717.1

### ALSOPHIS RIJGERSMAEI

## **REPTILIA: SQUAMATA: COLUBRIDAE**

# Catalogue of American Amphibians and Reptiles.

Townsend, J.H., R. Powell, and R.W. Henderson. 2000. Alsophis rijgersmaei.

# Alsophis rijgersmaei Cope Anguilla Bank Racer

- Alsophis rijgersmaei Cope 1869:154. Type locality, "the small island of St. Martins, in the Spanish West Indies." Syntypes, Academy of Natural Sciences, Philadelphia (ANSP) 5411– 16 (5411, female, SVL 550 mm, tail 193 mm; 5412, female, SVL 395 mm, tail 142 mm; 5413, female, SVL 655 mm, tail 230 mm; 5414, male, SVL 517 mm, tail 246 mm; 5415, male, SVL 538 mm, tail 247 mm; 5416, female, SVL 695 mm, tail 238 mm), "donated" by H.E. Van Rijgersma, date of collection unknown (examined by RWH).
- Alsophis cinereus Garman 1887:282. Type locality, "St. Barts; Anguilla." Syntypes, Museum of Comparative Zoology (MCZ) 6126, adult female from St. Barthélémy, collected by "Lagois," no date of collection (received by the museum in 1879), and 6139, adult male from Anguilla, collected by Lagois and Branch, no date of collection (received 1886); however, original catalogue entries indicate that 14 specimens were entered under the numbers listed above: in addition to MCZ-R-6126, MCZ-R-177201-4 are tagged duplicates from St. Barthélémy (177202 is a male, 177204 is a juvenile, the others are females), and, in addition to MCZ-R-6139, MCZ-R-177197-200 are tagged duplicates from Anguilla (177199 is a male, 177196 and 177198 are juveniles, the others are females); the fate of three additional specimens mentioned in the original catalogue entry is uncertain (J.P. Rosado, in litt., 03.VIII.00) (not examined by authors).

Dromicus rufiventris: Boulenger 1894:124 (part).

Leimadophis rufiventris: Amaral 1929:168 (part).

Dromicus rijgersmaei: Werner 1929:107.

Dromicus cinereus: Werner 1929:107.

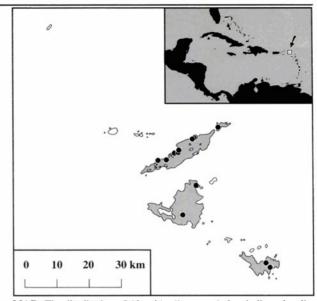
Alsophis rijgersmai: Parker 1936:230. See Remarks.

Alsophis rijersmai: Schwartz and Thomas 1975:173. See Remarks.

· CONTENT. No subspecies are recognized.

• **DEFINITION.** Alsophis rijgersmaei is a moderately sized colubrid, with a maximum SVL of 615 mm for males (Brongersma 1959) and 796 mm for females (Daltry 1998). Dorsal scale rows number 21 at midbody. Ventral scales number 201–208 in males and 197–206 in females; subcaudals number 109–117 in males and 93–102 in females. Supralabials are 8/8, infralabials 10/10, preoculars 1/1 or 2/2, postoculars 2/2, temporals 1+2/1+2, and loreals 1/1. The cloacal scute is divided.

Dorsal ground color ranges from drab olive-green to slate gray or dark taupe. A black-bordered, brown lateral stripe extends from the rostral, passes through the eye, continues onto the body at the level of dorsal scale rows 2 and 3, and gradually deteriorates into a series of longitudinal markings. The supralabials are pale with some brown mottling and the chin is mottled gray and white. Two black-bordered brown spots, followed by a brown neck band, characterize the nuchal region of most specimens. The dorsal pattern consists of brown to black markings that vary from irregular to chevron or diamond-like in shape. The dorsal pattern fades and disappears posteriorly. The venter is pale yellowish-white with some gray mottling that becomes more apparent posteriorly, particularly on the subcaudal scales.



**MAP.** The distribution of *Alsophis rijgersmaei*; dots indicate locality records (modified from Schwartz and Henderson 1991). The type locality is too imprecise to plot.

• **DIAGNOSIS.** *Alsophis rijgersmaei* can be distinguished from all Lesser Antillean congeners by having 21 dorsal scale rows at midbody (Schwartz and Henderson 1985).

• **DESCRIPTIONS.** Detailed descriptions of the species, other than the originals of Cope (1869) and Garman (1887), are in Brongersma (1959), Schwartz and Henderson (1991), and Daltry (1998).

• ILLUSTRATIONS. Brongersma (1959) provided a black and white photograph of a female from St.-Barthélémy. Daltry (1998) included line drawings of dorsal, lateral, and ventral views of the head, the dorsal scales, and a ventral view of the body.

• **DISTRIBUTION.** Alsophis rijgersmaei is endemic to the Anguilla Bank, where it is found in a variety of undisturbed and altered habitats ranging from dry thorn forest to moderately



FIGURE. Adult male Alsophis rijgersmaeifrom Shoal Bay Village, Anguilla (photograph by RP).

mesic hillsides. The species has been recorded from Anguilla, Scrub Island, St.-Martin/Sint Maarten, and St.-Barthélémy. The range was illustrated previously in Schwartz and Henderson (1991).

#### • FOSSIL RECORD. None.

• PERTINENT LITERATURE. Barbour (1930a) described A. cinereus as common on Anguilla. Parker (1936) provided scale counts on Anguillian specimens. Westermann (1953) noted the possible extirpation of the population on St.-Martin/Sint Maarten. Brongersma (1959) provided a description and photograph. Underwood (1962) provided a brief description. Maglio (1970) discussed origin, phylogeny, and zoogeography. Henderson and Sajdak (1986) examined the status of populations relative to the introduction of the mongoose. Henderson and Crother (1989) noted prey and activity period. Sajdak and Henderson (1991) discussed conservation status and habitat. Schwartz and Henderson (1991) provided a description and summarized the known natural history. Henderson (1992) discussed the impact of the mongoose and possible extirpation on St.-Martin/Sint Maarten. Powell et al. (1992) noted the capture and preservation of the first specimen since 1951 on mongoose-infested Sint Maarten. Crother and Hillis (1995) discussed xenodontine snake phylogeny and included a specimen from Anguilla in their data set. Censky (1996) and Henderson and Sajdak (1996) discussed prey. The IUCN (1996) classified the snake as endangered. Daltry (1998) provided a description and discussed natural history, taxonomy, distribution, and recommendations for conservation of the Anguillian population. Mitchell (1998) discussed status, conservation, public education, and local attitudes in Anguilla. Crother (1999) included an Anguillian specimen in his phylogenetic study of xenodontine snakes. Malhotra and Thorpe (1999) gave a cursory description and discussed distribution and natural history. Howard et al. (in press) discussed the presence of the species on Scrub Island and commented on abundance.

The species has been included in checklists by Barbour (1914, 1930b, 1935, 1937), Werner (1929), Schwartz and Thomas (1975), MacLean et al. (1977), Schwartz and Henderson (1985, 1988), Frank and Ramus (1995), Powell et al. (1996), and Censky and Kaiser (1998).

• **REMARKS.** Parker's (1936) spelling is probably the most correct form of the patronyn; the name is spelled properly and the second 'e' is not needed. Schwartz and Thomas (1975) not only listed this species as *Alsophis rijersmai*, but used the same incorrect spelling in citing Cope's (1869) original description. Subsequent authors have erroneously perpetuated the Schwartz and Thomas (1975) spelling.

These snakes are common but secretive and hard to find on mongoose-free Anguilla and its satellite, Scrub Island (Howard et. al., in press). In contrast, they are nearly extirpated on mongoose-infested St.-Martin/Sint Maarten (Henderson 1992), and are apparently highly localized where they still occur (Powell et al. 1992, Daltry 1998). Data regarding snake populations on mongoose-free St.-Barthélémy are insufficient to comment on their status (Daltry 1998), but Sajdak and Henderson (1991) encountered five A. *rijgersmaei* during three days of field work in 1987.

• ETYMOLOGY. The specific epithet *rijgersmaei* is a patronym honoring Dr. H.E. Van Rijgersma, a 19th-century naturalist on St. Maarten and donor of the type specimens (Cope 1869, Holthuis 1959).

• COMMENT. In 1987, two persons observed five snakes in three days of work on St.-Barthélémy and three snakes in six

days on Anguilla. This is a much lower encounter rate than experienced for many West Indian snakes.

Although generally considered to be a diurnally active snake (Schwartz and Henderson 1991), as are most snakes of the genus *Alsophis*, during three weeks on Anguilla in June 2000 two of five specimens collected were found well after dark.

• ACKNOWLEDGMENTS. We thank José P. Rosado for examining the syntypes of A. cinereus at MCZ at our request.

#### LITERATURE CITED

- Amaral, A. do. 1929. Estudos sobre Ophidios Neotropicos. XVIII. Lista remissiva dos Ophidios da regiao Neotropica. Mem. Inst. Butantan 4:i-viii + 129-271.
- Barbour, T. 1914. A contribution to the zoögeography of the West Indies, with especial reference to amphibians and reptiles. Mem. Mus. Comp. Zoöl. 44:205–359 + 1 pl.
- —. 1930a. Some faunistic changes in the Lesser Antilles. Proc. New England Zoöl. Club 2:73–85.
- —. 1930b. A list of Antillean reptiles and amphibians. Zoologica (N.Y.) 11:61–116.
- . 1935. A second list of Antillean reptiles and amphibians. Zoologica (N.Y.) 19:77–141.
- 1937. Third list of Antillean reptiles and amphibians. Bull. Mus. Comp. Zoöl. 82:77–166.
- Boulenger, G.A. 1894. Catalogue of the Snakes in the British Museum (Natural History), vol. 2. Trustees, British Museum (Natural History), London.
- Brongersma, L.D. 1959. Some snakes from the Lesser Antilles. Stud. Fauna Curaçao Carib. Isl. 9:50–60 + pls IV–V.
- Censky, E.J. 1996. The evolution of sexual size dimorphism in the teiid lizard Ameiva plei: a test of alternative hypotheses, p. 277–289. In R. Powell and R.W. Henderson (eds.), Contributions to West Indian Herpetology: A Tribute to Albert Schwartz. SSAR Contr. Herpetol. (12). Ithaca, New York.
- and H. Kaiser. 1998. Lesser Antillean herpetofauna, p. 181–221. In B.I. Crother (ed.), Caribbean Amphibians and Reptiles. Academic Press, San Diego.
- Cope, E.D. 1869. Seventh contribution to the herpetology of tropical America. Proc. Amer. Phil. Soc. 11:147–169.
- Crother, B.I. 1999. Phylogenetic relationships among West Indian xenodontine snakes (Serpentes; Colubridae) with comments on the phylogeny of some mainland xenodontines. Contemp. Herpetol. 1999(2):1–12 + 3 figs., 3 tables, 4 appendices.
- and D.M. Hillis. 1995. Nuclear ribosomal DNA restriction sites, phylogenetic information, and the phylogeny of some xenodontine (Colubridae) snakes. J. Herpetol. 29:316–320.
- Daltry, J. 1998. The Anguillian Racer (Alsophis rijersmai): findings of the project development visit, April 1998. Unpubl. rept., Fauna & Flora Internatl. Carib. Progr., Cambridge, United Kingdom.
- Frank, N. and E. Ramus. 1995. A Complete Guide to Scientific and Common Names of Reptiles and Amphibians of the World. NG Publ., Inc., Pottsville, Pennsylvania.
- Garman, S. 1887. On West Indian reptiles in the Museum of Comparative Zoölogy at Cambridge, Mass. Proc. Amer. Phil. Soc. 24:278– 286.
- Henderson, R.W. 1992. Consequences of predator introductions and habitat destruction on amphibians and reptiles in the post-Columbus West Indies. Carib. J. Sci. 28:1–10.
- and B.I. Crother. 1989. Biogeographic patterns of predation in West Indian colubrid snakes, p. 479–517. *In* C.A. Woods (ed.), Biogeography of the West Indies: Past, Present, and Future. Sandhill Crane Press, Gainesville, Florida.
- and R.A. Sajdak. 1986. West Indian Racers: a disappearing act or a second chance? Lore 36(3):13-18.
- and —. 1996. Diets of West Indian racers (Colubridae: Alsophis): composition and biogeographic implications, p. 327–338. In R. Powell and R.W. Henderson (eds.), Contributions to West Indian Herpetology: A Tribute to Albert Schwartz. SSAR Contr. Herpetol. (12). Ithaca, New York.
- Holthuis, L.B. 1959. H.E. Van Rijgersma—a little-known naturalist of St. Martin (Netherlands Antilles). Stud. Fauna Curaçao Carib. Isl. 39:69–78.

Howard, K.G., J.M. Eaton, S.C. Larimer, and J.H. Townsend. In press. *Alsophis rijgersmaei*. Geographic Distribution. Herpetol. Rev.

- IUCN. 1996. 1996 Red List of Threatened Animals. IUCN. Gland, Switzerland.
- MacLean, W.P., R. Kellner, and H. Dennis. 1977. Island lists of West Indian amphibians and reptiles. Smithson. Herpetol. Info. Serv. (40): 1–47.
- Maglio, V.J. 1970. West Indian xenodontine colubrid snakes: their probable origin, phylogeny, and zoogeography. Bull. Mus. Comp. Zool. 141:1–53.
- Malhotra, A. and R.S. Thorpe. 1999. Reptiles and Amphibians of the Eastern Caribbean. Macmillan Educ. Ltd., London.
- Mitchell, E. 1998. The Anguillian Racer (Alsophis rijersmai): environmental education report, July 1998. Unpubl. rept., Fauna & Flora linternatl. Carib. Progr., Cambridge, United Kingdom.
- Parker. 1936. Some extinct snakes of the West Indies. Ann. Mag. Nat. Hist. ser. 10:227-233.
- Powell, R., R.W. Henderson, K. Adler, and H.A. Dundee. 1996. A checklist of West Indian amphibians and reptiles, p. 51–93. *In* R. Powell and R.W. Henderson (eds.), Contributions to West Indian Herpetology: A Tribute to Albert Schwartz. SSAR Contr. Herpetol. (12). Ithaca, New York.
- —, R.J. Passaro, and R.W. Henderson. 1992. Noteworthy herpetological records from Saint [*sic*] Maarten, Netherlands Antilles. Carib. J. Sci. 28:234–235.
- Sajdak, R.A. and R.W. Henderson. 1991. Status of West Indian racers in the Lesser Antilles. Oryx 25:33–38.
- Schwartz, A. and R.W. Henderson. 1985. A Guide to the Identification of the Amphibians and Reptiles of the West Indies Exclusive of Hispaniola. Milwaukee Publ. Mus., Milwaukee, Wisconsin.
- and —. 1988. West Indian amphibians and reptiles: a check-list. Milwaukee Pub. Mus. Contr. Biol. Geol. (74):1–264.

- and —. 1991. Amphibians and Reptiles of the West Indies: Descriptions, Distributions, and Natural History. Univ. Florida Press, Gainesville.
- and R. Thomas. 1975. A check-list of West Indian amphibians and reptiles. Carnegie Mus. Nat. Hist. Spec. Publ. (1):1–216.
- Underwood, G. 1962. Reptiles of the Eastern Caribbean. Carib. Affairs 1:1-192.
- Werner, F. 1929. Übersicht der Gattungen und Arten der Schlangen aus der Familie Colubridae. III. Teil (Colubrinae). Mit einem Nachtrag zu den übrigen Familien. Zool. Jahrb. (Syst.) 57:1–196.
- Westermann, J.H. 1953. Nature preservation in the Caribbean. A review of the literature on the destruction and preservation of the flora and fauna of the Caribbean Area. Publ. Found. Sci. Res., Suriname, Netherlands Antilles 9:1–107.

JOSIAH H. TOWNSEND, Department of Biology, Miami-Dade Community College, Kendall Campus, Miami, FL 33176 (current address: Department of Wildlife Ecology and Conservation, University of Florida, Gainesville, FL 32611) (joetownsend@earthlink.net), **ROBERT POWELL**, Department of Biology, Avila College, Kansas City, MO 64145 (powellr@mail.avila.edu), and **ROBERT W. HENDERSON**, Section of Vertebrate Zoology, Milwaukee Public Museum, Milwaukee, WI 53233 (rh@mpm.edu).

Primary editor for this account, Larry David Wilson.

Published 30 September 2000 and Copyright © 2000 by the Society for the Study of Amphibians and Reptiles.