

**Catalogue of American Amphibians
and Reptiles 911**

Powell, R., J. Torres, and O. H. Garrido. 2017.
Leiocephalus onaneyi.

***Leiocephalus onaneyi* Garrido
Guantánamo Striped Curly-tailed Lizard**

Leiocephalus onaneyi Garrido 1973:4.
Type locality, “en la cima de la loma de Macambo, entre San Antonio del Sur e Imías, Provincia de Oriente, Cuba” [on top of Loma de Macambo between San Antonio del Sur and Imías, Oriente [= Guantánamo] Province, Cuba]. Holotype, Instituto de Zoología de la Academia de Ciencias de Cuba (IZ) 2869, an adult female, collected by Onaney Muñiz on 8 June 1970 (examined by OHG). See **Remarks**.

CONTENT. No subspecies are recognized.

DESCRIPTION. *Leiocephalus onaneyi* is a medium-sized member of the genus; the largest individual is an adult female with a SVL of 72 mm (Garrido 1973; Schwartz and Henderson 1991). Dorsal scales are keeled and imbricate, ventrals smooth and subcycloid. Median dorsal crest scales not greatly enlarged, slightly lower than median dorsal caudal scales, number 48 in occiput-vent distance, and one-half midbody scales number 16–18. Four median head scales, 5 supraoculars, 4–5 loreals, 4–5 scales in the frontoparietal row, and 5 enlarged preauricular scales are present. Supraorbital semicircles sometimes complete, and parietals in contact or not. Males have a pair of enlarged postcloacal scales.

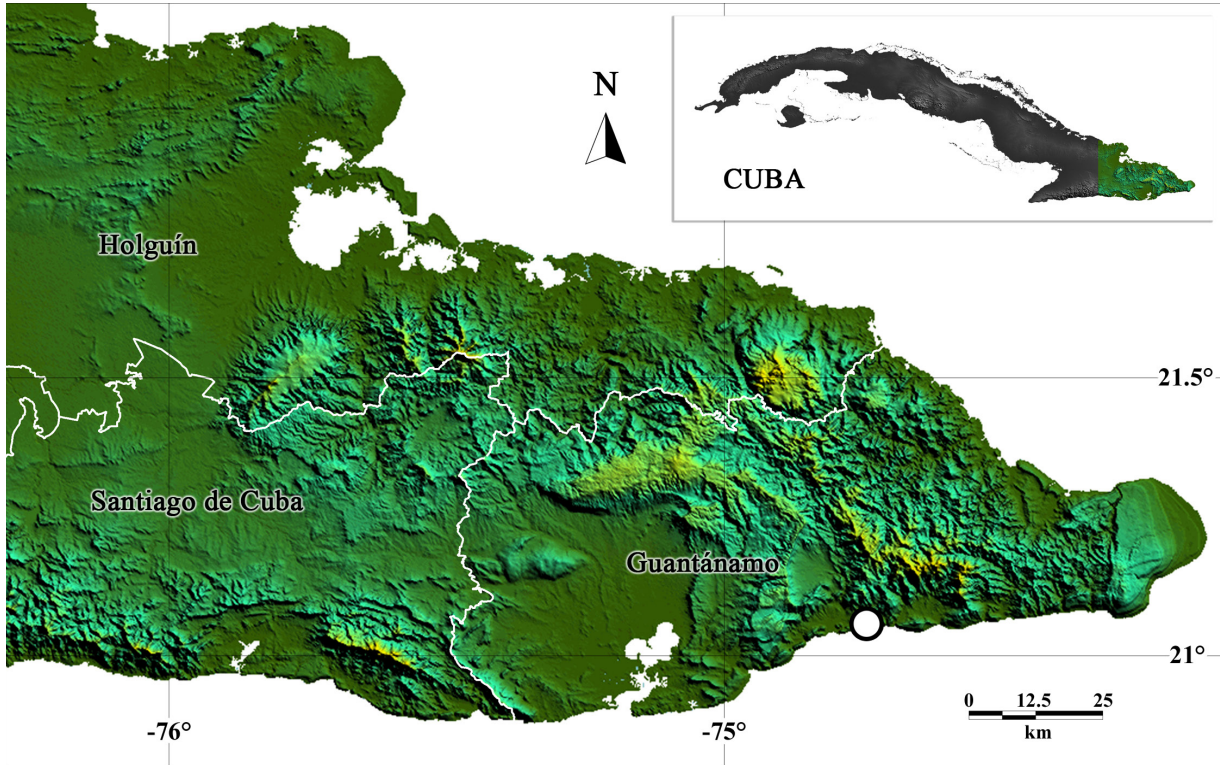
Sexual dichromatism is not pronounced (Garrido 1973; Schwartz and Henderson 1991), with sexes differing only in throat color; throats of males are white and those of females gray, with the color extending



FIGURE 1. Adult female *Leiocephalus onaneyi* (Museo Nacional de Historia Natural de Cuba [MNHNCu] 4695) from near the type locality (from Díaz and Cádiz 2012). Photograph by Luis M. Díaz.

onto the venter. Otherwise in both sexes, the dorsum is longitudinally zonate, with eight zones extending from middorsum to the venter on each side (most, except where indicated, begin on the head and extend onto the tail): (1) three scale rows along the dorsal midline chocolate-brown with those in the middorsal row paler; (2) chestnut-brown, practically gray, and about one-half the width of zone 1; (3) chocolate and covering almost 4 scales rows; (4) gray (as in zone 2), extending from above or behind the eyes onto the tail; (5) chocolate and about 4.5 scale rows wide; (6) similar to zone 4 and extending from below the eyes through the ears to the groin; (7) chocolate-chestnut and about 3 scale rows wide; and (8) pale gray bordering the white, unmarked venter.

DIAGNOSIS. *Leiocephalus onaneyi* can be distinguished from all Cuban congeners by the strongly lineate dorsum, an unmarked white or gray throat, and an immaculate white venter (Garrido 1973; Schwartz and Henderson 1985). The dorsum of *Leiocephalus carinatus* is rather uniform or bears vague crossbars or large, black lateral blotches. *Leiocephalus cubensis* has a weakly lineate dorsum but a throat with a variable



MAP. The distribution of *Leiocephalus onaneyi*; the open circle marks the type locality. The species is known only from the vicinity of the type locality.

pattern of lines, dashes, dots, or mottling. In *Leiocephalus stictigaster*, the venter in males usually bears dark dots, the throat is more or less lineate, and dorsal and lateral fields are spotted with black. *Leiocephalus macropus* has supraaxillary blotches and a transverse bar across the shoulders above the forelimb insertions. In *Leiocephalus raviceps*, the dorsum is pale with grayish herringbone markings or fine dots.

PHYLOGENETIC RELATIONSHIPS. This species has not been included in any phylogenetic studies (e.g., Pregill 1992).

PUBLISHED DESCRIPTIONS. Detailed descriptions were published by Garrido (1973) and Schwartz and Henderson (1991).

ILLUSTRATIONS. **Color photographs** were published by Díaz and Cádiz (2012) and Hedges (2017). **Black-and-white**

photographs of the top of the head of the holotype and a dorsal view and the throat of a subadult male paratype were presented by Garrido (1973). A **color illustration**, also reproduced on the dust jacket, was published by Rodríguez Schettino (1999c); a black-and-white version of the same image was presented by Garrido (2003).

DISTRIBUTION. *Leiocephalus onaneyi* is known only from the immediate vicinity of the type locality on top of Loma de Macambo (elev. ~150 m) in xeric habitat characterized by ‘dog-tooth’ limestone and dominated by grasses, agaves, and dense spiny bushes (Díaz and Cádiz 2012; Garrido 1973; Rodríguez Schettino 1999c; Schwartz and Henderson 1991). The species was “expected on the hills that comprise the Sierra de Imías” (Schwartz and Henderson 1988), but other descriptions emphasized that animals were found only on top of Loma Macambo and that the



FIGURE 2. Juvenile *Leiocephalus onaneyi* (MNHNCu 4696) from near the type locality (from Díaz and Cádiz 2012). Photograph by Luis M. Díaz.

vegetation on the slopes was substantially different (Garrido 1973, 2003; Díaz and Cádiz 2012). The range was illustrated by Hedges (2017), Rodríguez Schettino et al. (2013), and Schwartz and Henderson (1991).

FOSSIL RECORD. No fossils are known.

PERTINENT LITERATURE. In addition to the original description of *Leiocephalus onaneyi* published by Garrido (1973), this species was the focus of both an essay describing efforts to collect additional specimens (Garrido 2003) and a report on the rediscovery of the species (Díaz and Cádiz 2012). *Leiocephalus onaneyi* was included in checklists, general works, articles focusing on other species, or faunal accounts published by Alfonso et al. (2012), Estrada (2012), Estrada and Ruibal (1999), Frank and Ramus (1995), Henderson and Powell (2009), Hutchins et al. (2003), MacLean et al. (1977), Muñoz Riveaux et al. (2008), Perez et al. (1996), Powell et al. (1996), Pregill (1992), Rodríguez Schettino (1999a, 1999b, 1999c), Rodríguez Schettino and Rivalta González (2003), Rodríguez Schettino and Rodríguez Gómez (2003), Rodríguez Schettino et al. (1999, 2010, 2013), Schwartz (1978), Schwartz and Henderson (1985, 1988, 1991), Schwartz and

Thomas (1975), Uetz et al. (2016), and Wrobel (2004). See **Remarks** for information on the conservation status of the species.

REMARKS. The holotype (IZ 2869) was transferred to the Colecciones Zoológicas de la Academia de Ciencias de Cuba (CZACC), Instituto de Ecología y Sistemática, Ministerio de Ciencia, Tecnología y Medio Ambiente, with a new number, CZACC 4.3267 (Chamizo Lara et al. 2005).

Following different criteria, *Leiocephalus onaneyi* was listed by Perera et al. (1994) as: (1) very restricted and rare (*sensu* Buide González et al. 1974), (2) vulnerable (*sensu* Mace et al. 1992), and (3) rare or uncommon but not endangered (*sensu* Master 1991). This species was listed as “critically endangered” by Rodríguez Schettino and Chamizo Lara (1998) and Vales et al. (1998), but subsequently, *Leiocephalus onaneyi* was considered “possibly extinct” by L. Rodríguez Schettino and A. Chamizo Lara (in Rodríguez Schettino 1999a) and Chamizo Lara and Martínez Reyes (2007). Status surveys and action plans were provided by Chamizo Lara et al. (2001). The species was included by Henderson and Powell (2009) in a list of “presumably extinct” West Indian species that disappeared



FIGURE 3. Natural habitat of *Leiocephalus onaneyi* near the type locality on Loma de Macambo, Guantánamo Province, Cuba (from Díaz and Cádiz 2012). Photograph by Luis M. Díaz.

in historical times. The ‘rediscovery’ of the species, published by Díaz and Cádiz (2012), at least temporarily excluded *Leiocephalus onaneyi* from compendia of extinct taxa, but it was again listed as “critically endangered” by Chamizo Lara and Martínez Reyes (2012). The species has not been assessed for the IUCN Red List (IUCN 2016).

ETYMOLOGY. The specific epithet *onaneyi* is a patronym honoring Onaney Muñiz, a renowned Cuban botanist and collector of the type series (Garrido 1973, 2003).

ADDITIONAL VERNACULAR NAMES. Sierra Curlytail Lizard (Frank and Ramus 1995; Wrobel 2004; various websites, e.g., iNaturalist 2017; Myers et al. 2017; Uetz et al. 2016); Bayoya de Onaney (Garrido 2003; note that ‘Bayoya’ is the general name applied to all curly-tailed lizards in Cuba except *Leiocephalus carinatus*); Guantánamo Striped Curlytail (Díaz and Cádiz 2012); Guantánamo Striped Curlytail (Hedges 2017).

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LITERATURE CITED

- Alfonso, Y. U., G. Fajardo, E. Suarez, and K. L. Krysko. 2012. Sexual size dimorphism, ovipositioning, and hatching in *Leiocephalus macropus asbolomus* (Squamata: Leiocephalidae) in Alexander von Humboldt National Park in eastern Cuba. *IRCF Reptiles & Amphibians* 19:230–236.
- Buide González, M. S., J. Fernández Milera, F. García Montaña, O. H. Garrido Calleja, H. de los Santos Izquierdo, G. Silva Taboada, and L. S. Varona Calvo. 1974. Las Especies Amenazadas de Vertebrados Cubanos. Academia de Ciencias de Cuba, Instituto de Zoología, Departamento de Vertebrados, La Habana, Cuba. 32 pp.
- Chamizo Lara, A. R. and M. Martínez Reyes. 2007. Estado de conservación de las especies y algunas poblaciones del género *Leiocephalus* (Sauria: Tropicuridae) en Cuba. P. 86 in Resúmenes. VII Simposio Internacional de Zoología, Topes de Collantes, Cuba. [Not seen; cited by Chamizo Lara and Martínez Reyes 2012].
- Chamizo Lara, A. R. and M. Martínez Reyes. 2012. Hoja de datos del taxón. *Leiocephalus onaneyi* Garrido, 1973. Pp. 102–103 in Libro Rojo de los Vertebrados de Cuba (H. González Alonso, L. Rodríguez Schettino, A. Rodríguez, C. A. Mancina, and I. Ramos García, editors). Editorial Academia, La Habana, Cuba.
- Chamizo Lara, A., L. Rodríguez Schettino, L. V. Moreno García, V. Seijo, I. Fernández, Á. Arias, and E. Manso. 2001. Hoja de datos de taxon Bayoya, *Leiocephalus onaneyi*. [4 pp.] in Taller para el Análisis de la Conservación y Manejo Planificado de una Selección de Especies Cubanas. La Habana, Cuba 1–3 de Noviembre, 1999. Informe. (Report of Conservation Assessment and Management Plan Workshop for Selected Cuban Species) (E. Perez, Y. Matamoros, and S. Ellis, editors). Conservation Breeding Specialist Group, Species Survival Commission, IUCN – The World Conservation Union (CBSG), Apple Valley, Minnesota. [Sections independently paginated].
- Chamizo Lara, A. R., L. V. Moreno García, and L. Rodríguez Schettino. 2005. Holotypes of reptiles in the herpetological collection of the Institute of Ecology and Systematics, Cuba. *Smithsonian Herpetological Information Service* 135:i + 1–10.
- Díaz, L. M. and A. Cádiz. 2012. The rediscovery of the Guantánamo Striped Curlytail (*Leiocephalus onaneyi*). *IRCF Reptiles & Amphibians* 19:11–13.
- Estrada, A. R. 2012. The Cuban Archipelago.

- Pp. 113–125 in *Island Lists of West Indian Amphibians and Reptiles* (R. Powell and R. W. Henderson, editors). *Bulletin of the Florida Museum of Natural History* 51.
- Estrada, A. R. and R. Ruibal. 1999. A review of Cuban herpetology. Pp. 31–62 in *Caribbean Amphibians and Reptiles* (B. I. Crother, editor). Academic Press, San Diego, California.
- Frank, N. and E. Ramus. 1995. *A Complete Guide to Scientific and Common Names of Reptiles and Amphibians of the World*. N G Publishing, Inc., Pottsville, Pennsylvania. 377 pp.
- Garrido, O. H. 1973. Nueva especie de *Leiocephalus* (Lacertilia, Iguanidae) para Cuba. *Poeyana* 116:1–19.
- Garrido, O. H. 2003. Discovery and rediscovery. Pp. 59–66 in *Islands and the Sea. Essays on Herpetological Exploration in the West Indies* (R. W. Henderson and R. Powell, editors). *Contributions to Herpetology Volume 20*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.
- Hedges, S. B. 2017. *Caribherp. West Indian amphibians and reptiles [Amphibians and reptiles of Caribbean Islands]: Cuba*. Temple University, Philadelphia, Pennsylvania. Available at <http://www.caribherp.org/index.php?il=Cuba&so=class,%20ord,%20subord,%20family,%20species&vw=y&dd=n&mob=y>. Archived by WebCite at <http://www.webcitation.org/6pkdc38st> on 15 April 2017.
- Henderson, R. W. and R. Powell. 2009. *Natural History of West Indian Reptiles and Amphibians*. University Press of Florida, Gainesville, Florida. xxiv + 496 pp.
- Hutchins, M., J. B. Murphy, and N. Schlager, editors. 2003. *Grzimek's Animal Life Encyclopedia*. Second Edition. Volume 7, Reptiles. The Gale Group, Inc., Farmington Hills, Michigan. xvi + 593 pp.
- iNaturalist. 2017. *Sierra Curlytail Lizard (Leiocephalus onaneyi)*. Available at <http://inaturalist.org/taxa/39344-Leiocephalus-onaneyi>. Archived by WebCite at <http://www.webcitation.org/6qaDUIoP9> on 19 May 2017.
- IUCN (International Union for Conservation of Nature). 2016. *The IUCN Red List of Threatened Species*. Version 2016-3. Available at <http://www.iucnredlist.org>. [Search performed on this site on 16 April 2017 lists “This taxon has not yet been assessed for the IUCN Red List...” but URL for search results is only a generic <http://www.iucnredlist.org/search> and can not be archived].
- Mace, G., N. Collar, J. Cooke, K. Gaston, J. Ginsberg, N. Leader Williams, M. Maun-der, and E. J. Milner-Gulland. 1992. The development of new criteria for listing species on the IUCN Red List. *Species* 19:16–22.
- MacLean, W. P., R. Kellner, and H. Dennis. 1977. Island lists of West Indian amphibians and reptiles. *Smithsonian Herpetological Information Service* 40:1–47.
- Master, L. L. 1991. Assessing threats and setting priorities for conservation. *Conservation Biology* 5:559–563.
- Muñoz Riveaux, S., Y. Urgellés Alfonso, and L. Rodríguez Schettino. 2008. Variación morfológica y alimentación de *Leiocephalus macropus* (Sauria: Tropicuridae) en Yacabo Abajo, provincia de Guantánamo, costa semiárida de Cuba. *Hombre, Ciencia y Tecnología* 12(4):8 pp. [pages not numbered].
- Myers, P., R. Espinosa, C. S. Parr, T. Jones, G. S. Hammond, and T. A. Dewey. 2017. *The Animal Diversity Web* (online). Available at http://animaldiversity.org/accounts/Leiocephalus_onaneyi/classification/. Archived by WebCite at <http://www.webcitation.org/6qaDj5yiM> on 19 May 2017.
- Perera, A., V. Berovides, O. H. Garrido, A. Estrada, A. González, and M. Álvarez. 1994. Criterios para la selección de especies amenazadas de vertebrados cubanos.

- P. 96 *in* Resúmenes. Tercer Simposio de Zoología, La Habana, Cuba. [Authors also reviewed a copy of the unpublished paper].
- Perez, E., E. Osa, Y. Matamoros, and U. S. Seal, editors. 1996. Taller para la Conservacion Analisis y Manejo Planificado de una Seleccion de Especies Cubanas. Informe. Habana, Cuba 7–10 March 1996. Conservation Breeding Specialist Group (SSC/IUCN). Report of Conservation Assessment and Management Plan Workshop for Selected Cuban Species: CBSG, Apple Vally, Minnesota. 131 + 4 + 20 + 71 pp.
- Powell, R., R. W. Henderson, K. Adler, and H. A. Dundee. 1996. An annotated checklist of West Indian amphibians and reptiles. Pp. 51–93, Plates 1-8 *in* Contributions to West Indian Herpetology. A Tribute to Albert Schwartz (R. Powell and R. W. Henderson, editors). Contributions to Herpetology, Volume 12. Society for the Study of Amphibians and Reptiles, Ithaca, New York.
- Pregill, G. K. 1992. Systematics of the West Indian lizard genus *Leiocephalus* (Squamata: Iguania: Tropiduridae). The University of Kansas Museum of Natural History Miscellaneous Publication 84:1–69.
- Rodríguez Schettino, L. (editor). 1999a. Introduction. Pp. 1–16 *in* The Iguanid Lizards of Cuba (L. Rodríguez Schettino, editor). University Press of Florida, Gainesville, Florida.
- Rodríguez Schettino, L. 1999b. Biogeography. Pp. 86–103 *in* The Iguanid Lizards of Cuba (L. Rodríguez Schettino, editor). University Press of Florida, Gainesville, Florida.
- Rodríguez Schettino, L. 1999c. Systematic accounts of the species. Pp. 104–380 *in* The Iguanid Lizards of Cuba (L. Rodríguez Schettino, editor). University Press of Florida, Gainesville, Florida.
- Rodríguez Schettino, L. and A. R. Chamizo Lara. 1998. Reptiles cubanos con algún grado de amenaza de extinción. *Poeyana* 463:1–8.
- Rodríguez Schettino, L. and V. Rivalta González. 2003. Lista de especies. Pp. 162–165 *in* Anfibios y Reptiles de Cuba (L. Rodríguez Schettino, editor). UPC Print, Vaasa, Finland.
- Rodríguez Schettino, L. and A. Rodríguez Gómez. 2003. Especies en peligro y su conservación. Pp. 156–161 *in* Anfibios y Reptiles de Cuba (L. Rodríguez Schettino, editor). UPC Print, Vaasa, Finland.
- Rodríguez Schettino, L., M. Martínez Reyes, and L. V. Moreno García. 1999. Ecology and Behavior. Pp. 36–58 *in* The Iguanid Lizards of Cuba (L. Rodríguez Schettino, editor). University Press of Florida, Gainesville, Florida.
- Rodríguez Schettino, L., V. Rivalta González, and E. Pérez Rodríguez. 2010. Distribución regional y altitudinal de los reptiles de Cuba. *Poeyana* 498:11–20.
- Rodríguez Schettino, L., C. A. Mancina, and V. Rivalta González. 2013. Reptiles of Cuba: Checklist and Geographic Distributions. *Smithsonian Herpetological Information Service* 144:1–96.
- Schwartz, A. 1978. Some aspects of the herpetogeography of the West Indies. Pp. 31–51 *in* Zoogeography in the Caribbean. The 1975 Leidy Medal Symposium (F. B. Gill, editor). Academy of Natural Sciences of Philadelphia Special Publication No. 13.
- 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 Public Museum, Milwaukee, Wisconsin. 165 pp.
- Schwartz, A. and R. W. Henderson. 1988. West Indian amphibians and reptiles: A check-list. *Milwaukee Public Museum Contributions in Biology and Geology* 74:1–264.

- Schwartz, A. and R. W. Henderson. 1991. Amphibians and Reptiles of the West Indies: Descriptions, Distributions, and Natural History. University of Florida Press, Gainesville, Florida. xvi + 720 pp.
- Schwartz, A. and R. Thomas. 1975. A Check-List of West Indian Amphibians and Reptiles. Carnegie Museum of Natural History Special Publication 1. 216 pp.
- Uetz, P., J. Hallermann, and J. Hosek (editors). 2016. The Reptile Database. *Leiocephalus onaneyi* Garrido, 1973. Available at <http://reptile-database.reptarium.cz/species?genus=Leiocephalus&species=onaneyi>. Archived by WebCite at <http://www.webcitation.org/6gCVRdPXs> on 22 March 2016.
- Vales, M., A. Álvarez, L. Montes, and A. Ávila (compilers). 1998. Estudio Nacional sobre la Diversidad Biológica en la República de Cuba. Programa de las Naciones Unidas para el Medio Ambiente, Centro Nacional de Biodiversidad del Instituto de Ecología y Sistemática, Agencia de Medio Ambiente. Ministerio de Ciencia, Tecnología y Medio Ambiente, La Habana, Cuba. 480 pp.
- Wrobel, M. (compiler). 2004. Elsevier's Dictionary of Reptiles in Latin, English, German, French and Italian. Elsevier, Amsterdam, The Netherlands. ix + 758 pp.

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