

BEAUFORTIA

SERIES OF MISCELLANEOUS PUBLICATIONS

ZOOLOGICAL MUSEUM OF THE UNIVERSITY OF AMSTERDAM

No. 239

Volume 18

April 8, 1971

Two new species of the catfish genus *Corydoras* from Brazil and Peru (Pisces, Siluriformes, Callichthyidae)

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ABSTRACT

This paper contains descriptions and figures of two new species of *Corydoras*, *C. maculifer* from Brazil and *C. panda* from Peru. The relationships of the new species with other species of *Corydoras* are discussed.

While preparing a review of the callichthyid genus *Corydoras* we received two new species of this genus through Dr. P. H. Greenwood, curator of the freshwater fish section of the British Museum (Natural History) (BMNH). *Corydoras maculifer* was collected by Mrs. Dr. R. H. Lowe-McConnell during the Xavantino-Cachimbo expedition 1968. *Corydoras panda* was collected by Mr. R. H. Richards during the Cambridge Veterinary Peru expedition 1968, of the Jesus College, Cambridge. Comparative material was loaned by Dr. K. Deckert and Dr. C. Karrer of the Institut für Spezielle Zoologie und Zoologisches Museum, Berlin (ZMB), and by Dr. W. Klauswitz of the Natur-Museum und Forschungs-Institut Senckenberg, Frankfurt am Main (SMF). Dr. S. H. Weitzman of the Smithsonian Institution, National Museum of Natural History at Washington, D. C. (USNM), kindly read the manuscript. Figures 1 and 3 were prepared by Mr. D. Sminia, figure 2 by Mr. J. Ruting, and figure 4 by Mr. A. L. van der Laan. Proportions are expressed in standard length (sl), and in head length (hl). Measurements are taken to one tenth of a millimeter (cf. Nijssen, 1970: 10—11, fig. 3).

Corydoras maculifer new species (figs. 1, 5a)

Holotype BMNH 1970.10.30.3, sl 35.0 mm, Brazil Est. Mato Grosso, Sangadina stream, 2 km W. of Chavantina (14°45' S, 52°20' W), tributary of the Rio das Mortes. Xavantina-Cachimbo expedition. Coll. R. H. Lowe-McConnell, 2-V-1968.

3 Paratypes: BMNH 1970.10.30.5-6, sl 15.7-24.6 mm, and ZMA 110.681, sl 23.3 mm, same locality as holotype. Coll. R. H. Lowe-McConnell, 25-III-1968.

1 Paratype BMNH 1970.10.30.4, sl 25.7 mm, Brazil, Est. Mato Grosso, Duaspontes stream, 34 km S. of Chavantina, tributary of the Rio das Mortes. Xavantina-Cachimbo expedition. Coll. R. H. Lowe-McConnell, 26-III-1968.

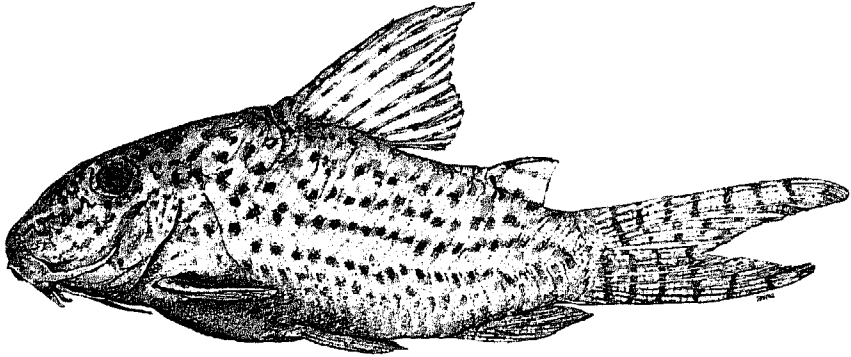


FIG. 1. *Corydoras maculifer* new species, holotype, BMNH 1970.10.30.3, sl 35.0 mm.

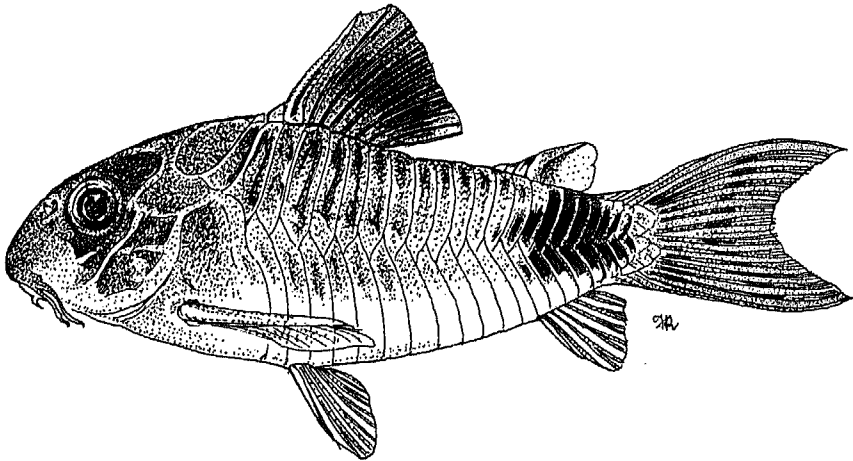


FIG. 2. *Corydoras panda* new species, holotype, BMNH 1969.7.15.8, sl 41.9 mm

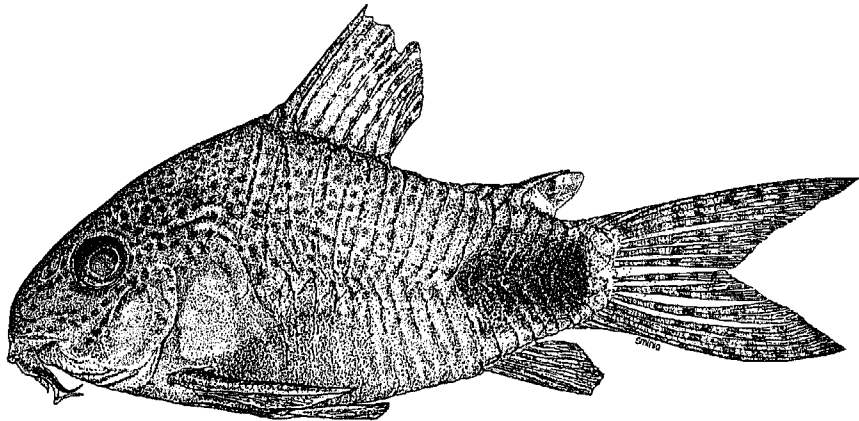


FIG. 3. *Corydoras caudimaculatus* Rössel, 1961, holotype, SMF 5291, sl 41.5 mm.

Description. — Data of the holotype: sl 35.0 mm; bd (body depth at origin of dorsal spine) 12.6 mm (2.8 in sl); bw (body width at origin of pectoral spines) 7.7 mm (4.5 in sl); lds (length dorsal spine) 8.0 mm (4.4 in sl); lps (length pectoral spine) 9.2 mm (3.8 in sl); hl (head length) 11.2 mm (3.1 in sl); sn (snout length) 6.8 mm (1.6 in hl); lbo (length bony orbit) 3.4 mm (3.3 in hl); wi (least interorbital width) 3.4 mm (3.3 in hl); ca (width coracoid area between anteriormost ventral body scutes) 4.0 mm (2.8 in hl); dep (least depth caudal peduncle) 5.5 mm (2.0 in hl); D (dorsal fin) 1,7; P₁ (pelvic fin) i,5; A (anal fin) ii, 5; P₂ (pectoral fin) 1,9; C (principal caudal fin rays) 7/6; dbs (dorsolateral body scutes) 24; vbs (ventrolateral body scutes) 21; pas (preadipose scutes) 3. Two pairs of rictal barbels and one pair of mental barbels. Inner edge of pectoral spine strongly serrated (fig. 5a). Fontanel length 4.5 mm. Skin of intercoracoid area naked.

Data based on 2 paratypes (BMNH 1970.10.30.5, ZMA 110.681): sl 23.3-24.6 mm; bd 2.8-3.0; bw 4.4-4.6; lds 4.6-5.5; lps 4.5-5.1; hl 3.0; sn 1.7; lbo 3.1-3.2; wi 3.4-3.5; ca 2.9-3.2; dep 2.2; D 1,7; P₁ i,5; A ii,5; P₂ 1,9-10; C 7/7; dbs/vbs 24/21; pas 3.

Colour in alcohol (see fig. 1 of holotype). — Ground colour of head and body pale tan. Head, snout, and nuchal plates covered by irregular short dark brown lines, less distinct on operculum and cleithrum. Rictal barbels unpigmented. Body covered by small brown spots forming five horizontal rows, of which rows at either side of junctions of lateral body scutes are most prominent. Belly region whitish. Three horizontal rows of small brown spots on dorsal fin spine and rays. Brown spots on adipose spine and membrane. Spine and rays of pectoral and pelvic fins evenly pigmented with brown. Anal fin with two indistinct rows of brown spots. Caudal fin rays with seven irregular vertical brown bands on the upper lobe and with six bands on the lower lobe.

The paratypes (juveniles) show a similar colour pattern as holotype. The three horizontal rows on dorsal fin rays are more prominent than in holotype. A faint brown mask across eyes is present in smallest paratype.

Etymology: from the Latin “macula” meaning spot and the Latin “ferre” meaning to bear, in reference to the many spots.

Discussion. — Although *Corydoras maculifer* does not seem closely related to any known species of *Corydoras*, *C. polystictus* Regan, 1912, from Brazil, Est. Mato Grosso, Rio Paraguai at Descalvado(s) (16° 45' S, 57° 40' W), has a similar colour pattern. We examined the two syntypes of *C. polystictus* (BMNH 1895.5.17.62-63), sl 27.1-29.4 mm, and find that although Regan (1912: 216) described the colour pattern of this species as: “Longitudinal series of small dark spots on sides of body and on rays of dorsal fin; other fins immaculate”, little of this colour pattern remains visible in the syntypes at present. *C. maculifer* differs from *C. polystictus* in having a strongly serrated pectoral spine (the serration of the inner edge of the pectoral spine is weak in *C. polystictus*), a lesser body depth (2.8-3.0 in *C. maculifer* and 2.4

in *C. polystictus*), a lesser body width (4.4-4.6 in *C. maculifer* and 3.7-3.9 in *C. polystictus*), a longer snout (1.6-1.7 in *C. maculifer* and 2.3 in *C. polystictus*), and a narrower interorbital width (3.3-3.5 in *C. maculifer* and 2.0-2.1 in *C. polystictus*).

***Corydoras panda* new species (figs. 2, 5b)**

Holotype BMNH 1969.7.15.8, sl 41.9 mm, Peru. Est. Huanuco, Aguas Amarillas, tributary of Rio Pachitea, Ucayali river system. Coll. R. H. Richards, 10-VIII-1968.

2 Paratypes, BMNH 1969.7.15.9, sl 32.3 mm, and ZMA 110.604, sl 37.0 mm, same data as holotype.

Description. — Data of the holotype: sl 41.9 mm; bd (body depth at origin of dorsal spine) 15.8 mm (2.7 in sl); bw (body width at origin of pectoral spines) 13.0 mm (3.2 in sl); lds (length dorsal spine) 8.4 mm (5.0 in sl); lps (length pectoral spine) 11.2 mm (3.7 in sl); hl (head length) 12.9 mm (3.2 in sl); sn (snout length) 5.9 mm (2.2 in hl); lbo (length bony orbit) 4.2 mm (3.1 in hl); wi (least interorbital width) 5.6 mm (2.3 in hl); ca (width coracoid area between anteriormost ventral body scutes) 6.8 mm (4.5 in hl); dcp (least depth caudal peduncle) 6.0 mm (2.2 in hl); D I,7; P₁ i,5; A ii,5; P₂ I,9; C 7/7; dbs (dorsolateral body scutes) 23; vbs (ventrolateral body scutes) 20; pas (preadipose scutes) 2. Two pairs of rictal barbels and one pair of mental barbels. Inner edge of pectoral spine with small irregular serrae (fig. 5b). Fontanel length 2.8 mm. Skin of intercoracoid area naked.

Data based on 2 paratypes: sl 32.3-37.0 mm; bd 2.5-2.7; bw 3.4-3.5; lds 3.9-4.3; lps 3.0-3.4; hl 3.0-3.1; sn 2.3-2.4; lbo 2.7-2.9; wi 2.4-2.5; ca 2.4-2.6; dcp 2.0-2.1; D I,7; P₁ i,5; A ii,5; P₂ I,8-9; C 7/7; dbs/vbs 22-23/20; pas 3.

Colour in alcohol (see fig. 2 of holotype) — Ground colour of head and body pale tan. Melanophores across dorsum of head, dorsal, posterior and ventral to eyes, and on anteriormost part of operculum, forming a black

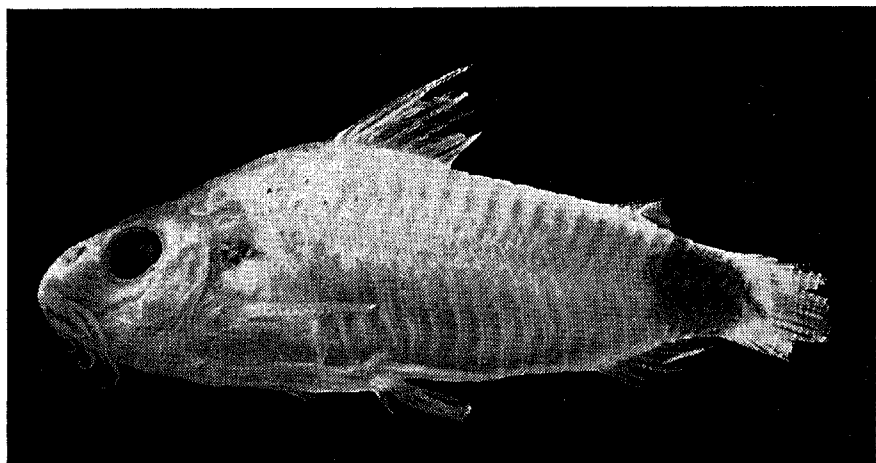


FIG. 4. *Corydoras guapore* Knaack, 1961, holotype, ZMB 21406, sl 33.3 mm.

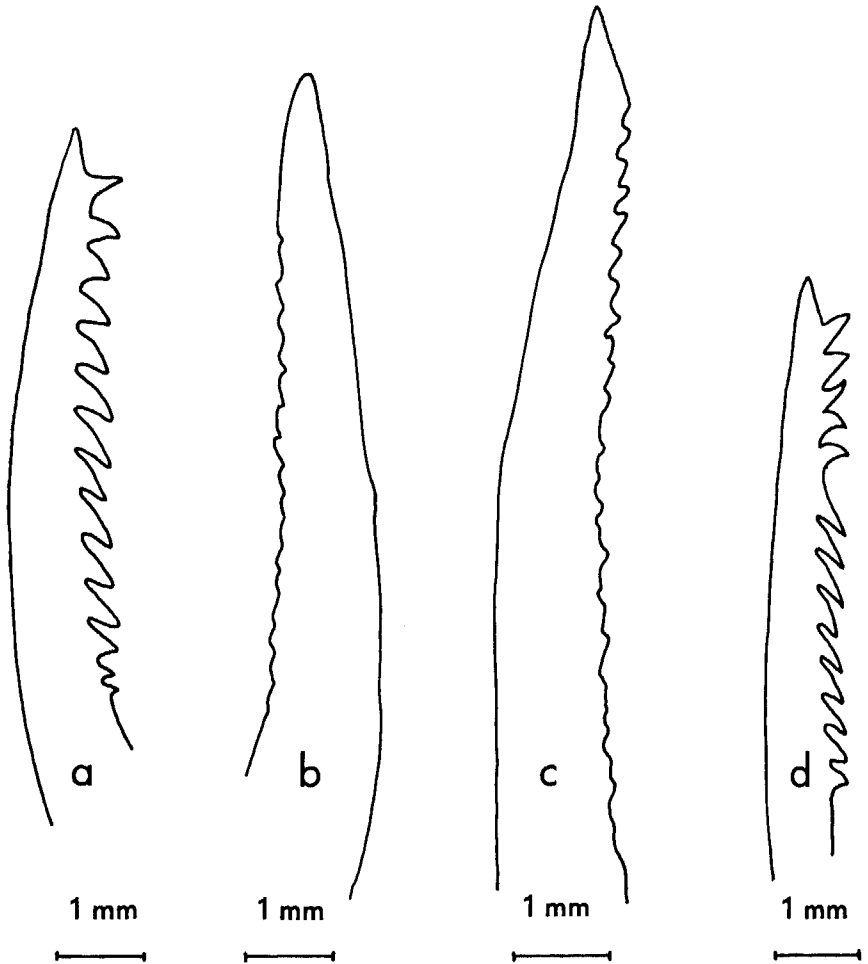


FIG. 5. Ventral view of pectoral spines of holotypes of: a — *Corydorax maculifer* n. sp., 35.0 mm sl, left spine; b — *C. panda* n. sp., 41.9 mm sl, right spine; c — *C. caudimaculatus* Rössel, 1961, 41.5 mm sl, left spine; d — *C. guapore* Knaack, 1961, 33.3 mm sl, left spine.

mask. Remainder of head with scattered grey pigment. Unossified ventrolateral part of snout whitish. Dorsum of snout dark grey. Dorsal rictal barbels greyish. Large black blotch on the caudal peduncle, covering dorsolateral scutes 15 through 22, and ventrolateral scutes 14 through 19. Body otherwise with scattered black pigment except for the ventral region. Belly region white. Dorsal fin almost entirely black, except for spine. Black pigment along posterior edge of adipose fin (adipose spine entirely black in one paratype), and on anterior part of membrane. Pectoral, pelvic, and anal fins almost without pigment. Caudal fin with scattered grey pigment on the rays, con-

centrated about halfway from caudal base to caudal fin lobes, forming a faint irregular vertical band.

Etymology: The species is named after the Giant Panda (*Ailuropoda melanoleuca*), because of its black and white colour pattern.

Discussion. — The colour pattern of *Corydoras panda* resembles that of *C. guapore* Knaack, 1961 (figs. 4, 5d), and *C. caudimaculatus* Rössel, 1961 (figs. 3, 5c), which also have a large black blotch on the caudal peduncle. *C. guapore* and *C. caudimaculatus* were both described from specimens imported for aquarium purposes by Tropicarium, Frankfurt am Main. They were said to have been collected in the upper course of Rio Guaporé (= Itenez), Brazil, Est. Mato Grosso, by Mr. H. Schultz. We have examined the holotype of *C. guapore* (ZMB 21406, sl 33.3 mm). The two paratypes of this species were recorded by Knaack (1961: 135) as still living in 1961 and were to be deposited later on in Berlin Museum according to Knaack. These are not yet in the Museum's collection (Dr. C. Karrer, in litt., November 3, 1970). *C. panda* differs from *C. guapore* in lacking a strongly serrated pectoral spine (figs. 5b and 5d), in having a broader body (3.2-3.5 in *C. panda* and 4.5 in *C. guapore*), a longer head (3.0-3.2 in *C. panda* and 3.8 in *C. guapore*), and a narrower interorbital width (2.3-2.5 in *C. panda* and 1.5 in *C. guapore*). We have examined the holotype (SMF 5291, sl 39.3 mm) and 5 paratypes of *Corydoras caudimaculatus*. Of these paratypes the larger three (SMF 5292/94) were measured (sl 26.1-34.7 mm). The smaller two (SMF 5295/96) were damaged. The sixth paratype (SMF 5297) mentioned by Rössel (1961: 49) was said to be exchanged with the Vienna Museum, but is not present in Vienna, or in Frankfurt am Main. *C. panda* appears to be closely related to *C. caudimaculatus*. *C. panda* has a lesser body depth (2.5-2.7 in *C. panda* and 2.1-2.2 in *C. caudimaculatus*), a shorter dorsal spine (3.9-5.0 in *C. panda* and 2.9-3.7 in *C. caudimaculatus*), a shorter snout (2.2-2.4 in *C. panda* and 2.1 in *C. caudimaculatus*), and a narrower interorbital width (2.3-2.5 in *C. panda* and 2.0-2.1 in *C. caudimaculatus*). Moreover, both species differ from each other in colour pattern, *C. caudimaculatus* having the body, head, and dorsal fin with many small roundish dark brown spots.

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