

Catalogue of American Amphibians and Reptiles.

Bauer, A.M. and A.P. Russell. 1993. *Aristelliger lar*.

Aristelliger lar Cope

Aristelliger lar Cope, 1861 (1862):497. Type-locality, "near Jeremie, [Département de la Grand Anse] Hayti [Haiti]". Holotype, Museum of Comparative Zoology (MCZ) 3607 (formerly MCZ 1504), an adult female, collected by F. Weinland, collection date unknown (examined by authors).

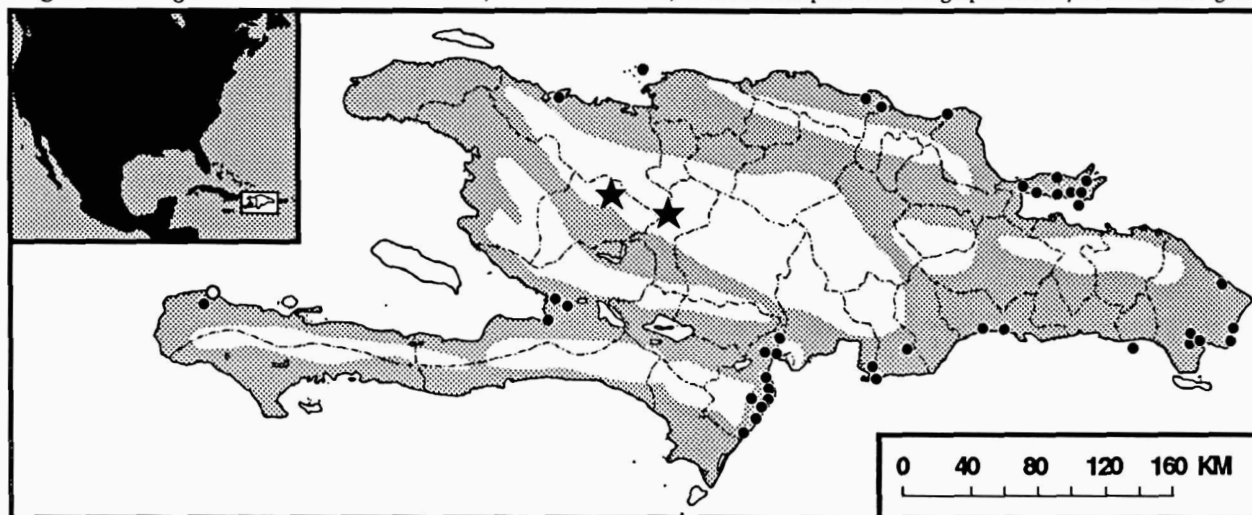
Aristelliger titan Hecht, 1951:5. Type-locality, "Pleistocene or sub-Recent, from Dairy Cave, St. Ann Parish, Jamaica, British West Indies." Holotype, American Museum of Natural History (AMNH) 7503 (complete left dentary), collected by H.E. Anthony, 1919-1920 (not examined by authors).

• **Content.** No subspecies are currently recognized.

• **Definition.** This species is a very large member of the genus *Aristelliger*. Males reach 135 mm SVL and females 111 mm SVL (Hecht, 1952; Schwartz and Henderson, 1991). Median postmentals



Figure. *Aristelliger lar* from 3.0 km east of Canoa, Barahona Province, Dominican Republic. Photograph courtesy of S. Blair Hedges.



Map. Distribution of *Aristelliger lar* on Hispaniola. The indicated range is approximate only. The species is probably more widespread at low elevation than indicated by known localities. The large open circle marks the type-locality, solid circles note other known records, and stars indicate fossil sites. Additional fossil sites for *A. titan* occur in Jamaica and are plotted on the generic map.

number 1-3, but instances of 2 and 3 are rare. The rostral is considerably wider than high. Lamellae number 14-17 on the 4th digit of the manus and 15-19 on the 4th digit of the pes. Small, asymmetrical adhesive plates occur adjacent to the claw only on digit one of the manus and pes.

The dorsal color pattern in adults develops from a series of pale dorsal rhomboids and a pair of prominent black scapular ocelli with white centers. The rhomboids are edged by darker scales and may be bisected by a more or less continuous dark middorsal stripe extending from the dark dorsum of the head to the sacrum. In juveniles the dorsal pattern is more striking and the rhomboids may be represented by more or less regular cross bands. Fading may result in a series of 5-6 indistinct dark transverse bars that separate squarish areas of distinctly lighter grey. The lateral surfaces are light brown or grey and are mottled by dark irregular marks. Often the dorsal pattern in large adults fades to an almost monochrome coloration similar to that on the lateral surfaces, although the dark scapular patches generally remain discernable. The dorsum is generally grey and bears a series of dark red vermiculations and/or other indistinctly-shaped markings. A broad, dark grey to brown streak runs through the canthal region and continues behind the eye, where it is bordered dorsally by a white stripe. Both stripes diminish in intensity and are extinguished above the shoulder. The limbs bear dark vermiculations above and have pale grey lower surfaces. The tail has a series of diminishing bars at its base. Regenerated portions exhibit longitudinal dark, broken lines. The iris is tan to brown. In juveniles the tail is strongly marked by alternating light and dark bands that increase in length distally along the length of the tail.

• **Diagnosis.** *Aristelliger lar* may be distinguished from its congeners by the following combination of characters: asymmetrical adhesive plates adjacent to the claw only on digit I of the manus and pes; usually a single postmental scale (occasionally 2 or 3), body robust and of very large size (>100 mm SVL).

• **Descriptions.** Detailed descriptions were furnished by Cope (1861 [1862]), Boulenger (1885), Cochran (1941), and Schwartz and Henderson (1991). Burns et al. (1992) and Powell and Parmerlee (1992) reported that northern populations differ from those of southern Hispaniola in several features and that the former may actually be examples of *A. bechti*, a taxon that they speculated may have been introduced.

• **Illustrations.** Cochran (1941) provided line drawings of the dorsal and ventral aspects of the snout, the ventral aspect of the tail, a lateral view of the head, and ventral renditions of the manus and pes. Powell and Parmerlee (1992) provided a color photograph of this species, Hoppe (1989) included a color photograph of a juvenile, and Burns et al. (1992) presented a black and white photograph of an adult male. Russell (1981) furnished an illustration of the scapula of digit IV of the pes. McDowell and Bogert (1954) illustrated several views of the cranium and mandible. Hecht (1951) provided a photo of the lingual view of the dentary and an extensive series of osteological illustrations (the left dentary; the skull in dorsal, ventral and lateral views; the frontal, parietal and maxillae; the axis, a cervical, thoracic and anterior caudal vertebra; a growth series of frontals) from individuals found in Dairy Cave. Hassler (1930) illustrated eggs and a hatchling as well as egg-laying sites with black and white photographs.

• **Distribution.** *Aristelliger lar* is native to Hispaniola, Isla Catalina, the Cayos Siete Hermanos, and Cayo Levantado in Bahía de Samaná (Schwartz and Henderson, 1991). In their investigation of the Cayos Siete Hermanos, Burns et al. (1992) found the species only on Monte Chico. This species is widespread, at least at lower elevations, on Hispaniola, primarily in mesic wooded or karst areas. A range map was proved by Schwartz and Henderson (1991). Hallowell (1860 [1861]) reported this species from Nicaragua, but this is certainly in error.

• **Fossil Record.** Pleistocene to Recent fossil material (dentary and maxillae) has been documented from Deep Cave near St. Michel de l'Atalay, Département de l'Artibonite, Haiti (Hecht, 1951) and from Cerro de San Francisco Cave, San Rafael Province, Dominican Republic (Etheridge, 1965). Hispaniolan fossils are not as large as living specimens. *Aristelliger titan*, which was synonymized by Etheridge (1965) and Estes (1983) with *A. lar*, was described by Hecht (1951) from Portland Cave, Clarendon Parish, Dairy Cave, St. Ann Parish, and

the Hellshire Hills. The youngest of these deposits indicate that a relictual population may have survived here subsequent to the isolation of this island. Estes (1983) provided a listing of referred fossil material.

• **Pertinent Literature.** Skin fragility was mentioned by Cochran (1941). Hecht (1951) gave tooth count information and replacement patterns. Mensural characters were compared with other members of the genus by Hecht (1951). A detailed osteological description, especially of cranial features for *A. titan*, was given by Hecht (1951). Stephenson and Stephenson (1956) also discussed skull morphology in general. Growth of the frontal bone was outlined by Hecht (1951). Bauer and Russell (1989) considered the structure of the parafrontal bones. Underwood (1954) described pupil shape and compared the pollex and hallux with *Diplodactylus*. Russell (1977) indicated the presence of hemipenial bones (as postcloacal bones). Etheridge (1965) discussed the osteology and dentition of fossil specimens as well as habitat preferences. Russell and Bauer (1986) reported on the maximum size attained by this species, and Snider and Bowler (1992) presented a captive longevity record. Sumida and Murphy (1987) considered dentition. Hassler (1930) discussed habitat, tail autotomy, and egg-laying sites. Hecht (1952) discussed the minimal breeding size. Cochran (1941) considered this species rare, but Etheridge (1965) thought it uncommon only because of collection bias. Hecht (1951) indicated that the distribution in Hispaniola is relictual. Schwartz and Henderson (1991) and Burns et al. (1992) considered the basic habitat preferences of this species. The former also reported on activity times and dietary information gleaned from fecal samples, indicating that this species may be in part herbivorous (eating fruits and seeds). Burns et al. (1992) considered the plant material component of the diet to be inconsequential. Powell and Parmerlee (1992) further itemized the arthropod components of the diet, and Burns et al. (1992) tabulated the stomach contents of five specimens. Egg-laying sites and egg dimensions were described by Schwartz and Henderson (1991). Thomas (1966) discussed partial diurnality in this species. SEA/DVS (1990) provided an index to habitats in the Dominican Republic. Hecht (1951, 1952) stated that *A. titan* may have been the ancestor of *A. praesignis* and postulated owl predation as a factor favoring reduced size in this transition.

• **Nomenclatural History.** Hecht (1951) regarded *A. titan* as a distinct species because of its greater size (150 mm SVL) and greater number of teeth. Etheridge (1965), however, following a reanalysis of available osteological and dental material suggested that *A. titan* and *A. lar* were conspecific and Estes (1983) formally synonymized the two. Pregill (*in* Estes, 1983), however, doubted that the Jamaican *A. titan* is identical with the Hispaniolan *A. lar*. Hecht (1951) referred to the populations from Samaná and adjacent areas as "*A. lar*. new. ssp.", but subsequent collecting has demonstrated that the disjunction upon which this tentative subspecific recognition was based is artificial.

• **Etymology.** No etymology was provided in the original description. The specific epithet *lar*, a Latin noun, refers to a Roman household deity. Because this noun can also refer to a dwelling it perhaps refers to the finding of the original specimen in a house.

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