

REPTILIA: SQUAMATA: CORYTOPHANIDAE

LAEMANCTUS

Catalogue of American Amphibians and Reptiles.

McCranie, J.R. and G. Köhler. 2004. *Laemanctus*.

***Laemanctus* Wiegmann**
Casqueheaded Basilisks, Cutetes

Laemanctus Wiegmann 1834:16 (part). Type species, *Laemanctus longipes* Wiegmann (1834), by subsequent designation of Fitzinger (1843).

• **CONTENT.** Two species, *L. longipes* and *L. serratus*, are recognized.

• **DEFINITION AND DIAGNOSIS.** These lizards in the family Corytophanidae (*sensu* Frost and Etheridge 1989, Frost et al. 2001; but see Schulte et al. 2003) have a flat-topped cephalic casque projecting over the neck in both sexes (the casque can be slightly elevated medially on the posterior portion). Dorsal head scales are strongly rugose to slightly carinate, reflecting the dermal rugosities of the underlying skull. Subdigital scales have keratinized knobs on the anterior section of each scale. The flat-topped cephalic casque easily distinguishes *Laemanctus* from other genera in the family. Lang (1989) also defined the genus (compared to other corytophanid genera) on the basis of the presence of free postfrontals, the parietal foramen located at the frontoparietal suture, crowns of the posterior marginal teeth tricuspid with crowns tapered and lateral cusps reduced, neural spines shorter than the height of the vertebral body, 6 (3 + 3) rib articulation pattern, a small amount of fascia present at the posterodorsal corner of the infratemporal fossa, and the *M. adductor mandibulae externus superficialis* with a single dorsal head. Etheridge and de Queiroz (1988) also stated that the ribs are lost from the last presacral vertebra.

Laemanctus can be distinguished from all other pleurodont iguanian lizards by the following combination of characters (in addition to those listed above): moderate size (to 190 mm SVL according to Boulenger 1885, although most adults are less than 150 mm SVL); body laterally compressed; caudal autotomy absent; tail, legs, and toes extremely long; dorsal and ventral body scales keeled, imbricate; gular fold present or absent; gular pouch absent; femoral and preanal pores absent; and nasal scale single, nostril located more or less centrally in scale.

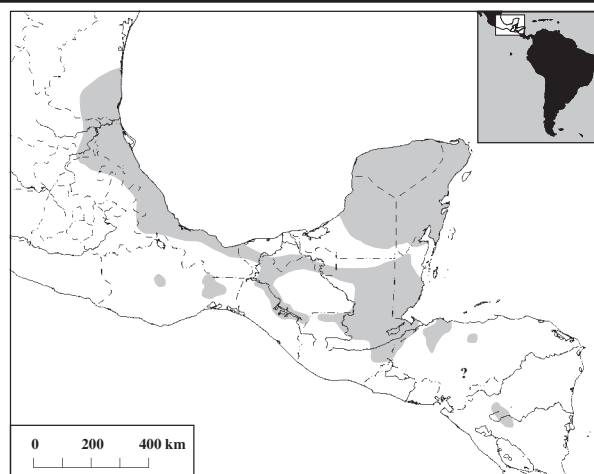
• **DESCRIPTIONS.** McCoy (1968) provided a detailed description of the genus and its two species. See the species accounts (McCranie and Köhler 2004a,b) for other descriptions.

• **ILLUSTRATIONS.** See the species accounts (McCranie and Köhler 2004a,b).

• **DISTRIBUTION.** The genus ranges from central Tamaulipas and central Oaxaca, México to central Nicaragua. All records are from the Atlantic versant, except for two nineteenth-century records from the Pacific versant in central Oaxaca, México. The genus occurs from near sea level to about 1500 m, although most localities are in the lowlands. One species occurs in primarily mesic habitats, the other in primarily subhumid habitats.

• **FOSSIL RECORD.** None, but Langebartel (1953) tentatively assigned a subfossil dentary from a cave in Yucatán, México to *Laemanctus* (see also Estes 1983).

• **PERTINENT LITERATURE.** See the species accounts (McCranie and Köhler 2004a,b) for extensive lists. The follow-



MAP. Distribution of *Laemanctus*. The question mark in Honduras represents a sight record (see **Remarks** in McCranie and Köhler 2004b).

ing references mention only the genus: **phylogenetic patterns of viviparity** (Lee and Shine 1998), **phylogenetic analysis among iguanian lizards** (Etheridge and de Queiroz 1988, Frost and Etheridge 1989), **biogeography** (Mertens 1934; Savage 1966, 1982), **dispersal routes in northern Central America** (Stuart 1957), **osteological comments** (Romer 1956, Etheridge 1964, Weiner and Smith 1965, Etheridge 1967, de Queiroz 1987, Russell 1988), **scleral ossicles** (Underwood 1970), **lack of caudal autotomy** (Hoffstetter and Gasc 1969; Arnold 1984, 1988; Bellairs and Bryant 1985), **lack of femoral or preanal pores** (Renous-Lécure and Jullien 1972, Jullien and Renous-Lécure 1973), **scale microstructure** (Peterson 1984), **parietal eye** (De Lisle 1985), **predation** (Thorstrom 2000), and **generic key to the Mexican herpetofauna** (Casas Andreu and McCoy 1979).

• **KEY TO SPECIES.** The number in parentheses following the species name refers to the Catalogue account number.

1. a. Head casque with enlarged triangular shaped scales along posterior margin; low, serrated middorsal crest present ...
..... *L. serratus* (796)
- b. Head casque margin relatively smooth, without enlarged triangular shaped scales; no serrated middorsal crest present
..... *L. longipes* (795)

• **ETYMOLOGY.** The name *Laemanctus* probably is derived from the Greek *laminos* (throat) and *anctus* (press together), presumably in reference to the tapered crowns of the marginal teeth (from Lang 1989).

• **COMMENT.** We use the common name Casqueheaded Basilisks, per Campbell (1998), in preference to Casquehead Iguanas (Liner 1994, Frank and Ramus 1995), although both “common names” would be meaningless to the people living within the geographical range of the members of this genus.

• **ACKNOWLEDGMENTS.** R. Ackley provided distributional records from the University of Texas at Arlington Collection of Vertebrates. J.H. Townsend provided a copy of a publication.

LITERATURE CITED

Arnold, E.N. 1984. Evolutionary aspects of tail shedding in lizards and their relatives. *J. Nat. Hist.* 18:127–169.

- . 1988. Caudal autotomy as a defense, p. 235–273. *In* C. Gans and R.B. Huey (eds.), *Biology of the Reptilia*. Vol. 16. Ecology B, Defense and Life History. Alan R. Liss, Inc., New York.
- Bellairs, A.d'A. and S.V. Bryant. 1985. Autotomy and regeneration in reptiles, p. 301–410. *In* C. Gans and F. Billett (eds.), *Biology of the Reptilia*. Vol. 15. Development B. John Wiley & Sons, New York.
- Boulenger, G.A. 1885. *Catalogue of the Lizards in the British Museum (Natural History)*. Vol. II. 2nd ed. Trustees of the British Museum (Natural History), London.
- Campbell, J.A. 1998. *Amphibians and Reptiles of Northern Guatemala, the Yucatán, and Belize*. Univ. Oklahoma Press, Norman.
- Casas Andreu, G. and C.J. McCoy. 1979. *Anfibios y Reptiles de Mexico. Claves ilustradas para su identificación*. Ed. Limusa, México, D.F.
- De Lisle, H.F. 1985. Why do lizards have a third eye? *Herpetology* 15(2):1–17.
- de Queiroz, K. 1987. Phylogenetic systematics of iguanine lizards. A comparative osteological study. *Univ. California Publ. Zool.* 118:1–203.
- Estes, R. 1983. *Sauria terrestria, Amphibiaenia*. Handbuch der Paläoherpetologie. *Encyclopedia of Paleoherpptology*. Teil10A/Part 10A. Gustav Fischer Verlag, Stuttgart.
- Etheridge, R. 1964. The skeletal morphology and systematic relationships of sceloporine lizards. *Copeia* 1964:610–631.
- . 1967. Lizard caudal vertebrae. *Copeia* 1967:699–721.
- and K. de Queiroz. 1988. A phylogeny of Iguanidae, p. 283–367. *In* R. Estes and G. Pregill (eds.), *Phylogenetic Relationships of the Lizard Families: Essays Commemorating Charles L. Camp*. Stanford Univ. Press, Stanford, California.
- Fitzinger, L. 1843. *Systema Reptilium*. Fasciculus Primus. Amblyglossae. Braumüller et Seidel Bibliopolas, Vindobonae.
- Frank, N. and E. Ramus. 1995. *A Complete Guide to the Scientific and Common Names of Reptiles and Amphibians of the World*. NG Publ., Inc., Pottsville, Pennsylvania.
- Frost, D.R. and R. Etheridge. 1989. A phylogenetic analysis and taxonomy of iguanian lizards (Reptilia: Squamata). *Univ. Kansas Mus. Nat. Hist. Misc. Publ.* 81:1–65.
- , —, D. Janies, and T.A. Titus. 2001. Total evidence, sequence alignment, evolution of polychrotid lizards, and a reclassification of the Iguania (Squamata: Iguania). *Amer. Mus. Novitates* (3343):1–38.
- Hoffstetter, R. and J.-P. Gasc. 1969. Vertebrae and ribs of modern reptiles, p. 201–310. *In* C. Gans, A.d'A. Bellairs, and T.S. Parsons (eds.), *Biology of the Reptilia*. Vol. 1. Morphology A. Academic Press, London.
- Jullien, R. and S. Renous-Lécuru. 1973. Étude de la répartition des pores fémoraux, anaux, préanaux et ventraux chez les lacertiliens (Reptilia). *Bull. Mus. Natl. Hist. Nat., Paris, 3^e série, n° 104, Zool.* 78:1–33.
- Lang, M. 1989. Phylogenetic and biogeographic patterns of basiliscine iguanians (Reptilia: Squamata: "Iguanidae"). *Bonner Zool. Monogr.* (28):1–172.
- Langebartel, D.A. 1953. The reptiles and amphibians, p. 91–108. *In* R.T. Hatt, H.I. Fisher, D.A. Langebartel, and G.W. Brainerd, *Faunal and Archeological Researches in Yucatan Caves*. Cranbrook Inst. Sci. Bull. 33:1–119 + 4 pl.
- Lee, M.S.Y. and R. Shine. 1998. Reptilian viviparity and Dollo's Law. *Evolution* 52:1441–1450.
- Liner, E.A. 1994. Scientific and common names for the amphibians and reptiles of Mexico in English and Spanish. *Nombres científicos y comunes en Inglés y Español de los anfibios y los reptiles de México*. SSAR *Herpetol. Circ.* (23):v + 113 p.
- McCoy, C.J. 1968. A review of the genus *Laemanctus* (Reptilia: Iguanidae). *Copeia* 1968:665–678.
- McCranie, J.R. and G. Köhler. 2004a. *Laemanctus longipes*. *Cat. Amer. Amphib. Rept.* (795):1–4.
- McCranie, J.R. and G. Köhler. 2004b. *Laemanctus serratus*. *Cat. Amer. Amphib. Rept.* (796):1–5.
- Mertens, R. 1934. Die Insel-Reptilien, ihre Ausbreitung, Variation und Artbildung. *Zoologica* 32:1–209 + 6 pl.
- Peterson, J.A. 1984. The microstructure of the scale surface in iguanid lizards. *J. Herpetol.* 18:437–467.
- Renous-Lécuru, S. and R. Jullien. 1972. Contribution à la connaissance de l'histoire des iguanidés (Reptiles, Squamates) par la confrontation de divers critères: types d'innervation reconnus aux deux membres, présence ou absence de pores fémoraux et préanaux. *Bull. Mus. Natl. Hist. Nat., Paris, 3^e série, n° 29, Zool.* 23:253–272.
- Romer, A.S. 1956. *Osteology of the Reptiles*. Univ. Chicago Press, Chicago, Illinois.
- Russell, A.P. 1988. Limb muscles in relation to lizard systematics: a reappraisal, p. 493–568. *In* R. Estes and G. Pregill (eds.), *Phylogenetic Relationships of the Lizard Families: Essays Commemorating Charles L. Camp*. Stanford Univ. Press, Stanford, California.
- Savage, J.M. 1966. The origins and history of the Central American herpetofauna. *Copeia* 1966:719–766.
- . 1982. The enigma of the Central American herpetofauna: dispersal or vicariance? *Ann. Missouri Bot. Gard.* 69:464–547.
- Schulte, J.A., II., J.P. Valladares, and A. Larson. 2003. Phylogenetic relationships within Iguanidae inferred using molecular and morphological data and a phylogenetic taxonomy of iguanian lizards. *Herpetologica* 59:399–419.
- Stuart, L.C. 1957. Herpetofaunal dispersal routes through northern Central America. *Copeia* 1957:89–94.
- Thorstrom, R. 2000. The food habits of sympatric forest-falcons during the breeding season in northeastern Guatemala. *J. Rapt. Res.* 34:196–202.
- Underwood, G. 1970. The eye, p. 1–97. *In* C. Gans and T.S. Parsons (eds.), *Biology of the Reptilia*. Vol. 2. Morphology B. Academic Press, London.
- Weiner, N.J. and H.M. Smith. 1965. Comparative osteology and classification of the crotophytidiform lizards. *Amer. Midl. Nat.* 73:170–187.
- Wiegmann, A.F.A. 1834. *Herpetologia Mexicana, seu descriptio Amphibiorum Novae Hispaniae, quae Itineribus comitis de Sack, Ferdinandi Deppe et Chr. Guil. Schiede in Museum Zoologicum Berolinense Pervenerunt*. Pars Prima, Saurorum Species Amplectens. Adiecto systematis Saurorum prodromo, additisque multis in hunc Amphibiorum Ordinem observationibus. Sumptibus C.G. Lüderitz, Berolini.

JAMES R. McCRANIE, 10770 SW 164th Street, Miami, FL 33157–2933, USA (jmccrani@bellsouth.net), and **GUNTHER KÖHLER**, Forschungsinstitut und Naturmuseum Senckenberg, Senckenberganlage 25, D-60325 Frankfurt a. M., Germany (gkoehler@senckenberg.de).

Primary editor for this account, Andrew H. Price.

Published 30 October 2004 and Copyright © 2004 by the Society for the Study of Amphibians and Reptiles.
