Catalogue of American Amphibians and Reptiles.

DUELLMAN, WILLIAM E. 1968. *Smilisca phaeota.*

Smilisca phaeota (Cope)
Central American smilisca

Hyla phaeota Cope, 1862:358. Type-locality, "Turbo, New Granada [= Intendencia de Chocó, Colombia]," elevation sea level. Holotype, U. S. Natl. Mus. 4347, adult male collected by J. Cassin.

Hyla labialis W. Peters, 1863:463. Type-locality, "Umgegend von Bogotá" [= vicinity of Bogotá, Cundinamarca, Colombia]. Holotype, Zoologisches Museum Berlin, 4913, collector unknown.

Hyla baudinii dolomedes Barbour, 1923:11. Type-locality, "Río Esnápe, Sambú Valley," Darién Province, Panamá. Holotype, Museum Comparative Zoology 8539, juvenile collected by Thomas Barbour and Winthrop S. Brooks.

Hyla phaeota phaeota: H. M. Smith, 1953:152. First use of trinomial.

Smilisca phaeota: Starrett, 1960:303. Transfer of *Hyla phaeota* Cope to *Smilisca.*

• CONTENT. No subspecies are recognized.

• DEFINITION AND DIAGNOSIS. A large *Smilisca*—males attain snout–vent lengths of 65 mm, and females reach maximum snout–vent lengths of 78 mm. The snout is not noticeably short and is rounded in dorsal profile. The hind limbs are long; the tibia length usually is more than 53% of the snout–vent length. The diameter of the tympanum usually is more than two-thirds that of the eye. The tarsal fold is well developed and extends the full length of the tarsus. The inner metatarsal tubercle is moderately large, low, flat, and elliptical. The fingers are about one-half webbed, and the toes are four-fifths webbed. The skull is as long as wide and has large, straight-edged supraorbital flanges extending posterolaterally, but lacks a frontoparietal fontanelle. The squamosal is large but not in contact with the maxillary. In life the venter is creamy white; the dorsum is tan or green with dark brown or dark green blotches. A dark interorbital bar usually is present. The hind limbs are marked by dark transverse bands. The loreal region is pale green, bordered above by a narrow brown stripe that extends from the nostril to the eye. The upper lip is silvery white. A broad dark brown or black mark extends posteriorly from the orbit, encompassing the tympanum, to a point above the insertion of the forelimb. The flanks are pale green or tan marked with a fine brown or black venation. The anterior and posterior surfaces of the thighs are pale brown with small cream spots on the posterior surfaces. The iris is bronze, darkest medially, with fine black reticulations. In breeding males the throat is dark gray.

Tadpoles have tails slightly less than twice the length of the body. The dorsal surface of the body is pale brown; a cream, crescent-shaped mark is present on the posterolateral edge of the body. The caudal musculature is pale creamy tan with brown spots. The mouth is anteroventral. The median part of the upper lip is bare; the rest of the mouth is bordered by a single row of papillae.

The presence of a silver white labial stripe and a dark postorbital mark distinguishes *S. phaeota* from all other large Middle American hylids, except *S. cyanosticta.* The latter differs from *S. phaeota* by having blue spots on the flanks and posterior surfaces of the thighs, and in having a skull with a large frontoparietal fontanelle and narrow supraorbital flanges. *Smilisca baudinii* is distinguished from *S. phaeota* in that the former has a shorter, more truncate snout and has vertical bars on the upper lip. The combination of one row of labial papillae and dorsal fin extending onto the body distinguishes the tadpoles of *S. phaeota* from other species of *Smilisca* having tadpoles with short tails and only one row of labial papillae. Of these species the tadpoles of *S. cyanosticta* have only one row of labial papillae, but in that species the dorsal fin does not extend onto the body.

• DESCRIPTIONS. Taylor (1952) provided a good description of specimens from Costa Rica. Duellman and Trueb (1966) gave a detailed account of the species from throughout the range, including descriptions of adults, eggs, tadpoles, breeding call, and cranial osteology. The breeding call consists of one or two moderately short notes—"wauk." The notes, which have durations of 0.33 to 0.42 seconds, are given at intervals of about 20 seconds to several minutes. The notes have 100 to 130 pulses per second and a dominant frequency of 330 to 495 cycles per second.

• ILLUSTRATIONS. Black and white illustrations of adults were given by Taylor (1952) and Duellman and Trueb (1966); the latter also illustrated the hands, feet, skull, and tadpoles, and gave an audiospectrogram. The illustration given by Breder (1946, pl. 55) labelled "*Hyla phaeota*" actually is a photograph of *Smilisca sila.*

• DISTRIBUTION. *Smilisca phaeota* inhabits humid evergreen forests from northeastern Nicaragua southeastward on the Caribbean lowlands to northern Colombia. The species occurs also on the Pacific lowlands of the Golfo Dulce region of southeastern Costa Rica and the Pacific slopes of central

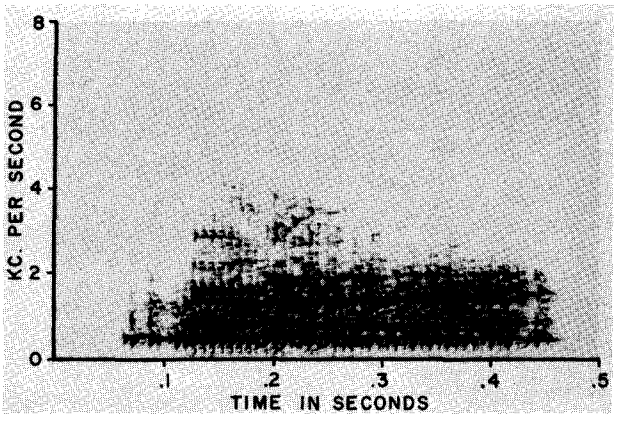
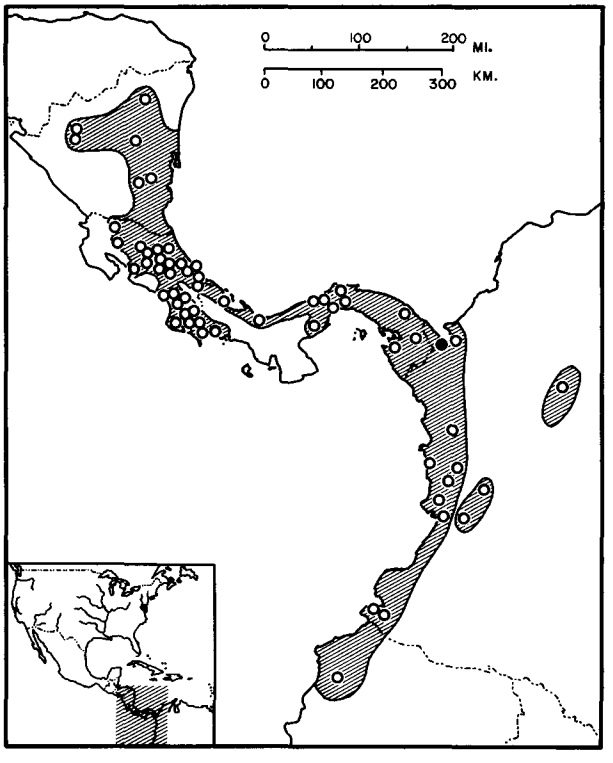


FIGURE. Audiospectrogram (narrow band, 40 cycles per second) of the mating call of *Smilisca phaeota*: Puntarenas Province, Costa Rica, 10 April 1961, air 25°C. (Univ. Kansas Mus. Nat. Hist. Tape No. 79; specimen No. 64293.)



MAP. The solid symbol marks the type-locality; hollow symbols indicate other known localities. The estimated range is shaded.

Panamá eastward to Colombia and thence southward on the Pacific lowlands to west-central Ecuador. It also occurs in the Cauca and Magdalena valleys in Colombia. Although the species has been found at elevations of nearly 1000 meters, the majority of records are from the lowlands. The range on the Pacific lowlands is discontinuous, for the species is unknown on the semi-arid lowlands of Guanacaste Province, Costa Rica, and from the Azuero Peninsula and savannas on the Pacific lowlands of Panamá.

• FOSSIL RECORD. None.

• PERTINENT LITERATURE. Duellman and Trueb (1966) in their monograph of the genus *Smilisca* summarized the literature pertaining to the taxonomy, variation, life history, and distribution of the species.

• REMARKS. Peters (1863) named *Hyla labialis*, but in 1874 regarded *H. labialis* as a synonym of *H. phaeota* Cope (1862).

Barbour (1923) named *Hyla baudini dolomedes* from the Río Esnápe, Darién Province, Panamá. Dunn (1931) showed that the type was a juvenile *H. phaeota*.

Smith (1953) named *Hyla phaeota cyanosticta* from Piedras Negras, el Petén, Guatemala. Duellman and Trueb (1966) demonstrated that on the basis of osteological and ethological evidence *cyanosticta* is not conspecific with *phaeota*.

Duellman and Trueb (1966) pointed out a striking geographic gradient in size in this species. Northern samples of breeding males (Bonanza, Nicaragua) have an average snout–vent length of 43.7 mm. Southward on the Caribbean lowlands to the Panama Canal Zone the average increases to 56.5 mm and remains nearly constant southward into Colombia. In the disjunct population in the Golfo Dulce region on the Pacific lowlands of Costa Rica the average snout–vent length in breeding males is 61.4 mm.

The vernacular name, Central American smilisca, is proposed because this frog is virtually ubiquitous in the wet lowlands of Central America.

• ETYMOLOGY. The name *phaeota* apparently refers to the dark markings on the dorsum and is derived from the Greek *Phaios* meaning dark or dusky.

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