DESCRIPTIONS OF NEW HYLID FROGS FROM COLOMBIA AND ECUADOR

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ABSTRACT: Four new species of hylid frogs are named from Ecuador and Colombia. *Hyla gryllata* is a member of the *Hyla microcephala* group, and *Hyla sugillata* belongs to the *Hyla rostrata* group; both species are named from Provincia Los Ríos on the Pacific lowlands of Ecuador, and the latter occurs northward into Chocó, Colombia. *Hyla larinopygion* from the Andes of Departamento Cauca, Colombia, is of unknown affinites. *Phyllomedusa perinesos* is described from the Amazonian slopes of the Andes in Ecuador.

IN recent years field parties from the Museum of Natural History at the University of Kansas have amassed large collections of frogs from western South America. Many undescribed species are included in these collections, which are being studied by various workers. I have been concerned with the hylids; five species of *Hyla* and two of *Gastrotheca* have been named in previous papers (Duellman, 1969, 1972a, b, c; Duellman and Fritts, 1972). In the present paper I am describing three *Hyla* and one *Phyllomedusa*.

Most of the specimens are in the Museum of Natural History at the University of Kansas (KU), but some specimens have been deposited in the California Academy of Sciences (CAS), United States National Museum (USNM), and the collection of Werner C. A. Bokermann in São Paulo, Brasil (WCAB). For the loan of other specimens, I am indebted to Charles W. Myers, American Museum of Natural History (AMNH); Hymen Marx, Field Museum of Natural History (FMNH); Dorothy M. Smith, University of Illinois, Museum of Natural History (UIMNH); and John W. Wright, Los Angeles County Museum (LACM). Field work was supported in part by Watkins Museum of Natural History Grants, University of Kansas. I am grateful to the following persons for their contributions to the present work: Calaway H. Dodson for providing facilities at the Estación Biológica Río Palenque; Juan Barberis F. and Ernest Ochoa of Gulf Oil Companies Ecuador for logistical aid; Bruce MacBryde, Universidad Católica del Ecuador, for transportation and field companionship; Stephen R. Edwards, Ligia Galarza, John E. Simmons, and C. Rhea Warren for collection of specimens.

In the following descriptions terminology follows that of Duellman (1970).

Hyla gryllata new species
(Fig. 1A)

Holotype.—KU 146452 from Estación Biológica Río Palenque, 56 km north of Quevedo, Provincia Los Ríos, Ecuador, 220 m; one of a series obtained 9 April 1972 by William E. Duellman and C. Rhea Warren.

Paratypes.—KU 146450–1, 146453–62, same data as holotype; KU 146463–5, CAS 134511–12, USNM 194612–13 same locality, collected 12 April 1972 by William E. Duellman and John E. Simmons; KU 147577–78, WCAB 47110–11 same locality, collected 9 July 1972 by John E. Simmons and Ligia Calarza.

Diagnosis.—A species of the *Hyla microcephala* group, as defined by Duellman and Fouquette (1968), characterized by 1) a broad, rectangular, dark brown, middorsal mark, having straight transverse anterior border and deeply indented posterior border, resulting in a ∩-shaped mark with a thick base in some specimens; 2) narrow, dark brown dorsolateral stripe extending to, or nearly to groin; 3) loreal region dark brown; narrow white line along canthus, edge of eyelid, and in some specimens posteriorly on supratympanic fold;

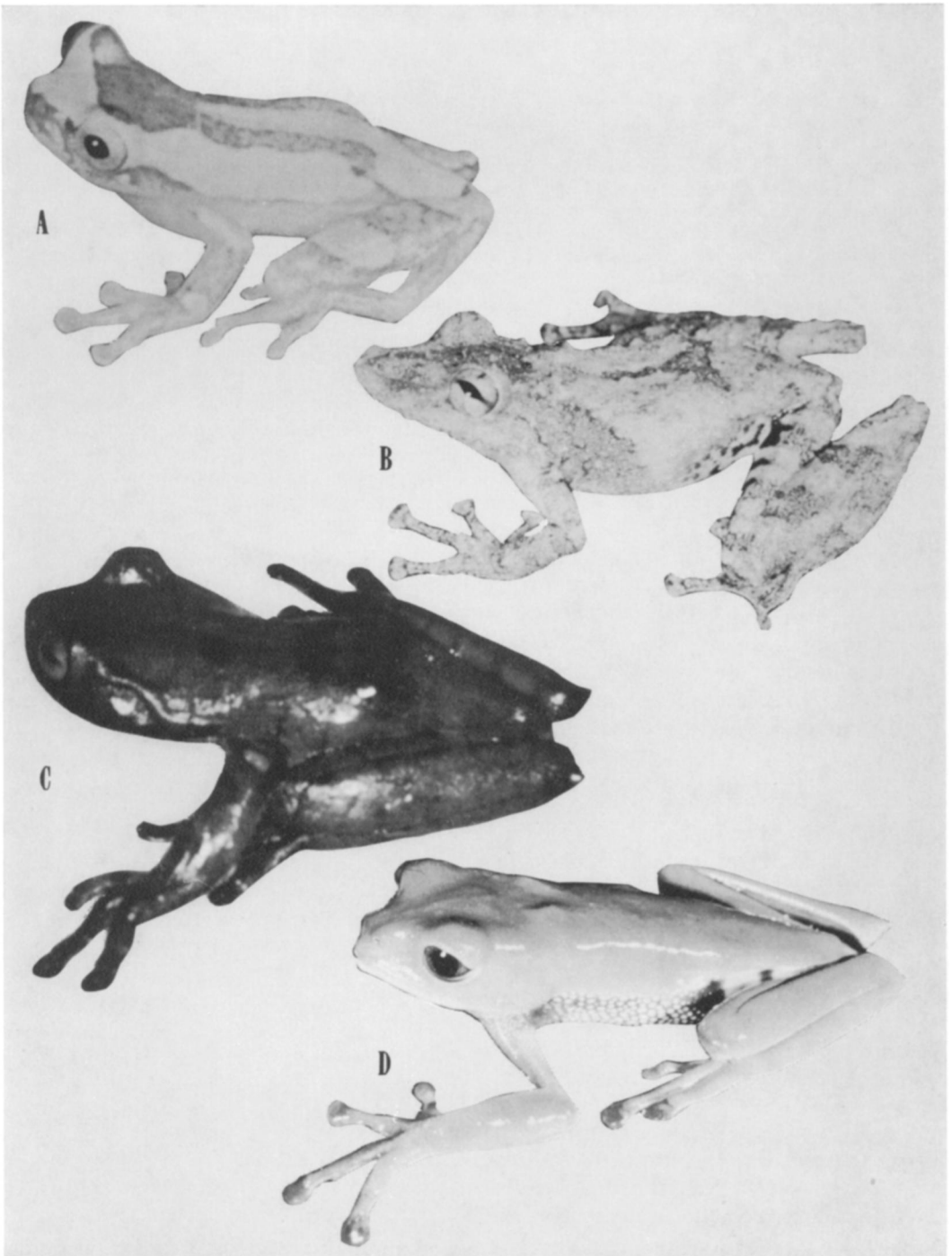

FIG. 1.—A. *Hyla gryllata*, KU 146452, ♂, 23.7 mm SVL. B. *Hyla sugillata*, KU 146444, ♂, 40.6 mm SVL. C. *Hyla larinopygion*, KU 144127, ♀, 53.6 mm SVL. D. *Phyllomedusa perinesos*, KU, 146562, ♂, 45.7 mm SVL.

TABLE 1.—Measurements and proportions (means in parentheses) of *Hyla gryllata*.

Character	20 Males	5 Females
Snout-vent length (SVL)	22.6–25.5 (23.7)	27.5–30.6 (29.2)
Tibia length/SVL	0.492–0.556 (0.515)	0.516–0.545 (0.529)
Foot length/SVL	0.452–0.522 (0.467)	0.464–0.498 (0.482)
Head length/SVL	0.286–0.313 (0.301)	0.287–0.302 (0.296)
Head width/SVL	0.286–0.313 (0.303)	0.257–0.302 (0.288)
Tympanum/Eye	0.333–0.500 (0.409)	0.394–0.457 (0.422)

4) dark brown transverse bars on limbs. The large middorsal dark mark distinguishes *Hyla gryllata* from other members of the *Hyla microcephala* group, but this dorsal pattern is reminiscent of that in *Hyla ebraccata* and *H. leucophyllata*, both of which have a more extensive axillary membrane and webbing on the hand and a pair of glands on the chest.

Description.—$N = 20\,♂\,♂, 5\,♀\,♀$. (see Table 1 for measurements and proportions). Head wider than body; snout short, truncate in dorsal aspect; tip of snout projecting slightly beyond margin of lip; nostrils three-fourths distance from orbit to tip of snout, not protuberant; internarial area flat; canthus rounded; loreal region barely concave; lips rounded; eye large, protuberant, directed anterolaterally; interorbital region flat; supratympanic fold weak, covering upper edge of tympanum; tympanic ring weak or absent; tympanum separated from eye by distance about equal to twice diameter of tympanum.

Axillary membrane extending about one-third length of upper arm; forearm robust, lacking ulnar fold and tubercles; fingers short, bearing large discs; diameter of disc on third finger twice diameter of tympanum; length of fingers from shortest to longest 1-2-4-3; subarticular tubercles large round; distal tubercle on fourth finger bifid; supernumerary tubercles round, nearly as large as subarticular tubercles; palmar tubercle large, bifid; prepollical tubercle large, elliptical; prepollex lacking nuptial excrescence; webbing extending to base of penultimate phalanges of fingers 1, 2, 4, to middle of antepenultimate phalange of third finger. Hind limb moderately slender, lacking fold or tubercle on heel, tarsal folds, and outer metatarsal tubercle; inner metatarsal tubercle large, diagonally elliptical, not visible from above; toes moderately long, bearing discs slightly smaller than those on fingers; length of toes from shortest to longest 1-2-3-5-4; subarticular tubercles large, round; supernumerary tubercles smaller, round; webbing extending from base of disc of first toe to base of penultimate phalange of second, from base of disc of second to base of penultimate phalange of third, from base of disc of third to base of penultimate phalange of fourth and on to base of disc of fifth toe.

Anal opening directed posteroventrally at midlevel of thighs; anal sheath long, lacking tubercles and folds; skin on belly and proximal posteroventral surfaces of thighs granular; skin on other surfaces smooth. Tongue broadly cordiform, shallowly notched posteriorly, barely free behind; dentigerous processes of prevomers posteromedially inclined elevations between small triangular choanae; total number of prevomerine teeth in males 0–4 ($\bar{x} = 2.3$), in females 4–7 ($\bar{x} = 5.2$); vocal slit extending from midlateral base of tongue to angle of jaw; vocal sac single, median, subgular, greatly distensible; when inflated extending to axilla.

Coloration (in preservative): Dorsum tan to creamy white with brown markings, always consisting of dark middorsal mark with straight transverse anterior edge across eyelids; mark extending posteriorly at least to sacrum; solid in three individuals; posterior margin indented to scapular region in 18, to occiput in 4, resulting in latter in paravertebral dark stripes. Canthus brown; postorbital brown line extending to sacral region and connected with posterolateral corner of dorsal mark in 18, continuing onto supratympanic fold in 8. Edge of upper lip cream, faintly or distinctly expanded suborbitally. Thighs uniform cream or bearing narrow line of dark pigment dorsally; forearms, shanks, and feet tan with brown transverse markings; hidden surfaces of limbs and all ventral surfaces creamy white.

Coloration (in life): Dorsum yellowish-tan with brown markings; thighs, hands, and feet pale-orange; belly white; ventral surfaces of thighs and shanks lacking pigment; vocal sac yellow; iris bronze.

Mating Call.—The call consists of a cricket-like "creek-eek-eek". Analysis of 12 notes of four individuals (Fig. 2A) revealed the following characteristics (means

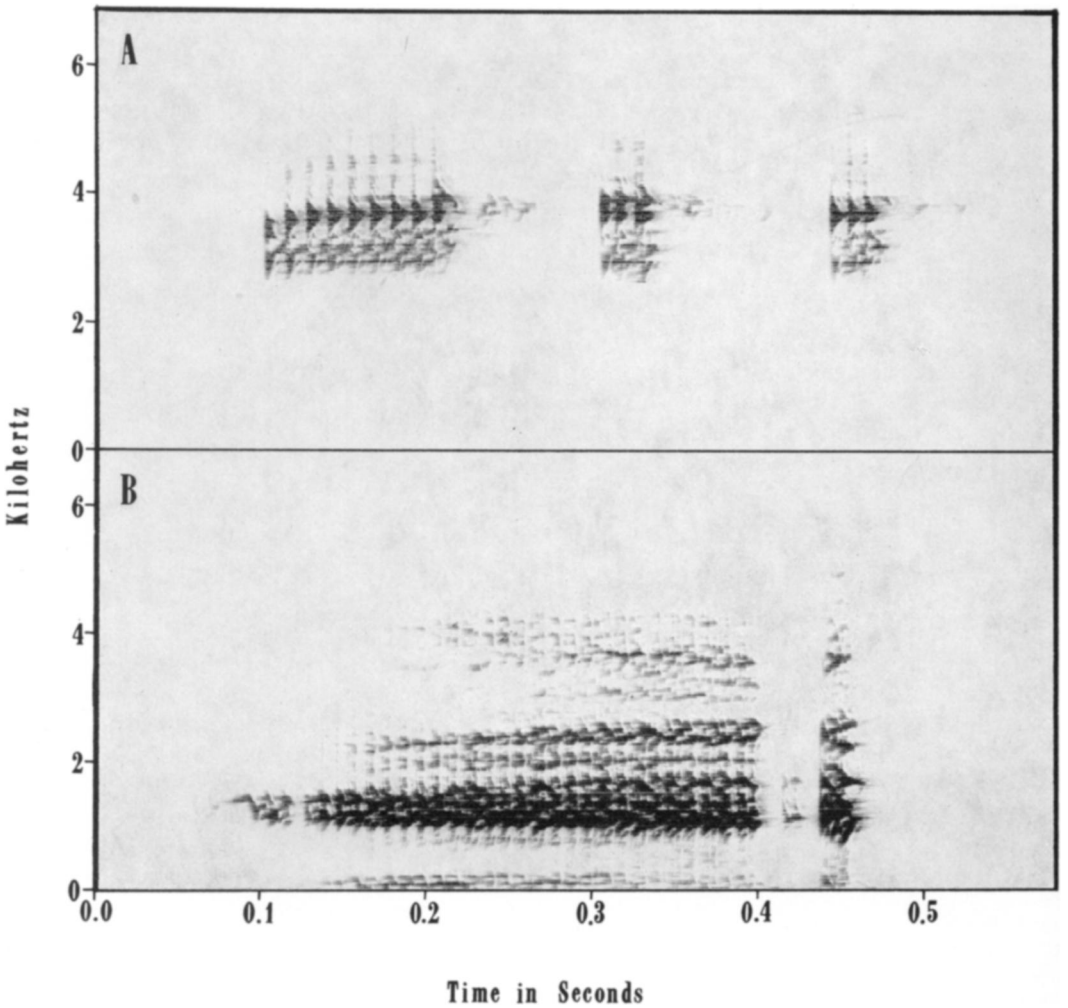

FIG. 2.—Audiospectrograms of mating calls. A. *Hyla gryllata*, KU Tape 1191. B. *Hyla sugillata*, KU Tape 1196. Band width 40 Hz.

in parentheses): call rate 4–18 (10.0) calls per minute; notes per call group 1 monophasic primary note plus 1–4 (2.3) monophasic secondary notes; duration of primary note 0.09–0.38 (0.19) seconds; secondary notes 0.02–0.07 (0.037) seconds; pulse rate 75–85 (80) pulses per second; fundamental frequency 335–440 (365) hertz; dominant frequency 3600–4960 (3806) hertz.

Etymology.—The specific name is Latin *gryllatus*, meaning chirp like a cricket, and is used in reference to the mating call of this small frog.

Remarks.—Within the *Hyla microcephala* group, *Hyla phlebodes* is the geographically closest species to *H. gryllata*; the former is known from Chocó, Colombia, and is the only other member of the *Hyla microcephala* group on the Pacific lowlands of South America. In addition to striking differences in coloration (*H. phlebodes* has a dorsolateral dark line extending only to arm and dorsal pattern consisting of irregular dashes or interconnected lines), there are differences in structure and mating calls. In comparison with data on *H. phlebodes*

(Duellman and Fouquette, 1968), *H. gryllata* is slightly larger with proportionately longer foot and proportionately shorter and narrower head. Comparison of mating calls reveals that *H. gryllata* has a slower pulse rate and higher fundamental frequency than *H. phlebodes*.

The type series was collected at a large duckweed-covered pond in a banana grove; individuals were calling from bushes at the edge of the water. Associated with *Hyla gryllata* at the pond in April 1972 were breeding congregations of *Hyla pellucens, H. quinquefasciata, H. sugillata, Agalychnis litodryas, Trachycephalus jordani, Bufo marinus, Leptodactylus ventrimaculatus,* and *Rana palmipes*. A few *Hyla gryllata* were found on grasses overhanging shallow muddy pools, around which *Hyla rosenbergi* and *Smilisca phaeota* were calling. The pond is a natural depression in an extensive banana grove and located about 1 km from forest. Extensive searching in the adjacent rain forest revealed no individuals of *Hyla gryllata*.

Hyla sugillata new species

(Fig. 1B)

Holotype.—KU 146444 from Estación Biológica Río Palenque, 56 km north of Quevedo, Provincia Los Ríos Ecuador; obtained 9 April 1972, by William E. Duellman.

Paratypes.—KU 146445, same data as holotype; KU 146446–9, same locality and collector, 12 April 1972.

Diagnosis.—A member of the *Hyla rosstrata* group, as defined by Duellman (1972b), characterized by: 1) snout acuminate; 2) proboscis absent; 3) row of tubercles present on lower jaw; 4) dorsum tuberculate; 5) small tubercle on heel; 6) throat cream; 7) groin and hidden surfaces of thighs mottled black and blue. *Hyla sugillata* differs from all other members of the group by having black and blue mottling, instead of dark brown and cream mottling or vertical black and yellow or green bars on the thighs.

Description.—$N = 6\,♂\,♂$, 1 ♀ (data for female follows mean values of males). Snout-vent length 38.7–42.0 (39.9), 45.5 mm; tibia length 20.4–23.1 (21.5), 25.6 mm, 52.4–56.9 (54.1), 56.3 percent of snout-vent length; foot length 16.4–18.6 (17.3), 19.8 mm, 41.9–45.3 (43.5), 43.5 percent of snout-vent length; head length 14.7–15.7 (15.0), 17.6 mm, 37.4–37.9 (37.7), 38.6 percent of snout-vent length; head width 12.8–13.4 (13.1), 16.1 mm, 31.9–33.5 (32.7), 35.4 percent of snout-vent length; interorbital distance 4.2–5.2 (4.7), 5.6 mm, 32.8–38.8 (35.7), 34.8 percent of head width; width of eyelid 2.9–3.1 (3.0), 3.4 mm, 22.6–24.0 (23.2), 21.1 percent of head width; distance from eye to nostril 5.5–6.3 (5.8), 6.1 mm, 37.4–40.1 (38.6), 34.7 percent of head length; diameter of eye 3.6–4.2 (3.8), 4.5 mm; diameter of tympanum 2.5–2.8 (2.7), 3.4 mm, 66.6–75.0 (70.1), 75.6 percent of diameter of eye.

Head narrower than body; snout long, acuminate in dorsal and lateral profiles, protruding beyond margin of lip; nostrils three-fourths distance from eye to tip of snout, protuberant dorsolaterally; internarial region depressed; canthus rounded; loreal region flat; lips rounded; eyes moderately small, not greatly protuberant; interorbital region flat; supratympanic fold moderately heavy, covering upper edge of tympanum; tympanic ring present; tympanum posteroventral to eye, separated from eye by distance equal to about two-thirds diameter of tympanum.

Axillary membrane absent; forelimb slender, lacking ulnar fold but having small tubercles distally; fingers long, slender, bearing large truncate discs; width of disc on third finger equal to diameter of tympanum; length of fingers from shortest to longest 1-2-4-3; webbing absent; subarticular tubercles medium, round; supernumerary tubercles small, round, present irregularly on proximal segments; palmar tubercle large, flat, bifid; prepollex slightly enlarged, lacking nuptial excrescence in breeding males. Hind limb moderately robust; two conical tubercles and many minute tubercles on heel; outer row of low tarsal tubercles continuing as low scalloped dermal fold on outer edge of fifth toe; inner tarsal fold absent; inner metatarsal tubercle low, flat, ovoid, barely visible from above; outer metatarsal tubercle large, ovoid; toes long, bearing discs slightly smaller than those on fingers; length of toes from shortest to longest 1-2-3=5-4; webbing vestigial between first and second toes, extending from base of discs of second toe to base of penultimate phalange of third toe from distal end of penultimate phalange of third toe to base of penultimate phalange of fourth toe and on to base of disc of fifth toe; subarticular tubercles small, round; supernumerary tubercles minute, present in one row on proximal segments.

Anal opening directed posteroventrally at upper

level of thighs; anal sheath short; anus bordered above by three large tubercles, below by many small tubercles; skin on belly and proximal posteroventral surfaces of thighs granular; skin on chin, chest, and other ventral surfaces of limbs smooth; skin on dorsum smooth with scattered low tubercles, largest and most numerous on snout; row of tubercles along margin of lower jaw. Tongue narrowly cordiform, shallowly notched posteriorly, barely free behind; dentigerous processes of prevomers closely approximate transverse ridges between large longitudinally rectangular choanae; total number of prevomerine teeth 14–19 (16.4), 21; vocal slits extending from posterolateral base of tongue to angle of jaws; vocal sac single, median, subgular, and greatly distensible, extending laterally beyond head and posteriorly to pectoral region.

Coloration (in preservative): Dorsum tan with dark brown markings consisting of one or two blotches on lip anterior to orbit, triangular mark with corners on eyelids and apex in occipital region, large crescent-shaped mark from tympanum to midflank, irregular transverse mark in sacral region (with anterior middorsal extension in three), narrow transverse bars on limbs, and scattered flecks on body. Flanks gray with black mottling; anterior and posterior surfaces of thighs and inner surfaces of shanks gray or cream with black mottling, tending towards vertical bars on thighs. Throat and belly creamy white with small brown flecks on throat and chest; ventral surfaces of limbs cream with brown spots, especially on shanks; feet and webbing brown.

Coloration (in life): Dorsum tan with brown markings; flanks and thighs blue and black; venter cream; iris creamy-brown with brown horizontal mark.

Mating Call.—The call is a low growl, consisting of a single pulsed, diphasic note (Fig. 2B). Analysis of 14 notes of five individuals revealed the following variation (means in parentheses): note repetition rate 1.3–5.0 (3.1) notes per minute; pulse rate 110–140 (117) pulses per second; duration 0.28–0.60 (0.39) seconds; fundamental frequency 264–442 (338) hertz, dominant frequency 1017–2904 (2023) hertz. One individual produced two notes having two emphasized harmonics—900 and 2700, 1200 and 2700 hertz.

Etymology.—The specific name is from the Latin *sugillatum* meaning black and blue and is used here in reference to the color of the groin and hidden surfaces of the thighs.

Remarks.—Duellman (1972b) tentatively referred Chocoan specimens to *Hyla boulengeri* and noted that at least two of those specimens had black and blue markings, instead of black and yellow or green characteristic of *H. boulengeri*. The acquisition of new material from Ecuador confirms earlier suspicions that individuals from the Pacific lowlands of Colombia and Ecuador are not *boulengeri*. In addition to the type series and one skeleton from the type locality, I have examined the following specimens that are referable to *Hyla sugillata* (all listed as *H. boulengeri* by Duellman, 1972b): COLOMBIA: *Chocó*: Andagoya, FMNH 81854–5, LACM 46826–9; near Playa del Oro, upper Río San Juan, LACM 46842; 2 km above Playa del Oro, upper Río San Juan, AMNH 85373–4; Quibdó, LACM 46830–41; Tado, Río San Juan, LACM 46843–50. ECUADOR: *Esmeraldas*: Carondelet, UIMNH 53584; San Javier, UIMNH 55653–4.

The type series of *Hyla sugillata* was obtained at the same pond as *Hyla gryllata*; see discussion of that species for a description of the area. All individuals were found in secluded places. Males were calling in a variety of such places—underside of *Heliconia* leaf; on elephant ear (*Xanthosoma*) leaf covered by another elephant ear leaf, curled dead banana leaf, and dense bushes; the one female was in a dense bush. No individual was more than 1.5 m above the ground, and all were more than 2 m away from the pond.

Hyla larinopygion new species
(Fig. 1C)

Holotype.—KU 144127 from Quebrada Santa Tereza, between Popoyán and Quintana, Departamento Cauca, Colombia, 2200 m, obtained 3 May 1971, by Stephen R. Edwards.

Diagnosis.—A moderate-sized *Hyla* characterized by 1) uniformly brown dorsum; 2) flanks and hidden surfaces of thighs gray with vertical black bars; 3) venter cream with black spots; 4) anal region

greatly swollen, bordered above by transverse dermal fold; 5) fingers webbed basally; 6) toes about one-half webbed. The swollen anal region immediately distinguishes *Hyla larinopygion* from any other known Neotropical *Hyla*, none of which has black and gray vertical markings on the flanks and hidden surfaces of the limbs.

Description.—$N = 1$ ♀. Snout-vent length 53.6 mm; tibia length 27.8 mm, 50.8 percent of snout-vent length; foot length 24.6 mm, 45.9 percent of snout-vent length; head length 20.0 mm, 37.3 percent of snout-vent length; head width 18.5 mm, 34.5 percent of snout-vent length; interorbital distance 6.5 mm, 35.1 percent of head width; width of eyelid 4.7 mm, 25.4 percent of head width; diameter of eye 6.2 mm; diameter of tympanum 3.7, 59.7 percent of diameter of eye; distance from orbit to nostril 4.7 mm, 23.5 percent of head length.

Head as wide as body; snout truncate in dorsal and lateral profiles; nostrils four-fifths distance from eye to tip of snout, not protuberant; internarial area flat; canthus round; loreal region moderately concave; lips thick, rounded; eyes moderately large, not greatly protuberant; top of head flat; supratympanic fold moderately heavy, obscuring upper edge of tympanum, curving downward to point behind angle of jaw; tympanic ring present; tympanum separated from eye by distance slightly greater than length of tympanum.

Axillary membrane absent; forearm robust; ulnar fold low, scalloped; wrist fold distinct; fingers long, bearing small discs, that on third finger equalling diameter of tympanum; length of fingers from shortest to longest 1-2-4-3; subarticular tubercles large, flat; supernumerary tubercles diffuse, present on proximal segments; palmar tubercle low, diffuse, bifid; prepollex enlarged, ovoid; webbing present basally between fingers. Hind limbs slender, having dermal fold on knee and ankle; inner tarsal fold low, present on distal half of tarsus; outer tarsal fold and metatarsal tubercle absent; inner metatarsal tubercle flat, elliptical, barely visible from above; toes long, bearing discs slightly smaller than those on fingers; length of toes from shortest to longest 1-2-3-5-4; subarticular tubercles large, round; supernumerary tubercles small, round, present on proximal segments; webbing extending from base of penultimate phalange of first toe to base of penultimate phalange of second, from middle of penultimate phalange of second to middle of antepenultimate phalange of third, from middle of penultimate phalange of third to middle of antepenultimate phalange of fourth and on to middle of penultimate phalange of fifth toe.

Anal opening directed posteriorly at point above upper level of thighs, bordered above by short, flap-like, transverse dermal fold, surrounded by swollen glandular area with median cleft from opening to ventral surfaces of thighs; skin on chest, belly, and proximal posteroventral surfaces of thighs weakly granular; skin on other surfaces smooth. Tongue round, adherent behind; dentigerous processes of prevomers high, transverse ridges just posterior to small ovoid choanae; prevomerine teeth 11–13.

Coloration (in preservative): Dorsal surfaces of head and body and side of head uniform dull grayish brown; dorsal surfaces of limbs same color with faint, narrow, transverse, dark brown lines; flanks, dorsal surfaces of fingers and toes, anterior and posterior surfaces of thighs, inner and ventral surfaces of shanks, and inner surfaces of feet gray with brownish black vertical bars; throat, belly, and ventral surfaces of thighs cream with irregular, bold black markings; webbing on feet cream with black spots.

Coloration (in life): Dorsum solid brown; flanks and hidden surfaces of limbs blue with black bars; venter marbled black and blue; iris silver with fine black reticulations.

Etymology.—The specific name is from the Greek *larinos* meaning fat, and the Greek *pygos* meaning rump; the name is used in reference to the distinctive swollen anal region.

Remarks.—A metamorphosing young with a tail stub was found at the type locality on 3 May 1971. Before it was preserved the tail was completely absorbed. The snout-vent length is 31.6 mm, and the anal region is enlarged. The dorsum is grayish brown with faint irregular darker reticulations. Distinct, narrow, transverse brown lines are present on the thighs; the flanks are cream with brown flecks, and the venter and hidden surfaces of the thighs are uniform cream.

The type locality is 15–20 km east of Popoyán on the road to Quintana. Quebrada Santa Tereza is a small, wooded ravine in otherwise cleared pasture land. The holotype was found by day in a terrestrial bromeliad growing on exposed tree roots on the steep eroded bank of the ravine; the young individual was on a bush near the stream in the bottom of the ravine at night.

The grossly swollen anal region of *Hyla*

larinopygion is unique in the Hylidae; the condition is approached only in some *Phyllomedusa* having anal apertures directed ventrally. The coloration of *Hyla larinopygion* is equally distinctive. Vertical black bars on the flanks and hidden surfaces of the thighs are characteristic of three Amazonian species—*Hyla calcarata, fasciata,* and *raniceps.* The light interspaces are pale blue in large females of *calcarata* and *fasciata,* but the ventral surfaces of these three species are white.

Phyllomedusa perinesos new species

(Fig. 1D)

Holotype.—KU 146562 from the Río Salado, about 1 km upstream from the Río Coca, Provincia Napo, Ecuador, 1410 m, obtained on 7 April 1972, by William E. Duellman.

Diagnosis.—A small species of *Phyllomedusa* (snout-vent length 45.7 mm in male), having: 1) snout truncate in profile; 2) parotoid glands diffuse, not forming elevated longitudinal ridges; 3) webbing absent; 4) first toe shorter than second; 5) short calcar present; 6) flanks and concealed surfaces of limbs purple with large cream (orange in life) spots. The coloration alone distinguishes this species from all other *Phyllomedusa.*

Description.—$N = 1\,\delta$. Snout-vent length 45.7 mm; tibia length 22.4 mm, 49.0 percent of snout-vent length; foot length 19.0 mm, 41.6 percent of snout-vent length; head length 15.6 mm, 34.1 percent of snout-vent length; head width 14.9 mm, 32.4 percent of snout-vent length; interorbital distance 4.6 mm, 30.8 percent of head width; width of eyelid 4.7 mm, 31.5 percent of head width; diameter of eye 5.0 mm; diameter of tympanum 3.0 mm, 60 percent of diameter of eye.

Head as wide as body; snout short, truncate in dorsal and lateral profiles; nostrils at tip of snout, not protuberant; internarial region slightly depressed; canthus rounded; loreal region barely concave; lips rounded; interorbital region slightly convex; eyes large, protuberant; parotoid region rounded extending to point above axilla; supratympanic fold diffuse, barely covering upper edge of tympanum, becoming thin and flap-like posterior to tympanum, extending ventrally to angle of jaw; tympanum round, distinct, separated from eye by distance equal to about one-third diameter of tympanum.

Axillary membrane absent; upper arm slender; forearm moderately robust bearing ventrolateral ulnar fold extending from elbow to disc of fourth finger; fingers moderately long, not webbed, bearing small round discs; diameter of disc on third finger 1.9 mm; length of fingers from shortest to longest 1-2-4-3; subarticular tubercles small, conical; supernumerary tubercles small, conical, present on proximal segments; palmar tubercle single, diffuse; prepollex rounded, bearing horny nuptial excrescence. Hind limbs moderately slender; outer tarsal fold extending from blunt calcar to disc of fifth toe; inner tarsal fold extending full length of tarsus; inner metatarsal tubercle low, flat, elliptical, not visible from above; outer metatarsal tubercle absent; toes moderately short, not webbed, bearing small discs subarticular tubercles small, conical, except proximal tubercle on fourth toe, which is much larger than others; supernumerary tubercles small, conical, present on proximal segments; length of toes from shortest to longest 1-2-3-5-4.

Anal opening directed posteriorly at mid-level of thighs, surrounded by small tubercles, bordered above by thin transverse dermal fold and laterally by one or two large granules; skin on throat, chest, belly, flanks and proximal ventral surfaces of shanks finely granular; skin on other surfaces smooth. Tongue broadly lanceolate, free posteriorly for about one-third of its length; prevomerine teeth 1-2, widely separated at level of anterior edges of small elliptical choanae; vocal slit short, extending from posterolateral corner of tongue to angle of jaw; vocal sac single, median, subgular.

Coloration (in preservative): Dorsal surfaces of head, body, forelimb, proximal half of fourth finger, hind limb, and fourth and fifth toes dull dark blue. Flanks, hidden surfaces of limbs, dorsal surfaces of fingers 1-3 and toes 1-3, and ventral surfaces of limbs brownish-purple; throat and belly creamy-tan. Large cream spots on hidden surfaces—one each on dorsal surface of upper arm, groin, anterior and posterior surfaces of thighs and inner surface of shank; cream-tipped granules on flanks and around anus, tarsal, and supra-anal stripes white.

Coloration (in life): Dorsum green; flanks dark purple with white granules; groin, hands, feet, ventral and hidden surfaces of limbs purple with large bright orange spots; belly pinkish-white. Ulnar, tarsal, and supra-anal stripes cream; iris dull greenish-gray with fine black reticulations; palpebrum unpigmented.

Etymology.—The specific name *perinesos* is Greek meaning edged with purple, here used in reference to the purple color of the flanks and hidden surfaces of the limbs.

Remarks.—The single known specimen was perched on the leaf of a bush in disturbed montane rainforest at 2200 h. No standing water was found nearby, but within 100 m were two small rivulets along which *Centrolenella* were calling. The type locality is at the south edge of the Papallacta-Lago Agrio road about 300 m west of the bridge across the Río Salado and approximately 1 km up the Río Salado from its confluence with the Río Coca. The valley of the Río Salado at this point is narrow but level at an elevation of 1400 m. Some cultivation exists in the valley, which otherwise supports few large trees; apparently the valley is flooded periodically. Mountains rise steeply on either side of the valley and support a dense montane rainforest having many epiphytes and tree ferns.

The only other species of *Phyllomedusa* collected in this area is *P. buckleyi* Boulenger, which has been found in the montane rainforest between 1120 and 1740 m. *Phyllomedusa buckleyi* differs noticeably from *P. perinesos* by having uniform orange flanks and hidden surfaces of the limbs, and a silver iris. *Phyllomedusa perinesos* is structurally like *P. buckleyi* and evidently belongs to the group of species (*buckleyi*, *lemur*, and *medinae*) inhabiting montane slopes in lower Central America and northwestern South America.

Many individuals of various species of *Phyllomedusa* have been observed to assume a defensive posture of arching the back, bending the head downward, pressing the hind limbs against the flanks, and tucking the hands beneath the chin. This posture was assumed by the holotype immediately when it was picked off of the bush. All subsequent handling and exposure to light resulted in the same posture.

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