



A New Frog (Leptodactylidae: Eleutherodactylus) from the Pacific Lowlands of Ecuador

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A New Frog (Leptodactylidae: *Eleutherodactylus*) from the Pacific Lowlands of Ecuador

JOHN D. LYNCH

Eleutherodactylus caprifer new species is named from Esmeraldas and Pichincha provinces of Ecuador. Superficially it resembles species of the *E. fitzingeri* group but differs in having areolate skin on the venter.

IN 1970, while gathering data on vertical distributions of *Eleutherodactylus* on the Pacific versant of the Ecuadorian Andes, I collected a series of a strikingly-patterned frog east of Santa Domingo de los Colorados in Pichincha, Ecuador. The species exhibits some traits suggestive of membership in the *E. fitzingeri* group (long first finger, prominent tympanum); however, in having areolate skin on the venter it is like frogs of the *E. unistrigatus* group. The combination of these three characteristics recalls the condition in the eastern Brazilian frogs of the *E. ramagii* group [*E. paulodutraei* Bokermann and *E. ramagii* (Boulenger)]. The new species is readily distinguished from the Brazilian species in size (nearly twice as large), in having a longer head (longer than broad), and in pattern and color. In reference to its pattern, the new species is named,

Eleutherodactylus caprifer new species

Holotype.—KU 131589, an adult male collected at Las Palmas, Provincia Pichincha, Ecuador, 920 m, on 8 August 1970 by John D. Lynch.

Paratypes.—KU 131590-602, collected syntopically with holotype.

Diagnosis.—1) skin of dorsum smooth, that of venter coarsely areolate; no dorsolateral folds; 2) tympanum prominent, $\frac{1}{4}$ – $\frac{1}{3}$ eye length; 3) snout acuminate in dorsal view, truncate in lateral profile, short; 4) upper eyelid slightly broader than IOD (interorbital distance); no cranial crests; 5) prevomerine odontophores triangular in outline; 6) males with subgular vocal sac and vocal slits; 7) first finger longer than second finger; all fingers bearing broad discs, pads of outer fingers larger than those of inner fingers; 8) fingers bearing narrow lateral

fringes; 9) no ulnar tubercles; 10) no tubercles on heel or tarsus; slight inner tarsal fold present; 11) two metatarsal tubercles, inner elongate, four times size of outer; no supernumerary plantar tubercles; 12) toes bearing keel-like lateral fringes; no webbing; toe pads smaller than those of outer fingers; 13) tan with numerous thin brown chevrons; limb bars numerous, thin; thick brown canthal, supratympanic, dorsolateral stripe; posterior thigh brown flecked with cream; venter white, throat creamy yellow with a pair of brown longitudinal stripes; 14) adults moderate-sized, male 23.4–30.4 mm, female 40.5–43.8 mm SVL (snout-vent length).

Eleutherodactylus caprifer resembles *E. paulodutrai* and *E. ramagii* in having a long thumb and areolate skin on the venter. Both of the latter species have oblique (slanted) prevomerine odontophores (rather than triangular in outline), shorter heads, large pads on all digits, and relatively larger outer metatarsal tubercles than does *E. caprifer*.

Except for having areolate skin on the venter, *E. caprifer* would be viewed as a not especially noteworthy member of the *E. fitzingeri* group. The elongate inner metatarsal tubercle, relatively long limbs, size of digital pads, head shape, prominent tympanum, and shape of prevomerine odontophores support assignment to the *E. fitzingeri* group. *Eleutherodactylus caprifer* differs from all other species of the group in having areolate skin on the venter and smooth skin on the dorsum. I am aware of no other *Eleutherodactylus* that could be considered closely related.

Description.—Head as broad as body, longer than wide; head width 33.1–36.3 (\bar{x} = 34.6, N = 12) % of SVL; snout acuminate in dorsal view, weakly protruding to truncate in lateral profile; snout short, E-N (eye-nostril) 77.4–85.3 (\bar{x} = 80.3, N = 6) % eye length in males, 82.5–90.7 (\bar{x} = 87.2, N = 5) in females; nostrils not protuberant, directed laterally; canthus rostralis sharp, straight to weakly concave; loreal region weakly concave, sloping abruptly to lips; lips not flared; interorbital space flat, no cranial crests; upper eyelid with 96.3–113.3 (\bar{x} = 103.5, N = 11) % IOD; temporal region nearly vertical; supratympanic fold thick, concealing upper edge of tympanum; tympanum prominent, round in males, higher than long in females, its length 23.5–30.0 (\bar{x} = 26.8, N = 7) % eye length in males, 23.1–35.1 (\bar{x} = 28.3, N = 5) in females; tympanum separated from eye by 1½ times tympanum length in males, 2½ times

tympanum length in females; choanae moderate-sized, longer than wide, not concealed by palatal shelf of maxillary arch; prevomerine odontophores prominent, posteromedial to choanae, triangular in outline, each larger than a choana, bearing transverse row of 5–7 teeth across posterior border; odontophores separated by distance equal width of an odontophore; tongue longer than wide, posterior edge notched, posterior ¼–½ not adherent to floor of mouth; males with external, subgular vocal sac and vocal slits at corner of floor of mouth.

Skin of dorsum, flanks, and limbs smooth; no dorsolateral folds; skin of venter coarsely areolate, discoidal folds prominent; anal opening not enclosed in sheath; some warts posterior and posterolateral to venter; no ulnar tubercles or folds; palmar tubercle bifid, larger than thenar tubercle; in most individuals thenar tubercle is markedly conical, in others thenar tubercle oval; no supernumerary palmar tubercles; fingers bearing discs (broader than long) on pads; pads of outer fingers markedly broader than those of inner fingers; pads apically rounded; thumb longer than second finger.

No enlarged tubercles on knee, heel or tarsus; in some specimens a series of small tubercles present along outer edge of tarsus; low, indistinct inner tarsal fold along distal one-half of tarsus; inner metatarsal tubercle elongate, 3 times as long as wide, not compressed, 4 times size of low, elongate outer metatarsal tubercle; no supernumerary plantar tubercles; subarticular tubercles low, flat, longer than wide; toes bearing keel-like lateral fringes, no webbing; all toes bearing discs (broader than long) on apically rounded pads; toe pads smaller than those of fingers; heels overlap when legs are flexed at right angles to body; heel of adpressed hind-limb reaches vicinity of nostril; shank 48.5–57.7 (\bar{x} = 54.2, N = 12) % SVL.

In preservative, ground color tan to pale brown; dorsum bearing numerous thin brown chevrons, interorbital line; dark brown stripe from nostril through eye to groin; flanks darker than dorsum, bearing thin oblique bars; no distinct labial bars; limbs barred with narrow bars, those on shank oblique; every fourth limb bar twice as thick as other three (Fig. 1); posterior thigh brown, flecked with cream; anal triangle brown; venter white with creamy yellow wash; throat darker yellow with pair of longitudinal brown stripes; stripes darkest in females.

In life, *E. caprifer* was described as follows in

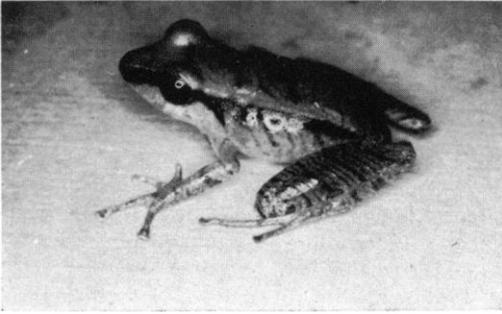


Fig. 1. *Eleutherodactylus caprifer* new species, KU 131591, immature female, 31.7 mm SVL.

my field notes: "Iris bright copper, darker below, with dark brown horizontal streak. Concealed thigh and groin dull brown, former with some pale pea-green flecking; throat of male fleshy pink, venter off-white as in female. Throat of female bears pair of dull gray longitudinal stripes. Dorsum of a few individuals nearly pale orange; limbs of female brown with or without faint green wash. When caught, some males had green wash to yellow body; concealed thigh nearly yellow."

Measurements of holotype in mm.—SVL 27.5; shank 15.4; head width 9.6; head length 10.8; upper eyelid width 3.0; IOD 3.0; tympanum length 1.2; eye length 4.0; E-N 3.1.

Etymology.—*Caprion* (vulgar Latin) from which the French and English chevron are derived and *fero*, to bear; in reference to the pattern of chevrons on the dorsum.

Natural history.—During the evening of 8 August 1970 I collected 14 specimens of low vegetation along a small stream approximately 100 m NW of the junction of highways 28 and 30 (Chiriboga and Alog roads to Santa Domingo de los Colorados). The frogs were all within 1 m of the stream perched on herbs (within 0.3 m of the ground). Males were calling and one

amplectant pair (KU 131589-90) was collected. The call is a series of 8–10 high pitched piercing chirps. The largest immature female (KU 131600) is 38.0 mm, only slightly smaller than the smallest gravid female (KU 131598, 40.5 mm SVL).

I am aware of only one other specimen of *E. caprifer* (BM 98.3.1.29, Cachabé, Prov. Esmeraldas, Ecuador). The specimen was misidentified by Boulenger, whose identification as *E. conspicillatus* was reported by Cochran and Goin (1970: 380). Apparently *E. caprifer* has special habitat requirements seldom visited by collectors. The extensive collections of amphibians secured in the Pacific lowlands of Ecuador by the late James A. Peters and more recently by William E. Duellman do not include *E. caprifer*.

Charles W. Myers secured two additional specimens of *E. caprifer* in chochoan Colombia (Amer. Mus. Nat. Hist. 88967, Departamento Cauca, Quebrada Guanguí, 100–200 m; and AMNH 88966, Departamento Valle, ca. 13 km W Dagua, Rio Anchicayá drainage, 820 m) and kindly permitted me to report them here.

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