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

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ABSTRACT

This paper contains descriptions and figures of two new species of the neotropical callichthyid catfish genus *Corydoras* Lacépède, 1803, from Brazil, *Corydoras pulcher* from Rio Purus, north of Lábrea, Est. Amazonas, and *Corydoras steindachneri* from Paranaguá, Est. Paraná. The relationships of the new species with other species of *Corydoras* are discussed.

INTRODUCTION

The two new species described herein were discovered in 1968 during visits to museum collections, associated with the preparation of a review of the South American callichthyid catfish genus *Corydoras*. Since it will be some time before our work on this group is completed and published, we believe it desirable to publish these new species now. *Corydoras pulcher* was found in the collection of the Natur-Museum und Forschungs-Institut Senckenberg (SMF), Frankfurt am Main. *Corydoras steindachneri* was found in the collection of the Naturhistorisches Museum (NMW), Wien.

In the descriptions of the species, 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).

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Corydoras pulcher new species (figs. 1, 2, 4a)

Holotype SMF 9231, 40.3 mm sl, Brazil, Est. Amazonas, Rio Purus, north of Lábrea (07°20' S, 64°46' W), Rio Amazonas system, coll. W. Schwartz, October 12, 1967. One paratype ZMA 112.648, 41.2 mm sl, same data as holotype.

Description. — Holotype: sl (standard length) 40.3 mm; bd (body depth at origin of dorsal spine) 15.6 mm (2.6 in sl); bw (body width at origin of pectoral spines) 9.5 mm (4.2 in sl); lds (length dorsal spine) 11.7 mm (3.4 in sl); lps (length pectoral spine) 11.3 mm (3.6 in sl); hl (head length) 14.7 mm (2.7 in sl); sn (snout length) 8.1 mm (1.8 in hl); lbo (length bony orbit) 4.0 mm (3.7 in hl); wi (least interorbital width) 5.6 mm (2.6 in hl); ca (width coracoid area between anteriormost ventral body scutes) 3.5 mm (4.2 in hl); dcp (least depth caudal peduncle) 5.7 mm (2.6 in hl); D (dorsal fin) I,7, last ray split to its base; P₁ (pelvic fin) i,5; A (anal fin) ii,5; P₂ (pectoral fin) I,9; C (principal caudal fin rays) 7/7; dbs (dorsolateral body scutes) 23; vbs (ventrolateral body scutes) 21; pas (preadipose scutes) 2. Two pairs of rictal barbels and one pair of mental barbels present. Inner edge of pectoral spine weakly serrated (fig. 4a). Fontanel length 5.7 mm. Skin of intercoracoid area naked.

Data from paratype: sl 41.2 mm; bd 2.5 in sl; bw 4.3 in sl; lds 3.4 in sl; lps 3.5 in sl; hl 2.7 in sl; sn 1.8 in hl; lbo 3.8 in hl; wi 2.6 in hl; ca 3.7 in hl; dcp 2.6 in hl; D I,7, last ray split to its base; P₁ i,5; A ii,5; P₂ I,9; C 7/7; dbs 24; vbs 21; pas 2.

Colour in alcohol (see fig. 1 of holotype and fig. 2 of paratype). — Ground colour of body and head pale yellowish tan. Dorsum of head dark brown from nostrils through end of supraoccipital process. Snout tan. Area ventral to eye and anteroventral part of opercle brown, forming a faint mask. Edge of supraoccipital process yellowish tan. Dorsal rictal barbels greyish, ventral rictal barbels and mental barbels yellowish. Posterior half of cleithrum with a brown blotch, otherwise pale white. Nuchal and predorsal scutes brown. Body with four longitudinal brown stripes in the holotype, three in paratype. Midlateral stripe solid, others somewhat irregular. An oblique brown blotch on body, anterior to midlateral stripe and along posteriodorsal edge of cleithrum. Posteriormost lateral body scutes unpigmented in holotype. Dorsal fin spine and first ray yellowish, except for greyish base. Base of second through seventh dorsal fin ray brown, connecting fin membrane tan in that area. An oblique brown line from second through fifth dorsal fin ray. Anterior half of seventh dorsal fin ray brown. Caudal fin with four vertical dark brown stripes in both lobes. In holotype first stripe well separated from pigment of body. In paratype separation not as clear. In lower lobe of caudal fin stripes are somewhat broader than in upper lobe. Adipose fin with two small brown, ill-defined spots. Faint brown pigment in anal fin. Pectoral fins with greyish pigmentation. Pelvic fins unpigmented.

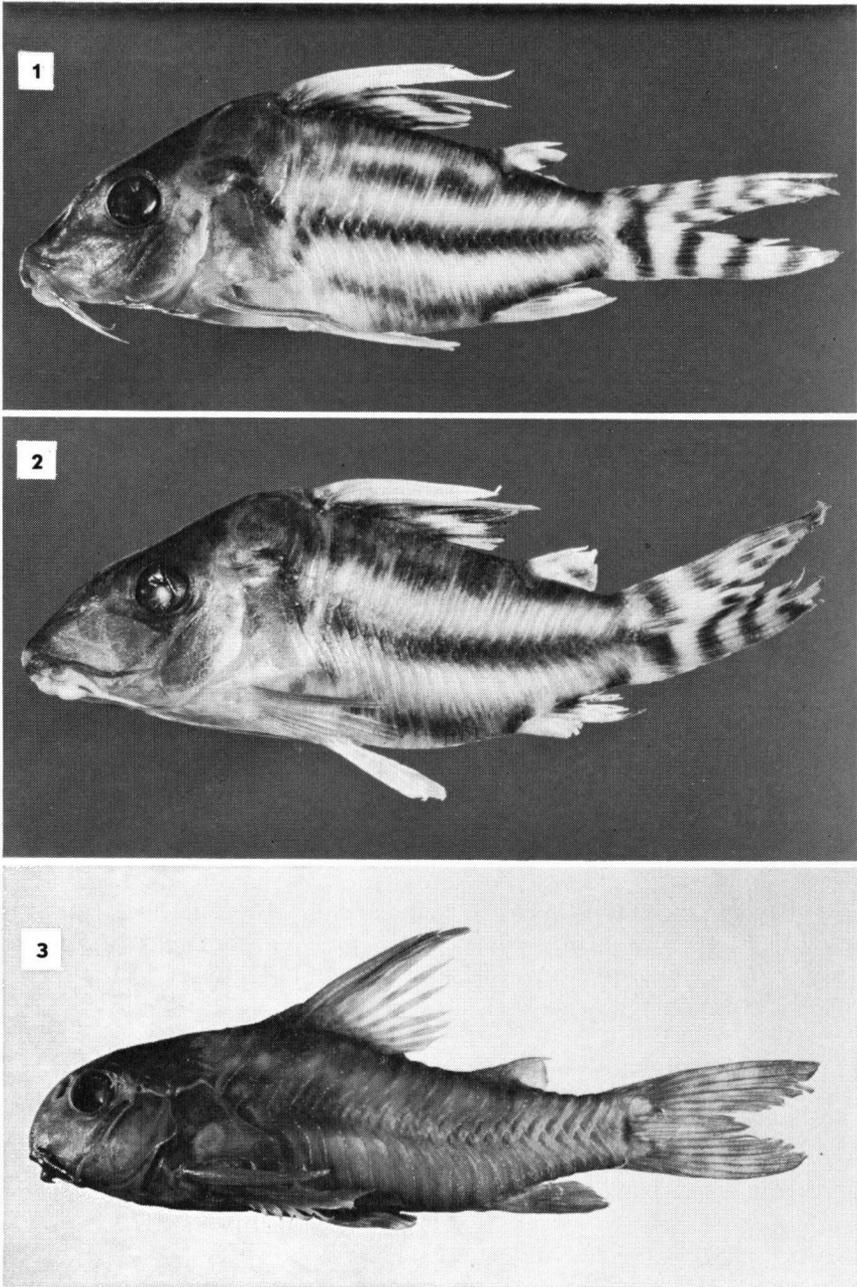


FIG. 1. *Corydoras pulcher* new species, holotype, SMF 9231, sl 40.3 mm.

FIG. 2. *Corydoras pulcher* new species, paratype, ZMA 112.648, sl 41.2 mm.

FIG. 3. *Corydoras steindachneri* new species, holotype NMW 1504, sl 40.4 mm.

Etymology. — From the Latin “pulcher” meaning beautiful, in allusion to the attractive colour pattern.

Discussion. — *Corydoras pulcher* appears most closely related to *Corydoras schwartzi*, of which two subspecies are known, *Corydoras schwartzi schwartzi* Rössel, 1963, and *Corydoras schwartzi surinamensis* Nijssen, 1970. *Corydoras pulcher* and *Corydoras schwartzi schwartzi* are sympatric, both originating from the Rio Purus, the latter having been described from specimens which were said to be from the mouth of this river. *Corydoras schwartzi surinamensis* is known from two creeks of the Coppe-name River in Surinam only.

Corydoras pulcher was compared with the holotype and nine paratypes of *Corydoras schwartzi schwartzi*, 22.6 to 34.5 mm sl (SMF 6425, and SMF 6426/6434), and with the holotype and twelve paratypes of *Corydoras schwartzi surinamensis*, 31.4 to 40.5 mm sl (ZMA 105.876, and ZMA 105.878).

Apart from differences in colour pattern, *Corydoras pulcher* is distinguished from the two subspecies of *Corydoras schwartzi* in the following characters: a more slender body (bw 4.2—4.3 in *C. pulcher*, 3.4—3.8 in *C. s. schwartzi*, 3.4—4.1 in *C. s. surinamensis*); a longer head (hl 2.7 in *C. pulcher*, 2.9—3.1 in *C. s. schwartzi*, 3.0—3.3 in *C. s. surinamensis*); a longer snout (sn 1.8 in *C. pulcher*, 2.1—2.4 in *C. s. schwartzi*, 1.9—2.2 in *C. s. surinamensis*); a smaller eye (lbo 3.7—3.8 in *C. pulcher*, 2.8—3.0 in *C. s. schwartzi*, 3.1—3.6 in *C. s. surinamensis*); a narrower interorbital (wi 2.6 in *C. pulcher*, 2.1—2.4 in *C. s. schwartzi*, 2.1—2.5 in *C. s. surinamensis*); a narrower intercoracoid area (ca 3.7—4.2 in *C. pulcher*, 2.5—3.3 in *C. s. schwartzi*, 1.9—2.7 in *C. s. surinamensis*); a narrower caudal peduncle (dcp 2.6 in *C. pulcher*, 1.8—2.1 in *C. s. schwartzi*, 2.1—2.3 in *C. s. surinamensis*); number of pectoral fin rays (P_2 1,9 in *C. pulcher*, 1,8 in *C. s. schwartzi* and *C. s. surinamensis*); number of preadipose scutes (pas 2 in *C. pulcher*, 3—4 in *C. s. schwartzi* and in *C. s. surinamensis*), and in structure of intercoracoid area (naked in *C. pulcher*, covered with a mosaic of small platelets in *C. s. schwartzi* and in *C. s. surinamensis*).

***Corydoras steindachneri* new species (figs. 3, 4b, 5a)**

Holotype NMW 1504, 40.4 mm sl, Brazil, Est. Paraná, Paranaguá (25°32' S, 48°36' W), coll. Spandl, 1923. One paratype ZMA 112.657, 38.6 mm sl, same data as holotype.

Description. — Holotype: sl (standard length) 40.4 mm; bd (body depth at origin of dorsal spine) 13.0 mm (3.1 in sl); bd' (body depth just in front of origin of dorsal spine) 12.5 mm (3.2 in sl); bw (body width at origin of pectoral spines) 10.6 mm (3.8 in sl); lds (length dorsal spine) 11.1 mm (3.6 in sl); lps (length pectoral spine) 11.9 mm (3.4 in sl); hl (head length) 11.1 mm (3.6 in sl); sn (snout length) 4.8 mm (2.3 in hl); lbo (length bony orbit) 3.1 mm (3.6 in hl); wi (least interorbital width) 5.3 mm (2.1 in hl); ca (width coracoid area between anteriormost ventral body scutes) 4.2 mm (2.6 in hl);

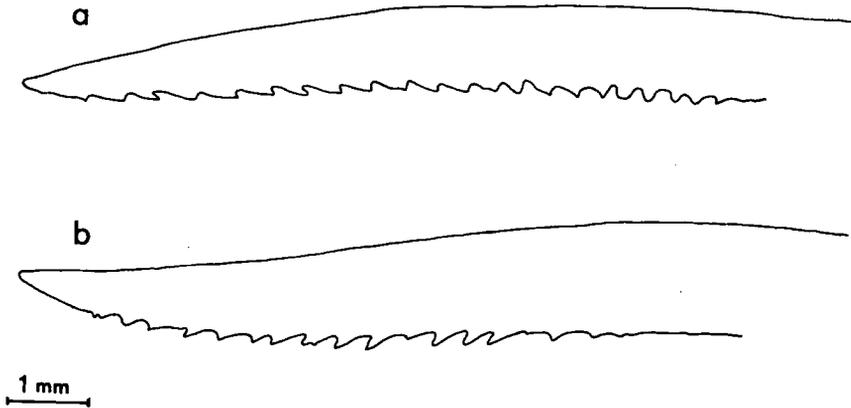


FIG. 4. a) right pectoral spine of *Corydoras pulcher* n. sp., holotype, 40.3 mm sl; b) right pectoral spine of *Corydoras steindachneri* n. sp., holotype, 40.4 mm sl.

dcp (least depth caudal peduncle) 5.1 mm (2.2 in hl); D (dorsal fin) I,7, last ray split to its base; P₁ (pelvic fin) i,5; A (anal fin) ii,5; P₂ (pectoral fin) I,7; C (principal caudal fin rays) 7/7; dbs (dorsolateral body scutes) 23; vbs (ventrolateral body scutes) 20; pas (preadipose scutes) 3. Two pairs of rictal barbels — right rictal barbel lacking in holotype — and one pair of mental barbels. Inner edge of pectoral spine weakly serrated (fig. 4b). Fontanel length 2.9 mm. Skin of intercoracoid area naked.

Data from paratype: sl 38.6 mm; bd 3.3 in sl; bd' 3.4 in sl; bw 3.9 in sl; lds 4.4 in sl; lps 3.6 in sl; hl 3.5 in sl; sn 2.3 in hl; lbo 3.5 in hl; wi 2.1 in hl; ca 3.1 in hl; dcp 2.3 in hl; D I,7, last ray not split to its base; P₁ i,5; A ii,5; P₂ I,8; dbs 23; vbs 20; pas 3.

Colour in alcohol (see fig. 3 of holotype). — Ground colour yellowish, probably due to approximately 50 years of preservation, which also resulted in fading much of original colour pattern. Dorsum of head, including supra-occipital process and snout, brown. Two large rounded midlateral brown blotches present, first from about third through eighth dorsolateral body scute, second from about fifteenth through about seventeenth dorsolateral body scute. A large rounded brown blotch below origin of dorsal fin, two smaller blotches below last dorsal fin ray and ventral to adipose fin, respectively. Some faint, ill-defined concentrations of pigment between these three dorsal blotches. Dorsal fin rays with widely scattered small brown dots. Adipose fin with brownish pigment dorsoposteriorly. Caudal fin with about five narrow irregular vertical lines. Anal fin with faint, widely scattered brownish pigment. Pelvic and pectoral fins unpigmented. Ventral region dirty white.

Etymology. — Named for Dr. Franz Steindachner (1834—1919), ichthyologist of the Naturhistorisches Museum, Wien, in recognition of his many valuable contributions to ichthyology. Dr. Steindachner described several species of the genus *Corydoras* as new to science (1877—1910).

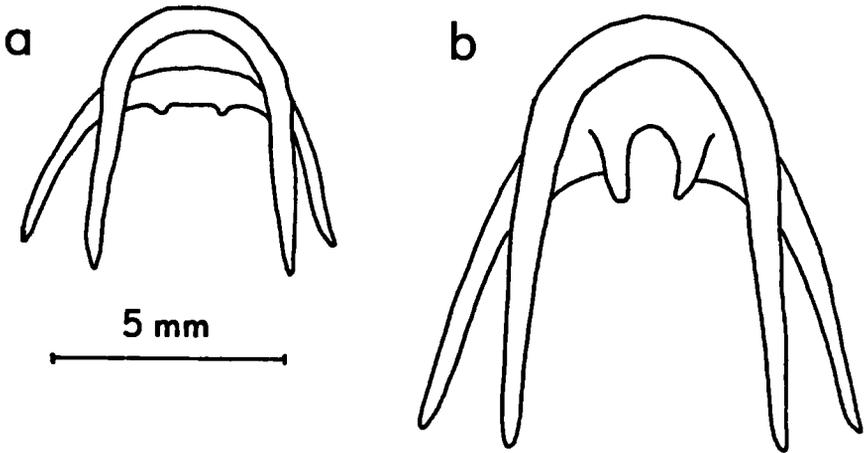


FIG. 5. a) ventral view of barbels and lips of *Corydoras steindachneri* n. sp., paratype, 38.6 mm sl; b) ventral view of barbels and lips of *Corydoras macropterus* Regan, 1913, ♀ specimen from Ribeirão da Icapara, 48.6 mm sl (ZMA 112.290).

Discussion. — In *Corydoras steindachneri* the predorsal scute bends dorsoposteriorly to a greater extent than found in other *Corydoras* species. Hence the measurement bd' is given in addition to bd , to facilitate comparison.

Corydoras steindachneri appears most closely related to *Corydoras macropterus* Regan, 1913, and the former was compared with the four syntypes of *Corydoras macropterus*, 42.0 to 51.5 mm sl (BMNH 1913.1.1.11–14), and with several other specimens from various localities. *Corydoras steindachneri* differs from *Corydoras macropterus* in the following characters: a longer dorsal spine (lds 3.6–4.4 in *C. steindachneri*, 5.8–6.3 in the syntypes and 4.9–5.4 in other specimens of *C. macropterus*); a shorter snout (sn 2.3 in *C. steindachneri*, 2.0 in the syntypes and 2.0–2.1 in other specimens of *C. macropterus*); a larger eye (lbo 3.5–3.6 in *C. steindachneri*, 4.0–4.5 in the syntypes and 3.7–4.0 in other specimens of *C. macropterus*); a broader interorbital area (wi 2.1 in *C. steindachneri*, 2.2–2.4 in the syntypes and other specimens of *C. macropterus*); a narrower caudal peduncle (dcp 2.2–2.3 in *C. steindachneri*, 1.8–2.0 in the syntypes and other specimens of *C. macropterus*); a lower number of dorsolateral and ventrolateral body scutes (dbs/vbs 23/20 in *C. steindachneri*, 25/22–23 in the syntypes and other specimens of *C. macropterus*); a lower number of preadipose scutes (3 in *C. steindachneri*, 4–6 in the syntypes and other specimens of *C. macropterus*); the serration of inner edge of pectoral spine (weakly serrated in *C. steindachneri*, strongly serrated in *C. macropterus*), and the structure of lower lip (mental barbels weakly developed and labial fold lacking in *C. steindachneri*, cf. fig. 5a; mental barbels strongly developed and large labial fold present in *C. macropterus*, cf. fig. 5b). Moreover, there

are differences in colour pattern of *C. steindachneri* and *C. macropterus*. *C. steindachneri* is not known to develop large fins in adult males, as in *C. macropterus*. *Corydoras steindachneri* is sympatric with *Corydoras undulatus* Regan, 1912, which was originally described from La Plata, Argentina. *Corydoras macropterus* was originally described from aquarium specimens, said to be from Paranaguá, Est. Paraná, Brazil.

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