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Aspidoras depinnai (Siluriformes: Callichthyidae): A New Species from Northeastern Brazil

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A new species of the corydoradine catfish genus *Aspidoras* is described from an isolated coastal river basin in northeastern Brazil. The new species is the first record of a member of the subfamily Corydoradinae from the intervening region between the rio Jaguaribe and rio São Francisco basins. *Aspidoras depinnai*, new species, is distinguished from all congeners by the presence of distal bifid serrations on the ossified portion of pectoral-spine posterior border and an irregular arclike blotch on the caudal peduncle. It differs from the remaining *Aspidoras* species examined in the present study by the presence of an irregular row of minute pores on the head and a small cartilage between the upper principal and procurrent caudal fin rays.

Uma nova espécie de bagre coridoradíneo do gênero *Aspidoras* é descrita de uma bacia costeira isolada no nordeste do Brasil. A nova espécie é o primeiro registro de um membro da subfamília Corydoradinae da região intermediária entre as bacias dos rios Jaguaribe e São Francisco. *Aspidoras depinnai*, nova espécie, é diferenciada de todas as suas congêneres pela presença de serreado bífido na margem posterior distal da porção ossificada do espinho peitoral e uma mancha irregular em arco no pedúnculo caudal. Além disso, ela difere das demais espécies de *Aspidoras* examinadas no presente estudo pela presença de uma fileira irregular de minúsculos poros na cabeça e uma pequena cartilagem entre os raios caudais principais e procurrentes superiores.

THE genus *Aspidoras* was established by Ihering (1907) to include a single species, *Aspidoras rochai*, from rivers around Fortaleza, Ceará State, Brazil. A second species, *Aspidoras lakoi*, was described by Ribeiro (1949). *Aspidoras* is easily distinguished from the other genera of the subfamily Corydoradinae by the presence of a supraoccipital fontanel (Nijssen and Isbrücker, 1976). According to recent studies (Reis, 1993, 1998; Britto, 1997), this character is an autapomorphy for the genus.

In addition to these features, recent studies (Reis, 1993, 1998; Britto, 1997) indicated several derived characters present in all *Aspidoras* species, as a reduced frontal fontanel not surpassing frontal-supraoccipital suture posteriorly, a compact opercle with its depth nearly equal its length, and the pectoral spine ossified portion less than half the length of the first pectoral fin ray. All these features are shared by the new species.

A taxonomic revision of the genus was made by Nijssen and Isbrücker (1976), who also described nine new species and placed *Corydoras pauciradiatus* and *Corydoras raimundi* in *Aspidoras*. Subsequently, three new species of *Aspidoras* were described: *Aspidoras virgulatus* (Nijssen and Isbrücker, 1980) and *Aspidoras belenos* and *Aspidoras microgalaeus* (Britto, 1998), increasing to 16 the number of *Aspidoras* species.

Aspidoras species occur only in Brazil, with almost all 16 species narrowly endemic, occurring in restricted areas of some major river drainages (Nijssen and Isbrücker, 1976): *A. lakoi* and *Aspidoras fuscoguttatus* from rio Paraná system, *Aspidoras albater* and *Aspidoras eurycephalus* from rio Tocantins system, *Aspidoras brunneus* and *A. microgalaeus* from rio Xingú system, and *A. belenos* from rio Araguaia system. Six species are known from northeastern Brazilian coastal river basins (*A. rochai* from rivers around Fortaleza; *Aspidoras raimundi* from rio Parnaíba; *Aspidoras carvalhoi* from rivers around Guaramiranga, Ceará State; *Aspidoras maculosus* from rio Itapicuru; *Aspidoras menezesi* from rio Jaguaribe; and *Aspidoras spilotus* from rio Acaráu). There is a wide distributional gap from rio Itapicuru basin in Bahia State to rio Jaguaribe basin in Ceará State, with no record of *Aspidoras* species occurring there. So far, records of corydoradine catfishes from that region involve two species of genus *Corydoras* (*C. garbei* and *C. multimaculatus*) in rio São Francisco (Reis, 1993). In the present work, a new species, *Aspidoras depinnai*, is described from material collected in rio Ipojuca basin, Pernambuco State. This species is the first record of a corydoradine catfish for the region.

Fig. 1. *Aspidoras depinnai*, new species, holotype, MZUSP 56216, 32.5 mm SL.

Materials and Methods

Morphometric and meristic data were taken according to Reis (1997) for the subfamily Callichthyinae, except for anal spine length, which is absent in all corydoradines. Length of the pectoral spine ossified part was measured from the spine articulation point to the ossified portion tip. Subunits of head were expressed as percentage of head length (HL), except for the length of the upper maxillary barbel, expressed as percentage of standard length (SL). Measurements were obtained using callipers to 0.02 mm. In the absence of some specimens (*A. raimundi, A. carvalhoi*, and *A. eurycephalus*), coloration and pectoral spine morphology comparisons were completed with descriptions and illustrations in Nijssen and Isbrücker (1976). Tooth and vertebral counts were taken from cleared-and-stained (cs) material and prepared according to Taylor and Van Dyke (1985). Vertebral counts include only free centra. Compound caudal centra (preural 1 + ural 1) were counted as a single element. Drawings were made with the aid of a camera lucida on the left side of the specimens. In these drawings, dotted areas represent bone, and areas filled with circles represent cartilage. Recognition of laterosensory canals followed Arratia and Huaquin (1995). Homology of preopercular pores followed Schaefer (1988). Osteological terminology followed Reis (1998). Institutional abbreviations are as listed in Leviton et al. (1985), with the addition of UFRJ for Laboratório de Ictiologia Geral e Aplicada da Universidade Federal do Rio de Janeiro, Rio de Janeiro.

Fig. 2. Dorsal (left) and ventral (right) views of head of *Aspidoras depinnai*, new species, paratype, MZUSP 53717, 33.3 mm SL. Odontodes not depicted. Scale bar = 1 mm.

Aspidoras depinnai, new species
Figures 1–2

Holotype.—MZUSP 56214, female, 32.5 mm SL; Brazil: Pernambuco State, creek at Amaraji-Primavera road, rio Ipojuca basin, 08°21′S, 35°26′W; F. Sá, 24 April 1999.

Paratypes.—All collected with the holotype; MCP 23706, 2 males, 24.7–29.1 mm SL, 2 females, 24.0–25.2 mm SL; MZUSP 56215, 2 males, 24.0–24.4 mm SL, 2 females, 24.9–30.3 mm SL; MZUSP 56216, male, cs, 22.5 mm SL, 2 females, cs, 28.3–29.1 mm SL; UMMZ 235432, 2 males, 23.5–24.2 mm SL, female, 26.4 mm SL. MZUSP 53717, female, 33.3 mm SL; MZUSP 53718, juvenile, 15.4 mm SL, Brazil: Pernambuco State, creek at Amaraji-Primavera road, rio Ipojuca basin, 08°21′S 35°26′W; M. de Pinna and F. Melo, 25 December 1998.

Diagnosis.—*Aspidoras depinnai* differs from its congeners by the following unique features: bifid serrations restricted to distal tip on ossified portion of pectoral spine posterior border (vs single serrations or bifid serrations along entire posterior border); and presence of irregular arclike brown blotch on caudal peduncle (vs absence).

TABLE 1. MORPHOMETRIC DATA FOR THE HOLOTYPE AND FIVE PARATYPES OF *Aspidoras depinnai*.

	Females			Male
	Holotype	Paratypes		
	MZUSP 56214	Mean	Range	MCP 23706
Standard length (mm)	32.54	30.3	28.30–33.26	29.08
Percentage of standard length:				
Body depth	28.5	28.6	26.8–29.5	29.1
Predorsal distance	43.4	43.1	41.1–45.9	42.9
Prepelvic distance	44.4	45.6	44.5–47.1	45.1
Preanal distance	78.4	77.6	76.8–79.2	77.7
Preadipose distance	79.5	80.6	79.8–81.8	80.5
Dorsal spine length	11.1	15.3	10.5–12.7	12.0
Pectoral spine length	14.0	16.9	11.1–14.7	11.1
Adipose fin spine length	7.7	9.3	8.4–10.6	8.7
Caudal peduncle depth	13.2	13.2	12.4–13.9	13.9
Dorsal to adipose distance	24.0	23.9	22.3–26.2	23.7
Dorsal fin base length	16.2	17.1	16.3–18.0	17.2
Maximum cleithral width	11.4	13.4	12.6–14.3	12.6
Head length	33.1	34.4	31.7–37.0	33.7
Upper maxillary barbel length	13.1	11.2	4.1–15.3	13.8
Percentage of head length:				
Head depth	80.9	74.9	72.3–77.8	77.1
Least interorbital distance	34.0	34.2	33.1–35.4	35.1
Horizontal orbit diameter	18.4	18.7	15.5–20.8	20.8
Snout length	40.4	40.2	38.8–41.3	38.8
Least internareal distance	22.3	22.5	19.7–24.5	24.5

Description.—Morphometric data are presented in Table 1. Head somewhat compressed, with convex dorsal profile. Head triangular in dorsal view. Snout rounded. Dorsal body profile slightly convex from tip of supraoccipital process to posteriormost dorsal fin ray. Post–dorsal fin body profile weakly concave, nearly straight from that point to caudal fin base. Ventral body profile convex from isthmus to anal fin origin. Profile slightly concave from first anal fin ray to caudal fin base. Trunk roughly cylindrical at pectoral girdle region and gradually more compressed towards caudal fin.

Eye laterally located; its orbit delimited dorsally by frontal and sphenotic and ventrally by infraorbitals. Anterior and posterior nares very close, separated only by thin skin flap. Anterior naris tubular. Posterior naris very close to anterodorsal orbit margin, separated from it by distance smaller than naris diameter. Mouth subterminal and small, width nearly equal in size to bony orbit length. Two pairs of maxillary and one pair of mental barbels. Dorsal and ventral maxillary barbels equal in size, reaching anterior limit of gill openings ventrally (Fig. 2). Some specimens with maxillary barbels fused at their bases from one-fifth to one-third of barbel length. Small rounded papillae over entire surface of all barbels, upper and lower lips, and isthmus region. Gill membranes united to isthmus. Four branchiostegal rays covered by thick skin; distal two united at their tips by branchiostegal cartilage. Teeth on upper pharyngeal tooth plate 38; teeth on fifth ceratobranchial 28. Males with long lanceolate genital papilla close to anus. Females with small rodlike genital papilla.

Nasal, frontal, sphenotic, pterotic-supracleithrum and supraoccipital visible externally, covered by thin layer of skin; all, except nasal, bearing minute scattered odontodes. Two fontanels, both covered by thin layer of skin. Anterior fontanel ovoid and small, delimited uniquely by frontal bones; its posterior margin not contacting supraoccipital. Posterior fontanel smaller than anterior one, restricted to middle of supraoccipital bone. Nasal slender, slightly curved; inner border contacting frontal. Frontal rectangular with anterior extension in contact with nasal bone, contacting sphenotic and supraoccipital posteriorly. Sphenotic trapezoid, contacting supraoccipital dorsally, pterotic-supracleithrum posteriorly and infraorbital 2 ventrally. Pterotic-supracleithrum pipelike in shape; anterior and deeper portion contacting supraoccipital dorsally and sphenotic anteriorly, whereas posterior and slender portion contacting first dorsal body plate dorsally and first lateral line

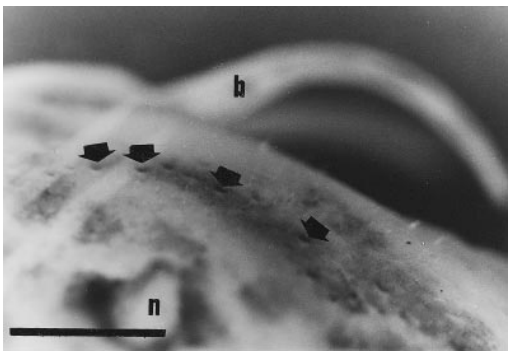

Fig. 3. Right side of head of *Aspidoras depinnai*, new species, showing some superficial neuromasts (arrows). b = barbel; n = anterior nare. Scale bar = 1 mm.

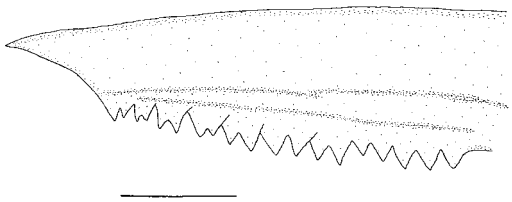

Fig. 4. Posterior tip of the ossified portion of left pectoral spine of *Aspidoras depinnai*, new species, paratype, MZUSP 53717, 33.3 mm SL. Odontodes not depicted. Scale bar = 1 mm.

ossicle posteriorly. Ventrally, entire bone contacts opercle and cleithrum. Supraoccipital quadrangular with posterior process, separate from azygous predorsal platelet by two dorsal body plates.

Two infraorbital bones, both visible externally, covered by thin skin layer and bearing minute odontodes. First infraorbital with anteriorly developed expansion.

Opercle and preopercle visible externally, covered by thin skin layer; former with minute odontodes scattered over its surface. Opercle compact, its free border angular. Preopercle slender. Interopercle triangular, covered by skin layer.

Trunk lateral line reduced to three latero-sensory canals; posteriormost encased in third dorsal body plate, anterior ones restrict to small ossicles. Lateral line canal entering neurocranium through pterotic-supracleithrum, splitting in two branches: postero-lateral and preopercle-mandibular; each one with single pore. Preopercle-mandibular branch continuing through pterotic-supracleithrum as temporal canal, which enters sphenotic, splitting in two branches. One branch giving rise to infraorbital canal and other one entering in frontal through supraorbital canal. Supraorbital canal with two branches; epiphyseal, opened close to anterior fontanel, and anterior, running through nasal. Nasal canal with three openings; posteriormost where supraorbital canal enters nasal. Remaining ones on tip and middle of bone, respectively. Infraorbital canal running through entire second infraorbital, entering infraorbital 1 and with two pores. Preopercle-mandibular branch giving rise to preopercle-mandibular canal, which runs through entire preopercle with three openings, corresponding to pores 3, 4, and 5, respectively. Irregular row of minute pores, much smaller than canal pores, situated anterior to nostrils and extending irregularly to sphenotic and below infraorbitals (Fig. 3).

Two series of laterally elongated plates covering entire body. One azygous platelet immediately anterior to dorsal fin. Three to five small unpaired platelets anterior to adipose fin. Eleven small plates on caudal fin base. All plates with minute odontodes restricted to their posterior borders. Coracoids covered by skin ventrally. Cleithrum visible externally, covered by thin skin layer. Minute odontodes scattered over area between coracoids and entire surface of cleithrum. Dorsolateral body plates 25–26; ventrolateral body plates 22–23; dorsolateral plates along dorsal fin base 6–7; dorsolateral plates from adipose fin to caudal fin 8–9. Precaudal vertebrae 9–10; caudal vertebrae 15; total free vertebrae 24–25; six pairs of ribs, first conspicuously more well developed than others.

Dorsal fin shape rounded. Dorsal fin origin just posterior to third dorsolateral body plate. Dorsal spine shorter than first five dorsal fin rays, posterior border smooth; dorsal fin rays I,8. Adipose fin rounded; its origin separated from base of last dorsal fin ray by seven to nine dorsolateral body plates. Adipose fin preceded by small, curved, well-ossified spine. Anal fin shape ellipsoid, origin just posterior to 13th to 14th ventrolateral body plate, at vertical through anterior margin of second to fourth preadipose platelet. Anal fin rays ii,5,i. Pectoral fin shape ovoid, origin just posterior to gill opening. Pectoral spine ossified portion shorter than first seven pectoral fin rays, its posterior border strongly serrated, with bifurcate serrations restricted to distal portion (Fig. 4). Pectoral fin rays I,8,i. Pelvic fin ellipsoid in shape, origin just below third ventral body plate, at vertical through base of second to third dorsal fin branched rays. Pelvic fin rays i,5. Caudal fin symmetrically bilobed. Small round cartilage between base of principal and procurrent caudal fin rays on upper lobe (Fig. 5). Principal caudal fin rays i,6/6,i. Procurrent caudal fin rays v/v.

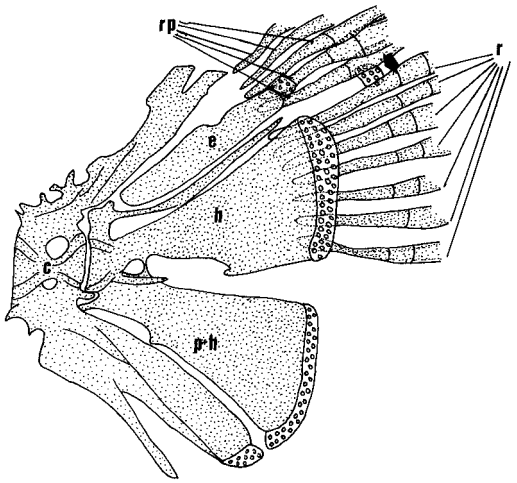

Fig. 5. Caudal skeleton of *Aspidoras depinnai*, new species, paratype, MZUSP 56216. c = vertebral centrum; e = epural; h = hypurals 3+4+5; p+h = parhypural + hypurals 1+2; r = principal rays; rp = procurrent rays; arrow = cartilage between principal and procurrent rays. Lower rays and odontodes not depicted. Scale bar = 1 mm.

All fins with minute odontodes scattered all over their rays. Dorsal, pectoral, and adipose fin spines with minute scattered odontodes.

Color in alcohol.—Ground color of head yellowish. Series of small dark brown blotches scattered over snout from mouth corner to nostrils. Irregular oblique brown stripe anteroventral to eye, somewhat faintly pigmented in small specimens. Two small irregular dark brown blotches posterior and ventral to this stripe. Top of head with series of large brown blotches surrounding anterior fontanel, confluent in some individuals. Largest blotch situated posterior to fontanel and covering frontal posterior tip, sphenotics and supraoccipital and nearly confluent with dark brown blotch on first dorsal plate. Scattered series of brown chromatophores just ventral and posterior to eye, more concentrated posteriorly, united as small dark blotches in larger specimens. Dorsal maxillary barbel light brown, with minute scattered dark brown dots. Ventral maxillary and mental barbels white. Preopercular region with uniform brown coloration. Opercle with dark brown elongate blotch along anterior margin, continuous with small blotch on interopercle. Posterior region of opercle with two large brown blotches, both surrounded by series of minute dots. Some specimens with these blotches confluent and joined to opercle anterior blotch on its dorsal portion. Ventral side of head white.

Ground color of trunk yellowish. Large dark brown spot on dorsal limit of cleithrum. Dorsal portion of dorsal body plates light brown. Large dark brown blotch over lateral line region on body plates. Three large dark brown blotches on junction of body plates, anteriormost one ventral to first six dorsal fin elements, posteriormost below adipose fin. Middle blotch slightly closer to latter one. Each dorsal body plate with scattered dark brown chromatophores. First four dorsal plates along dorsal fin base with dark small spot at middle portion; last two plates with elongate blotches on dorsal portion. Irregular dark brown blotch just over preadipose platelets, surrounded by series of chromatophores, sometimes confluent with middle and posterior blotches at plate junctions. Posterior to adipose fin, irregular arclike brown blotch extending to caudal peduncle. Each of first two ventral body plates with small brown spot on dorsal tip. Remaining ventral plates with scattered chromatophores, sometimes confluent with blotches at plate junctions. Some specimens with small dark brown blotches anterior and above anal fin. Ventral region of body yellowish.

Large dark brown blotch on base of first four dorsal fin branched rays, extending over border of dorsal body plates. Another brown blotch, located at base of last two dorsal fin rays. Conspicuous dark brown horizontal bar on middle of dorsal fin, more concentrated over rays than fin membranes in holotype. Ground color of all dorsal fin elements light brown; interradial membranes hyaline. Second to fourth anal fin branched rays with scattered chromatophores at middle portion; remainder of fin hyaline. Adipose fin spine light brown. Adipose fin membrane with dark brown spot on apex. Pectoral spine and first four pectoral fin branched rays with minute dark brown blotches. All pectoral fin elements yellowish light brown; interradial membranes hyaline. Pelvic fins hyaline. Caudal fin with three series of small dark brown blotches restricted to rays, forming poorly defined vertical stripe pattern. Caudal fin membranes hyaline.

Distribution.—Known only from the type-locality, rio Ipojuca basin, an isolated northeastern coastal drainage, Ceará State, Brazil (Fig. 6).

Etymology.—Named after Mário de Pinna, who first discovered the new species, also for his numerous contributions in ichthyology, primarily in the studies of catfishes.

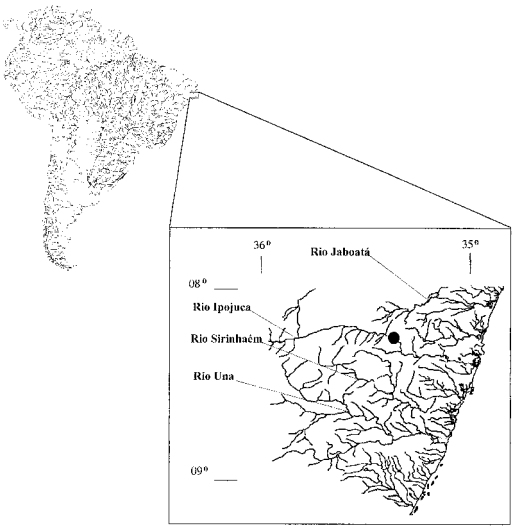

Fig. 6. Type-locality of *Aspidoras depinnai*, new species (circle). Inset showing detail of the region.

Discussion

Phylogenetic relationships between *A. depinnai* and other *Aspidoras* species are difficult to hypothesize at present, because a detailed phylogenetic study of the genus has not been conducted. However, Britto (1997), in a phylogeny of the Corydoradinae, indicated an assemblage composed of the species *A. poecilus, A.* aff. *poecilus, A. fuscoguttatus, A. rochai, A. albater*, and *A. virgulatus*, defined by the nasal sensory canal opening in three pores (vs only in two in other species of *Aspidoras*). Within this assemblage, *A. rochai, A. albater*, and *A. virgulatus* constitute a less inclusive clade defined by the slender shape of the palatine. *Aspidoras depinnai* also has a slender palatine, and the nasal bone has three pores. These features probably indicate a close relationship between the new species and *A. rochai, A. albater*, and *A. virgulatus*. Despite the presence of these characters, statements concerning the relationships among *Aspidoras* species remain somewhat speculative at present.

One character that distinguishes *A. depinnai* from all other species of *Aspidoras* is the bifid serrations restricted to the distal tip of the ossified portion of the pectoral spine posterior border. A similar condition is seen in *A. belenos*, although this species shows bifid serrations along the entire spine posterior border (Britto, 1998:fig. 6b). In addition, bifid serrations on the pectoral spines is a rare condition among Siluriformes, being elsewhere noted only in one species of *Rhamdia* (Weber and Wilkens, 1998) and some erethistid sisoroids (M. de Pinna, pers. comm.).

Another diagnostic feature of *A. depinnai* is the irregular arclike brown blotch on caudal peduncle (Fig. 1). Some *Aspidoras* species (e.g., *A. albater, A. menezesi*; Nijssen and Isbrücker, 1976: figs. 1–14) show blotches on postadipose trunk region; however, these differ in shape from that of *A. depinnai*.

One of the most conspicuous features of *A. depinnai* is the presence on the head of an irregular row of minute pores (Fig. 3). These pores are morphologically similar to those ones of other catfishes, including *Diplomystes* and some primitive loricarioids as *Nematogenys* and some trichomycterids, although in these families there are neuromasts associated with these pores (Arratia and Huaquin, 1995). None of the 13 *Aspidoras* species examined in the present study shows the minute pores observed in *A. depinnai*, which could be a putative autapomorphy for the new species. However, it is necessary to examine the remaining species to test this hypothesis. In addition, more scrutinious studies are necessary to discover whether these minute pores have neuromasts associated or another kind of structure.

Aspidoras depinnai is also distinguished from the examined species by the presence of a small cartilage between the upper principal and procurrent caudal fin rays (Fig. 5). The nature of this cartilage is somewhat obscure. In one cleared-and-stained specimen, the cartilage is joined with a notochord reminiscent, which suggests that this cartilage is the opisthural cartilage (Monod, 1968; McDowall, 1999). However, in the other two cleared-and-stained specimens, the cartilage is an isolated structure between the procurrent and principal caudal fin rays. Although this cartilage was not seen in the other examined *Aspidoras* species, more specimens of other corydoradine catfishes are needed to elucidate its nature and distribution among *Aspidoras* species and also to determine whether it is helpful to *Aspidoras* phylogeny.

Aspidoras depinnai is the first corydoradine catfish from this particular region of northeastern Brazil, a consequence probably of limited collecting effort rather than scarcity of these catfishes in that region. Also, the description of new taxa are important for phylogenetic reconstruction (de Pinna, 1992). The discovery of the present new taxon serve as a stimulus for new collecting efforts in its area of distribution and, as a consequence, may promote new studies regarding phylogeny and conservation.

Comparative material examined.—*Aspidoras albater* MCP 15974, 5 ex., 1 cs; MNRJ 12571, 26 ex.; MNRJ 12581, 45 ex., 3 cs; *A. belenos* UFRJ 3861, paratypes, 3 ex., 1 cs; *A. brunneus* ZMA 109.380, paratypes, 4 ex., 1 cs; *A. carvalhoi* MNRJ 5230, holotype; *A. fuscoguttatus* MCP 14253, 7 ex.; MCP 19401, 3 ex. cs; MNRJ 12649, 11 ex, 2 cs; MZUSP 35833, 2 ex.; *A. lakoi* MNRJ 5293, 4 ex., 2 cs; *A. maculosus* MZUSP 49245, 7 ex., 1 cs; *A. menezesi* MZUSP 49952, 2 ex.; *A.* aff. *menezesi* MZUSP 24634, 54 ex., 1 cs; *A. microgalaeus*, MZUSP uncataloged, 2 ex. cs; *A.* cf. *pauciradiatus* MZUSP 14634, 2 ex.; MZUSP 30841, 4 ex., 2 cs; MZUSP 31282, 2 ex.; *A. poecilus* UFRJ 1473, 10 ex., 1 cs; UFRJ 1693, 16 ex.; UFRJ 1818, 11 ex.; UFRJ 1823, 15 ex., 2 cs; UFRJ 1925, 4 ex.; *A.* aff. *poecilus* MNRJ 997, 16 ex.; MNRJ 5233, 9 ex.; MNRJ 11716, 69 ex.; MNRJ 12779, 12 ex., 3 cs; MNRJ 13045, 37 ex.; UFRJ 0201, 12 ex., 1 cs; UFRJ 2189, 7 ex.; *A. rochai* MCP 19402, 4 ex. cs; MZUSP 2195, lectotype; MZUSP 5300, paralectotype; *A.* aff. *rochai* MZUSP 53430, 16 ex., 1 cs; *A. spilotus* MNRJ 8688, paratypes, 142 ex., 2 cs; *A. virgulatus* MNRJ 4736, 14 ex., 3 ex. cs; MNRJ 5371, holotype; MNRJ 5143, paratypes, 5 ex.; MNRJ 5366, paratypes, 2 ex.; MNRJ 5370, paratype; MNRJ 5409, paratypes, 2 ex.; MNRJ 10547, paratypes, 3 ex.; MNRJ 12489, 1 ex.; MZUSP 39127, 1 ex.; MZUSP 39124, 8 ex.; MZUSP 39125, 1 ex.; MZUSP 39126, 3 ex.; UFRJ 1775, 17 ex., 3 cs; *Aspidoras* n. sp. MZUSP 41455, 10 ex., 5 cs.

Note.—Specimens recognized as *Aspidoras* cf. *pauciradiatus* according to Weitzman and Balph (1979). Recognition of *Aspidoras* aff. *poecilus* follows Nijssen and Isbrücker (1976).

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