

## Catalogue of American Amphibians and Reptiles.

Liner, E.A. 1998. *Pseudoeurycea galeanae*.

### *Pseudoeurycea galeanae* (Taylor)

*Oedipus cephalicus*: Dunn 1936:471. Misidentified.

*Bolitoglossa galeanae* Taylor 1941:83. Type locality, "near Galeana, N.L., 7,000 feet [2134 m] elevation" [Pablillo, 27 km SSE Galeana, Nuevo León, México] (see Remarks). Holotype, Florida Museum of Natural History (FMNH) 100113 (original number, E.H. Taylor-H.M. Smith [EHT-HMS] 17146, adult female, collected 10 July 1938 by Radclyffe Roberts (examined by author). Topotype, FMNH 110284 (original number, EHT-HMS 17145). Paratypes: HMS 25762–25763, National Museum of Natural History (USNM) 110642–110646, 110648–110649, 110651–110658, Museum of Comparative Zoology (MCZ) 25764 (previously USNM 110647), UMMZ 92423 (previously USNM 110650), Galeana, N.L., elevation 5,200 ft. [1585 m], collected by H.M. Smith. Paratype locality for the USNM specimens was corrected by Cochran (1961) to "15 miles [24.1 km] west of Galeana, Nuevo León, Mexico, 5,200 ft. [1585 m]." Taylor and Smith (1945) erred in stating that the USNM series was 119642–58, and Cochran (1961) erred by listing 116048–9 (see Remarks).

*Pseudoeurycea galeanae*: Taylor 1944:209.

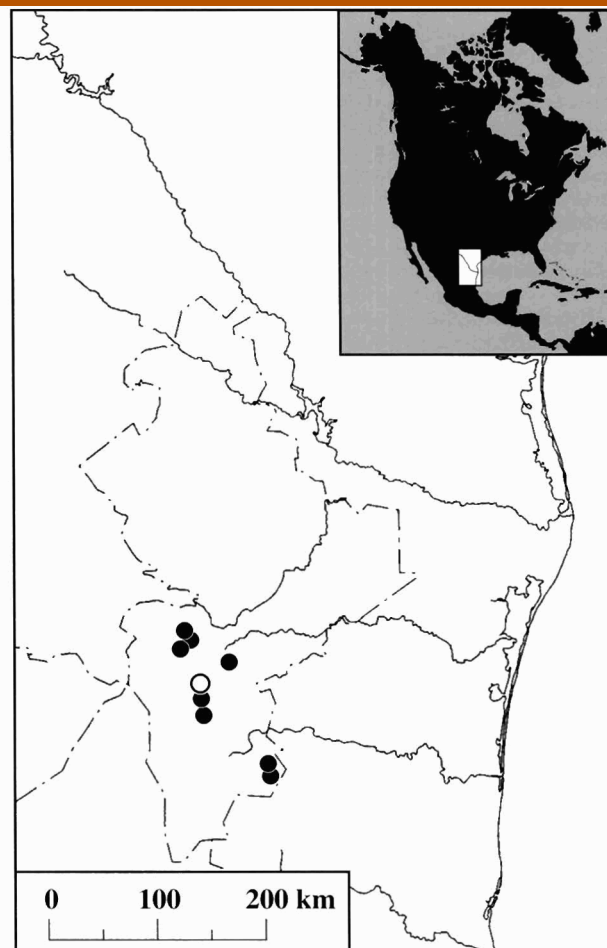
*Pseudoeurycea cephalica galeanae*: Taylor 1944:212

*Bolitoglossa galeanae*: Taylor and Smith 1945:541. Spelling of specific epithet corrected, but first corrected informally in Taylor (1944:209).

• **Content.** No subspecies are recognized, although Taylor (1944) referred to this taxon as *Pseudoeurycea cephalica galeanae* as well as *P. galeanae*.

• **Definition.** *Pseudoeurycea galeanae* is a moderately large salamander for the genus with a maximum SVL to 70 mm, vent 5 mm. The head is relatively flat and wider than the neck or body. Eyes are prominent. The nostrils are small and the nasolabial grooves run straight down from the posterior edges and have knoblike protuberances at the ends. Sublingual folds are present. Costal grooves number 13, and the tail has about 24 grooves. The tail is short, round, and bluntly tipped. Maxillary-premaxillary tooth count is 58–60, vomerine tooth count 18–20, mandibular teeth 64–66. Teeth are most numerous in older specimens. Trunk vertebrae number 14. Tarsals 4 and 5 are separated with 4 being the larger. Tarsal 5 does not articulate with the centrale. The columellae are greatly reduced. Prefrontals are present. Males differ from females by having longer limbs, shorter axilla to groin measurements, a greater subnarial swelling, fewer teeth, and a submental gland.

Ground color is slaty to purplish black, occasionally reddish. The venter is slightly lighter than the dorsum, the chin even



**Map.** Distribution of *Pseudoeurycea galeanae*. The circle marks the type locality, dots indicate other records.

lighter. Large white lichenoid spots occur on the tail and sometimes on the body. These may occasionally be lacking on either the tail or body, but some are always present. Some specimens have dispersed white flecking on the dorsal and lateral surfaces.

• **Diagnosis.** Aside from its isolated distribution, *Pseudoeurycea galeanae* is most closely related to *P. scandens*. From other *Pseudoeurycea*, both *P. scandens* and *P. galeanae* differ in having more extensive toe webbing and knoblike protuberances at the lower ends of the nasolabial grooves. *Pseudoeurycea scandens* differs from *galeanae* in having longer legs, more trun-



**Figure.** *Pseudoeurycea galeanae* from Puerto de Peña Nevada, 20 km NE San Antonio de Peña Nevada, Nuevo León.

cate, parallel-sided toes, and more extensive light markings on the body. *Pseudoeurycea scandens* also is to a large degree arboreal, whereas *galeanae* is basically terrestrial.

• **Descriptions.** Taylor (1941) gave a full description of the holotype. Taylor (1944) placed *galeanae* in his new genus *Pseudoeurycea*, listing it as *P. galeanae* and *P. cephalica galeanae*, and placed it in the *cephalica* group. Reese (1971) reported two characters not given in the original description: a reddish-brown coloration in some specimens and finely distributed white pigment on dorsal and lateral surfaces except where red occurs.

• **Illustrations.** None have been published previously.

• **Distribution.** This species is found in the Sierra Madre Oriental of central and southern Nuevo León, México. Dunn (1936) reported two specimens as *Oedipus cephalicus* from near Pablillo at 8200 ft (2499 m) elevation. Walker (1955) considered a series of four salamanders far removed from the range of *P. galeanae* in Menas Viejas, near Durango, Hidalgo as resembling *P. galeanae* in most features, but Smith et al. (1976) suggested that those specimens may represent a different geographic race of *P. cephalica*. Reese (1971) reported on specimens from 6 mi (9.7 km) N. Ascension, Nuevo León, about 64 km south of previous records. Johnson et al. (1982) reported other localities for the species in Nuevo León.

*Pseudoeurycea galeanae* represents the most northerly member of the *cephalica* group and occurs in open, semi-arid habitats. Some specimens in museums have been taken at 12,000 ft (3658 m) on Cerro Potosí. Morafka (1977) listed it as being in the Chihuahuan Desert from locations immediately adjacent to the desert. The locality data for the paratypes place them in the Chihuahuan Desert. The species apparently is terrestrial and is encountered primarily during rainy periods.

• **Fossil Record.** None.

• **Pertinent Literature.** No comprehensive work has been done on the species. Various topics covered in the literature are as follows: associated fauna (Liner and Dixon 1992, Rossman et al. 1964), bionumeric code (Smith and Smith 1978), caudivagant mechanisms (Reese 1971, Smith 1947, Taylor and Smith 1945), checklists (Brame 1957, 1967; Brame et al. 1978; Flores-Villela 1993; Flores-Villela et al. 1991; Flores-Villela and Gerez 1988, 1994; Frank and Ramus 1995; Frost 1985; Gorham 1974; Harding 1983; Smith et al. 1964; Smith and Taylor 1966), common names (Frank and Ramus 1995, Liner 1994), conservation (Sierra 1994), diagnostic characters (Wake and Elias 1983), distribution (Liner and Dixon 1992, Rabb 1956, Rossman et al. 1989, Wake and Lynch 1976), habitat (Reese 1971, Taylor 1941, Taylor and Smith 1945), literature citations (Smith and Smith 1976, 1993), paratype locations (Smith and Taylor 1945), museum specimen type and paratype listings and general holdings (Cochran 1961, Flores-Villela et al. 1991, Kluge 1983, Peters 1952, Smith et al. 1964, Smith and Taylor 1950), phylogenetic relations (Walker 1955, Wake and Lynch 1976), synonyms (Smith and Smith 1976), and type localities (Liner 1996, Smith and Taylor 1950).

• **Etymology.** This species was named after the village of Galeana near the type locality.

• **Remarks.** Taylor (1941), in the original description of *Bolitoglossa galaenae* (= *Pseudoeurycea galeanae*), stated that the type was collected near Galeana, Nuevo León at 7000 ft elevation, as was the topotype EHT-HMS 17145. On page 85, he stated that the specimens collected by Radclyffe Roberts came from under stones above Pablillo, Galeana, N.L. Pablillo is a village approximately 27 km SSE of Galeana at 7000 ft. The remaining type series was listed as Galeana, N.L., 5200 ft elevation. Taylor and Smith (1945) stated that 19 paratypes were collected 15 miles southeast of Galeana and that this was emended by Cochran (1961) to 15 mi west of Galeana. The actual locality of the type should be Pablillo, 27 km SSE Galeana,

Nuevo León, México. Rabb (1956) used Pablillo. Taylor and Smith (1945) described the area where Smith collected the series of 19 specimens. This area is part of the Chihuahuan Desert Biotic Province. The area around Pablillo is forested and with open meadows and at a higher elevation. Prior to the original description Dunn had reported two specimens from 8200 ft. near Pablillo as *Oedipus cephalicus*, but Rabb (1956) reidentified them as *P. galeanae* (ANSP 20024, 20030). In the paratype series collected by Smith, two were in the EHT-HMS collections as 25762-3 and the remaining 17 as USNM 110642-58. Smith (1945) listed the USNM series as 119642-58 and Cochran (1961) listed them as 110642-46, 116048-9, 116051-58, two specimens having been traded. Both Taylor and Smith (1945) and Cochran (1961) are in error. The numbers in the original description are correct.

USNM 110647 is now MCZ 25764 and USNM 110650 is now UMMZ 92423. Smith et al. (1964) listed a topoparatype, UIMNH 38035 and parenthetically 26122. The parenthetical number does not appear in the type description, but the specimen carries the same data as the USNM and EHT-HMS specimens cited in the description and as emended by Cochran (1961), except that it gives R.B. and H.M. Smith as the collectors. In contrast, the type description and the USNM specimens bear only the name H.M. Smith. The two specimens listed as EHT-HMS 25762-63 remain unaccounted for, unless the UIMNH specimen is one of them (with an erroneous number listed parenthetically). A survey by the author of museums for Nuevo León holdings has not turned them up, nor has an examination of checklists.

Smith et al. (1976) considered specimens from Minas Viejas, near Durango, Hidalgo, originally identified as *P. galeanae* by Walker (1955), a geographic race of *P. cephalica*.

Wake and Lynch (1976) in their regions where species occur erroneously listed region 2 for what should be region 3.

Sierra (1994) lists the species as threatened with extinction.

#### Literature Cited

- Brame, A.H., Jr. 1957. A list of the world's recent Caudata. Priv. printed. Univ. S. California, Los Angeles.
- . 1967. A list of the world's recent and fossil salamanders. *Herpeton* 2:1-26.
- , Jr. II., R. Hochnadel, H.M. Smith, and R.B. Smith. 1978. Bionumeric codes for amphibians and reptiles of the world. 1. Salamanders. *Trans. Kansas Acad. Sci.* 81:43-56.
- Cochran, D.M. 1961. Type specimens of reptiles and amphibians in the United States National Museum. *Bull. U.S. Natl. Mus.* (220):xv + 291 p.
- Dunn, E.R. 1936. The amphibians and reptiles of the Mexican expedition of 1934. *Proc. Acad. Nat. Sci. Philadelphia* 88:471-477.
- Flores-Villela, O. 1993. *Herpetofauna Mexicana. Lista Anotada de las Especies de Anfibios y Reptiles de México, Cambios Taxonómicos Recientes, y Nuevas Especies.* Carnegie Mus. Nat. Hist. Spec. Publ. (17):iv + 73 p.
- , E.H. García, and A. N. Montes de Oca. 1991. Catálogo de anfibios y reptiles del Museo de Zoología, "Alfonso L. Herrera." *Ser. Cat. Mus. Zool. "Alfonso L. Herrera"* (3):7 + 1-222 + 8 unnumbered pages.
- and P. Gerez. 1988. *Conservación en México: Síntesis sobre Vertebrados Terrestres, Vegetación y Uso del Suelo.* Inst. Nac. Invest. Recur. Biot. Conserv. Internac., Xalapa, México.
- and —. 1994. *Biodiversidad y Conservación en México: Vertebrados, Vegetación Uso de Suelo.* 2nd ed. Com. Nac. Conoc. Uso Biodivers. Univ. Auto. México.
- Frank, N. and E. Ramus. 1995. *A Complete Guide to Scientific and Common Names of Reptiles and Amphibians of the World.* N.G. Publ., Inc., Pottsville, Pennsylvania.
- Frost, D. R. (ed.). 1985. *Amphibians Species of the World. A Taxonomic and Geographical Reference.* Allen Press, Inc. and The Assoc. Syst. Coll., Lawrence, Kansas.
- Gorham, S.W. 1983. *Checklist of World Amphibians.* New Brunswick Museum, New Brunswick, Canada.
- Harding, K.A. 1983. *Catalogue of New World Amphibians.* Pergamon Press, Ltd., Oxford, England.

- Johnson, R.M., E.A. Liner, and A.H. Chaney. 1982. Geographic distribution: *Pseudoeurycea galeanae*. Herpetol. Rev. 13:51.
- Kluge, A. G. 1983. Type specimens of amphibians in the University of Michigan Museum of Zoology. Misc. Publ. Mus. Zool. Univ. Michigan (166):ii + 68 p.
- Liner, E.A. 1994. Scientific and common names for amphibians and reptiles of Mexico in English and Spanish. Nombres científicos y comunes en Inglés y Español de los anfibios y reptiles de México. SSAR Herpetol. Circ. (23):v + 113 p.
- . 1996. Herpetological type material from Nuevo León, México. Bull. Chicago Herpetol. Soc. 31:168–171.
- and J.R. Dixon. 1992. A new species of the *Sceloporus scalaris* group from Cerro Pena Nevada, Nuevo Leon, Mexico (Sauria: Iguanidae). Texas J. Sci. 44:421–427.
- , R.M. Johnson, and A.H. Chaney. 1976. Amphibian and reptile records and range extensions for Mexico. Herpetol. Rev. 7:177.
- Marx, H. 1958. Catalogue of type specimens of reptiles and amphibians in Chicago Natural History Museum. Fieldiana, Zool. 36:409–496.
- . 1976. Supplementary catalogue of type specimens of reptiles and amphibians in Field Museum of Natural History. Fieldiana, Zool. 69:33–94.
- Morafka, D.J. 1977. A Biogeographical Analysis of the Chihuahuan Desert Through its Herpetofauna. Biogeographica IX. Dr. W. Junk B.V., Publ., The Hague.
- Peters, J.A. 1952. Catalogue of type specimens in the herpetological collections of the University of Michigan. Occ. Pap. Mus. Zool. Univ. Michigan (539):1–55.
- Rabb, G.B. 1956. A new plethodontid salamander from Nuevo León, México. Fieldiana, Zool. 39:11–20.
- Reese, R.W. 1971. Notes on a small herpetological collection from Mexico. J. Herpetol. 5:67–69.
- Rossmann, D.A., E.A. Liner, C. A. Treveño, and A.H. Chaney. 1989. Redescription of the garter snake *Thamnophis exsul* Rossmann 1969 (Serpentes:Colubridae). Proc. Biol. Soc. Washington 102:507–514.
- Sierra, C.J. (Dir.). 1994. Diario Oficial de la Federación Organismo del Gobierno Constitucional de los Estados Unidos Mexicanos 488(10):1–110.
- Smith, H.M. 1947. Occurrence of a caudivagant mechanism in salamanders. Nat. Hist. Misc. (8):1–2.
- , R.L. Holland, and R. Spierling. 1976. Observations on a species of salamander (*Pseudoeurycea*) from Tamaulipas, Mexico. Bull. Maryland Herpetol. Soc. 12:33–36.
- , D.A. Langebartel, and K.L. Williams. 1964. Herpetological type-specimens in the University of Illinois Museum of Natural History. Illinois Biol. Monogr. (32):3 + 80 p. + 1 table.
- and R.B. Smith. 1976. Synopsis of the Herpetofauna of Mexico. v. IV. Source Analysis and Index for Mexican Amphibians. John Johnson, North Bennington, Vermont.
- and —. 1993. Synopsis of the Herpetofauna of Mexico. v. VII. Bibliographic Addendum IV and Index. Bibliographic Addenda II–IV 1979–1991. Univ. Press Colorado, Niwot.
- and E.H. Taylor. 1948. An annotated checklist and key to the Amphibia of Mexico. Bull. U. S. Natl. Mus. (194):iv + 118 p.
- and —. 1950. Type localities of Mexican reptiles and amphibians. Univ. Kansas Sci. Bull. 33, pt. 2:313–380.
- and —. 1966. Herpetology of Mexico. Annotated checklists and keys to the amphibians and reptiles. A reprint of Bulletins 187, 194, and 199 of the United States National Museum with a list of subsequent taxonomic innovations. Taxonomic innovations. Eric Lundberg, Ashton, Maryland.
- Sokolov, V.E. (ed.). 1988. Dictionary of Animal Names in Five Languages. Amphibians and Reptiles. Russky Yazyk Publ., Moscow.
- Taylor, E.H. 1941. Two new species of Mexican plethodontid salamanders. Proc. Biol. Soc. Washington 54:81–85.
- . 1944. The genera of plethodontid salamanders in Mexico, pt. 1. Univ. Kansas Sci. Bull. 30, pt. 1:189–232.
- and H.M. Smith. 1945. Summary of the collections of amphibians made in Mexico under the Walter Rathbone Bacon Traveling Scholarship. Proc. U.S. Natl. Mus. 95:521–613 + 15 pl.
- Wake, D.B. and P. Elias. 1983. New genera and a new species of Central American salamanders, with a review of the tropical genera (Amphibia, Caudata, Plethodontidae). Contr. Sci. Nat. Hist. Mus. Los Angeles Co. (345):1–19.
- and J.F. Lynch. 1976. The distribution, ecology, and evolutionary history of plethodontid salamanders in tropical America. Nat. Hist. Mus. Los Angeles Co. Sci. Bull. (25):1–65.
- Walker, C.F. 1955. A new salamander of the genus *Pseudoeurycea* from Tamaulipas. Occ. Pap. Mus. Zool. Univ. Michigan (567):1–8 + 1 pl.

---

**Ernest A. Liner**, 310 Malibou Blvd., Houma, Louisiana 70364–2598, U.S.A.

Primary editor for this account, Harold A. Dundee

Published 30 January 1998 and Copyright © 1998 by the Society for the Study of Amphibians and Reptiles.

---