5

- 4a A large dark blotch on anteriodorsal part of dorsal fin; body with a dark midlateral zig-zag stripe, above and below margined with white..... *Corydoras trilineatus* Cope, 1872
- 4b Anterior margin of dorsal fin entirely or partly dark; body without midlateral stripe..... 6
- 5a Body depth 2.7-3.2 in SL; snout length 1.8-2.0 in HL; interorbital width 2.2-2.7 in HL; 9-10 branched pectoral fin rays ... *Corydoras melanotaenia* Regan, 1912
- 5b Body depth 2.6 in SL; snout length 2.1 in HL; interorbital width 2.0-2.1 in HL; 8 branched pectoral fin rays..... *Corydoras aeneus* (Gill, 1858)
- 6a Body with two prominent dark blotches about the midlateral line, one below the dorsal fin, one below the adipose fin..... *Corydoras reynoldsi* Myers & Weitzman, 1960
- 6b Body with numerous small, dark spots..... 7
- 7a A dark vertical line on posterior margin of scutelets on caudal fin base, followed by a narrow, white band reaching to vertical bar on caudal fin rays..... *Corydoras leucomelas* Eigenmann & Allen, 1942
- 7b No dark vertical line on scutelets on caudal fin base, no white band on caudal fin rays..... *Corydoras delphax* n. sp.
- 8a Dorsal fin with a large dark blotch..... 9
- 8b Dorsal fin without a large dark blotch..... 10
- 9a Dorsolateral body scutes with dark pigment on mid-dorsum beyond dorsal fin..... *Corydoras metae* Eigenmann, 1914
- 9b Dorsolateral body scutes with an unpigmented zone on middorsum beyond dorsal fin..... *Corydoras melini* Lönnberg & Rendahl, 1930
- 10a Body scutes with five longitudinal series of spots below the dorsolateral body stripe..... *Corydoras loxozonus* n. sp.
- 10b Body scutes without longitudinal series of spots below the dorsolateral body stripe..... *Corydoras axelrodi* Rössel, 1962
- 11a Snout acute, elongate; ventral margins of coracoid not meeting along the abdominal midline..... *Corydoras simulatus* Weitzman & Nijssen, 1970
- 11b Snout round, short; ventral margins of coracoid meeting along the abdominal midline..... *Corydoras elegans* Steindachner, 1877

## SYSTEMATIC ACCOUNT

### *Corydoras trilineatus* Cope, 1872 (figs. 1, 2; table I A)

*Corydoras trilineatus* Cope, 1872: 281, pl. VI fig. 2 (original description; type-locality: Peru, "Rio Ambiacu" = Río Ampiyacu; 2 syntypes; lectotype designated by Nijssen & Isbrücker, 1980: 194).

Material examined. — CAS/SU 52596

(one), SL 40.2 mm, Caquetá near Tres Esquinas (00°43'N, 75°14'W), tributary to Río Caquetá, coll. M. Rakowicz, II-1959;— CAS/SU 51291 (one), SL 33.9 mm, Caquetá, Tres Esquinas, coll. T. D. White et al., II-1958.

Remarks. — The two Colombian specimens examined hardly differ from the lectotype and paralectotype from Peru (ANSP 8294 and 8295, SL 33.7 and 34.7 mm, respectively). The length of the snout, expressed as a ratio of HL is 2.0-2.1 in the Colombian specimens, against 2.2-2.3 in the two type-specimens.

*Corydoras trilineatus* can be easily identified by its distinctive colour pattern (fig. 2). The inner margin of the pectoral fin spine is weakly serrated. The intercoracoid area is covered with mosaic-like dermal ossifications.

### *Corydoras delphax* n. sp. (figs. 1, 3, 4a; table I B)

Material examined. — NRM 1972222.3251 (holotype), SL 49.7 mm; NRM 1972222.3253 (five paratypes), ZMA 119.063 (two paratypes), SL 44.4-52.9 mm, Guainía, Río Inírida system, Caño Bacón, Pueblo Bretania (03°43'N, 67°59'W), coll. T. Hongslo, 30-V-1972.

Description. — Holotype, SL 49.7 mm; body depth 20.6 mm; body width 13.1 mm; length dorsal spine 13.1 mm; length pectoral spine 13.6 mm; head length 17.3 mm; snout length 9.2 mm; length bony orbit 4.5 mm; interorbital width 7.7 mm; width intercoracoid area 6.7 mm; depth caudal peduncle 7.2 mm; fontanel length 6.8 mm. Pectoral fin with 8 branched rays. Dorsolateral body scutes 24, ventrolateral body scutes 22, preadipose scutes 2. Two pairs of rictal barbels, one pair of mental barbels. Medial border of pectoral fin spine weakly serrated (fig. 4a). Intercoracoid area naked.

Morphometric data, expressed as a ratio of SL or of HL of the holotype and of the paratypes are presented in table I B.

Colour in alcohol (fig. 3). — Ground colour tan, the dorsolateral body scutes slightly darker than the ventrolateral scutes. Dark pigment on

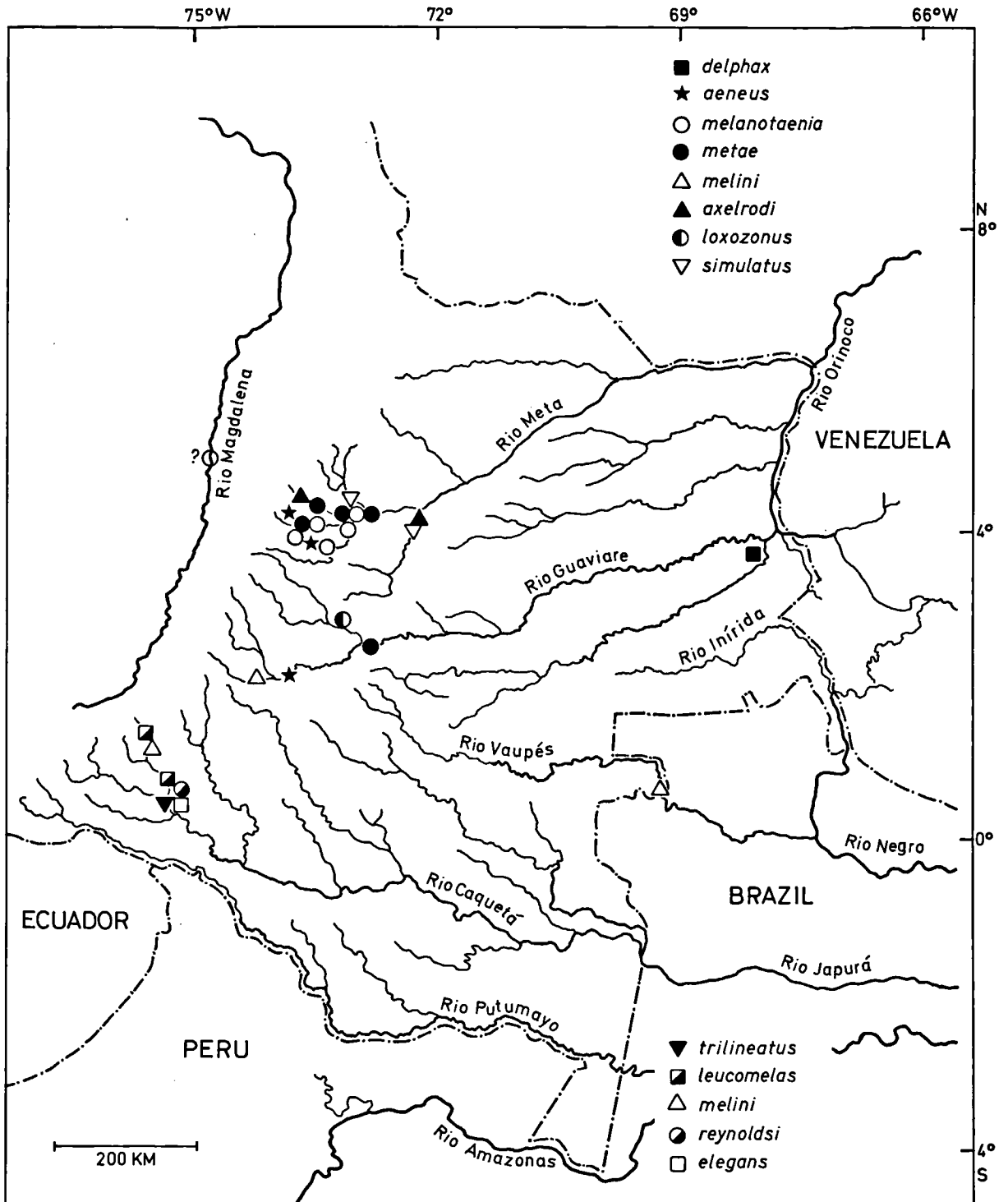


Fig. 1. Map of eastern Colombia, showing three tributaries to Río Orinoco with eight species of *Corydoras*, and two tributaries to Río Amazonas with five species.

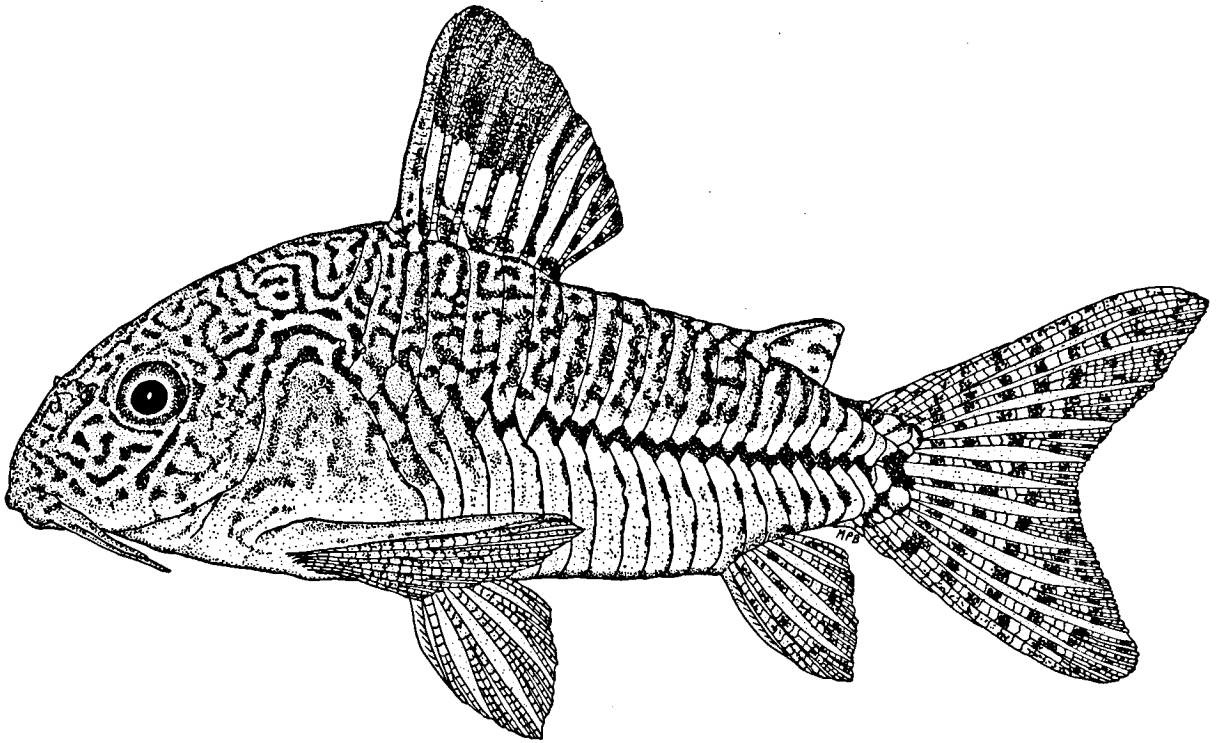


Fig. 2. *Corydoras trilineatus* Cope, 1872, Río Ortegaaza, CAS/SU 52596, SL 40.2 mm.

the dorsum of head across the eyes, posteriorly from the interorbital area towards the base of the supraoccipital. Body with a dark, squarish blotch on the dorsolateral body scutes, below the base of the dorsal fin spine and the three adjacent branched rays, including the fin membrane, extending on the fin through the distal tips of the spine and rays. Margins of dorso- and ventrolateral body scutes with dark pigment, forming thin irregular lines. Lighter part of dorsal fin and the entire caudal fin with minute dark spots, those on the caudal fin more numerous than on the dorsal fin. Adipose fin membrane tan. Pectoral, pelvic, and anal fins without pigment.

**Variability in the paratypes.** — The pigmentation on the body scutes, including the extension of the blotch below the dorsal fin, differs in size and distribution. It forms either narrow lines confined to the margins of the scutes, or irregular, small spots on the scutes. Almost each specimen shows variation (fig. 3). The spots on the caudal fin are sometimes con-

spicuous, arranged into irregular vertical series, or are less prominent, like in the holotype.

**Etymology.** — The specific name *delphax* is Greek, meaning young pig, an allusion to its feeding behaviour.

**Comparison.** — *Corydoras delphax* is reminiscent of *C. ambiacus* Cope, 1872, originally described from Peru, with which it shares all morphometric and meristic characters. We examined the holotype of *C. ambiacus* (ANSP 8291, SL 43.7 mm) and numerous additional specimens. The dark blotch on the dorsal fin, which in *C. delphax* continues to the distal tips of the spine and rays, is confined in *C. ambiacus* to the lower anterior half. The ground colour of *C. delphax* is tan, whitish in *C. ambiacus*. The markings on body and fins in *C. ambiacus* are well-defined and more conspicuous than in *C. delphax*.

*Corydoras delphax* has a colour pattern reminiscent of both *C. ambiacus* and *C. leucomelas*. *Corydoras delphax* is compared with Colombian specimens of *C. leucomelas*. It reaches a SL of

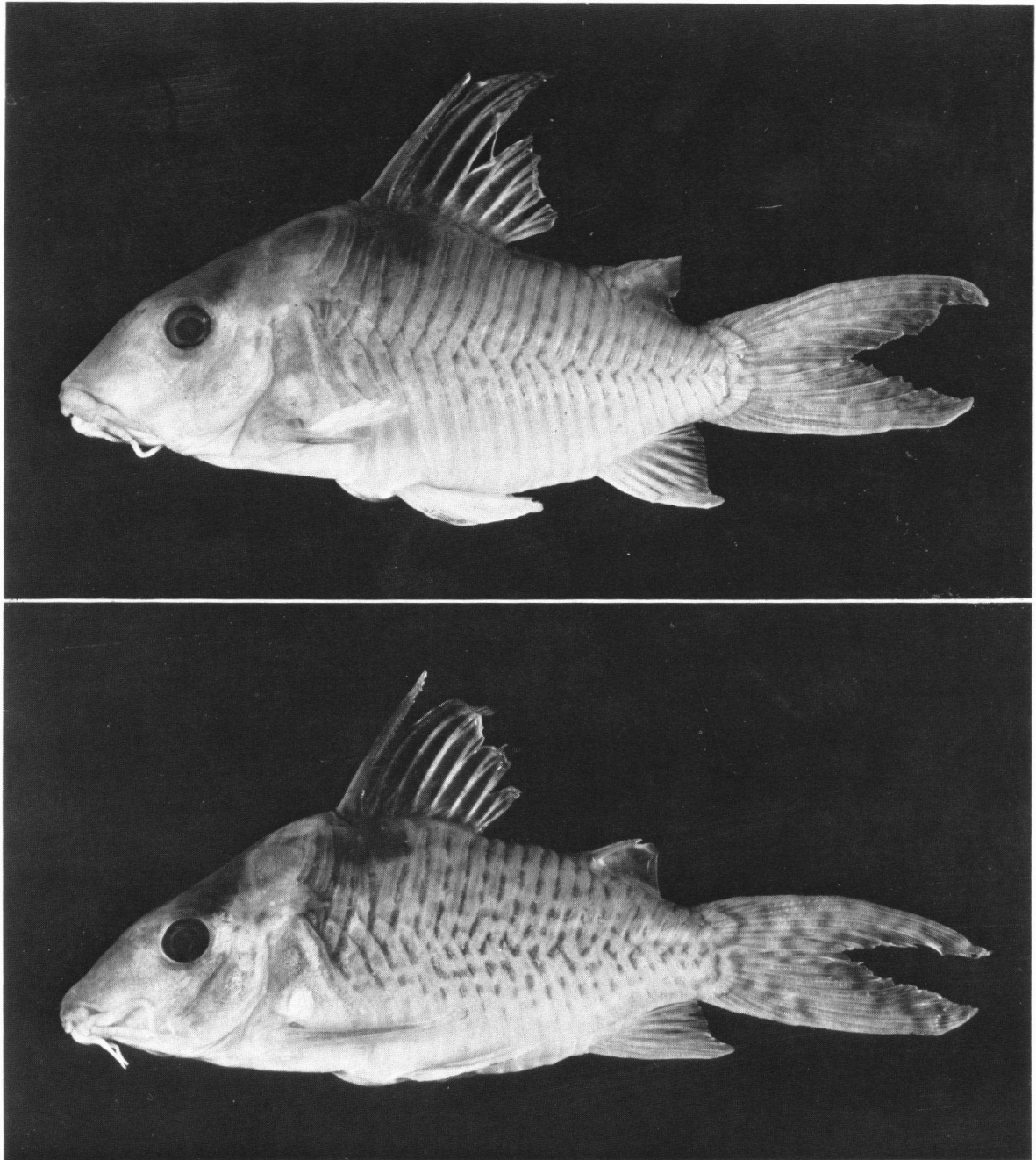


Fig. 3. *Corydoras delphax* n. sp.; above: the holotype, SL 49.7 mm; below: a paratype, ZMA 119.063, SL 47.2 mm, showing variability of the colour pattern.

52.9 mm, against 40.9 mm in *C. leucomelas*. The body width in SL is 3.8-4.1 in *C. delphax*, against 3.3-3.6 in *C. leucomelas* (SL 31.9-40.9 mm). The dorsal fin spine length in SL is

3.6-3.8 in *C. delphax*, against 2.8-3.4 in *C. leucomelas*. The pectoral fin spine length in SL is 3.3-3.8 in *C. delphax*, against 2.6-3.1 in *C. leucomelas*. The snout length in HL is 1.8-1.9 in

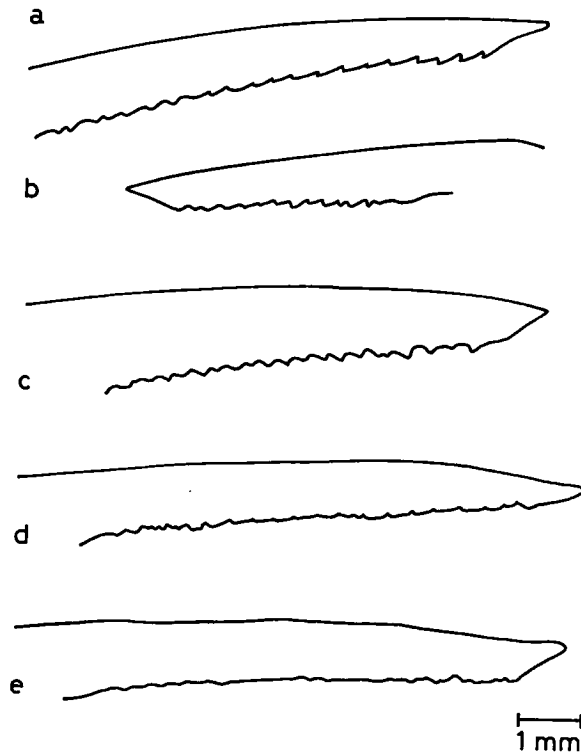


Fig. 4. Profiles of the pectoral fin spines of: a) *Corydoras delphax* n. sp., left spine of a paratype, SL 47.2 mm; — b) *Corydoras melanotaenia* Regan, 1912, right spine of the lectotype; — c) *Corydoras metae* Eigenmann, 1914, left spine of the holotype; — d) *Corydoras melini* Lönnberg & Rendahl, 1930, left spine of the lectotype; — e) *Corydoras axelrodi* Rössel, 1962, left spine of the holotype.

*C. delphax*, against 2.0-2.1 in *C. leucomelas*. The length of the bony orbit in HL is 3.5-3.9 in *C. delphax*, against 2.8-3.4 in *C. leucomelas*.

The colour pattern of *C. leucomelas* closely resembles that of *C. ambiacus* in the intensity of the dark markings. However, the pigmentation on the dorsal fin is similar to that in *C. delphax*. Characteristic for *C. leucomelas* is a dark vertical line on the posterior margin of the scutelets on the caudal fin base, followed by a narrow, unpigmented band.

Remarks. — The *Corydoras* sp. illustrated in Burgess (1982 a: 73, unidentified specimen figured in the middle of third out of five rows of photographs; also in Burgess, 1982 b: 12, as "*Corydoras melanistiis?*" [non Regan, 1912], four photographs, one in the right hand of second row from above, and the three of third row) may well represent *Corydoras delphax*. In addition, we have seen still living specimens im-

ported in the Netherlands some years ago as aquarium fishes, which can be identified as *C. delphax* in the same way as the illustrations in Burgess (1982 a & b).

#### ***Corydoras leucomelas* Eigenmann & Allen, 1942**

(figs. 1, 5; table I C)

*Corydoras leucomelas* Eigenmann & Allen, 1942: 178, pl. XII fig. 4 (original description; type-locality: "Yarinacocha" = Peru, Yarinacocha, cutoff lake at right bank of Río Pacaya, tributary on left bank of Río Ucayali near Sarayacu (about 05°15'S, 74°15'W); holotype only).

*Corydoras caquetae* Fowler, 1943: 248-249, figs. 26-27 (original description; type-locality: "Florencia, Río Ortegusa, Colombia"; holotype only).

Material examined. — ANSP 70509 (holotype of *Corydoras caquetae* Fowler, 1943), SL approximately 28.3 mm, Caquetá, Río

Table I: Morphometric and meristic data of: A) *Corydoras trilineatus* Cope, 1872; — B) *Corydoras delphax* n. sp., holotype and paratypes; — C) *Corydoras leucomelas* Eigenmann & Allen, 1942; the specimen in the second column is the holotype of *C. caquetae* Fowler, 1943; — D) *Corydoras aeneus* (Gill, 1858); — E) *Corydoras melanotaenia* Regan, 1912; the specimens from "Río Magdalena" are the lecto- and paralectotype.

species	A	B	C	C	D	D	E	E
N	2	8	5	1	1	1	2	22
river system	Caquetá	Infrida	Caquetá	Caquetá	Guaviare	Meta	"Magdalena"	Meta
SL in mm	33.9-40.2	44.4-52.9	31.9-40.9	28.3	35.6	41.2	31.2-40.9	27.6-46.7
SL/body depth	2.4-2.5	2.4-2.5	2.2-2.5	2.4	2.6	-	2.9-3.1	2.7-3.2
SL/body width	3.4	3.8-4.1	3.3-3.6	-	3.6	-	4.3	3.5-4.1
SLlength dorsal spine	3.5-4.0	3.6-3.8	2.8-3.4	-	4.7	-	4.7-5.5	4.6-6.0
SL/length pectoral spine	2.9-3.0	3.3-3.8	2.6-3.1	-	3.6	-	3.7-4.6	3.3-4.6
SL/head length	3.0-3.2	2.9-3.1	3.1-3.2	3.0	3.2	3.3	3.4-3.5	3.0-3.5
HL/snout length	2.0-2.1	1.8-1.9	2.0-2.1	-	2.1	2.1	1.9-2.0	1.8-2.0
HL/length bony orbit	3.1-3.4	3.5-3.9	2.8-3.4	2.7	3.7	-	3.7-3.8	3.5-4.2
HL/width interorbital	2.0-2.1	2.1-2.4	1.9-2.1	2.0	2.1	2.0	2.2-2.4	2.3-2.7
HL/depth caudal peduncle	2.0	2.2-2.5	1.9-2.3	-	2.1	-	1.9-2.1	1.8-2.2
P <sub>2</sub>	1,8	1,8	1,7-8	-	1,8	-	-	1,9-10
DBS/VBS	23/21	24/21-22	23-24/20-22	23/21	24/21	-	24-25/21-22	24-25/21-22
PAS	3-4	2-3	3-4	4	3	-	4-5	3-5

Orteguaza at Florencia (01°37'N, 75°37'W), coll. Nicéforo Maria, 1932;—USNM 100743 (one), SL 20.0 mm, same data as the holotype of *Corydoras caquetae*;—CAS/SU 52598 (five), SL 31.9-40.9 mm, Caquetá, Río Orteguaza near Tres Esquinas (00°43'N, 75°14'W), tributary to Río Caquetá, coll. M. Rakowicz, II-1959.

Remarks. — The Colombian specimens were compared with the holotype (CAS/IUM 15818, SL 26.7 mm) from Peru. The head length in SL is 3.1-3.2 in the five specimens in CAS/SU 52598, against 2.9 in the holotype. The interorbital width in HL is 1.9-2.1 in the Colombian specimens, against 2.2 in the holotype.

The inner margin of the pectoral fin spine is finely serrated. In larger specimens, the intercoracoid area is covered with small, mosaic-like dermal ossifications.

### *Corydoras aeneus* (Gill, 1858) (figs. 1, 6; table I D)

*Hoplosoma aeneum* Gill, 1858: 403 (original description; type-locality: "...clear streams of the island of Trinidad..."; 4 syntypes; lectotype designated by Nijssen & Isbrücker, 1980: 208).

Material examined. — CAS/SU 53763 (one), SL 35.6 mm, Meta, Río Guaviare system Cordillera Macarena, small brook into Río Guayabero (02°17'N, 73°44'W) 5 miles below El Refugio, alt. 300 m, coll. T. White & G. S. Myers, 24-II-1960; — CAS/IUM 15038 (one), SL 41.2 mm, Meta, upper Río Meta, Quebrada Cramelote, Villavicencio, coll. M. Gonzales, 24-III-1914; — CAS 36555 (two), SL 27.9-35.8 mm, Meta, Río Negro at Villavicencio (04°09'N, 73°38'W), coll. M. Gonzales, 1914.

Remarks. — See under *Corydoras melanotaenia* below.

### *Corydoras melanotaenia* Regan, 1912 (figs. 1, 4b, 7; table I E)

*Corydoras melanotaenia* Regan, 1912: 217-218 (original description; type-locality: Colombia, "Honda" (12° 21'N, 71°47'W), Río Magdalena basin; 2 syntypes; lectotype designated by Nijssen & Isbrücker, 1980: 208).

Material examined. — BMNH 1909.7.23:41 (lectotype), SL 40.9 mm, locality questionable, coll. B. Leighton; — BMNH



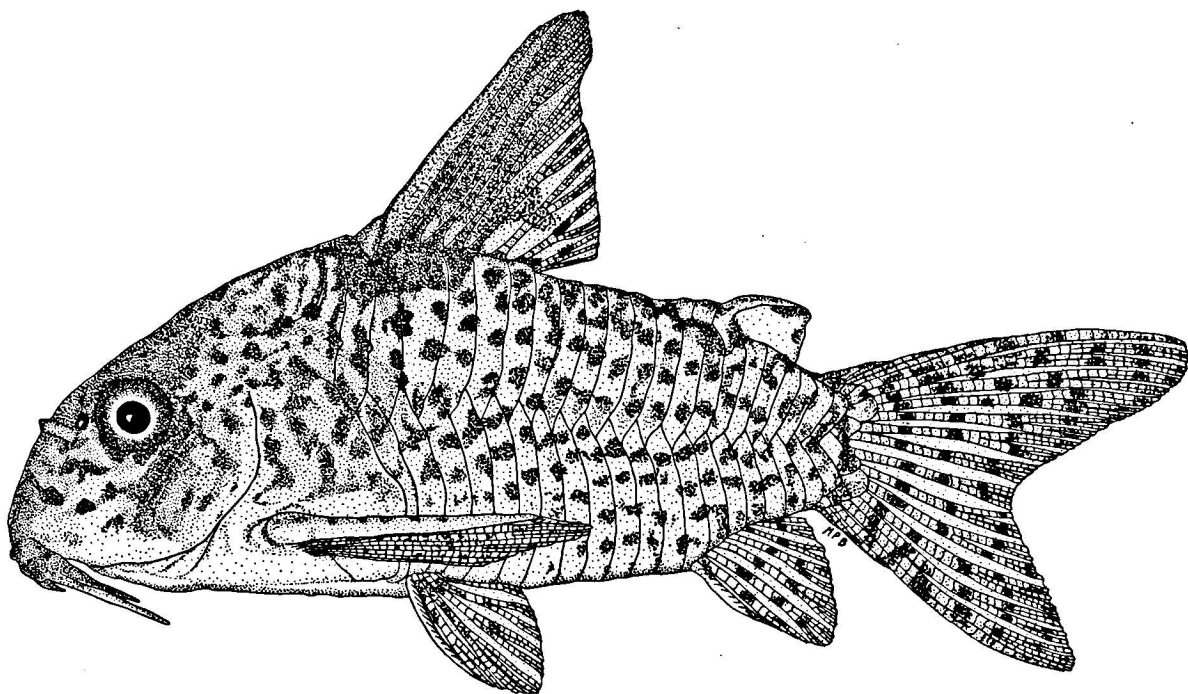


Fig. 5. *Corydoras leucomelas* Eigenmann & Allen, 1942, Río Ortegaza, CAS/SU 52598, SL 33.9 mm.

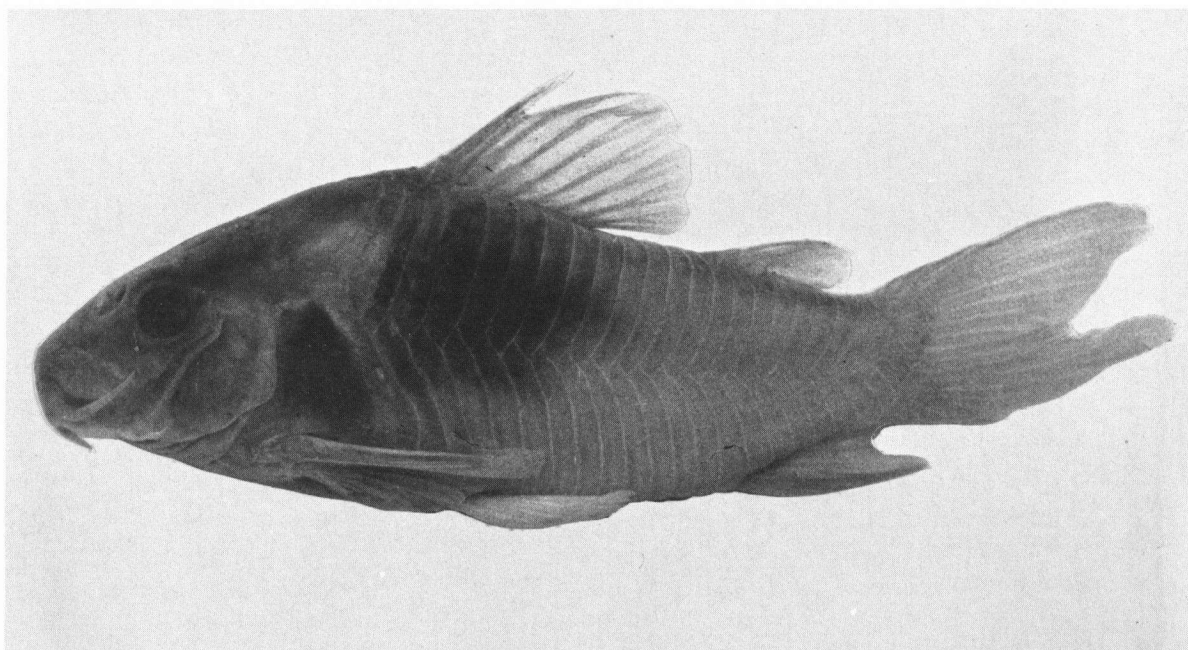


Fig. 6. *Corydoras aeneus* (Gill, 1858), small brook into Río Guayabero, CAS/SU 53763, SL 35.6 mm.

1909.7.23:42 (one paralectotype), SL 31.2 mm, same data as the lectotype; — ZMA 109.381, ZMA 109.382 (eight), SL 27.6-32.0 mm, Meta, upper Río Meta, S.E. of Villavicencio, coll. R. Socolof, XII-1963; — ZMA 109.383 (fourteen), SL 22.5-39.3 mm, Meta, Río Manacacias, surroundings of Restrepo, coll. R. Socolof, 14-XII-1963; — USNM 204472 (seven), ZMA 110.426 (two), USNM 246698 (three), SL 28.7-47.8 mm, Meta, Río Ocoa near Puerto Lopez, coll. K. Nelson, 23-VIII-1961; CAS/SU 16003 (four), Río Ocoa; — USNM 246696 (three), SL 27.9-46.6 mm, Meta, Caño Pachaquiario near Puerto Lopez, coll. K. Nelson, 22-VIII-1961; — USNM 246697 (one), SL 25.7 mm, Meta, Río Quenane near Puerto Lopez, coll. K. Nelson, 22-VIII-1961; — CAS/IUM 15039 (one), SL 30.5 mm, Meta, Río Meta at Barrigona (Puerto Barrigón, 04°10'N, 73°01'W), coll. M. Gonzales, 1914; — CAS 36554 (four), SL 41.9-43.4 mm, Meta, Río Negro at Villavicencio (04°09'N, 73°38'W) coll. M. Gonzales, 1914; — CAS/IUM 13783 (one), SL 34.5 mm, Meta, tributary to Río Meta near Cumaral, coll. A. Maria, 1917; — CAS/SU 32080 (one), SL 37.7 mm, Guaicaramo, coll. M. Gonzales,

1914; — RMNH 28684 (two), SL of the largest 39.4 mm, Meta, along road Villavicencio to Puerto Lopez, coll. A. Werners, 1972.

Remarks. — *Corydoras melanotaenia* resembles *C. aeneus* in pigmentation. The body depth in SL is 2.7-3.2 in *C. melanotaenia* (24 specimens, including the lecto- and paralectotype), against 2.6 in *C. aeneus* from Colombia. The snout length in HL is 1.8-2.0 in *C. melanotaenia*, against 2.1 in Colombian *C. aeneus*. The interorbital width in HL is 2.2-2.7 in *C. melanotaenia*, against 2.0-2.1 in *C. aeneus*. *Corydoras melanotaenia* has 9-10 branched pectoral fin rays, against 8 in *C. aeneus*. Unfortunately, only four specimens of *C. aeneus* were available from Colombia, two of which could be measured and counted.

*Corydoras melanotaenia* appears to be confined to Colombia, whereas *C. aeneus* is a wide-spread species.

Eigenmann (1922: 65, 220, 228) expressed his doubt about the type-locality of *C. melanotaenia* as originally recorded by Regan. In his opinion, *C. melanotaenia* was shipped from Honda, although it was probably collected in the Río Meta Basin. Miles (1945) did not record any *Corydoras* species from Río Magdalena.

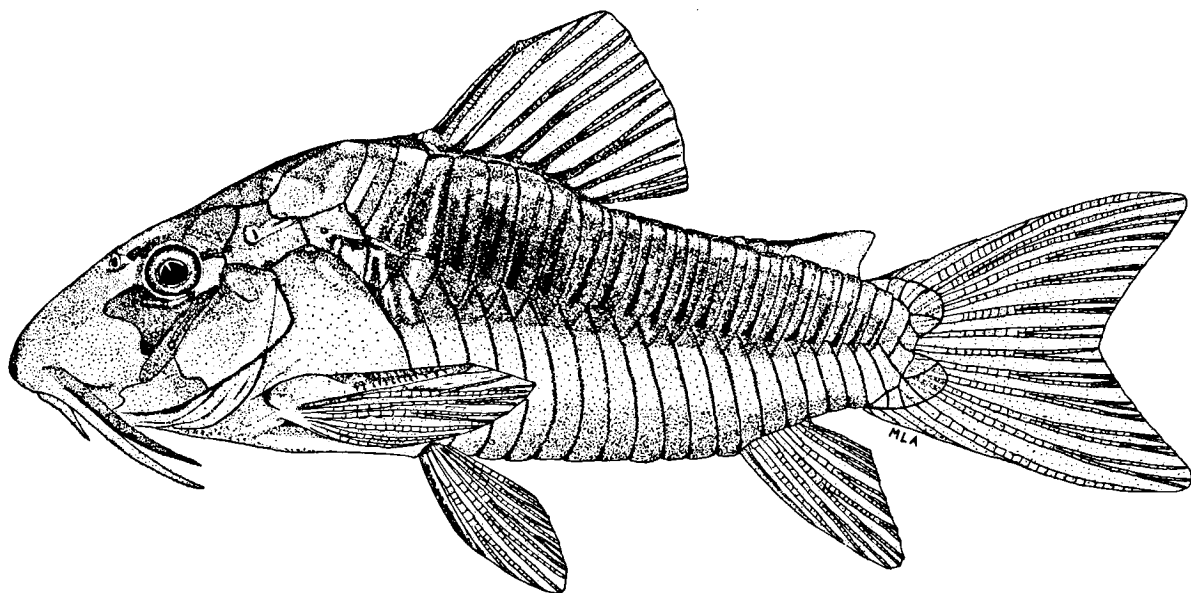


Fig. 7. *Corydoras melanotaenia* Regan, 1912, Caño Pachaquiario, USNM 246696, SL 46.6 mm.

Dahl (1971: vii) confirmed the opinion of Eigenmann. So far, we did not obtain any *Corydoras* specimen from the Río Magdalena Basin, which supports Eigenmann's opinion.

***Corydoras metae* Eigenmann, 1914**  
(figs. 1, 4c, 8; table II F)

*Corydoras metae* Eigenmann, 1914: 230 (original description; type-locality: "Barrigona, Río Meta, Colombia"; holotype), — Eigenmann, 1916: 78, pl. XIV fig. 1 (listed; illustration of the holotype), — Eigenmann, 1922: 227, pl. VIII fig. 5 (listed; illustration of the holotype).

Material examined. — CAS/IUM 13451 (holotype), SL 38.0 mm, Río Meta, Barrigón, coll. M. Gonzales, 1914; — USNM 189677 (two), SL 36.4-36.8 mm, Meta, Caño Pachaquiario at Puerto López, coll. K. Nelson, 22-VIII-1961; — USNM 246699 (two), SL 26.3-34.8 mm, Meta, Río Ocoa at Puerto López, coll. K. Nelson, 23-VIII-1961; — ANSP 84796 (one), SL 37.4 mm, Meta, Río Meta at Villavicencio, coll. C. Miles, X-1940; — ZMA 109.379 (four), SL 19.2-36.1 mm,

Meta, Río Manacacias near Restrepo, coll. R. Socolof, 14-XII-1963; — ANSP 121624 (five), Meta, Caño Angosturas near Hacienda Humacita, coll. J. E. Böhlke, N. & D. Foster, 22-II-1972; — ANSP 121623 (three), Meta, Caño Angosturas near Hacienda Humacita, coll. J. E. Böhlke, N. Foster & J. Thomerson, 28-III-1971; — RMNH 28685 (one), SL 37.8 mm, Meta, along road Villavicencio to Puerto López, coll. A. Werners, 1972; — USNM 246700 (ten), SL 25.5-32.5 mm, Meta, Caño Negro on road to Puerto Porfio, E. of Villavicencio, coll. J. E. Thomerson et al., 27-III-1974; — SMF 8181 (nine), SL 25.0-34.3 mm, Meta, Río Meta near Villabo, coll. C. A. Velasques, 3/5-I-1962; — NRM 1971296.4875 (three), SL 31.8-37.6 mm, Meta, Caño Negros (04°05'N, 73°33'W), coll. T. Hongslo, 24-VII-1971; — NRM 1972084.3132 (one), SL 29.8 mm, Meta, Peralonzo Caño Pachaquiario (04°06'N, 73°10'W), coll. T. Hongslo, 24-II-1972.

Remarks. — See under *Corydoras melini* Lönnberg & Rendahl, 1930, below.

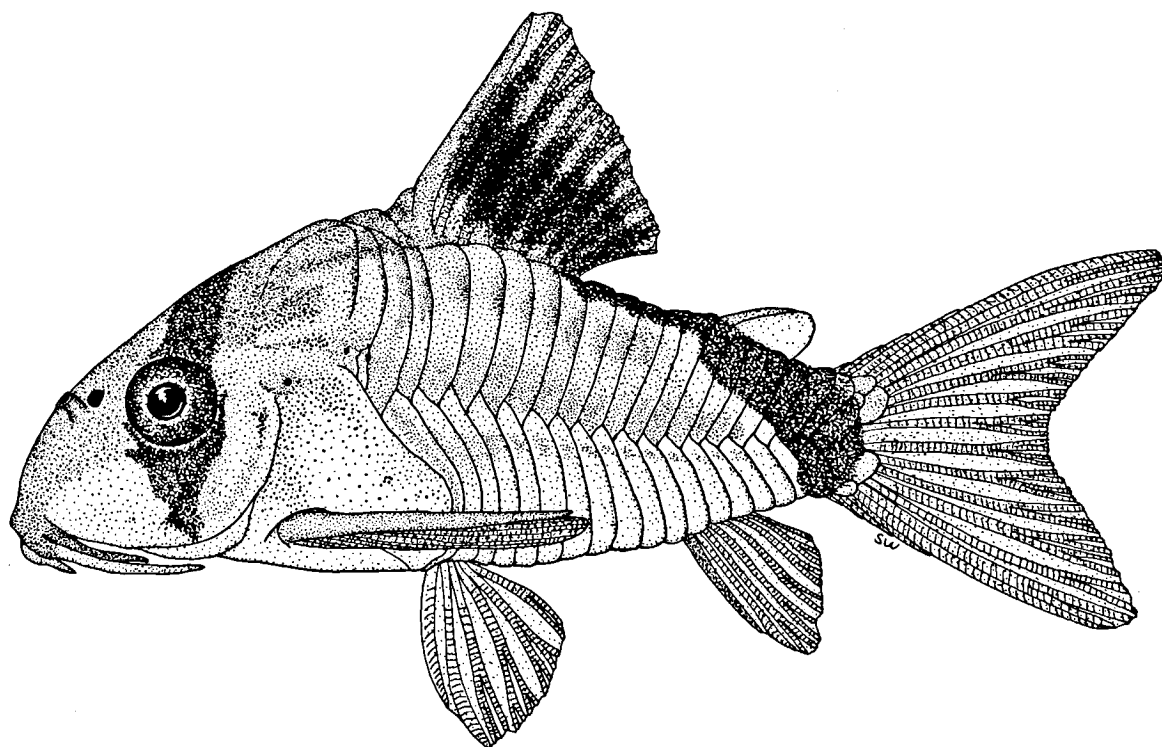


Fig. 8. *Corydoras metae* Eigenmann, 1914, exact locality unknown, CAS/SU 52587, SL 27.0 mm.

**Corydoras melini** Lönnberg & Rendahl, 1930  
(figs. 1, 4d, 9; table II G)

*Corydoras melini* Lönnberg & Rendahl, 1930: 1-6, figured (original description; type-locality: "Jauareté an dem Ausfluss des Rio Papuri in den Rio Uaupés (Rio Waupes deutscher Atlanten), 68, 5°w.L., 113°n.B."); 5 syntypes; lectotype designated by Nijssen & Isbrücker, 1980: 209).

Type-locality: Brazil/Colombia, Iuareté at confluence of Rio Papurí and Rio Uaupés (00°35'N, 69°13'W).

Material examined. — NRM/SMNH 11091 (lectotype), SL 44.4 mm, NRM/SMNH 10142 (four paralectotypes), SL 31.4 - 42.3 mm, locality data as above, coll. D. Melini, 1924; — CAS/SU 53738, CAS/SU 54376 (forty-two), SL max. 23.0 mm, Meta, Cordillera Macarena, Río Losada (02°12'N, 74°04'W), coll. T. D. White & G. S. Myers, 23-II-1960; — CAS/SU 53686 (fourteen), SL 28.0-33.7 mm, Caquetá, Río Orteguaza at Puerto Lara near

Florencia (01°35'N, 75°36'W), coll. G. S. Myers et al., 21-II-1960.

Remarks. — *Corydoras melini* is reminiscent of *C. metae* in morphometric and meristic characters, and in details of their colour pattern. However, *C. melini* has a whitish ground colour, whereas in *C. metae* the ground colour is tan, often with a pink hue. *Corydoras melini* has an unpigmented area dorsal to the oblique stripe on the body, posterior to the base of the last dorsal fin ray (fig. 9). In *C. metae* the dark body stripe meets on the mid-dorsum beyond the dorsal fin (fig. 8).

In 13 specimens of *C. melini* (SL 28.0-44.4 mm, including the lectotype and paralectotypes), the body depth in SL is 2.4-2.8, against 2.2-2.4 in 16 specimens of *C. metae* (SL 26.3-40.8 mm, including the holotype), whereas the body width of *C. melini* is 3.4-4.5 in SL, against 3.2-3.5 in *C. metae*. *Corydoras melini* has 23-25/21-23 dorso-/ and ventrolateral body scutes, against 20-23/19-20 in *C. metae*.

Table II: Morphometric and meristic data of: F) *Corydoras metae* Eigenmann, 1914; the specimen in the first column is the holotype; — G) *Corydoras melini* Lönnberg & Rendahl, 1930; the specimens from Río Vaupés are the lectotype and paralectotypes; — H) *Corydoras reynoldsi* Myers & Weitzman, 1960, holotype and paratypes.

species	F	F	F	G	G	H
N	1	10	5	5	8	8
river system	Meta	Meta	Guaviare	Vaupés	Caquetá	Caquetá
SL in mm	38.0	26.3-37.4	27.0-40.8	31.4-44.4	28.0-33.7	22.0-31.4
SL/body depth	2.3	2.2-2.4	2.2-2.4	2.4-2.7	2.5-2.8	2.8-3.0
SL/body width	3.3	3.2-3.4	3.3-3.5	3.5-4.5	3.4-3.7	3.5-3.7
SL/length dorsal spine	4.0	3.4-4.1	3.0-4.2	3.0-4.6	3.4-3.9	2.9-3.5
SL/length pectoral spine	3.4	3.0-3.4	2.8-3.6	2.9-4.0	-	2.8-3.2
SL/head length	3.0	2.9-3.4	2.9-3.0	3.0-3.3	3.1-3.4	3.3-3.5
HL/snout length	2.1	2.0-2.2	2.0-2.3	1.9-2.1	2.1-2.2	2.3-2.7
HL/length bony orbit	3.2	2.8-3.3	2.6-3.2	2.9-3.5	-	2.7-2.9
HL/width interorbital	2.2	2.1-2.4	2.2-2.3	2.2-2.3	2.0-2.2	2.1-2.4
HL/depth caudal peduncle	2.0	1.9-2.0	1.9-2.1	1.9-2.2	-	1.8-2.0
P <sub>2</sub>	1,8	1,7-8	1,8	1,8-9	-	1,8
DBS/VBS	22/19	20-23/19-20	21-22/19-20	23-25/21-23	-	23-24/20-21
PAS	2	2-3	2-3	3-5	-	2-4

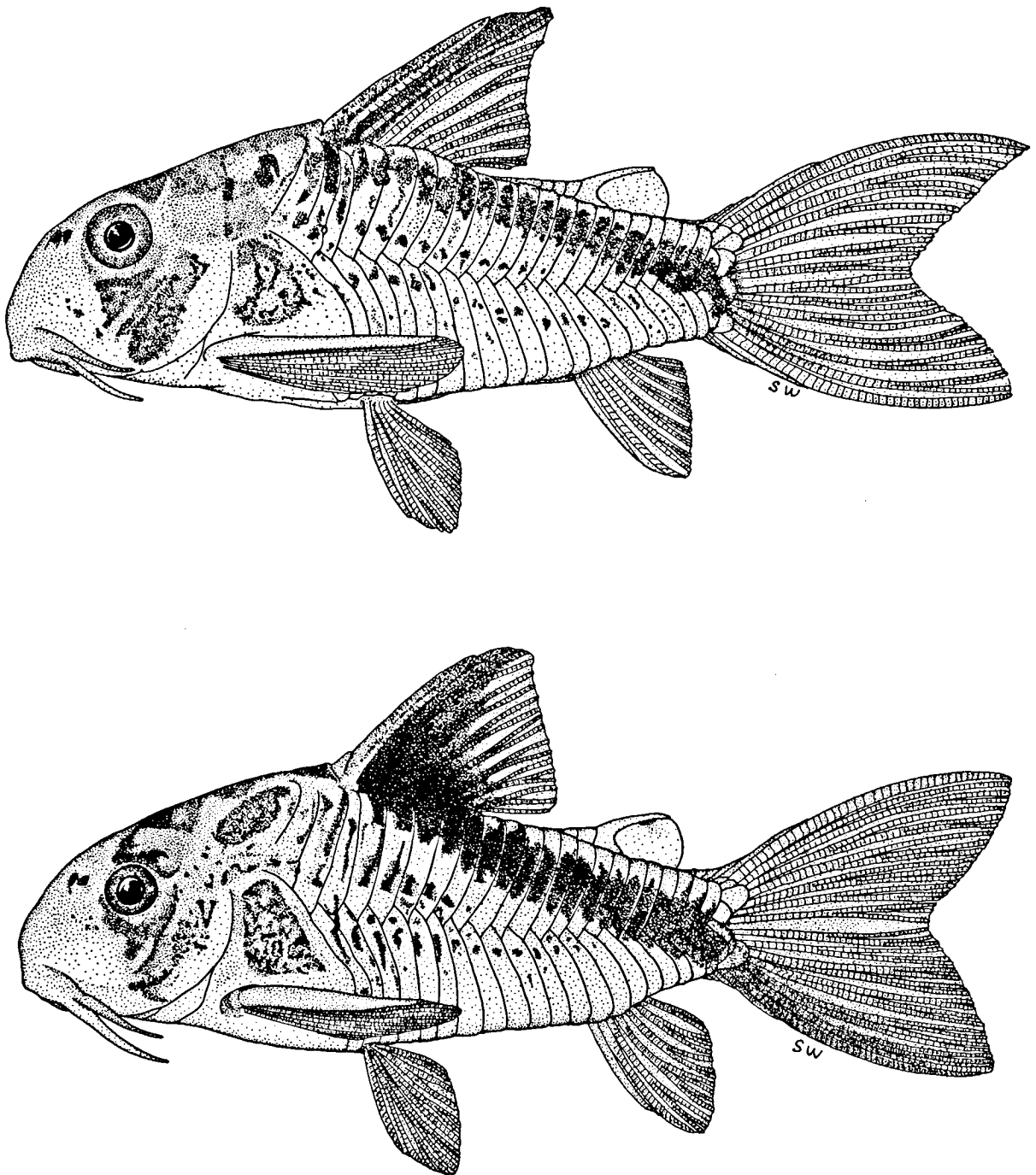


Fig. 9. *Corydoras melini* Lönnberg & Rendahl, 1930; above: Río Losada, CAS/SU 53738, SL 23.0 mm; below: upper Río Ortegua, CAS/SU 53686, SL 32.5 mm, showing variability of the colour pattern.

**Corydoras reynoldsi** Myers & Weitzman, 1960  
(figs. 1, 10; table II H)

*Corydoras reynoldsi* Myers & Weitzman, 1960: 105-108, figs. 2-3, table 2 (original description; type-locality: "...Tres Esquinas Station no. 12, ...A small stream tributary to the Río Orteguaza opposite the town and air base known as Tres Esquinas, Caquetá Province, Colombia. ...approximately at 0°45'N., 75°15'W.; holotype and 7 paratypes).

Material examined. — CAS/SU 52349 (holotype), SL 27.3 mm, CAS/SU 50702 (six paratypes), ZMA 111.424 (one paratype), SL 22.0-31.4 mm, Caquetá, small tributary to Río Orteguaza opposite Tres Esquinas, coll. G. S. Myers, T. D. White, J. N. Reynolds & L. Wulff, 13-II-1958.

Remarks. — *Corydoras reynoldsi* has a characteristic colour pattern (fig. 10).

**Corydoras axelrodi** Rössel, 1962  
(figs, 1, 4e, 11; table III J)

*Corydoras axelrodi* Rössel, 1962: 335-337, figs. 1-3 (original description; type-locality: "Columbien, Río Meta"; holotype and two paratypes).

Material examined. — SMF 5700 (holotype), SL 35.9 mm, SMF 5701/5702 (two paratypes), SL 31.6-33.5 mm, Río Meta, coll. K. Swegles; — USNM 246701 (ninety), ZMA 119.062 (five), SL 20.8-34.2 mm, Meta, mouth of caño into Río Manacacias at Puerto Gaitan (06°15'N, 71°27'W), coll. J. E. Thomerson et al., 2-IV-1974; — USNM 198074 (one), SL 35.3 mm, Meta, Restrepo, don. H. R. Axelrod through R. Socolof, V-1963.

Remarks. — See comparison with *Corydoras loxozonus* n. sp..

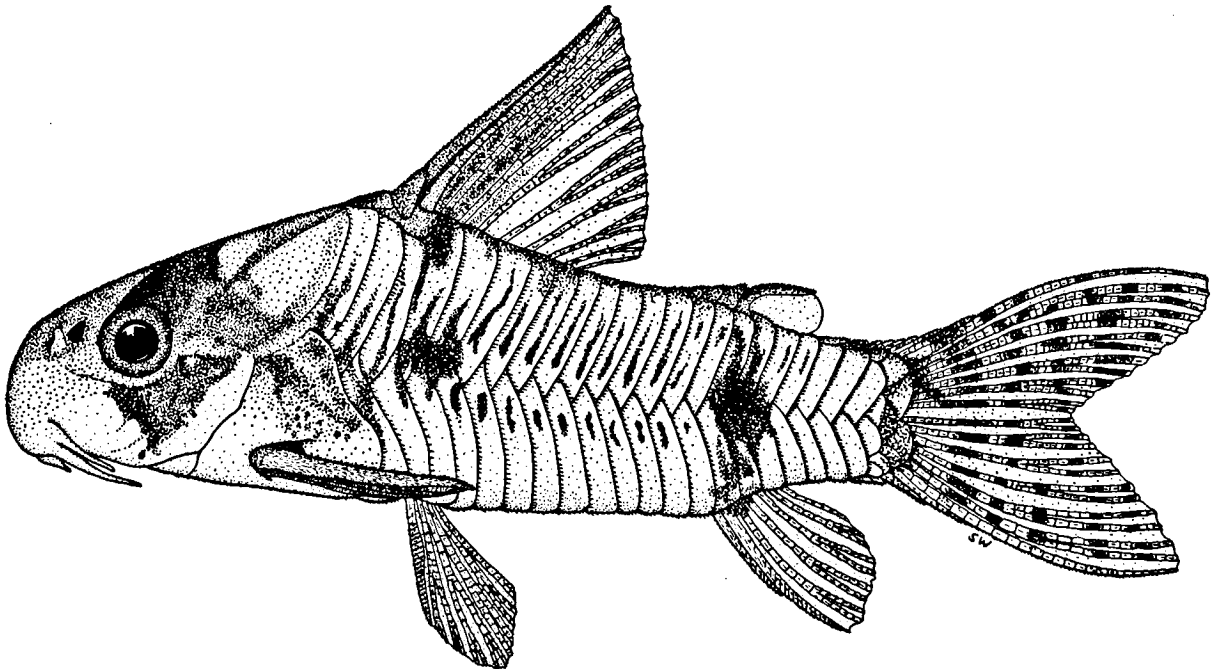


Fig. 10. *Corydoras reynoldsi* Myers & Weitzman, 1960, holotype (reproduction of illustration in Myers & Weitzman, 1960, fig. 2).

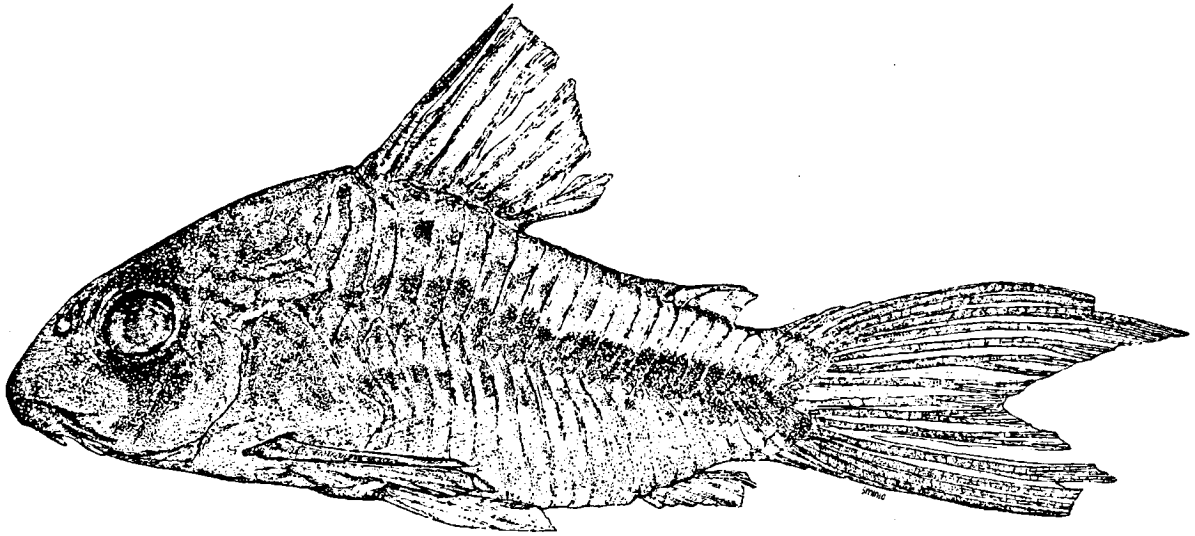


Fig. 11. *Corydoras axelrodi* Rössel, 1962, holotype.

***Corydoras loxozonus* n. sp.**  
(figs. 1, 12; table III K)

Material examined. — ANSP 150170 (holotype), SL 35.7 mm, Meta, Lomalinda near Río Ariari, tributary to Río Guaviare, S.E. of Villavicencio, col. E. J. Huggins, 20-VIII-1969.

Description. — Holotype, SL 35.7 mm; body depth 14.4 mm; body width 9.8 mm; length dorsal spine 9.7 mm; length pectoral spine 11.0 mm; head length 11.6 mm; snout length 5.9 mm; length bony orbit 4.2 mm; interorbital width 5.1 mm; width intercoracoid area 4.1 mm; depth caudal peduncle 5.6 mm; fontanel length 4.1 mm. Pectoral fin with 7 branched rays. Dorsolateral body scutes 24, ventrolateral body scutes 20, preadipose scutes 4. Two pairs of rictal barbels, one pair of mental barbels. Medial border of pectoral fin spine weakly serrated. Intercoracoid area with minute scattered ossifications.

Morphometric data, expressed as ratios of SL or of HL are given in table III K.

Colour in alcohol (fig. 12). — Ground colour tan. Dark brown pigment on dorsum of head across the eyes, posteriorly reaching the base of the supraoccipital process, extending below the

eyes on the ossified parts of the head, suggesting a mask. Ill-defined dark brown pigment between the posterior part of the head, anterior to the base of the dorsal fin spine.

Dorsal fin base and dorsal margin of body scutes, between last dorsal fin ray and base of adipose fin spine, with dark pigment forming a narrow line. This line continues on the dorsal margin of the scutes between the adipose fin membrane and the base of the caudal fin.

A conspicuous dark brown oblique stripe runs from below the base of the dorsal fin spine to the small scutelets on the caudal fin base, posterior to the last ventrolateral body scute. This stripe is margined dorsally and ventrally by an unpigmented zone, the dorsal one tan, the ventral zone whitish.

The body scutes below the ventral unpigmented zone show five longitudinal series of spots. Except for a series of minute spots on the midline, these spots become gradually smaller ventrally.

Dorsal fin with a dark brown line between spine and anterior margin of second branched ray, membrane included, extending to distal tip of first and second ray, not reaching the base of these rays.



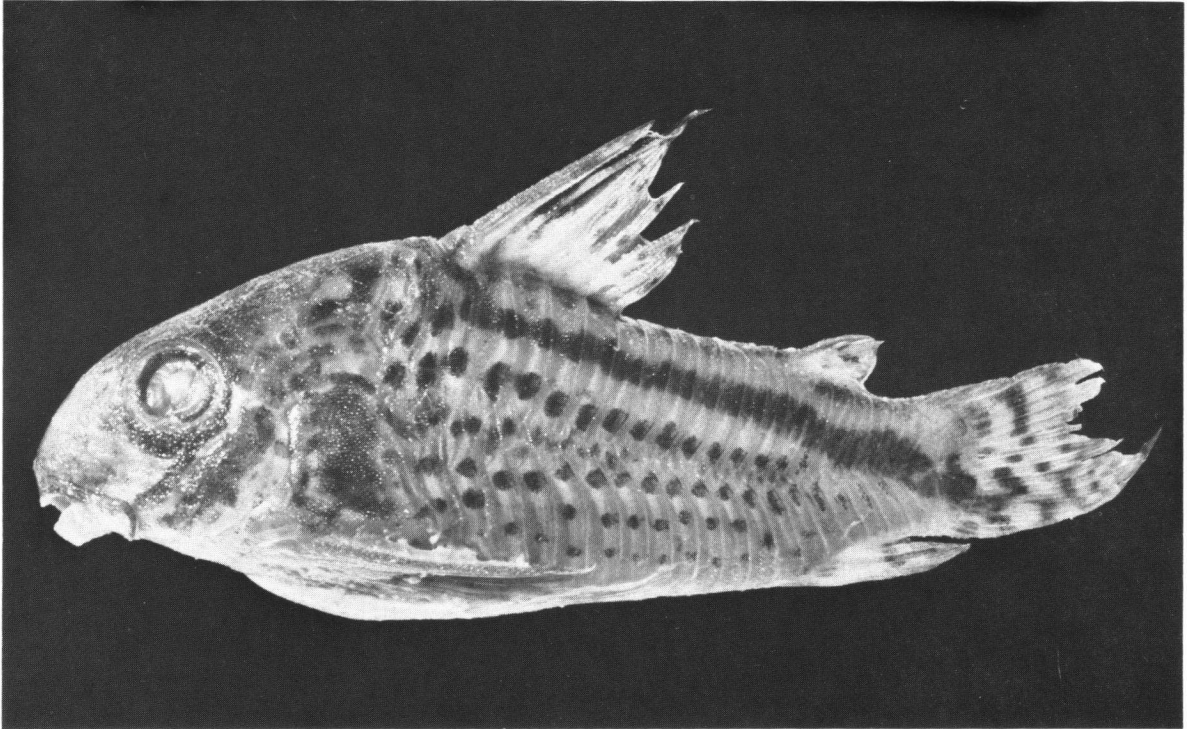


Fig. 12. *Corydoras loxozonus* n. sp., holotype.

Remaining dorsal fin rays with minute dark spots in two horizontal series, one about halfway the length of the rays, the other near their distal tip.

Adipose fin spine with some brown pigment, the membrane with a small, dark brown spot.

Caudal fin with distal tips of upper lobe incomplete. About three series of spots form irregular vertical lines, the anterior one more conspicuous than the others.

Anal fin with faint pigmentation near the base of the three anterior rays, and halfway all rays.

Pectoral and pelvic fins hyaline, except for some scattered, minute dots.

The holotype is well-preserved, although its colour pattern may have faded during the period of preservation.

**Etymology.** — The specific name *loxozonus* is coined from the Greek *loxos* meaning slanting and the Latin *zona* meaning belt, girdle, in allusion to the dark oblique stripe on the body.

**Comparison.** — *Corydoras loxozonus* is reminiscent of *C. axelrodi*, sharing a conspicuous dark oblique stripe on the body and a mask across the eyes. *Corydoras axelrodi* lacks the pigmentation on the fins and on the sides of the body, as present in *C. loxozonus*.

*Corydoras loxozonus* and *C. axelrodi* share all the body proportions (table III J-K). The single specimen of *C. loxozonus* has seven pectoral fin rays against eight in *C. axelrodi*.

**Remarks.** — The holotype of *Corydoras loxozonus* was borrowed from ANSP in 1972. We hesitated to describe the specimen as a new species until we received colour slides of living aquarium specimens with a colour pattern greatly similar to that of *C. loxozonus* (Riehl & Baensch, 1982: 462-463; Burgess, 1982a: 74, as *C. deckeri*, a nomen nudum). None of these slides were accompanied by specimens and/or accurate locality data (Riehl & Baensch state that their specimen occurs in Colombia). We are now certain that *C. loxozonus* is not conspecific with *C. axelrodi*.



Table III: Morphometric and meristic data of: J) *Corydoras axelrodi* Rösse, 1962; the specimens in the first column are the holotype and paratypes; — K) *Corydoras loxozonus* n. sp., holotype; — L) *Corydoras elegans* Steindachner, 1877; — M) *Corydoras simulatus* Weitzman & Nijssen, 1970; the specimens in the first column are the holotype and paratypes.

species	J	J	K	L	M	M
N	3	4	1	1	7	3
river system	Meta	Meta	Guaviare	Caquetá	Meta	Meta
SL in mm	31.6-35.9	31.8-35.3	35.7	40.0	44.3-52.9	41.7-54.6
SL/body depth	2.3-2.5	2.3-2.6	2.5	2.7	2.7-3.0	2.7-3.1
SL/body width	3.6-3.9	3.4-4.0	3.6	4.1	4.2-4.6	4.2-4.3
SL/length dorsal spine	3.2-3.6	3.5-3.7	3.7	4.8	3.9-5.3	4.3-5.4
SL/length pectoral spine	3.1-3.2	3.0-3.3	3.3	3.7	4.2-4.9	4.2-5.5
SL/head length	3.0-3.1	2.9-3.2	3.1	3.8	3.0-3.2	2.9-3.2
HL/snout length	2.0-2.1	2.0-2.2	2.0	2.5	1.6-1.7	1.6-1.7
HL/length bony orbit	2.7-2.8	2.9-3.2	2.8	3.1	3.7-4.2	3.8-4.3
HL/width interorbital	2.2-2.3	2.2-2.4	2.3	1.8	3.1-3.3	3.1-3.4
HL/depth caudal peduncle	2.0-2.1	2.0-2.1	2.1	1.8	2.2-2.6	2.3-2.6
P <sub>2</sub>	1,8	1,8	1,7	1,8	1,9	1,9
DBS/VBS	23-24/20-21	22-23/20	24/20	24/21	24/21-22	24/21-22
PAS	3	2-3	4	3	2-3	2-3

***Corydoras elegans* Steindachner, 1877**  
(figs. 1, 13; table III L)

*Corydoras elegans* Steindachner, 1877: 141-143 (original description; the syntype-localities are in Brazil: "Cudajas, ... Tefé"; lectotype designated by Nijssen & Isbrücker, 1980: 213, from Brazil- Amazonas, Rio Amazonas at Tefé; 359 paralectotypes).

Material examined. — CAS/SU 52597 (one), SL 40.0 mm, Caquetá, near Tres Esquinas (00°43'N, 75°14'W), tributary to Río Caquetá, coll. M. Rakowicz, II-1959.

Remarks. — *Corydoras elegans* has a wide area of distribution. Its colour pattern is variable, different in both sexes.

*C. elegans* is easily recognizable by its short, round snout, by its coracoid margins which are close to each other ventrally, and by its strongly serrated medial edge of the pectoral fin spine.

The Colombian specimen differs slightly from lectotype (NMW 46729, SL 42.8 mm) and 20 paralectotypes (NMW 46730 (4), MCZ 8203 (12), MNHN 89-276/279 (4), SL 28.0-44.5 mm) from Brazil, by having a slightly shorter dorsal fin spine (4.8 in SL against 3.7-4.6), and by having 24 dorsolateral body scutes against 22-23 in the type-specimens.

***Corydoras simulatus* Weitzman & Nijssen, 1970**  
(figs. 1, 14; table III M)

(figs. 1, 14; table III M)

*Corydoras simulatus* Weitzman & Nijssen, 1970: 126-129, figs. 4, 6d (original description).

Material examined. — USNM 197615 (holotype), SL 51.0 mm, USNM 197616 (four paratypes), ZMA 110.384 (two paratypes), SL 32.0-52.9 mm, Meta, Río Ocoa near Puerto López (04°06'N, 72°57'W), Río Meta system, coll. K. Nelson, 23-VIII-1961; — USNM 197667 (one paratype), SL 52.9 mm, Meta, Caño Pochaquiario at Via Puerto López, coll. K. Nelson, 22-VIII-1961; — NRM 1971296.3878 (three), ZMA 119.065 (two), SL 38.1-54.6 mm, Meta, Quebrada Venturosa (about 04°04'N, 72°59'W), coll. T. Hongslo, 24-VII-1971; — USNM 246702 (one), SL 29.6 mm, Meta, Caño into Río Manacacias at Puerto Gaitán (06°15'N, 71°27'W), coll. J. E. Thomerson et al., 2-IV-1974; — SMF 8803 (one), SL 41.7 mm, Meta, Caño Pochaquiario near Villabo, coll. C. A. Velasques, 5-I-1962.

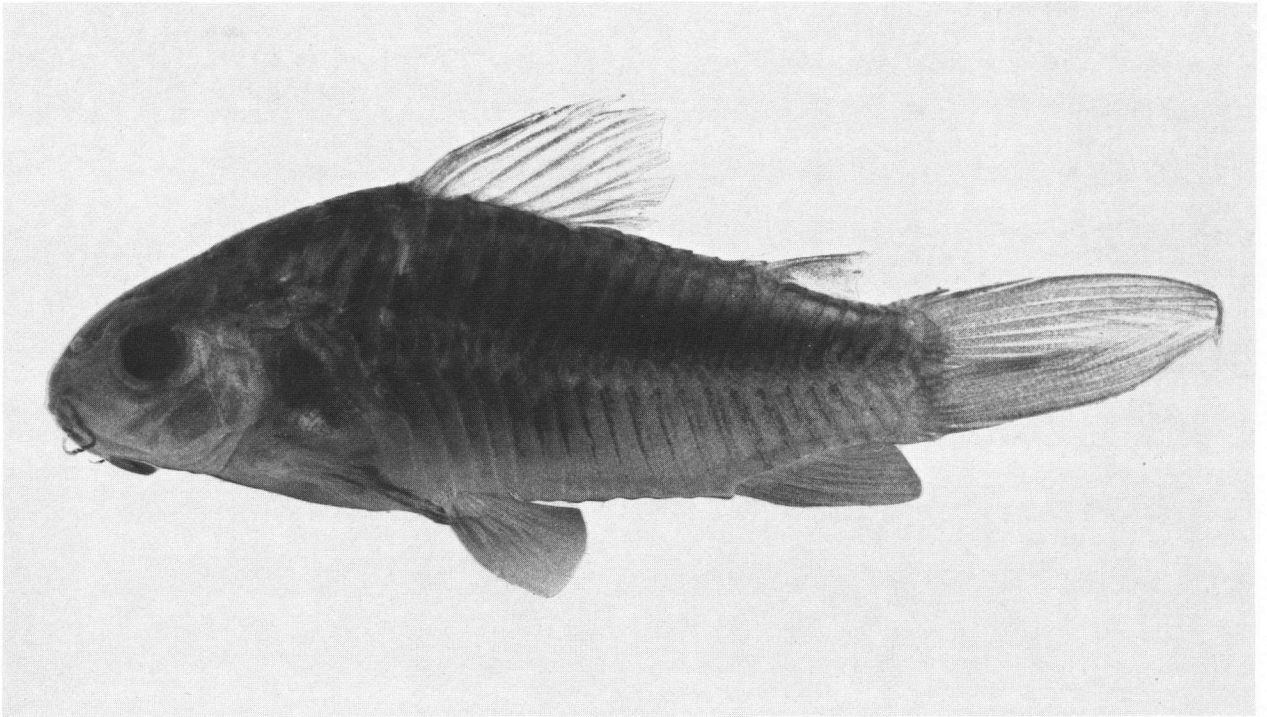


Fig. 13. *Corydoras elegans* Steindachner, 1877, tributary to Rfo Caquetá, CAS/SU 52597, SL 40.0 mm.

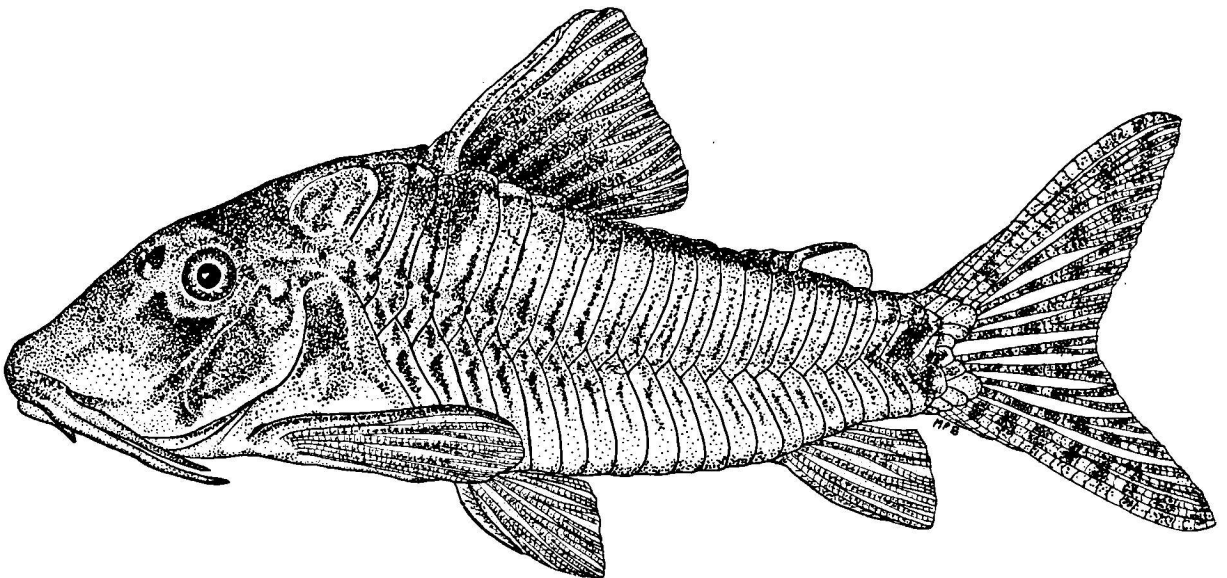


Fig. 14. *Corydoras simulatus* Weitzman & Nijssen, 1970, holotype (reproduction of illustration in Weitzman & Nijssen, 1970, fig. 4).

Remarks. — The colour pattern of *Corydoras simulatus* reminds of that of *C. metae* and *C. melini*. *C. simulatus* can easily be distinguished by several morphometric and meristic characters (tables II F-G and III M), and especially by its strongly serrated medial edge of the pectoral fin spine.

#### REFERENCES

- BURGESS, W. E., 1982a. *Corydoras* & Co., part 2. Trop. Fish Hobby., 30 (12): 68-75.
- , 1982b. *Corydoras* & Co., part 3. Trop. Fish. Hobby. 31 (2): 8-14.
- CALA, P., 1977. Los peces de la Orinoquia colombiana: lista preliminar anotada. Lozania, 24: 1-21.
- DAHL, G., 1971. Los peces del norte de Colombia,: I-XVII, 1-391 (i) (Ministerio de Agricultura, INDERENA, Bogotá).
- EIGENMANN, C. H., 1916. New and rare fishes from South American rivers. Ann. Carnegie Mus., 10 (1-2): 77-86, pls. XIII—XVI.
- , 1922. The fishes of western South America, part I. The fresh-water fishes of northwestern South America, including Colombia, Panama, and the Pacific slopes of Ecuador and Peru, together with an appendix upon the fishes of the Rio Meta in Colombia. Mem. Carnegie Mus., 9 (1): 1-346, pls. I-XXXVIII.
- MILES, C., 1947. Los peces del Río Magdalena ("A field book of Magdalena fishes"),: 1-214, (xiii), xiv-xxviii (Ministerio de la Economía Nacional, Sección de Piscicultura, Pesca y Caza, Bogotá).
- MYERS, G. S. & S. H. WEITZMAN, 1960. Two new fishes collected by General Thomas D. White in eastern Colombia. Stanford ichth. Bull., 7 (4): 98-109.
- NIJSSSEN, H. & I. J. H. ISBRÜCKER, 1976. The South American plated catfish genus *Aspidoras* R. von Ihering, 1907, with descriptions of nine new species from Brazil (Pisces, Siluriformes, Callichthyidae). Bijdr. Dierk., 46 (1): 107-131.
- , 1980. A review of the genus *Corydoras* Lacépède, 1803 (Pisces, Siluriformes, Callichthyidae). Bijdr. Dierk., 50 (1): 190-220.
- RIEHL, R. & H. A. BAENSCH, 1982. Aquarien Atlas,: 1-992 (Mergus Verlag für Natur- und Heimtierkunde, Baensch, Melle).
- WEITZMAN, S. H. & H. NIJSSSEN, 1970. Four new species and one new subspecies of the catfish genus *Corydoras* from Ecuador, Colombia and Brazil (Pisces, Siluriformes, Callichthyidae). Beaufortia, 18 (233): 119-132.

Received: January 27, 1983