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TWO NEW ANURAN AMPHIBIANS FROM MEXICO

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THE two species of frogs described herein are a part of the collection made by Dr. Hobart M. Smith in Mexico during 1938 and 1939 for the United States National Museum. These novelties were called to my attention by Dr. Smith, who requested that I describe the forms. The drawings of the types were made by Walter Yost; those of the tadpole of the *Hyla* by Hazel Watson.

Genus SYRRHOPHUS Cope

SYRRHOPHUS SMITHI, new species

PLATE 1

Type.—U.S.N.M. No. 108594; 15 miles west of Galeana, Nuevo León, Mexico; elevation 5,200 feet, October 13, 1939. H. M. Smith collector.

Paratype.—EHT-HMS No. 23067, topotype.

Diagnosis.—A large member of the genus (known maximum size 33 mm.); width of an eyelid nearly four-fifths the interorbital distance; diameter of eye equals its distance from anterior edge of nostril; a long (6.2 mm.) lumbar gland scarcely discernible except for pores seen under lens; diameter of tympanum a little more than half of eye diameter; tibiotarsal articulation reaches to tympanum; heels touch but do not overlap; tip of digits somewhat thickened, blunt, lacking a terminal groove, not wider than digits; an outer palmar tubercle present; dorsal and ventral surfaces absolutely smooth; a few granules on anterior part of sides; ash gray with black flecking above; white below.

Description of the type.—Head a little narrower than body, its width (11.2 mm.) about equal to its length (11.25 mm.); canthal region rounding, the lores sloping broadly to lip, the region behind nostril slightly concave; snout oval, the tip broadly rounded; eye length (4 mm.) less than length of snout (5.1 mm.), reaching anterior edge of nostril; nostril small, contained in distance to eye four times; tympanum subcircular, slightly higher than long, its diameter (2.3 mm.) more than one-half of the eye (4 mm.), separated from eye by a distance equal to more than half its diameter (1.2 mm.).

Tongue rather thick, somewhat pyriform, not or but slightly nicked behind, free for about half its length, somewhat papillate; choanae large, nearly lateral, not concealed by jaw when seen from below; no vomerine teeth.

Arm moderately long, when extended the wrist reaches beyond snout; first finger as long as second, both shorter than fourth; three palmar tubercles, outer small, conical, median largest, oval, inner as large as subarticular tubercles; slight swellings under the distal joints; supernumerary tubercles large; five supernumerary tubercles on palm, and some smaller granules at base of fingers; leg rather short; the heel reaches to tympanum, the inner metatarsal tubercle does not quite reach tip of snout; small inner metatarsal tubercle, only little larger than subarticular tubercles; outer metatarsal tubercle a little more than half as large as inner; subarticular tubercles large, very salient, the tips pointed forward; supernumerary tubercles present; those on the third and fourth toes high, compressed; about 13 tubercles of varying size on sole; free part of fourth toe twice that of the fifth; no trace of tarsal folds or tubercles. No trace of web.

Skin above, quite smooth; below, likewise smooth; a few granules evident on sides, encroaching slightly on abdomen; an abdominal disk faintly discernible, the posterior edge of which crosses posterior part of abdomen some distance in front of femurs; lumbar gland (discernible only by the enlarged pores visible under a lens or by the cream-white exudate) about 6.2 mm. long, and about one-third as wide; it does not reach groin; vocal sacs in male?; slight suggestion of flattened tubercles on eyelid. Under side of femur with longitudinal grooves, between which there is some granulation; granulation on posterior face of femur more distinct.

Color, freshly preserved.—Ash gray with numerous indefinite darker gray, blackish, or brownish flecks; a larger blackish-brown spot on the gland, with some minute light flecks; limbs lighter than body, with indefinite brownish bars on femur, more pronounced bars on tibia; feet dimly barred; a tiny light spot between orbits, tympanum brownish; a darker loreal stripe; edge of lip much lighter than lores; entire ventral surfaces white with a very sparse peppering of darker (visible only under the lens).

Measurements (in mm.).—Snout to vent, 33; snout to angle of mouth, 7.6; snout, 5.1; eye diameter, 4; tympanum, 2.3; head width, 11.2; head length, 11.25; arm, 20.2; leg, 45; tibia, 14; foot, 21.

Remarks.—The paratype is a very young specimen having the mode of coloration somewhat different. The general coloration is blackish brown, with the minute grayish-white flecks a little more prominent on the sides. A row of white flecks is present along edges of lips, while the light flecks and spots on the arms are more pronounced, the light predominating. On the limbs the whitish-cream coloration covers most of the anterior face of the femur and a region on the dorsal surface of the femurs. The banding is not pronounced on the postero-dorsal face of femur and tibia. Numerous small cream spots are present on chin, breast, and abdomen, with a fine peppering of dark pigment.

This species appears to be most closely related to the very much smaller *Syrrhophus guttilatus* (Cope) (type locality, Guanajuato). It differs apparently in having shorter legs and longer arms and a totally different coloration (that species being brown with whitish spots, the limbs banded with rufous).

The specimens were collected 15 miles west of Galeana; elevation 5,200 feet. They were found in semiarid terrain, under a rock. The vegetation is of low shrub, cactus, and agaves; no grass cover is present in the type locality.

The species is named for its discoverer, Dr. Hobart M. Smith.

Genus *HYLA* Laurenti

HYLA DENDROSCARTA, new species

PLATES 2, 3

Type.—U.S.N.M. No. 108679 collected at Cuautlapa, Veracruz, January 1, 1939, by Dr. Hobart M. Smith.

Paratypes.—U.S.N.M. Nos. 108676–108678; 108680–108686. EHT–HMS Nos. 23236–23256, all topotypes.

Diagnosis.—A medium-sized tree frog (known maximum size 35 mm., snout to vent); fingers about one-third, toes about two-thirds, webbed; tympanum moderately distinct, covered with skin pigmented like the body, about half the diameter of the eye; tibiotarsal articulation reaches nostril; subarticular tubercle of outer finger bifid; small vocal sacs in males; vomerine teeth between choanae; gums at the base of the teeth and between the teeth heavily pigmented; tongue not free behind.

Description of the type.—Head rather large, a little broader than the body; eye moderate, its diameter (3.6 mm.) much less than length of snout (4.5 mm.); width of upper eyelid (3.4 mm.) much less than

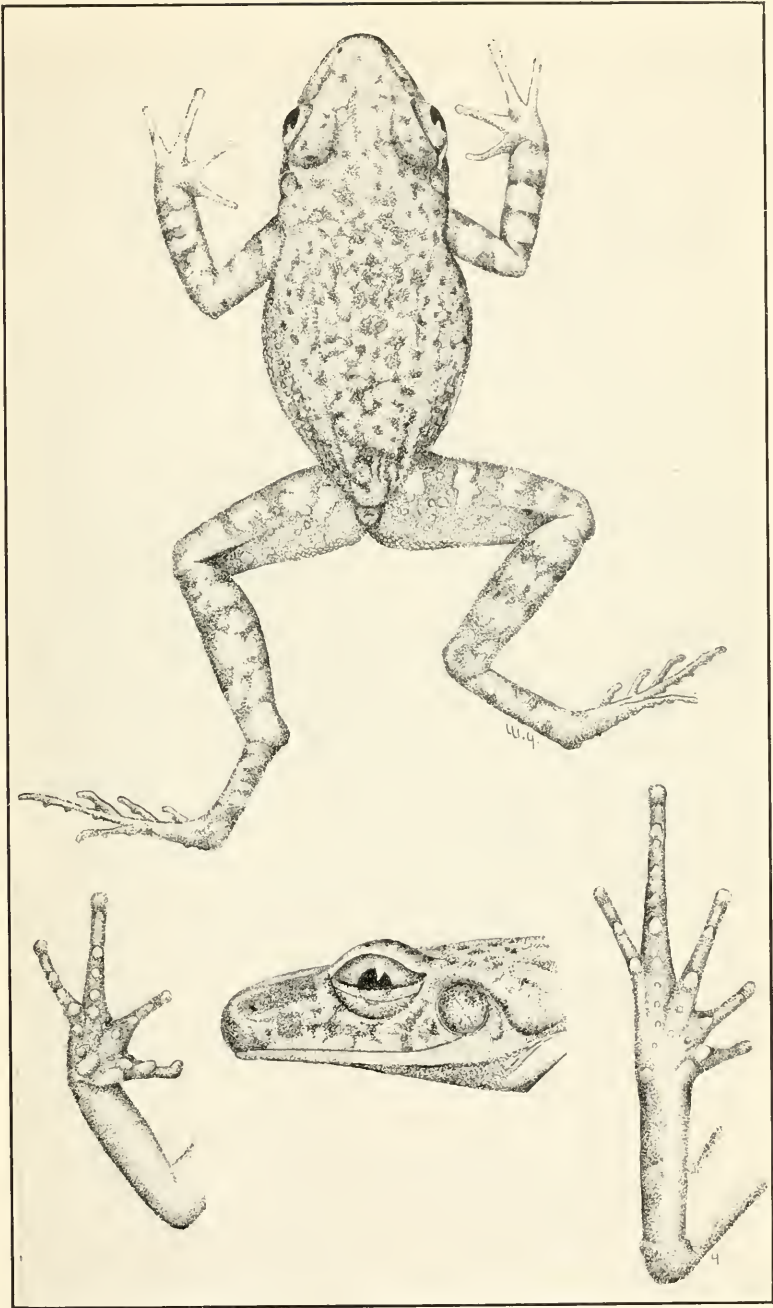
interorbital distance (4.4 mm.); diameter of tympanum (1.9 mm.) slightly larger than half diameter of orbit (3.6 mm.); canthus rostralis rounded; loreal region slightly concave behind nostril; snout rather pointed, the nostrils about 1 mm. from the tip.

Tongue subcircular, not or but slightly notched behind, the posterior part of tongue not free; choanae rather large; vomerine teeth in two groups lying between choanae but not reaching their anterior or posterior levels, the two groups of teeth separated from each other by a distance as great as their distance from choanae; gums about teeth pigmented, the pigment appearing to form short vertical lines between the teeth; the openings of the mucous glands form a continuous sinuous line about halfway between the anterior level of choanae and the front of mouth.

Hand brought forward the wrist reaches beyond tip of snout; fingers a little more than one-third webbed, the edges of the membrane more or less scalloped and continuing as a very narrow fringe to base of disks; terminal disks large, those of outer fingers (2 mm.) with a diameter greater than tympanum; subarticular tubercle of the fourth finger bifid; that on first finger larger than those on second and third; large elongate tubercle at base of first finger, larger than the palmar tubercle, which is more or less bifid; numerous smaller tubercles on palm, the skin between them more or less granular; a row of five tubercles under forearm; tibiotarsal articulation reaches to posterior edge of nostril; tarsal fold present, not especially well developed; third and fifth toes reach forward the same distance; toes little more than two-thirds webbed, the webs more or less scalloped on the edges and reaching forward to the disks as narrow margins; inner metatarsal tubercle large, flattened; outer small, farther forward than the anterior edge of the inner tubercle; several supernumerary tubercles on sole, the skin between them and the membrane between toes granular; terminal disks well developed but a little smaller than the disks of outer fingers; when limbs are placed at right angles to body the heels overlap (5 mm.); anal flap rather small; anus followed by a short narrow groove and radiating fluting.

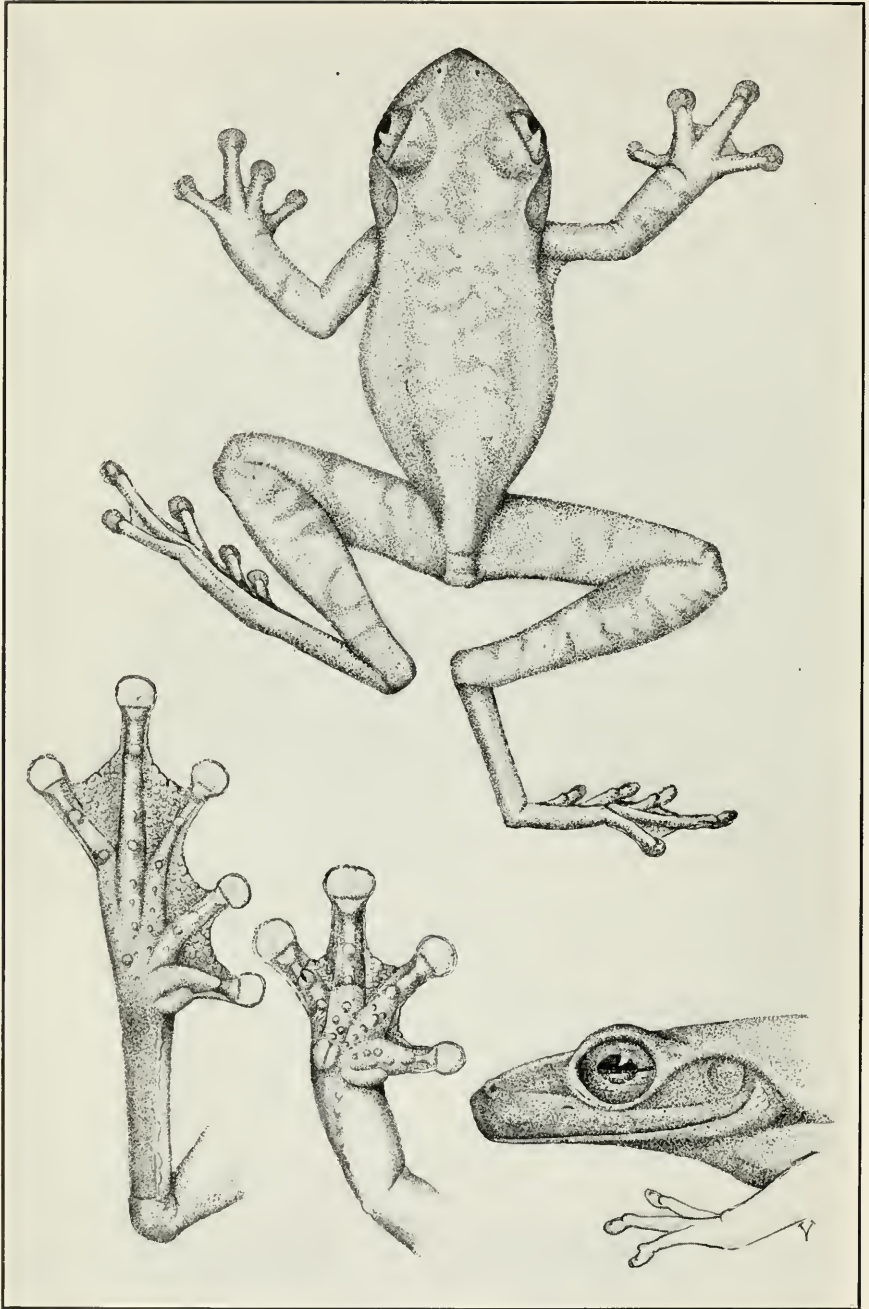
Skin of head minutely corrugated, of body practically smooth; chin and throat faintly granulate; breast, abdomen, under side of femur, and a slight area on the posterior face of femur with heavy granulation; a small tubercle on heel.

Color in alcohol.—Above, fawn color, with faint lavender coloration on head and some indefinite mottling on the back and limbs of the same color; below, uniform creamy white; under a lens the pigment is visible as minute dots; it is present on the ventral surface as a slight peppering, on anterior edge of lower jaw, and on under side of knee and foot; otherwise the venter is immaculate.



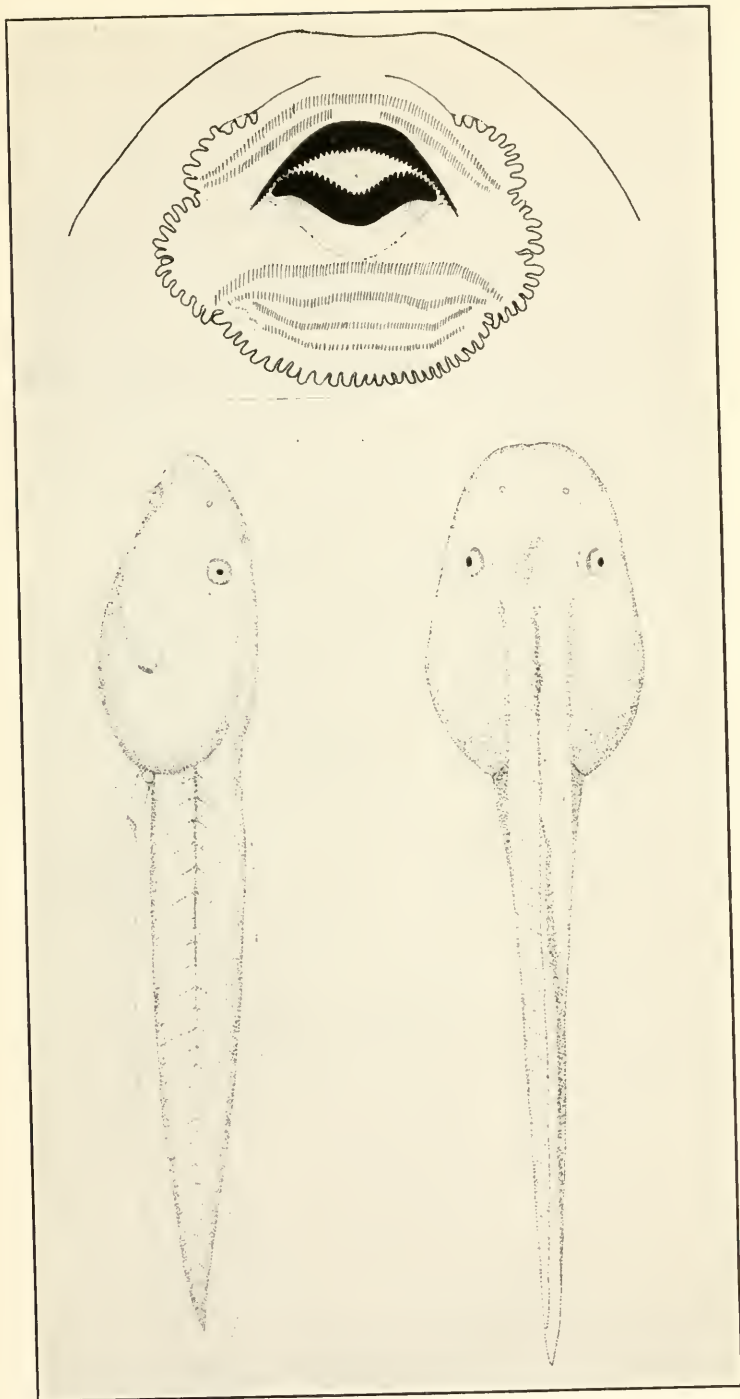
SYRRHOPHUS SMITHI, NEW SPECIES.

Type, U. S. N. M. No. 108594, from Galeana, Nuevo León. Upper figure, $\times 2$; three lower figures, $\times 3$.



HYLA DENDROSCARTA, NEW SPECIES.

Type, U. S. N. M. No. 108679, from Cuautlapa, Veracruz. Upper figure, $\times 2$; three lower figures, $\times 3$.



HYLA DENDROSCARTA, NEW SPECIES.

Larva. Topotypic paratype, EHT-HMS No. 23236. Upper figure, mouth, $\times 20$; lower figures, lateral and dorsal views, $\times 4$.

Measurements (in mm.).—Snout to vent, 35; width of head, 12.8; length of head, 12.1; arm, 20.2; leg, 57; tibia, 19.2; foot, 24.8.

Description of the tadpole.—Head and body in profile feebly arched, the dorsal region rather flattened; outline of the body seen from above is broadly ovoid, slightly truncate anteriorly. The mouth is ventral; lips moderately narrow, their borders papillate; dental formula of anterior lip 1+1+1; of posterior lip 1+1+1+1; upper beak broader than lower, both with distinct serrations on edge; upper beak crescentic, lower, broadly V-shaped.

Nostrils dorsal, nearly midway between eye and tip of snout; spiracle sinistral, tubular; vent sinistral, forming a short tube.

Tail very long with about 27 segments discernible; tip pointed; fin arising some distance back from base of tail on dorsal surface, and reaching body on under edge of tail, widest near the tip; eyes blackish.

Color of tadpole in life.—Specimens are grayish flesh color in life; under the lens there is discernible a peppering of dark pigment over anterior dorsal part of head and body; on the tail the pigment is extremely sparse, a few dots being visible near the base of the fin.

Remarks.—The specimens were obtained from bromeliad plants in trees in the vicinity of the village of Cuautlapa. The eggs are laid in the plants, and the young pass through a fairly typical larval stage.

I found one lot of freshly laid eggs, which I presumed belonged to this species, on August 18, 1939. They were in a plant only about 6 feet from the ground on a stump. In other plants in the same locality numerous tadpoles were taken, some having well-developed limb buds. In specimens collected in the middle of September one was found transformed.

Many adults in life are generally creamy yellow above and lemon yellow on the posterior part of venter.

The openings of the vocal sacs are posterior and relatively very small, the throat shows no typical wrinkling.

The relationship may be with the small bromeliad frog *Hyla melanomma* (in press) from Guerrero. The species differs from all other known Mexican hylas in the pigmentation of the gums.