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NOTES ON A COLLECTION OF FISHES FROM SOUTHEASTERN VENEZUELA

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The Venezuela Botanical Expedition, 1953, of Chicago Natural History Museum, led by Dr. Julian A. Steyermark, made a small collection of fishes from the Rio Abácapa on the west slope of Chimantá-tepui in extreme southeastern Venezuela. This collection, including only sixteen forms, is noteworthy because half of the species have not been reported from Venezuela before. Three species are new.

Seven of the forms, *Rhamdia quelen*, *Astyanax bimaculatus*, *Creatochanes affinis*, *Hoplerythrinus unitaeniatus*, *Gymnotus carapo*, *Eigenmannia virescens*, and *Crenicichla saxatilis*, are widely distributed in South America, occurring at least from the Guianas to the Paraguay basin. One species, *Anostomus anostomus*, is known from British Guiana and the western part of the Amazon. One additional form, *Bryconamericus deuterodonoides*, is restricted to the Orinoco basin. Another, *Moenkhausia miangi*, has been taken only from the head waters of the Rio Branco. Three others, *Hemicetopsis minutus*, *Ancistrus temmincki*, and *Leporinus arcus*, have previously been recorded from the Guianas only.

The Rio Abácapa, about 75 feet wide and up to 10 feet deep at the place of collection, flows into the Rio Apacará, which in turn empties into the Rio Caroni, the first major tributary of the Orinoco coming from the south. The collection was made at 1,300 feet except for *Hoplerythrinus unitaeniatus*, *Eigenmannia virescens*, and *Chasmocranus chimantanus*, which were caught at 2,200 feet. The collectors of all specimens were Dr. Steyermark and Mr. Charles Griffin. The figures are the work of Mr. Tom Dolan, Berwyn, Illinois.

Chasmocranus chimantanus sp. nov.

Holotype.—Chicago Natural History Museum no. 45704 from

Rio Abácapa on the west side of Chimantá-tepui. Collected on April 4, 1953, at 2,200 feet altitude. Figure 92.

Description of holotype.—Dorsal i,6; pectoral i,8; ventral i,5; anal iv,9; gill rakers 7 (total); total length 106 mm.; standard length 91 mm.

Body elongate, slightly depressed before dorsal, cylindrical, becoming compressed in posterior quarter; width of body at pectoral bases 7.7.

Head depressed, interorbital flat; mouth terminal; anterior nostrils tubulated, their distance from snout about half the distance

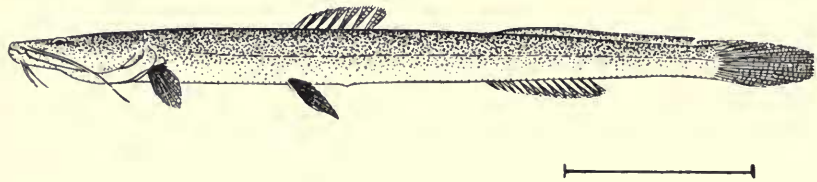

FIG. 92. *Chasmocranus chimantanus* sp. nov., holotype. Line represents 25 mm. at original size.

between them, which equals the distance to posterior nostrils; latter low, with valvular flaps, closer to orbits than to each other, distance between them equaling distance between anterior nostrils; snout 3.2 in head; no free orbital rim; eye covered with skin, elliptic in shape, long diameter 7.4 in head, subequal to interorbital, 2.3 in snout; lower jaw projecting slightly; lower lip plicate; both jaws with bands of small teeth; dentary group thicker medially than laterally; premaxillary group with posterior projection laterally, making the lateral border thicker than the medial; no teeth on palate; maxillary barbel extending short distance beyond pectoral base; two pairs of mental barbels, their bases in a straight line, distance between inner and outer barbel about half of the distance between the two inner ones; outer mental barbel reaching two-thirds of the distance to the pectoral, inner barbel about half as far.

Dorsal fin without spine, snout-dorsal distance 2.5, base of fin 11.1, height slightly less than base; adipose low and long, 3.9, distinct from caudal, dorsal base 2.2 in dorsal-adipose distance; pectoral without spine, inserted low on side, short, subequal to postorbital part of head and to dorsal base; ventral inserted under dorsal, slightly longer than pectoral, separated from anal origin by 1.3 times its own length; origin of anal opposite that of adipose, base

about 1.5 in adipose, height equal to that of dorsal; caudal truncate, median 10 rays longest and subequal, slightly shorter than head; fleshy anterior extensions of caudal on both edges of peduncle.

Color (in alcohol) dark purplish brown, becoming light midventrally; no markings; fins unmarked, dusky.

Paratypes.—Three specimens (CNHM 45705) with the same collection data as the holotype.

In the following enumeration, the data for the holotype are given first and those for the paratypes follow in order of their lengths.

Standard length (mm.) 91.0, 89.0, 84.0, 71.0; dorsal i,6 (all); pectoral i,8 (all); anal 13, 14, 13, 13; gill rakers (total) 7, 8, 7, 7; head 5.12, 4.84, 4.75, 4.87; depth 11.2, 11.1, 12.2, 11.1; width at pectoral base 7.65, 7.82, 7.78, 7.80; adipose 3.89, 4.42, 4.10, 3.78; dorsal base 11.1, 10.9, 12.9, 13.7; snout in head 3.23, 3.07, 3.15, 2.98; interorbital in snout 2.19, 2.22, 2.00, 1.96.

Remarks.—The pimelodid genus *Chasmocranus* Eigenmann was characterized by the long and low adipose fin separated from the caudal, the backward projection of the lateral border of the premaxillary tooth patch, the forked caudal, the absence of a free orbital rim, and the lack of pungent dorsal and pectoral spines (Eigenmann, 1912). Gosline (1941) concurred with Eigenmann in this definition and, in a key, distinguished *Chasmocranus* from the closely related *Acentronichthys* Eigenmann and Eigenmann and *Heptapterus* Bleeker on the basis of the number of anal rays, the last two said to have more than 17 and *Chasmocranus* "about 11." The gap in anal counts, however, is not as great as Gosline indicated. A specimen of *H. mustelinus* (CNHM 56898) has only 17 anal rays; *C. chimantanus* has as many as 14.

The new form agrees with other species of *Chasmocranus* in the diagnostic characters noted above except that it has a truncate caudal. As originally defined by Eigenmann and Eigenmann (1889), *Acentronichthys* is distinguished from *Heptapterus* only by its forked caudal, that of the latter being rounded. Gosline (1941) agreed with the separation on this basis. If the shape of the caudal in these pimelodids has this significance, *chimantanus* probably should not be placed in *Chasmocranus*. However, considering the over-all similarity of *chimantanus* to *Chasmocranus*, the shape of the caudal does not seem to define a generic gap. Likewise, in the case of *Acentronichthys* and *Heptapterus*, the difference in a single character (caudal shape) has been over-emphasized and their extensive similarity underemphasized. The taxonomic precept of genera reflecting similarities

and species reflecting differences has been ignored in this group of catfishes.

Chasmocranus chimantanus most closely resembles *C. surinamensis* Bleeker and *C. longior* Eigenmann, as shown by its flat head, relatively narrow interorbital, and elongate shape. It differs in anal count from *surinamensis* (18–19); the latter is too insufficiently known to permit additional comparison. *Chasmocranus longior* has a relatively wider body, longer head, longer dorsal fin base, and more gill rakers (8–11, mean 9.3). The other species of *Chasmocranus* differ from *chimantanus* in anal counts and body proportions. These differences are brought out in Table 1 and in the following key to the genus.

1. Anal with 18 or more rays ..... *surinamensis* Bleeker
   Anal with fewer than 17 rays 2
2. Caudal truncate; anal 13–14; dorsal base 11–13 in standard length. *chimantanus* sp. nov.
   Caudal forked; anal usually 12 or fewer; dorsal base less than 10.5 3
3. Dorsum with dark crossbands or spots 4
   Dorsum uniform brown or black 5
4. Upper caudal lobe distinctly longer than lower ..... *truncatorostris* Borodin
   Caudal lobes equal in length ..... *quadrizonatus* Pearson
5. Interorbital flat, more than 2.25 in snout; anal 12–13 ..... *longior* Eigenmann
   Interorbital rounded, 1.25 in snout; anal 10 ..... *brevior* Eigenmann

The holotype of *brevior* and the holotype and seven paratypes of *longior* were examined. No specimens of the other species were seen; characters for use in the key and in Table 1 were taken from the original descriptions.

Placed in *Heptapterus* by Bleeker (1864), *surinamensis* differs from all other species of that genus by its relatively short adipose fin (about 4 in the length instead of 2–3) and by the separation of adipose and caudal fins. In these respects *surinamensis* agrees with the species of *Chasmocranus*. The only character of this poorly known species that might prevent its allocation in *Chasmocranus* is its high anal count (18–19). The inclusion of *surinamensis* in *Chasmocranus* is tentative.

Rhamdia quelen Quoy and Gaimard

Pimelodus quelen Quoy and Gaimard, 1824, Voy. Uranie, Zool., pl. 49, figs. 3, 4—no locality given.

Dorsal i,6; pectoral I,8; anal iv–v,7; gill rakers 3+6–8; standard length 104–114.5 mm.; adipose 2.43–2.54; interorbital 2.83–3.16 in head.

Two specimens.

TABLE 1.—Comparison of Species of the Genus *Chasmocranus* Eigenmann

Characters	*chimantanus*	*longior*	*surinamensis*	*brevior*	*quadrizonatus*	*truncatorostris*
Ratio of standard length to:						
Head	4.8–5.1	3.9–4.8	5.2	3.9	4.3	4.8
Depth	11.1–12.2	9.0–11.2	13	8.5	5.4	6.8
Adipose	3.8–4.4	3.8–4.7	4	5.1	4.5	3.3
Dorsal base	10.9–13.7	8.8–10.5	13	9.8	7.5	7.3
Ratio of snout to interorbital	2.0–2.2	2.3–2.8	2	1.3	1.1	—
Anal rays	13–14	12–13	18–19	10	11	10

Hemicetopsis minutus Eigenmann

Hemicetopsis minutus Eigenmann, 1912, Mem. Carnegie Mus., **5**: 211, pl. 23, fig. 2—Amatuk, British Guiana.

Dorsal i,6; pectoral i,7; ventral i,5; anal 21–24; standard length 24.0–30.5 mm.; head 4.17–4.49; depth 5.70–6.10; snout-vent 1.89–1.97; snout-dorsal 2.90–3.18; anal base 3.17–3.48. All proportions in standard length.

The maxillary barbel ends at the gill opening. The outer mental barbel reaches the gill opening below the head and is only slightly shorter than the maxillary. The vomerine teeth are in a single row, interrupted medially.

Four specimens. New to the fauna of Venezuela.

In barbel length, dental arrangement, and body proportions these agree with the holotype of *minutus*, which was examined. The latter specimen, however, has dorsal and pectoral counts of i,5 and i,6, respectively. The present fishes may represent a new form.

Schultz (1944) placed *minutus* in the genus *Pseudocetopsis* Bleeker, which he distinguished from *Paracetopsis* Bleeker on the basis of the median interruption of the vomerine tooth patch in the latter. But the holotypes of both *minutus* and *macilentus* Eigenmann, which Schultz also allocated to *Pseudocetopsis*, have the vomerine tooth-rows interrupted in the mid-line. These species differ further from Schultz's diagnosis of *Pseudocetopsis* in that the ventral fins are not united. In *minutus* (including the four Chimantá fishes), the ventrals are immediately adjoining but not connected.

Ancistrus temmincki Valenciennes

Hypostomus temminckii Valenciennes *in* Cuvier and Valenciennes, 1840, Hist. Nat. Poissons, **15**: 514—Cayenne, French Guiana.

Dorsal I,7; pectoral I,6; ventral i,5; anal i,4; lateral plates 23–24; plates dorsal to adipose 5; standard length 74.5–83.5 mm.; head 2.65–2.79; depth 4.69–4.86; snout 1.66–1.86; interorbital 2.56–2.64; mandibular ramus in interorbital 3.16–3.42.

Body above and below with round light spots; tentacles of snout in straight line.

Two specimens. New to the fauna of Venezuela.

Leporinus arcus Eigenmann

Leporinus arcus Eigenmann, 1912, Mem. Carnegie Mus., **5**: 300, pl. 42, fig. 3—Tukeit, British Guiana.

Dorsal ii,10; pectoral i,15; ventral i,8; anal ii,8; lateral line scales 33; transverse scales lateral line to dorsal origin 4½, to ventral insertion 4; gill rakers 10+14; standard length 142 mm.; head 3.78; depth 3.12.

The coloration agrees exactly with Eigenmann's description.

One adult female with ripe ova. New to the fauna of Venezuela.

Leporinus steyermarki sp. nov.

Holotype.—Chicago Natural History Museum no. 45701 from Rio Abácapa on the west side of Chimantá-tepui. Collected at 1,300 feet altitude on March 27, 1953. Figure 93.

Description.—Dorsal ii,10; pectoral i,14; ventral i,8; anal ii,8; lateral line scales 32; transverse scales lateral line to dorsal origin 4, to ventral insertion 4; circumpeduncular scales 12; standard length 125 mm.

Dorsal profile slightly arched; ventral more markedly convex; depth 3.25; head conical, obtusely pointed, 3.83; nostrils separated by diameter of the posterior one; anterior nostril tubular, posterior slightly nearer orbit than corner of mouth; snout 2.39; eye in middle third of head, with adipose eyelid, 4.48; mouth terminal; lips weakly plicate; four teeth in each half of both jaws, teeth incisiform, not lobed, sloping forward to tip of jaws; gill membranes broadly united to isthmus, gill opening extending about diameter of one nostril below level of pectoral base.

Pectoral fin inserted low on side, base oblique, fin rounded, equal to length of head behind nostrils, separated from ventral insertion by half its length; dorsal fin origin closer to tip of snout than to caudal base, origin opposite insertion of ventral, margin rounded, fin height a little greater than pectoral length; ventral fin rounded, separated from anus by four-fifths of its length, subequal to pectoral length; origin of anal one scale behind vent, behind tip of adpressed dorsal, margin rounded, longest ray about three-fourths of length of longest dorsal ray; adipose dorsal opposite end of anal base; caudal deeply forked, lobes subequal.

Color (in alcohol) brown, much darker dorsally; seven obscure black bars across the back, none reaching the lateral line; three round black spots in lateral line, diminishing in size posteriorly, the first opposite dorsal fin and four scales wide by four scales long, the second opposite anal origin and three scales wide by three long, and the third at the caudal base and two scales wide by two long; an obscure dark spot on the opercle; two vertically oval black spots

below lateral line and anterior to first mid-lateral spot, the first immediately behind gill opening and the second opposite end of pectoral; two small, obscure, round, black spots below lateral line posteriorly, one opposite end of ventral fin and one opposite end of anal base; rays of dorsal, anal, and caudal dusky; otherwise fins hyaline.

Remarks.—In coloration *steyermarki* resembles *friderici* Bloch, *maculatus* Müller and Troschel, and *granti* Eigenmann, all of which occur in northern South America. However, the mid-lateral row of spots in *granti* and *maculatus* are horizontally oval instead of round. Furthermore, all three of these species differ from *steyermarki* in circumpeduncular scales, having 16 instead of 12. *Leporinus friderici* has a higher lateral line scale count (35 or more) than *steyermarki* or the others noted (31–33). *Leporinus maculatus* is distinguished by having only 3 teeth in each half of the upper jaw whereas the others have 4.

The differences between *steyermarki* and the other Venezuelan species of *Leporinus* are brought out in the following key.

1. Coloration in adults and subadults (over 100 mm.) consisting of longitudinal stripes only 2
   Coloration consisting of round or elongate spots, transverse bars, or a combination of these 3
2. Mid-lateral black stripe covering lower half of scale row bearing lateral line; profile flat or concave over orbit ..... *striatus* Kner
   Mid-lateral black stripe covering entire width of lateral line scales; profile evenly convex over orbit ..... *arcus* Eigenmann
3. Ventral usually i,8, rarely (1/10 of those seen) i,9 4
   Ventral usually i,9, rarely (1/10 of those seen) i,8 7
4. Pattern of vertical bars only; profile concave over orbit ..... *hypselonotus* Günther
   Round or horizontally elongated spots in mid-lateral line; profile convex or flat over orbit 5
5. A longitudinal mid-lateral stripe from opposite vent to caudal; 6 teeth in upper jaw ..... *muelleri* Steindachner
   No black markings longer than anal fin base; 8 teeth in upper jaw 6
6. Lateral line scales 35–37; circumpeduncular scales 16 ..... *friderici* Bloch
   Lateral line scales 32; circumpeduncular scales 12 ..... *steyermarki* sp. nov.
7. Scale rows from lateral line to dorsal origin 4, to ventral insertion 3½. *latofasciatus* Steindachner
   Scale rows from lateral line to dorsal origin 6 or more, to ventral insertion 5 or more ..... *fasciatus* Bloch and *affinis* Günther

No specimens of *muelleri* or *latofasciatus* were seen. Material at hand does not permit the separation of *fasciatus* and *affinis;* they were treated as subspecies by Borodin (1929).

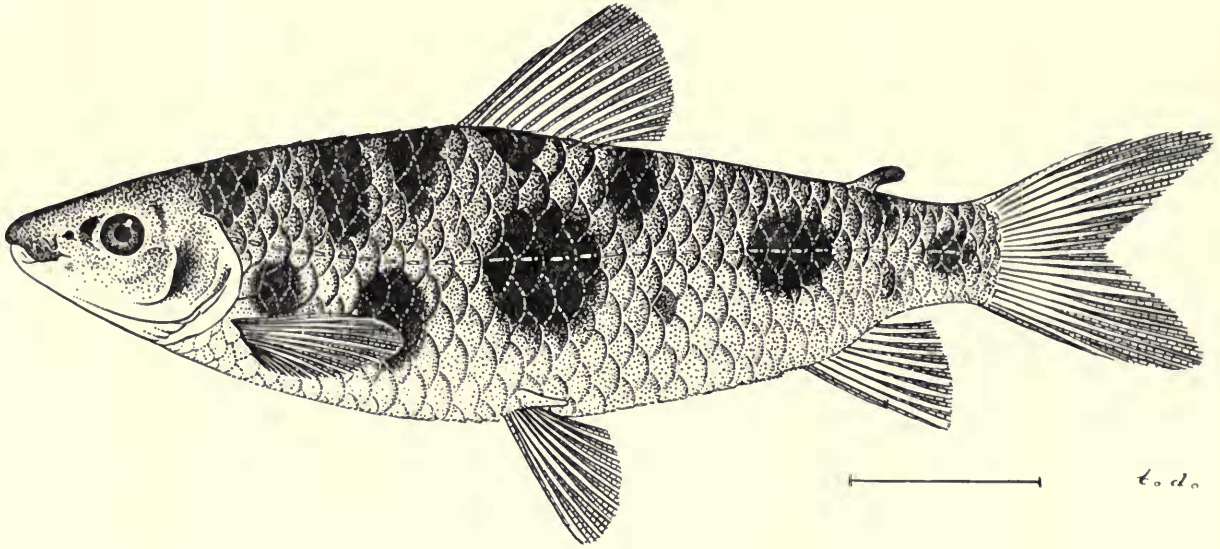

FIG. 93. *Leporinus steyermarki* sp. nov., holotype. Line represents 25 mm. at original size.

Anostomus anostomus Linnaeus

Salmo anostomus Linnaeus, 1758, Syst. Nat., 10th ed., 1: 312—Indies.

Dorsal ii,10; pectoral i,13; ventral i,8; anal iii,8; lateral line scales 36; transverse scales lateral line to dorsal origin 4½, to ventral insertion 3½; standard length 81.5 mm.; head 3.92; depth 4.43.

One specimen. New to the fauna of Venezuela.

Moenkhausia miangi Steindachner

Moenkhausia miangi Steindachner, 1915, Denks. Akad. Wiss. Wien, 93: 29, pl. 3, fig. 5—Rio Miang, Brazil.

Dorsal ii,9; pectoral i,10–12 (mean i,11.2); ventral i,7; anal iii,23–26 (mean iii,24.2); lateral line scales 35–38 (mean 36.4); transverse scales lateral line to dorsal origin 6–7 (usually 7), to ventral insertion 5–5½; predorsal scales 11; circumpeduncular scales 14; gill rakers 9–10+11–12; standard length 35.5–40.5 (6 specimens) and 90.0 mm. (1); head 3.33–3.46 (young), 3.75 (adult); depth 2.65–2.68 (young), 2.37 (adult); eye 2.27–2.50 (young), 3.28 (adult).

Large round black spot at base of caudal; vertically elongate humeral spot; premaxilla with 5 teeth in both rows; maxilla with 2 teeth.

These fishes agree in almost all details—counts, habitus, proportions, and coloration—with Steindachner's description. This is apparently only the second time *miangi* has been collected and is the first Venezuelan record.

Astyanax bimaculatus Linnaeus

Salmo bimaculatus Linnaeus, 1758, Syst. Nat., 10th ed., 1: 311—South America.

Dorsal ii,9; pectoral i,12–13; ventral i,7; anal iii,23–25; lateral line scales 39–40; transverse scales to dorsal origin 9, to insertion of ventrals 6–7; gill rakers 9–10+12–13; standard length 72.0–74.0 mm.; head 3.80–3.83; depth 2.71–2.75; predorsal length 2.03–2.08; eye 2.79–2.94.

Two teeth on maxilla; mid-dorsal line naked in front of dorsal fin.

Two specimens.

These fishes are only tentatively identified as *bimaculatus*. They differ from *bimaculatus* in their lower anal ray count (usually iii,29 or more in *bimaculatus*), the presence of two maxillary teeth (usually none or one in *bimaculatus*), and the more elongate form (depth

usually 2.0–2.6 in *bimaculatus*). Considering the complexity of the *bimaculatus* rassenkreis, it is probably better not to describe these fishes as a new form until the entire group is revised.

Creatochanes affinis Günther

Tetragonopterus affinis Günther, 1864, Cat. Fishes Brit. Mus., 5: 329—British Guiana.

Dorsal ii,10; pectoral i,11; ventral i,7; anal iii,24; lateral line scales 43; scales lateral line to dorsal origin 8, to ventral insertion 3; gill rakers 8+1+10; standard length 27.5–89.0 mm.; head 4.23; depth 4.02; eye 2.73.

Two specimens; data given for larger fish only. New to the fauna of Venezuela.

Bryconamericus deuterodonoides caudovittatus subsp. nov.

Holotype.—Chicago Natural History Museum no. 45706 from the Rio Abácapa on the west side of Chimantá-tepui. Collected at 1,300 feet altitude on April 2, 1953.

Paratypes.—CNHM no. 45707 (12) from the type locality.

Description.—Dorsal ii,8; pectoral i,10–11 (mean i,10.7); ventral i,7; anal iii,16–18 (mean iii,16.7); lateral line scales 35–36; transverse scales lateral line to dorsal origin 4–5, to ventral insertion 3; predorsal scales 11–12; gill rakers 5–7+10–12, total 15–19; teeth in outer premaxillary row 3–4 (mean 3.7), on maxilla 2–3 (mean 2.6); standard length 26.0–37.0 mm.; head 3.82–4.05; depth 3.45–3.88; eye 2.70–3.07.

Color (in alcohol) pale brown; an obscure vertically elongate humeral spot; a black mid-lateral stripe, broadening slightly on caudal peduncle and extending to tips of middle caudal rays; in best-preserved fishes basal portion of dorsal and anal membranes deep orange or red; basally caudal lobes yellow, becoming orange, then fading to hyaline distally.

Other characters as in *d. deuterodonoides.*

Remarks.—The continuation of the black stripe to the tips of the middle caudal rays differentiates *d. caudovittatus* from both *d. deuterodonoides* Eigenmann and *d. euryodous* Schultz, in both of which the stripe ends either at the base or at the center of the middle caudal rays. Other differences among these forms are summarized in the key below.

Teeth in outer premaxillary row 2, in maxilla 3 or 4 (evenly divided in paratypes); branched anal rays usually 15; gill rakers 6+9–10.
d. deuterodonoides Eigenmann
(Range: Colombia; upper Meta basin in the extreme western end of the Orinoco drainage)

Teeth in outer premaxillary row usually 4, in maxilla 2 or 3 (about evenly divided); branched anal rays usually 16; gill rakers 4–5+9–10.....*d. euryodous* Schultz
(Range: Venezuela; central northern portion of the Orinoco basin)

Teeth in outer premaxillary row usually 4, in maxilla 2 or 3 (about evenly divided); branched anal rays usually 17; gill rakers 5–7+10–12.
d. caudovittatus subsp. nov.
(Range: Venezuela; extreme southeastern corner of Orinoco basin)

Eigenmann (in Eigenmann, Henn, and Wilson, 1914) gives the gill raker count of *d. deuterodonoides* as 4+7. The counts given above are based on examination of the holotype and three paratypes. Apparently Eigenmann did not count rudimentary gill rakers.

Hoplerythrinus unitaeniatus Agassiz

Erythrinus unitaeniatus Agassiz *in* Spix, 1829, Selecta Gen. Spec. Pisc. Bras., p. 42, pl. 19—São Francisco, Brazil.

Dorsal iii,8; pectoral i,14; ventral i,7; anal ii,9; lateral line scales 32; transverse scales lateral line to dorsal origin 3½, to ventral insertion 3½; standard length 150 mm.; head 3.00; depth 4.20.

One specimen.

Gymnotus carapo Linnaeus

Gymnotus carapo Linnaeus, 1758, Syst. Nat., 10th ed., **1**: 246—America

Anal about 200; pectoral 15; total length 143 mm.

One specimen.

Eigenmannia virescens Valenciennes

Sternarchus virescens Valenciennes *in* d'Orbigny, 1847, Voy. Amer. Mer., **5**, pt. 2, p. 11, pl. 13, fig. 2—South America.

Anal 188–221; total length 177–194 mm.; snout–anal origin 8.42–9.08 in total; caudal filament 2.64–2.89 in total.

Three specimens.

Crenicichla saxatilis Linnaeus

Sparus saxatilis Linnaeus, 1758, Syst. Nat., 10th ed., **1**: 278—Surinam.

Dorsal XIX–XX,13–14; pectoral i,15–16; anal III,9–10; mid-lateral scales 55–62; lateral line scales 21–23+10–12; standard length 103–185 mm.; head 2.58–2.86; snout 2.96–3.35.

Five specimens.

Aequidens chimantanus sp. nov.

Holotype.—Chicago Natural History Museum no. 45702 from Rio Abácapa on the west side of Chimantá-tepui. Collected at 1,300 feet altitude on March 31, 1952. Figure 94.

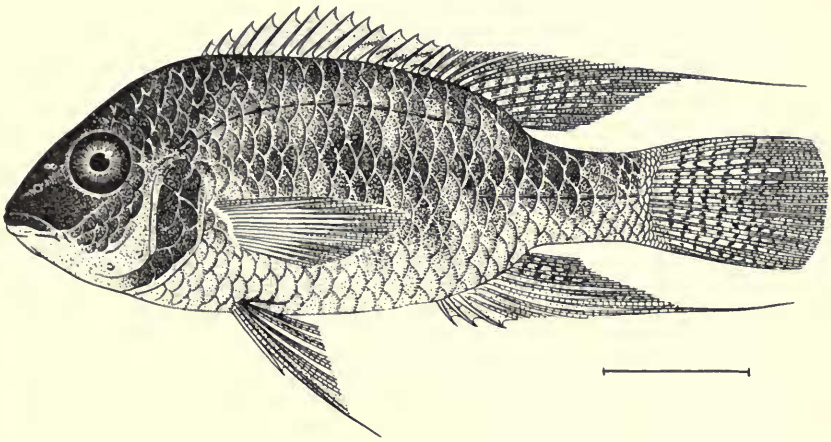

FIG. 94. *Aequidens chimantanus* sp. nov., holotype. Line represents 25 mm. at original size.

Description of holotype.—Dorsal XIV,11; pectoral ii,13; anal III,9; lateral line scales 17+7; mid-lateral scales 22; gill rakers 2+4.

Body oval in outline; dorsal profile convex, steep from tip of snout to nape, rounded over occiput, highest above pectoral base, sloping slightly thereafter, horizontal over caudal peduncle; ventral profile convex, rounded to below pectoral base, sub-horizontal to anal origin, rounded at anal base, horizontal below caudal peduncle.

Maxilla not reaching vertical from anterior margin of orbit; teeth in 3 to 5 rows in both jaws, those of outer rows largest; snout longer than eye, 2.46; eye moderate, 3.62, smaller than interorbital; latter rounded, 2.82; preopercle edge smooth.

Origin of dorsal fin anterior to gill opening; dorsal spines increasing in size to fifth, subequal thereafter to last spine, which is distinctly longer and equal to length of snout; soft dorsal pointed, the fourth, fifth, and sixth rays elongated and reaching end of caudal; pectoral pointed, inserted below level of orbit, slightly shorter than head, reaching level of anal origin; ventrals pointed, overlapping anal, first soft ray elongated; origin of anal opposite

thirteenth lateral line scale and twelfth or thirteenth dorsal spine, third spine longest, slightly shorter than last dorsal spine; soft anal pointed, third to sixth rays elongated, reaching end of caudal; caudal truncate.

Snout and preorbital naked; 3 oblique rows of scales on cheek; preopercle naked; 2 vertical rows of large scales on opercle; scalation of top of head beginning between eyes; lateral scales ctenoid; lateral lines separated by two scale rows; one and one-half rows between base of last dorsal spine and lateral line; base of caudal scaled; all of fin bases naked.

Color (in alcohol) grayish brown, darker above; head uniform; five or six indistinct, dark, vertical bands on side; each band somewhat darker just below upper lateral line forming an obscure longitudinal streak running into caudal peduncle; a dark blotch in upper half of caudal base; membrane of dorsal gray with darker crossbars; caudal similarly marked; pectoral hyaline; ventrals gray, membrane darker between first two rays; anal gray, barred pattern appearing only between last three rays.

Paratypes.—CNHM no. 45703, two fishes with same collection data as holotype. They are similar in all essential respects to the holotype. Even the juvenile shows the characteristic high elevation of the dorsal profile above the pectoral base, although the profile of the head is not as steep as in the larger individuals. Another difference, also a function of size, is the lack of attenuation of the soft dorsal and anal in the small specimen.

In the following enumeration, data for the holotype are succeeded first by those for the larger paratype and then by those for the smaller one.

Total length (mm.) 136, 142, 85; standard length (mm.) 100.5, 105, 63.5; dorsal XIV,11, XIV,10, XIV,10; pectoral ii,13 (all); anal III,9, III,9, III,8; lateral line scales 17+7, 15+7, 17+6; midlateral scales 22, 22, 24; scales between last dorsal spine and lateral line 1½ (all); gill rakers 2+4, 3+5, —; head 2.65, 2.69, 2.65; depth 2.34, 2.39, 2.36; snout 2.46, 2.10, 2.40; interorbital 2.82, 2.64, 2.93; eye 3.62, 4.03, 3.08.

Remarks.—The key that follows gives some of the characters that distinguish *chimantanus* from its congeners in northern South America. Two characters, the dorsal profile and the uniform head coloration, are especially diagnostic. All of the northern species of *Aequidens*, with the exception of *geayi*, have a more evenly rounded dorsal profile with the highest elevation distinctly behind the base

of the pectoral. Also, all the northern *Aequidens*, this time with the exception of some individuals of *tetramerus*, have conspicuous marks on the head: a vertical bar, a round blotch, or narrow dark lines. The relatively shallow body also distinguishes *chimantanus*, as in most of the northern species body depth is usually less than 2.3.

Key to *Aequidens* from Venezuela[1] and the Guianas:

1. Preopercle scaled ..... *maroni* Steindachner
   Preopercle without scales 2
2. Side with a single, conspicuous, vertical, black bar, reaching from middle of dorsal base almost to mid-ventral line ..... *geayi* Pellegrin
   Side either with a round spot or with several vertical black bands 3
3. Two or 2½ scales between base of last dorsal spine and lateral line 4
   One or 1½ scales between base of last dorsal spine and lateral line 7
4. Dark longitudinal streak from eye to end of dorsal base ..... *vittatus* Heckel
   Dark longitudinal streak running along upper half of caudal peduncle 5
5. A dark vertical bar from eye to angle of preopercle 6
   No dark bar to angle of preopercle; usually a round spot below and behind eye ..... *tetramerus* Heckel
6. Dark cheek bar beginning at center of orbital border .. *potaroensis* Eigenmann
   Dark cheek bar beginning at hind corner of orbit ..... *metae* Eigenmann
7. Dark spot on caudal base centered on lateral line 8
   Dark caudal spot occupying area above lateral line 9
8. Dark longitudinal streak from eye to end of dorsal base; no dark blotch on side ..... *mariae* Eigenmann
   Dark longitudinal streak (visible in young only) running into caudal peduncle; all size groups with conspicuous, dark blotch on sides ..... *pulcher* Gill
9. Dark bar from orbit to angle of preopercle; highest point of dorsal profile behind pectoral base ..... *vittatus* Heckel
   No dark bar from eye to angle of preopercle; highest point of dorsal profile opposite pectoral base ..... *chimantanus* sp. nov.

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[1] Includes species Schultz (1949) lists as "expected to occur in Venezuela."

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