

Description of a new species of *Apistogramma* (Teleostei: Cichlidae) from the upper Amazonas basin

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by

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Introduction

The South American cichlid genus *Apistogramma* Regan, comprises a large number of small species, usually not exceeding 50 mm in body length. Thirty-eight species are currently recognized as valid (Kullander 1979, 1980 a, b), but many remain to be described. Among the fishes collected by Dr. Karl Heinz Lüling during his expedition to Peru in 1978 (see Lüling 1981,



Fig. 1. Holotype of *Apistogramma eunotus*, an adult male, 49.9 mm standard length, from near Pucallpa, Ucayali river system.

preceding paper), are three specimens of an undescribed form. That material forms the basis for the present paper. It enabled me to identify many more, less well-preserved specimens in material studied earlier, and these are also included.

Methods for counts and measurements, etc., are as described in Kullander (1980 a, c). Abbreviations employed include BMNH (British Museum [Natural History], London), CP (caudal peduncle), MCZ (Museum of Comparative Zoology, Cambridge, Massachusetts), MHNG (Muséum d'Histoire naturelle de Genève), NRM (Swedish Museum of Natural History, Stockholm), SL (standard length), and ZFMK (Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn).

For the opportunity to study material in their care, I am indebted to Drs. Karl Heinz Lüling (ZFMK), Volker Mahnert (MHNG), William L. Fink and Mr. Karsten E. Hartel (MCZ), and Mr. Gordon Howes (BMNH). Mrs. Anita Hogeborn made one of the photographs (Fig. 2).

Apistogramma eunotus n. sp.

(Fig. 1)

Bibliography

- Apistogramma amoenus*; (nec Cope, 1872) Regan 1913, p. 283 (description; relationships; based on BMNH 1913.7.30:56–57).
- (pt) Fowler 1940, p. 283 (compared with *A. ambloplitoides* Fowler; data from Regan (1913) only).
 - (pt) Fowler 1944, p. 269 (bibliography; references to Regan (1913) and Fowler (1940) only).
- Apistogramma taeniatum*; (nec Günther, 1862) (?) Meinken 1961, p. 138 (description; Umgegend von Letitia [probably Leticia, Colombia]; conditional proposal of subspecies *longirostris*, name not available), fig. p. 138 (sketch, male and female, habitus, lateral aspect).
- (?; pt) Meinken 1971, pp. 37, 38 (compared with *A. geisleri* Meinken; data from Meinken (1961) only (Ostperu)).
 - (?) Kullander 1979, p. 944 (compared with *A. nijsseni* Kullander; data from Meinken (1961)).
 - (?; "*longirostris*") Kullander 1980 a, p. 18 (listed), p. 25 (subspecies name not available).
- Apistogramma amoenum*; (nec Cope, 1872) Kullander 1979, p. 944 (compared with *A. nijsseni* Kullander; based on BMNH 1913.7.30:56–57).
- Apistogramma* sp. Kullander 1980 a, pp. 10, 16, 64 (redetermination; compared with *A. moae* Kullander; based on BMNH 1913.7.30:56–57).
- Apistogramma taeniata*; (nec Günther, 1862) (?) Kullander, 1980 a, p. 75 (reference to Meinken (1961)).
- [*Apistogramma* sp.] Kullander 1980 a, p. 10 (R. Yavari; compared with *A. moae*; based on NRM THO/1971365:3507, THO/1976312:0914–0923, THO/1976311:1164–1168).

Diagnosis

Head length 30.7–35.8%, body depth 31.7–43.5% of SL. CP length 60.9–93.5% of CP depth. D. XIV. 7, XV. 6–7. A. III. 6–7. Squ. long 21–23. Gill-rakers 0–3. Preoperculum entire. Dorsal fin without produced lappets. Caudal fin rounded. No lateral spot. Dorsal fin dark anteriorly. Caudal fin immaculate, rarely vaguely spotted, except for caudal base spot. No chest blotch in females. Abdominal stripes present or absent, not strong. Bar 6 split vertically in specimens over 24 mm SL. (24 specimens of both sexes, 14.2–49.9 mm SL.) A species of the *regani* group, distinguished chiefly by the absence of conspicuous abdominal stripes, immaculate or almost immaculate caudal fin, elevated back of large males, and vertical division of Bar 6 in adults.

Etymology

The name *eunotus* is from the Greek *eu* (well) and *notos* (back), and is suggested by the very highbacked appearance of the holotype.

Material

Specimens measured (Table 1) are indicated by an asterisk.

Holotype: ZFMK 10772. ♂, 49.9 mm SL*. Perú, Depto. Loreto, R. Ucayali system, near Pucallpa, on road to Aguaytia, „Dunkelwasser bei ‚Campo Verde“". 3 September 1978. Leg. K. H. Lühling (Sta. PU2).

Paratypes: BMNH 1913.7.30:56–57. Two, sex indet., 35.8, 39.8* mm. R. Ucayali. Rosenberg. [Perú, R. Ucayali. No date. Leg. Mounsey, purch. W. F. H. Rosenberg.]

MCZ 15807. One ♂, 40.6* mm; one, probably ♀, 34.0* mm. Tabatinga. Bourget. [Brasil, Est. Amazonas, R. Solimões system, Tabatinga. September–October 1865. Leg. Thayer Expedition: D. Bourget.]

MHNG 1583.50. One ♀, 21.0* mm. Perú, Depto. Loreto, R. Ucayali system, Jenaro Herrera. 18 October 1977. Leg. P. de Rham.

NRM THO/1971365:3507. One ♀, 20.4* mm. Perú, Depto. Loreto, R. Yavarí, Lago Matamata. 10 September 1971. Leg. T. Hongslo (Sta. VIT 6A).

NRM THO/1976312:0914–0923. Three ♂, 21.0, 21.7, 23.5 mm; seven ♀, c.18.3, 18.9*, c.20.0, c.20.5, 20.5*, c.20.9, c.23.5 mm. Perú, Depto. Loreto, R. Yavarí, San Sebastian, „Caño do Comprido“. 27 July 1976. Leg. T. Hongslo.

NRM THO/1976311:1164–1168. One ♂, 31.7* mm; four ♀, 19.8*, c.20.1, 24.4*, 27.1* mm. Same locality as preceding. 26 July 1976. Leg. T. Hongslo.

ZFMK 10773–10774. One ♀, 35.7* mm; one juv., 14.2* mm. Same data as holotype.

Description

Holotype

Body rather robust, back elevated. Broadest at posterior head and anterior middle flank region; deepest immediately anterior to insertion of ventral fins, gradually tapering backwards. Dorsal contour continuous with predorsal contour, very slightly ascending to below about sixth dorsal spine, from where gradually descending; discontinuous with straight, feebly sloping dorsal caudal peduncle contour. Chest sloping, becoming horizontal immediately anterior to ventral fin bases; abdominal contour about straight horizontal; anal base contour straight, sloping, slightly more oblique terminally; caudal peduncle ventral contour about straight, less oblique than anal base contour. Head deep. Predorsal contour with lesser curvature on snout to about above rostral edge of orbit, then straight ascending to almost dorsal fin origin, before which rising less steeply. Initial rise of predorsal contour about 44° . Preventral head contour slightly convex, sloping, angle about 32° . Snout rather broad, rounded; dorsal contour steeper, convex, ventral straight. Ascending processes of premaxilla reaching behind anterior edge of orbit. Angle of maxilla about 48° ; tip exposed, reaching to just behind rostral edge of orbit. Lower jaw distinctly longer than upper but equal anteriorly. Orbit in dorsal and rostral halves of head; tangential. Preoperculum entire.

The largest scales anteriorly on the flanks, gradually decreasing in size towards side margins, squ. long. 22. Predorsal scales cycloid anterior to extrascapular pores and along dorsal midline; squ. prd. 11, squ. prv. 13. Cheek with four series of scales; in uppermost series three, in the next series the posteriormost scale ctenoid, the rest cycloid. Opercular scales 13, ctenoid; subopercular scales four, cycloid, in one series, leaving broad naked bone margin; interopercular scales three, in one series, cycloid, leaving broad naked bone margin. Lateral lines with $12 + p + l + 2p / 3p + 4$ (right side), and $12 + 3p + pb / 2p + 6$ (left side) scales, continued by one canal on caudal fin on right side. Dorsal and anal fins naked; more than one-fourth of caudal fin scaled, outer area including cycloid scales, squ. caud. 5.

Dorsal spines increasing in length to the fifth or sixth, from which subequal, the last longest. Lappets all long, pointed, especially the second to fifth long (second, as long as spine; third, one-third of spine length). The fin is fixed in a rested position, and can be raised only at the risk of rupturing the interradi al membranes. Although the lappets are long, they do not appear to be produced as in e. g. *A. cacatuoides* Hoedeman. Soft part pointed, third ray longest, reaching to about middle of caudal fin; soft anal fin similar but slightly injured. D. XV.7. A.III.7. Pectoral fin rounded, reaching to above second anal spine. P.12. Ventral fin pointed, first ray longest, slightly produced, reaching to about first anal rays, inner rays gradually shorter. Caudal fin

damaged, rounded shape suggested by almost intact upper lobe; 16 principal rays.

Jaw teeth narrow, conical, slightly recurved apically; size difference between inner and outer teeth not conspicuous. On one side in upper/lower jaw 26/30 teeth in outer series; about two inner series, irregular anteriorly. In lower jaw one inner series extending posteriorwards for about half the length of the outer series, in upper jaw one inner series nearly as long as the outer series. Vertebrae 12 + 12; one supraneural spine. Ceratobranchial gill-rakers absent from outer surface of first gill-arch; 12 rakers on edge of lower pharyngeal tooth-plate.

Coloration: Ground colour yellowish white. Markings on body grey, not contrasting; countershaded, chest region of pure ground colour. Forehead, upper lip, snout dorsally, and preorbital grey. Preorbital stripe slightly darker. Cheek yellowish. Lower lip, lower jaw, pre-, inter-, and lower part of suboperculum whitish to dirty whitish. Suboperculum dorsally, and most of operculum, except for narrow pale margin of postorbital stripe, grey. Suborbital stripe dark brown, from posterior half of ventral margin of orbit curved obliquely ventrad to edge of preoperculum, continued as wedge over junction of sub- and interopercula; about width of pupil. Nape dark, brownish; supraorbital stripe of about pupil width, dark brown close to orbit, vanishes into general dark colour of nape. Postorbital stripe moderately wide, narrower than pupil, to lateral band. Flank pattern diffuse. Lateral band indistinct, anteriorly narrow (one scale wide or slightly wider), widening slightly posteriorwards from Bar 3, ending in Bar 7. Vertical bars: 1, diffuse, brownish, darkening near dorsal base, restricted to back; 2, similar to preceding; 3, diffuse above lateral band, more distinct below it, to line between lower edge of pectoral axilla and vent; 4 and 5, similar to Bar 3; 6, convex anteriorwards, split vertically into two equal narrow bars; 7, diffuse, widened anteriorwards on middle. Bars broader than interspaces, and not forming spots where crossing lateral band. Pectoral spot on upper edge of pectoral axilla. Scales above lateral band narrowly dark-edged. No abdominal or midventral stripes.

Fins dusky. Two anteriormost dorsal fin membranes black, the remainder with blackish spots at bases; three terminal spot-stripes close to base on soft dorsal fin. Caudal fin immaculate; no caudal spot, but small dark spots on the proximal portion of the fin representing dissolved caudal spot. Anal fin with conspicuous terminal spot-stripes, in about four series, and a spot on the base of each membrane. Ventral fin marginally smoky.

Paratypes

The female topoparatype is more elongate compared with the male (depth 38.9% of SL; 43.5% in the holotype). The pectoral fin reaches to above the

anal fin origin, the ventral fin, with a short extension, to the second anal spine. The anterior dorsal fin lappets are somewhat long compared to spine lengths; posteriorly the lappets are moderately long. The caudal fin is damaged, but the edge was probably rounded. The dentition is similar to that of the holotype; there are about 25 teeth in the outer series on one side of the upper jaw; the lower jaw teeth cannot be counted. The vertebral count is as in the holotype. The lower pharyngeal tooth-plate is shown in Fig. 3.

The coloration is similar to that of the holotype, but, notably, including a distinct caudal spot. The vertical bars are more distinct; Bars 5 and 6 ventrally split vertically. The abdomen is yellow below a line between the pectoral fin base and the anal fin origin. A narrow black midventral stripe runs from just before vent, anteriorwards almost to ventral fin bases. There is but a single terminal spot-stripe in the dorsal fin. The first soft ray and membrane of the ventral fin are dark grey. The caudal spot is rectangular and extended vertically.

The juvenile topoparatype is not well preserved. The ground colour is yellowish white, the markings greyish brown. The supraorbital stripe reaches to the nape and there are dark spots at the articulation of the lower jaw and immediately behind the lower lip. The vertical bars are faint; Bars 2–3 reach ventrally to the lateral band, Bars 4–7 to the ventral edge of the sides; Bars 3–5 are slightly intensified where crossing the lateral band. Four abdominal stripes of dots: (1) from above the pectoral axilla caudad into the lateral



Fig. 2. *Apistogramma eunotus*. A young male from San Sebastian on the lower Rio Yavari, 31.7 mm standard length (NRM THO/1976311: 1164–1168).

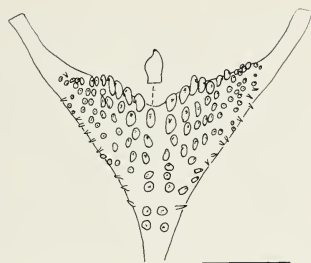


Fig. 3. Lower pharyngeal tooth-plate of *Apistogramma eunotus*. Occlusal view. The scale represents 1 mm. From a paratype, ZFMK 10773, 35.7 mm.

band, (2) from under the middle of the pectoral axilla to Bar 4, (3) from the lower edge of the pectoral axilla to Bar 5, (4) from below the pectoral axilla indistinctly along abdominal side. The caudal spot is only indicated; only the proximal part of the fin remains. The outer edge of the ventral fin is darkened; fins otherwise pigmented, but without distinct pattern, pectoral fin clear.

I include in the type-series also another 21 specimens, most of which are in a rather poor state of preservation. In the smaller specimens (up to 24.4 mm), Bar 6 is not split ventrally as in the larger specimens. Abdominal stripes are more or less apparent or obsolete. Characteristic of the NRM material collected in 1976 is that the lateral band tends to a spot series, the spots formed where the lateral band is crossed by the vertical bars; the spots in Bars 3 and 4 are most intense, but that in Bar 2 is also strong; no prominent lateral spot is formed. Otherwise a rather even, continuous lateral band is formed. The caudal spot is as in the female topoparatype or more concentrated. Traces of caudal fin spot-stripes can be seen in the MHNG paratype. None of the paratypes has the pronounced high back of the holotype, but the larger specimens approach the holotype in shape. Well-preserved caudal fins are all rounded.

Quantitative data

Measurements from 14 specimens, including the holotype, are given in Table 1. Many of the paratypes are not in good condition, and were therefore not measured. Meristic data for the holotype are given in the preceding description. Below are summarized the counts from the holotype and all paratypes (altogether 24 specimens).

Fin counts: D. XIV.7 (1), XV.6 (1), XV.6.i (1), XV.7 (21). A. III.6 (16), III.6.i (4), III.7 (4). P. 11 (3), 12 (21). C. 16 (22); two aberrant specimens with 8 + 10 and 8 + 7 caudal rays respectively.

Scales: Squ. long. 21 (1), 22 (20), 23 (1), uncertain (2). Upper lateral line canals 7–14 ($\bar{x} = 11.1 \pm 0.41$, $n = 22$), total 13–16 ($\bar{x} = 14.4 \pm 0.19$, $n = 23$). Lower lateral line canals 0–6 ($\bar{x} = 3.5 \pm 0.30$, $n = 20$), total 5–8 ($\bar{x} = 7.1 \pm 0.18$, $n = 21$), occasionally one pore (4), one canal (1) or two canals (1) on caudal fin. Squ. caud. 3–6 ($\bar{x} = 4.1 \pm 0.15$, $n = 19$). Predorsal scales 9–12 ($\bar{x} = 9.7 \pm 0.16$, $n = 24$). Preventral scales 9–13 ($\bar{x} = 10.4 \pm 0.21$, $n = 19$). Cheek scale series 1 (1), 3 (9), 4 (14). Opercular scales 7–13 ($\bar{x} = 10.0 \pm 0.47$, $n = 11$), subopercular scales 3–7 ($\bar{x} = 5.0 \pm 0.32$, $n = 19$), in one (13) or two (6) series; interopercular scales 1–4 ($\bar{x} = 2.7 \pm 0.15$, $n = 23$).

Gill-rakers 0 (2), 1 (4), 2 (17) or 3 (1); 9 (1), 10 (1), 11 (9), 12 (10), uncertain (3) on lower pharyngeal tooth-plate.

Table 1. Measurements from 14 specimens of *Apistogramma eunotus* (including holotype, and 13 paratypes, BMNH 1913.7.30:56–57 (one), MCZ 15807, MHNG 1583.50, NRM THO/1971365:3507, NRM THO/1976312:0914–0923 (two), NRM THO/1976311:1164–1168 (four), and ZFMK 10773–10774; SL range 14.2–49.9 mm) in per cent of SL, except CP/CP, which is CP length as per cent of CP depth, and holotype measurements, in the right hand column (HT), which are in mm.

| | n | Range | $\bar{x} \pm s\bar{x}$ | HT |
|----------------------|----|-----------|------------------------|------|
| Head length | 14 | 30.7–35.8 | 33.1 ± 0.39 | 16.1 |
| Head depth | 13 | 24.6–31.0 | 28.0 ± 0.52 | 15.3 |
| Body depth | 14 | 31.7–43.5 | 36.6 ± 0.83 | 21.7 |
| Predorsal length | 13 | 34.9–39.4 | 36.4 ± 0.41 | 17.4 |
| Preventral length | 12 | 37.4–42.0 | 39.9 ± 0.38 | 20.1 |
| Orbit diameter | 14 | 11.6–14.7 | 13.0 ± 0.26 | 5.8 |
| Snout length | 13 | 4.9– 6.6 | 5.8 ± 0.15 | 3.3 |
| Cheek depth | 14 | 5.2– 8.8 | 6.6 ± 0.28 | 4.4 |
| Head width | 14 | 15.4–17.6 | 16.3 ± 0.15 | 7.7 |
| Interorbital width | 14 | 6.3– 8.9 | 7.6 ± 0.18 | 4.2 |
| Preorbital depth | 14 | 2.0– 3.9 | 2.7 ± 0.16 | 1.8 |
| Upper jaw length | 12 | 8.3–11.0 | 9.3 ± 0.23 | 5.5 |
| Lower jaw length | 13 | 11.3–14.7 | 13.8 ± 0.27 | 7.3 |
| Postorbital length | 14 | 13.4–15.7 | 14.3 ± 0.19 | 6.7 |
| CP depth | 14 | 13.8–17.8 | 16.1 ± 0.30 | 8.9 |
| CP length | 14 | 10.6–14.6 | 12.4 ± 0.32 | 5.8 |
| Dorsal base length | 14 | 54.2–63.5 | 58.4 ± 0.82 | 31.7 |
| Anal base length | 14 | 17.6–20.5 | 19.2 ± 0.25 | 10.0 |
| Ventral spine length | 14 | 13.6–18.4 | 16.3 ± 0.41 | 6.8 |
| Ventral fin length | 14 | 24.2–38.7 | 27.8 ± 1.67 | 19.3 |
| Last D spine length | 14 | 14.1–21.6 | 18.6 ± 0.55 | 10.8 |
| Last A spine length | 14 | 16.2–21.2 | 19.5 ± 0.42 | 9.1 |
| CP/CP | 14 | 60.9–93.5 | 77.2 ± 2.62 | — |

Additional material

Several unregistered lots in the collection of the Museu de Zoologia da Universidade de São Paulo were identified, but only locality data were taken. Most are in poor condition. They are all from the Ucayali system in Peru: Pucallpa, 16 December 1974, leg. H. Ortega (two specimens); same data, 17 February 1976 (one); same locality, 15 March 1979, leg C. Villanueva (many specimens); Lobococha – Masisea, Pucallpa, 27 February 1976, leg. H. Ortega (three); Jenaro Herrera, 22 September 1978, leg. H. Ortega (two). It has not been possible to locate the material described by Meinken (1961), although it is suspected that his *A. taeniatum* from Leticia, really belong to *A. eunotus*.

Distribution

Middle and lower courses of the Rio Ucayali, lower course of the Rio Yavarí, and uppermost Rio Solimões (Tabatinga).

Discussion

As I have dealt with the Peruvian species of *Apistogramma* in two recent papers (Kullander 1979, 1980a), and because more species remain to be described from Peru, I restrict this discussion to the diagnostic characters of *A. eunotus*, and the status of the name *A. taeniatum longirostris* Meinken (1961).

Apistogramma eunotus belongs to the *regani* species group. It was established to contain those rather deep-bodied species that lack a lateral spot (a spot in Bar 3), and in which the vertical bars are usually more or less distinct and not just traces or absent in the adults. The sex dimorphism is slight, i. e. the adults are not readily sexed on external characters only, and adult males have neither produced dorsal fin lappets nor produced caudal fin rays. No species of this group has been described previously from the Peruvian Amazonas drainage system (but cf. below as regards *A. taeniatum longirostris*), although most of the species are actually Amazonian, and *A. eunotus* has been reported from Peru as *A. amoenus* by Regan (1913).

Apistogramma moae Kullander, described on two large males, 49.9 and 46.5 mm, from the Rio Moá (Rio Juruá system, Brazil), is the most similar species, and the only species with which *A. eunotus* might possibly be confused. It has a more washed-out pattern of dark markings, and there is no indication of a division of Bar 6. The snout is longer (7.7–8.2% of SL; 4.9–6.6%,

positively allometric in *A. eunotus*), and the snout profile appears more rounded. Otherwise, there appear to be no reliable differences in proportions and counts, but it is possible that a larger series of *A. moae* will show that it is a more slender species. In my earlier comparison of the two species (Kullander 1980 a, based on the BMNH *A. eunotus*), I suggested that there would be a difference in orbital diameter and head width, and in the cheek depth : interorbital width ratio. The holotypes are identical in standard length, and also in head length and orbital diameter, head width and preorbital depth, and there is an allometric increase in cheek depth in *A. eunotus* (range 73.3–104.8% of interorbital width) showing that these differences were an illusion.

From the other *regani* group species, *A. eunotus* may be distinguished as follows (data from Kullander 1980 a, b, and papers in prep. on *A. commbrae* and *A. ortmanni*) : *Apistogramma resticulosa* Kullander (Rio Madeira system) has short dark vertical stripes on the abdominal sides, and striped caudal fin; *A. ortmanni* (Eigenmann) (Guyana), *A. regani* Kullander (near Manaus), and *A. commbrae* (Regan) (Rio Paraguay system), have distinct abdominal stripes and striped caudal fin; *A. geisleri* Meinken (Óbidos) and *A. caetei* Kullander (Rios Apeú and Caeté) have striped caudal fin; *A. pleurotaenia* (Regan) („La Plata“) has four anal spines and striped caudal fin. *Apistogramma piauensis* Kullander (Rio Parnaíba) is known from a female, 22.7 mm, and two juveniles only. The female has a contrasting continuous lateral band, the vertical bars appear only as traces, and there are no terminal spot-stripes in the dorsal and anal fins. *Apistogramma taeniata* (Günther) (Rio Cupari) is available in a series of small specimens from near the type-locality (NRM unreg.). Upon direct comparison with the similar-sized Yavari material of *A. eunotus*, it appears that it has a continuous rather than spotted lateral band, and that the abdominal side pattern is more of the kind seen in *A. resticulosa*, rather than abdominal stripes. In addition, the split Bar 6 of *A. eunotus* appears to be a characteristic of this species alone, although it is not diagnostic for small specimens.

Apistogramma amoena (Cope), described from a now lost specimen, 63 mm total length, from the Rio Ampí-yacú (Marañón system), appears to have been an elongate rather than a deep-bodied form. It seems to differ in having the soft dorsal and anal fins prolonged, reaching beyond the caudal fin (to at most middle of caudal fin in *A. eunotus*), and in a much deeper preorbital bone (half orbit; about one-third of orbital diameter in large *A. eunotus*), but Cope's (1872) description is somewhat unsatisfactory. His colour description, however, suggests an appearance very different from that of *A. eunotus*: "Color brown; a black band from orbit to basis caudal. A black spot at base, and one at tip of caudal. Basis of dorsal and anal brown, rest yellow. A black band from orbit to angle of interoperculum. Cheeks and operculum with blue spots separated by yellow lines."

I hesitate to identify Meinken's (1961) *A. taeniatum* from Letitia [Leticia] as *A. eunotus*, although that form is at least very similar to *A. eunotus*. In Meinken's description it seems to differ chiefly in having a spotted caudal fin. The fifth and sixth dorsal spines are said to be longer than the rest in the male; but it is doubtful whether this observation refers to the spines or to the lappets, and it should be checked. Unfortunately, it has not been possible to find out where the two specimens are deposited now.

Should Meinken's specimens be found to belong to *A. eunotus*, his use of the name "*Apistogramma taeniatum longirostris*" needs to be considered. After noting some differences from *A. taeniatum* as previously described, Meinken (1961) concluded: „Würden alle aus Letitia kommenden Tiere mit der verhältnismäßig großen Körperhöhe und den verlängerten 4. und 5. [sic; cf. above] Dorsalstacheln diese lange Schnauze aufweisen, die damit geeignet wäre, den immer noch gültigen Bestimmungsschlüssel Tate Regans (Regan: Ann. Mag. Nat. Hist. 7. Serie Vol. 17, Jan. 1906, S. 49) der bis 1906 bekannten *Apistogramma*-Arten umzuwerfen, dann wäre die Aufstellung der Unterart *Apistogramma taeniatum longirostris* berechtigt."

From this it should be evident that there were differences between the type-material and the Letitia specimens that, if consistent in the Letitia population, would justify the erection of a subspecies. I interpret this as meaning that the material at hand did not give justification to the erection of a new taxon, but that more material was needed to verify the difference observed. Consequently, the name "*longirostris*" was not proposed, except in a conditional form. The name, published after 1960, is thus not available. Article 15 of the International Code of Zoological Nomenclature, states: "After 1960, a new name proposed conditionally, or one proposed explicitly as the name of a 'variety' or 'form' [Art. 45 e], is not available".

Summary

Apistogramma eunotus, n. sp., is described on the basis of 24 specimens, 14.2–49.9 mm standard length, from the Ucayali and Yavarí river systems in Peru, and the uppermost Rio Solimões at Tabatinga, Brazil. The species belongs to the *regani* species group, and may be distinguished by the vertically split Bar 6 in adults.

Zusammenfassung

Apistogramma eunotus n. sp. wird aus dem Rio Ucayali, dem unteren Rio Yavarí und dem oberen Rio Solimões bei Tabatinga beschrieben. Die Typen-Serie umfaßt 24 Exemplare von 14,2–49,9 mm Standardlänge. Die neue Art gehört in die *regani*-Gruppe und unterscheidet sich insbesondere durch die vertikal geteilte sechste senkrechte Seitenbinde.

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