

Catalogue of American Amphibians and Reptiles.

SCHWARTZ, ALBERT. 1979. *Eleutherodactylus audanti*.

Eleutherodactylus audanti Cochran

Eleutherodactylus audanti Cochran, 1934:164. Type-locality, "Peak La Selle [Département de l'Ouest, Haiti]." Holotype, Mus. Comp. Zool., Harvard Univ. 19704, gravid female, no collection date, collected by André Audant (not examined by author).

• CONTENT. Three subspecies are recognized: *audanti*, *melatrigonum*, and *notidodes*.

• DEFINITION. A species of the *auriculatus* group of Antillean *Eleutherodactylus* characterized by the combination of small size (males to 22 mm, females to 25 mm snout-vent length), dorsum reddish brown, tan, yellowish tan, pale orange, pale brown, buff, or even pea-green, and without distinctive markings except for a dark interocular bar and remnants of a scapular X; a dark and sharply distinct postanal triangle and a prominent dark crural bar, often outlined by pale margins; venter gray, often spotted with darker gray; tibia/snout-vent ratio ($\times 100$) 40.4–49.2 in males, 38.6–47.1 in females; some individuals with an asymmetrical orange to red dorsal blotching which overlies and obscures the faint dark dorsal pattern.

• DESCRIPTIONS. Structural details are given by Cochran (1934); Shreve and Williams (1963) gave comments on the dorsal pattern and variation and made comparisons with *E. abbotti*, with which they considered *E. audanti* conspecific. Schwartz (1966) compared *E. abbotti* and *E. audanti* and gave much detailed information on pattern and proportions which distinguish the two species. Cochran (1941:65–69) repeated the details of the original description. Goin (1959) gave counts of maxillary teeth.

• ILLUSTRATIONS. Cochran (1941:66) has a drawing of the dorsal pattern, and lateral view of the head, ventral views of the hand and foot, and interior view of the buccal cavity. Schwartz (1966:373) has a drawing of the dorsal view. Both illustrations are of the nominate subspecies.

• DISTRIBUTION. Schwartz and Thomas (1975:16–17) gave the distribution of the species as: the Massif de la Hotte, and Massif de la Selle, and the Montagne Noire in Haiti; the Dominican portion of the Massif de la Selle between Los Arroyos and El Aguacate in the República Dominicana (*audanti*); also the Cordillera Central north of Constanza and in the Valle de Culata (*melatrigonum*) and the Sierra de Neiba along the Dominico-Hai-

tian border in La Estrelleta and Independencia provinces (*notidodes*) in the República Dominicana. Schwartz, Thomas and Ober (1978) gave the first record for the Sierra de Barouco in the República Dominicana. The three subspecies are disjunct. Altitudinal distribution is between 3800 feet (1160 m; south of Castillon in the Massif de la Hotte) and 7200 feet (2200 m; north of Los Arroyos in the Massif de la Selle); elevational limits are set by the subspecies *audanti*.

Eleutherodactylus audanti is an upland frog, inhabiting highland hardwood forest edges, grasslands and pinewoods. It is rarely sympatric with *E. abbotti*; although the upper elevation of the latter appears to overlap broadly with lower elevation of *E. audanti*, only rarely is there actual extensive altitudinal overlap (see Schwartz, 1973).

• FOSSIL RECORD. None.

• PERTINENT LITERATURE. The descriptions by Cochran (1934, 1941), comments by Shreve and Williams (1963), detailed comparisons of *E. audanti* with *E. abbotti* (Schwartz, 1966), and mention of the distributions of the subspecies by Schwartz and Thomas (1975), and Schwartz, Thomas and Ober (1978) as well as altitudinal distributional details by Schwartz (1973) are the pertinent information on this species.

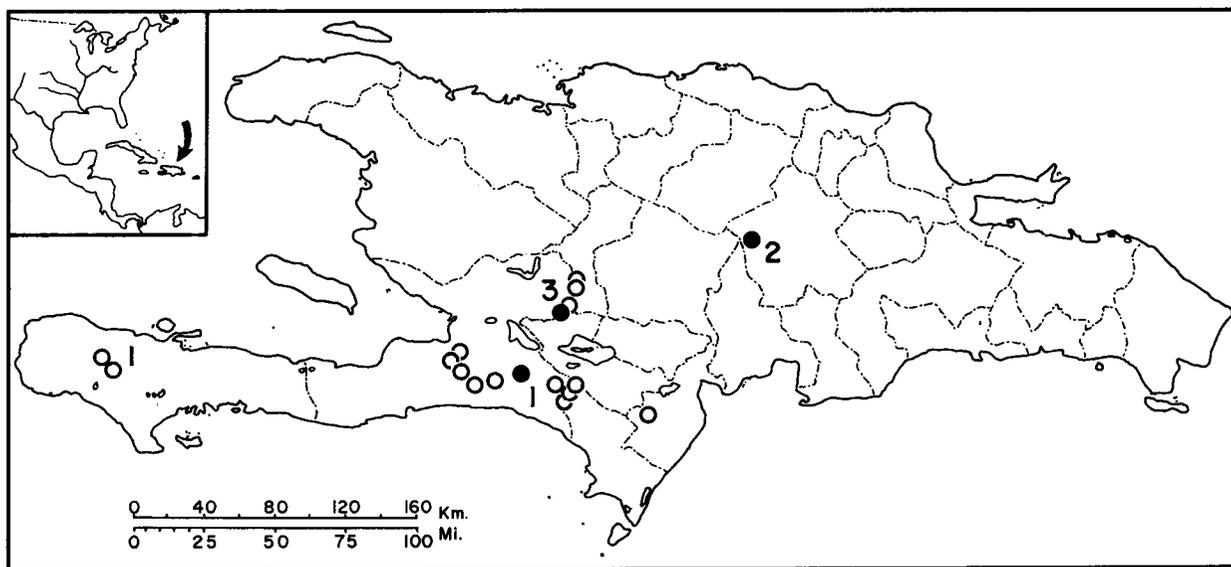
• REMARKS. Although Schwartz (1966) noted that the voices of *E. abbotti* and *E. audanti* are similar, this statement was corrected (Schwartz, 1969:106). The voice of *E. audanti* is a series of 15 to 20 metallic telegraphic chirps, without the interspersed "tuck-wheep" 's of *E. abbotti*.

During the day, *E. audanti* may be encountered under rocks and pieces of debris in mesic situations. Clutches of eggs accompanied by one or more adults were found 21 July in the Sierra de Neiba after very heavy rains. That the egg laying had been progressing for some time was demonstrated by the fact that some eggs were embryonated and hatched upon handling whereas others showed no signs of development.

• ETYMOLOGY. The trivial patronym is for M. André Audant who collected the type material; the subspecies names are *melatrigonum* from the Greek for "black" and "triangle" in reference to the dark postanal triangle, and *notidodes* from the Greek for "moisture" and "dweller" in allusion to the very mesic uplands of the Sierra de Neiba.

1. *Eleutherodactylus audanti audanti* Cochran

Eleutherodactylus audanti Cochran, 1934:164. See species synonymy.



MAP. Distribution of *Eleutherodactylus audanti* on Hispaniola. Solid circles mark type-localities; open circles indicate other localities.

Eleutherodactylus abbotti audanti: Shreve and Williams, 1963:320. *E. abbotti* and *E. audanti* considered conspecific. *Eleutherodactylus audanti audanti*: Schwartz, 1966:380. First use of trinomial.

• DEFINITION. A subspecies of *E. audanti* characterized by small size (males to 18 mm, females to 25 mm), and consequent smaller measurements in most body parts, shorter hindlimbs (tibia/snout-vent ratios $\times 100$ in males 40.8–46.8; $\bar{x} = 43.8$), a dark postanal triangle, thigh and crural bars outlined with pale color, and venter heavily pigmented with dark gray to black.

2. *Eleutherodactylus audanti melatrigonum* Schwartz

Eleutherodactylus audanti melatrigonum Schwartz, 1966:384. Type-locality, "7 km (4 miles) north of Constanza, La Vega Province, República Dominicana." Holotype, Mus. Comp. Zool., Harvard Univ. 43206, adult male collected 7 July 1963 by David C. Leber and Richard Thomas (examined by author).

• DEFINITION. A subspecies of *E. audanti* characterized (in males—females unknown) by moderate size (males to 20 mm), intermediate length of hindlimbs (tibia/snout-vent ratio $\times 100$, 40.9–47.4; $\bar{x} = 45.0$), hindlimb crossbars distinct and variously outlined in paler color, although never so boldly as in *E. a. audanti*, and pinkish belly with scattered dark chromatophores.

• REMARKS. Although the frogs of the Dominican Cordillera Central are well known, *E. a. melatrigonum* is known only from the type locality and the Valle de Culata, at elevations of about 5000 feet (1500 m).

3. *Eleutherodactylus audanti notidodes* Schwartz

Eleutherodactylus audanti notidodes Schwartz, 1966:380. Type-locality, "20 km (11.7 miles) southwest Hondo Valle, elevation 5950 ft., Independencia Province, República Dominicana." Holotype, Mus. Comp. Zool., Harvard Univ. 43204, an adult male collected 11 August 1963 by David C. Leber and Richard Thomas (examined by author).

• DEFINITION. A subspecies of *E. audanti* characterized (in males—females unknown) by large size (males to 22 mm), long hindlimbs (tibia/snout-vent length ratio $\times 100$, 40.4–49.2; $\bar{x} = 45.0$), hindlimb crossbars distinct but not prominently set off from

ground color by pale outlining, and little or no dark ventral pigmentation.

• REMARKS. *A. a. notidodes* is known only from the Sierra de Neiba between Elías Piña and Los Pinos on the road which parallels the Dominico-Haitian border; its altitudinal distribution is between 4400 feet and 6000 feet (1340–1830 m). The species is expected throughout the high elevations of this range as well as in the high and well-forested adjacent portions of the Haitian Montagnes du Trou-d'Eau.

COMMENT

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LITERATURE CITED

- Cochran, Doris M. 1934. Herpetological collections made in Hispaniola by the Utowana Expedition, 1934. Occas. Pap. Boston Soc. Natur. Hist. 8:163–188.
- 1941. The herpetology of Hispaniola. U.S. Nat. Mus. Bull. (177):vii + 398.
- Goin, Coleman J. 1959. Notes on the maxillary dentition of some frogs of the genera *Eleutherodactylus* and *Leptodactylus*. Herpetologica 15(3):134–136.
- Schwartz, Albert. 1966. The relationships of four small Hispaniolan *Eleutherodactylus* (Leptodactylidae). Bull. Mus. Comp. Zool. 133(8):371–399.
- 1969. The Antillean *Eleutherodactylus* of the *auriculatus* group. Stud. Fauna Curacao Caribbean Islands 30(114):99–115.
- 1973. Six new species of *Eleutherodactylus* (Anura, Leptodactylidae) from Hispaniola. J. Herpetol. 7(3):249–273.
- , and Richard Thomas. 1975. A check-list of West Indian amphibians and reptiles. Carnegie Mus. Natur. Hist. Spec. Publ. (1):1–216.
- , —, and Lewis D. Ober. 1978. First supplement to a check-list of West Indian amphibians and reptiles. Carnegie Mus. Natur. Hist. Spec. Publ. (5):1–35.
- Shreve, Benjamin, and Ernest E. Williams. 1963. The herpetology of the Port-au-Prince region and Gonave Island, Haiti. Part II. The frogs. Bull. Mus. Comp. Zool. 129(5):302–342.
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