

Catalogue of American Amphibians and Reptiles.

Townsend, J.H. 2006. *Geophis dunni*.

***Geophis dunni* Schmidt**

Geophis dunni Schmidt 1932:8. Type-locality, "Matagalpa, Nicaragua." Holotype, Museum of Comparative Zoology (MCZ) 31870, an adult female removed from the stomach of a coral snake, *Micrurus nigrocinctus* (MCZ 17087), collected by W.B. Richardson, date of collection unknown (see **Comment**) (examined by author).

• **CONTENT.** No subspecies are recognized.

• **DEFINITION.** A small snake (SVL 309 mm, TL 367 mm) in the *Geophis sieboldi* species group (Downs 1967). The following characteristics are from the holotype, the only known specimen: dorsal scales keeled and in 17–17–17 rows; apical pits present; 140 ventrals; 36 subcaudals; tail length 15.8% of total length; 2 internasals, 1.4 times as wide as they are long; internasal common suture 35% as long as prefrontal common suture; 1 prenasal and 1 postnasal, with postnasal 1.08 times as long as prenasal; 2 prefrontals 72% of snout length; prefrontal common suture 57% of frontal length; single loreal contacting orbit and postnasal, loreal 1.77 times as long as deep; 1 supraocular per side, the length of which is 48% the length of the loreal; frontal 6-sided, 0.94 times as wide as long; frontal-supraocular contact length 64% of supraocular length; single postocular 1.8 times as wide as long; 6 supralabials on each side, with 5th supralabial largest; 8/8 infralabials; 2 parietals, 1.58 times as long as wide; parietals 45% of head length (as measured from tip of snout to posterior margin of parietals); parietal common suture length 71% of frontal length; anterior temporals absent; right and left posterior temporals are separated by one medial and four lateral nuchals; mental 1.71 times as wide as long and separated from anterior chinshields by first pair of infralabials; first pair of infralabials in broad contact, with their common suture being 67% of their total length; anterior chinshields 1.62 times as long as broad and 1.24 times longer than the posterior chinshields; posterior chinshields not in contact.

The dorsal surface of the head brownish gray, with dark pigment extending posteriorly to the anterior 1/4 to 1/3 of the parietals; remainder of parietals distinctly paler, mottled brown and yellow; 3 anterior supralabials brownish gray, becoming somewhat paler towards ventral edge; 4th supralabial brownish gray on anterior one-third, mottled brown and yellow on posterior portion; ventral surface of head immaculate pale yellow, except mental, first infralabials, and anterior edge of anterior chinshields and 2nd through 5th infralabials brownish gray; dorsal surface of body with pale yellow ground color; a wide brown band beginning 2–3 dorsal scales posterior from the parietals, 7 dorsal scales long, and extending laterally to the upper half of the second dorsal scale row; dorsum with 24 brown saddles and irregular blotches that extend



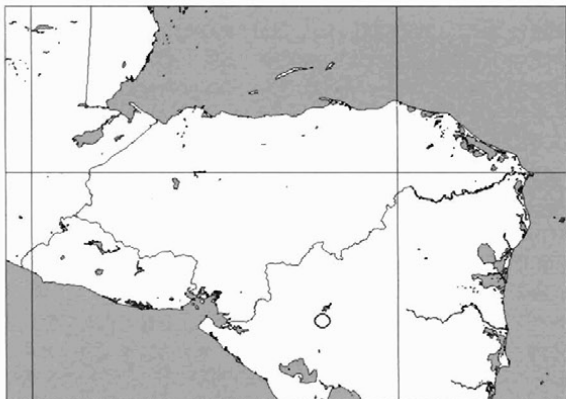
Figure 1. Holotype of *Geophis dunni* (MCZ 31870), adult female, 367 mm total length.

laterally to the 2nd or sometimes the 1st dorsal scale row; yellow scales between brown saddles and blotches with varying degrees of brown mottling, usually consisting to a brown spot at the apex of each scale; ventral surface immaculate pale yellow; dorsal surface of tail with 3 brown saddles and 2 elongate brown blotches; subcaudals immaculate anteriorly, with brown mottling on edges of scales increasing posteriorly, posterior quarter of tail mottled brown and yellow.

Downs (1967) described the maxilla as extending "anteriorly to the level of supralabial 2; anterior extension about equal to that of palatine; maxilla dorsoventrally compressed, bears 12 curved teeth, subequal in length; anterior tip of maxilla pointed, toothless; posterior end of maxilla curves ventrally, tapers to blunt point; anterior end of ectopterygoid single, not expanded; postorbital bone present."

• **DIAGNOSIS.** *Geophis dunni* has 17 dorsal scale rows throughout the body, distinguishing it from the following species of *Geophis* with 15 dorsal scale rows: *G. bellus*, *G. betaniensis*, *G. brachycephalus*, *G. cancellatus*, *G. championi*, *G. damiani*, *G. downsi*, *G. dugesii*, *G. godmani*, *G. hoffmanni*, *G. incomptus*, *G. juliai*, *G. laticinctus*, *G. laticollaris*, *G. maculiferus*, *G. nigroalbus*, *G. nigrocinctus*, *G. petersii*, *G. russatus*, *G. ruthveni*, *G. sallaei*, *G. semidoliatus*, *G. talamancae*, *G. tarascae*, and *G. zeledoni*. *Geophis dunni* can be distinguished from *G. anocularis*, *G. bicolor*, *G. blanchardi*, *G. chalybeus*, *G. dubius*, *G. duellmani*, *G. fulvoguttatus*, *G. immaculatus*, *G. isthmicus*, *G. latifrontalis*, *G. mutitorques*, *G. nephodrymus*, *G. omiltemanus*, and *G. rhodogaster* by having distinctly keeled dorsal scales on the posterior two-thirds of the body. *Geophis dunni* can be distinguished from the remaining species with distinctly keeled dorsal scales in 17 rows on at least the posterior half of the body in having 8 infralabials (6 in *G. carinosus*, *G. juarezi*, *G. pyburni*, and *G. rostralis*; 7 in *G. nasalis*), and by having 140 ventrals in the single known female (147–153 ventrals in female *G. sieboldi*).

• **DESCRIPTIONS.** Besides the original description by Schmidt (1932), Downs (1967) and Townsend



Map. Known distribution of *Geophis dunnii*. The open circle denotes the type-locality and only known locality for this species.

(2006) provided detailed descriptions of the holotype.

• **ILLUSTRATIONS.** Downs (1967) provided a black and white line drawing of the dorsal and lateral aspects of the head, and Townsend (2006) presented a color photograph of the preserved specimen.

• **DISTRIBUTION.** Known only from the type-locality, reported simply as “Matagalpa, Nicaragua” (see **Comment**).

• **FOSSIL RECORD.** None.

• **PERTINENT LITERATURE.** The name *Geophis dunnii* appears in the following publications describing other *Geophis* species: Restrepo T. and Wright (1987), Lips and Savage (1994), Wilson et al. (1998), Nieto-Montes de Oca (2003), and Townsend and Wilson (2006). *Geophis dunnii* appears in the following checklists, keys, distributional and biogeographical works: Peters and Donoso-Barros (1970), Villa (1983), Villa et al. (1988), Ruiz-Pérez (1996), Köhler (1999, 2001a,b, 2003), and Jansen and Köhler (2002 [2003]).

• **ETYMOLOGY.** The specific epithet is a patronym honoring Emmett Reid Dunn (1894–1956), former curator of herpetology at the Academy of Natural Sciences of Philadelphia and research associate of the American Museum of Natural History, “in allusion to his important contributions to our knowledge of this group of snakes” (Schmidt 1932:8).

• **COMMENT.** This enigmatic snake is known only from the type specimen, which was discovered in the stomach of a *Micrurus nigrocinctus* (MCZ 17087) collected during or before 1909 in a locality recorded only as “Matagalpa, Nicaragua” (MCZ Catalogue, original entry, checked by JHT on 20 December 2005). No additional material representing this species has been secured since its description. The type-locality is problematic, since Matagalpa is both a city and a department in northwestern Nicaragua and no other data (such as the elevation or habitat) is recorded.

Downs (1967) reported that the type specimen came from 705 m elevation, based apparently on an elevation in or near the city of Matagalpa. However it is unlikely that “Matagalpa” refers to the immediate vicinity of the city of Matagalpa, which is surrounded by denuded pine-oak forest. Since pine-oak forest is a widespread habitat in north central Nicaragua and adjacent Honduras, the lack of additional material of *G. dunnii* make it highly doubtful that this species occurs in pine-oak forest at or near the elevation provided by Downs (1967).

• **ACKNOWLEDGMENTS.** We would like to thank Jose P. Rosado (MCZ) for facilitating examination of the holotype of *G. dunnii*, and Daniel E. Janes for providing lodging and other assistance during my visit to the MCZ.

LITERATURE CITED

- Downs, F.L. 1967. Intrageneric relationships among colubrid snakes of the genus *Geophis* Wagler. Misc. Publ. Mus. Zool. Univ. Michigan (131):1–193.
- Jansen, M. and G. Köhler. 2002 (2003). Biogeografische analyse der herpetofauna von ausgewählten hochlandgebieten Nicaraguas. Salamandra 38:269–286.
- Köhler, G. 1999. The amphibians and reptiles of Nicaragua. A distributional checklist with keys. Cour. Forsch.-Inst. Senckenberg (213):1–121.
- . 2001a. Anfíbios y Reptiles de Nicaragua. Herpeton, Verlag Elke Köhler, Offenbach, Germany.
- . 2001b. Reptilien und Amphibien Mittelamerikas. Band 2: Schlangen. Herpeton, Verlag Elke Köhler, Offenbach, Germany.
- . 2003. Reptiles of Central America. Herpeton, Verlag Elke Köhler, Offenbach, Germany.
- Lips, K.R. and J.M. Savage. 1994. A new fossorial snake of the genus *Geophis* (Reptilia: Serpentes: Colubridae) from the Cordillera de Talamanca of Costa Rica. Proc. Biol. Soc. Washington 107: 410–416.
- Nieto-Montes de Oca, A. 2003. A new species of the *Geophis dubius* group (Squamata: Colubridae) from the Sierra de Juárez of Oaxaca, Mexico. Herpetologica 59:572–585.
- Peters, J.A. and R. Donoso-Barros. 1970. Catalogue of the Neotropical Squamata: Part I. Snakes. Bull. U.S. Natl. Mus. (297):v-viii + 347 p.
- Restrepo T., J.H. and J.W. Wright. 1987. A new species of the colubrid snake genus *Geophis* from Colombia. J. Herpetol. 21:191–196.
- Ruiz-Pérez, G.A. 1996. Claves Preliminares para Reconocer a los Reptiles de Nicaragua. Centro de Derecho Ambiental y Promoción Para el Desarrollo, Managua.
- Schmidt, K.P. 1932. Stomach contents of some American coral snakes, with the description of a new species of *Geophis*. Copeia 1932:6–9.
- Townsend, J.H. 2006. Inventory and conservation assessment of the herpetofauna of the Sierra de Omoa, Honduras, and a review of the *Geophis*

- (Squamata: Colubridae) of eastern Nuclear Central America. M.A. Thesis, Univ. Florida, Gainesville.
- and L.D. Wilson. 2006. A new species of snake of the *Geophis dubius* group (Reptilia: Squamata: Colubridae) from the Sierra de Omoa of northwestern Honduras. Proc. Biol. Soc. Washington 119:187–196.
- Villa, J. 1983. Nicaraguan Fishes, Amphibians, and Reptiles. A Checklist and Bibliography. Peces, Anfibios y Reptiles Nicaraguensis: Lista y Bibliografía. Univ. Centroamer., Managua.
- , L.D. Wilson, and J.D. Johnson. 1988. Middle American Herpetology. A Bibliographic Checklist. Univ. Missouri Press, Columbia.
- Wilson, L.D., J.R. McCranie, and K.L. Williams. 1998. A new species of *Geophis* of the *sieboldi* group (Reptilia: Squamata: Colubridae) from northern Honduras. Proc. Biol. Soc. Washington 111:410–417.

Josiah H. Townsend, Tropical Conservation and Development Program, Center for Latin American Studies, University of Florida, and Division of Herpetology, Florida Museum of Natural History, Gainesville, Florida 32611-7800 (jtownsend@flmnh.ufl.edu).

Primary editor for this account, Larry David Wilson.

Published 15 December 2006 and Copyright © 2006 by the Society for the Study of Amphibians and Reptiles.
