



<http://dx.doi.org/10.11646/zootaxa.3811.4.8>

<http://zoobank.org/urn:lsid:zoobank.org:pub:4DE1AB80-89A0-40A5-9EBE-30DDF30F5037>

A new species of triadal coral snake of the genus *Micrurus* Wagler, 1824 (Serpentes: Elapidae) from northeastern Brazil

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Abstract

The genus *Micrurus* comprises 123 currently recognized taxa (species and subspecies) that are traditionally arranged in four species groups diagnosable mainly by color pattern characteristics. Here, we describe a new species of triadal coral snake from northeastern Brazil. The new species is distinguished from other sympatric triadal congeners (*M. lemniscatus carvalhoi*, *M. ibiboboca* and *M. brasiliensis*) mainly by the entirely black parietals and by a suite of external characters and hemipenial morphology. The new species appears to be restricted to tropical ombrophilous lowland coastal forests of northeastern Brazil and all recently collected specimens are known to occur in small forest patches surrounded by periurban environment, which calls for an urgent evaluation on its conservation status.

Key words: Elapidae, taxonomy, morphology, *Micrurus*, new species, Northeastern Brazil

Introduction

The New World radiation of coral snakes is composed by the genera *Leptomicrurus* Schmidt, 1937, *Micruroides* Schmidt 1928, and *Micrurus* Wagler, 1824 (Roze 1996; Silva Jr. & Sites 1999, 2001; Campbell & Lamar 2004), which are distinguished from other Elapidae by their hemipenis with uniformly distributed spines and a basal pocket (Slowinski 1995; Campbell & Lamar 2004). *Micrurus* is by far the most diversified genus among the three, with 123 recognized taxa that are mostly diagnosed by their colored pattern of body ring arrangements, tail proportion with respect to the body length, and hemipenial morphology (Campbell & Lamar 1989, 2004; Savage & Slowinski 1992; Slowinski 1995; Silva Jr. & Sites 1999, 2001).

According to Campbell & Lamar (2004), four morphological groups may be recognized: a) the monadal group, long-tailed species with a single black ring separating the white and red rings (e.g., *M. corallinus*); b) the bicolor group, short-tailed species with white or red rings separated by black rings (e.g., *M. multifasciatus*); c) the Central American triadal group, long-tailed species with three black rings separated by white rings between red rings (e.g., *M. laticollaris*); and d) the South American triadal group, short-tailed species with the same color pattern as in “c”, but restricted geographically to South America (e.g., *M. ibiboboca*). The South American triadal group of *Micrurus* forms a strongly supported clade that comprises 22 valid species (Campbell & Lamar 2004; Slowinski 1995; Silva Jr. & Sites 1999, 2001).

In the course of extensive comparative studies of the triadal species of *Micrurus* (see Appendix I), we found a conspicuous population along the coastal forest formations of the northeastern states of Paraíba, Pernambuco and Rio Grande do Norte in Brazil, which did not conform to any sympatric species. Here we describe this population as a new species that appears to belong to the South American triadal clade.

Extensive sympatry between *M. ibiboboca* and *M. potyguara* represents another source of confusion. Until recent years, the only northeastern Brazilian triadral coral snake known was *M. ibiboboca*, a species thought to be distributed throughout both tropical ombrophilous lowland coastal forests (tabuleiros) of easternmost Northeast Brazil, and xeric, semi-arid inland regions of northeastern Brazil. As shown here, *M. ibiboboca* occurs in sympatry with *M. potyguara* throughout the distribution of the latter. However, *M. potyguara* is apparently restricted to the “tabuleiros” forests while *M. ibiboboca* is a widespread, mainly xeric species that eventually extended its range into degraded or deforested areas within the tropical ombrophilous lowland coastal forest domains.

As for other recently described species in northeastern Brazil (e.g., *Atractus caete* Passos et al. 2010; *Bothrops muriciensis* Ferrarezzi & Freire 2001; *Dendrophidion atlantica* Freire, Caramaschi & Gonçalves 2010; *Liotyphlops trefauti* Freire, Caramaschi & Argôlo 2007), *M. potyguara* occurs in localities that correspond to small remnants of the original northeastern Atlantic forest coastal landscape. This fact alone reinforces the urgent need to preserve these remnants that are presently under severe anthropic pressure due to intense economic exploitation (agricultural, touristic) or urban expansion.

Acknowledgements

We are indebted to the following Curators and respective curatorial staffs for providing access to specimens under their care: Darrel Frost and David Kizirian (AMNH), Jens Vindum (CAS), Carlos Grisolia (CCG), Maria de Fátima Leandro Marques (CEATOX-PB), Hélder Lúcio Rodrigues Silva (CEPB), José M. Gallardo (CHINM), Gilda V. Andrade (CHUFMA), Guarino Colli (CHUNB), Antônio Jorge Suzart Argôlo (CZGB e MZUESC), Harold Voris and Alan Resetar (FMNH), Francisco Luís Franco (IBSP), Aníbal R. Melgarejo (IVB), Jonathan Losos and José Rosado (MCZ), Júlio César Moura Leite (MNHCI), Ivan Ineich (MNHN), Martha Motte Paredes (MNHNP), Paulo Passos (MNRJ), Flora Acuna Juncá (MZUEFS), Heinz Grillitsch (NHMW), Sven Kullander e Erik Åhlander (NRM), Gunther Köhler (SMF), Rejâne Maria Lira da Silva (UFBA), Ron Nussbaum and Greg Schneider (UMMZ), W. Ronald Heyer, Kenneth Tigue, Robert Wilson and Steve Gotte (USNM), Paulo Roberto Manzani (ZUEC), Alexander Haas and Jakob Hallermann (ZSM). MP is supported by a scholarship from Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). GF is supported by a postdoctoral fellowship from FAPESP (2012/19753-6). DT is supported by a scholarship from CNPq (140003/2008-8). Funding for this project was provided by Systema Naturae Consultoria Ambiental Ltda., Fundação de Amparo à Pesquisa do Estado de São Paulo (BIOTA/FAPESP; grant number 11/50206-9) and Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq; grant numbers 565046/2010-1; 303545/2010-0; 564495/2010-7; 309443/2013-0) to AP, NS, and HZ.

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APPENDIX 1. Specimens examined.

Micrurus brasiliensis: **BRASIL: BAHIA:** Barreiras: CEPB 2301, IBSP 51310, MNRJ 2495 (paratype), 2496 (paratype), 2497 (paratype), UMMZ 108880 (holotype), 108881 (paratype); Brumado: IBSP 50142, 54921; Correntina: CHUNB 39081; Ibiassucê: MZUEFS 998; Santa Cruz de Cabrália: MCZ 3298 (paratype); São Desidério: IBSP 54848, 55385. **GOIÁS:** Colinas do Sul: CHUNB 44683; Guarani de Goiás: IBSP 55883; Mambai: MZUSP 15119; Minacu: IBSP 9152; Niquelândia: CEPB 3824, 3827. **MARANHÃO:** UHE Estreito: MZUSP 16732, 16733, 16734, 17212, 17213, 17215. **MINAS GERAIS:** Januária: UMMZ 108878 (paratype). **TOCANTINS:** Mateiros: CHUNB 14163, 25352; Palmas: CHUNB 12012; Santa Isabel: Ilha do Bananal: AMNH 90361 (paratype).