



FIRST CONFIRMED RECORD OF THE VENOMOUS CORAL SNAKE *Micrurus ibiboboca* (SERPENTES, ELAPIDAE) IN MINAS GERAIS, BRAZIL

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Abstract: We report for the first time the occurrence of the venomous snake species *Micrurus ibiboboca* in the state of Minas Gerais, Brazil, based on a specimen collected in an Atlantic Forest area. This is the sixth record of a venomous coral snake in Minas Gerais and increases to 160 the number of known snake species in the state.

Keywords: Atlantic Forest; coral snake; distribution; Squamata; Wallacean shortfall

Micrurus ibiboboca (Merrem, 1820) is a coral snake species described based on a specimen collected in the early 19th century by the Prince Maximilian of Wied, in the Atlantic Forest at the mouth of the Belmonte river (now Jequitinhonha river), state of Bahia (Campbell & Lamar 2004). A Brazilian endemic taxon, it is also recorded through the semiarid Caatinga and the Cerrado of northeastern Brazil (Vanzolini *et al.* 1980, Pires *et al.* 2014) and in the coastal Atlantic Forest of southeastern Brazil (Nogueira *et al.* 2019). This species has a complex taxonomy, being easily confused with *M. lemniscatus* (Linnaeus 1758) (Campbell & Lamar 2004; MacCulloch & Lathrop 2004), and some authors argue that the Caatinga populations may be a distinct and undescribed taxon (Argôlo 2004; Campbell & Lamar 2004, Guedes *et al.* 2014).

Micrurus ibiboboca is a triadal coral snake (7–13 body triads), distinguished from its congeners by the following characters: cloacal plate divided; a black nuchal ring is the anteriormost ring of the first complete triad; white rings equal to or slightly narrower than the external black rings; red rings immaculate or with small black tips, expanded ventrally (1–2 scales longer than at dorsal midline); triad pattern on body continues onto the tail (two black rings to two complete triads); a white/yellow internasal band bounded with black present, black marks on the genial scales; ventrals 198–247 in males, 188–254 in females; subcaudals paired, 17–33 in males, 16–34 in females (Campbell & Lamar 2004, Pires *et al.* 2014).

The reptile collection of the Museu de Zoologia

João Moojen, Universidade Federal de Viçosa, Brazil, has a specimen of *Micrurus ibiboboca* (MZUFV 1209) collected on 12 January 2005 at Fazenda Limoeiro (16°03'00" S, 40°51'00" W; ca. 800 m asl, datum WGS84), municipality of Almenara, state of Minas Gerais, southeastern Brazil. It is an adult male with the following characters: ventral plates 223; subcaudal plates 18; body triads eight; tail triads one; Figure 1). No further detail is available regarding the collection of this specimen. To the best of our knowledge it represents the first record of *M. ibiboboca* in Minas Gerais. The region is embedded in the

Atlantic Forest (*sensu* IBGE 2019), about 210 km west from the type locality of *M. ibiboboca*.

On 05 November 2019 MCN collected a specimen found dead on a dirt road within the Reserva Particular do Patrimônio Natural (RPPN) Mata do Passarinho (15°47'28" S, 40°31'34" W; ca. 665 m asl, datum WGS84) (field label MCN 434, to be deposited in the reptile collection of Universidade Federal de Juiz de Fora, Brazil). The specimen is an adult female; ventral plates 225; subcaudal plates in 22 pairs; body triads nine; tail triads one. The RPPN Mata do Passarinho is an Atlantic Forest protected area located on the



Figure 1. Specimen of *Micrurus ibiboboca* (MZUFV 1209) from Fazenda Limoeiro, Almenara, state of Minas Gerais, Brazil.

boundary between Minas Gerais and Bahia states, approximately 45 km northeast from Almenara (Figure 2).

Micrurus ibiboboca is a terrestrial species, occurring in forest and open areas, even in disturbed areas, and is active during both night and day (Argôlo 2004). These habits increase the

chance of encounters with humans, particularly in rural areas. However, there are a few records of snakebites caused by *M. ibiboboca*, as for Brazilian venomous coral snakes in general, probably due to their low aggressive behavior, small fangs, and limited angle of mouth opening (Bucarety *et al.* 2016).

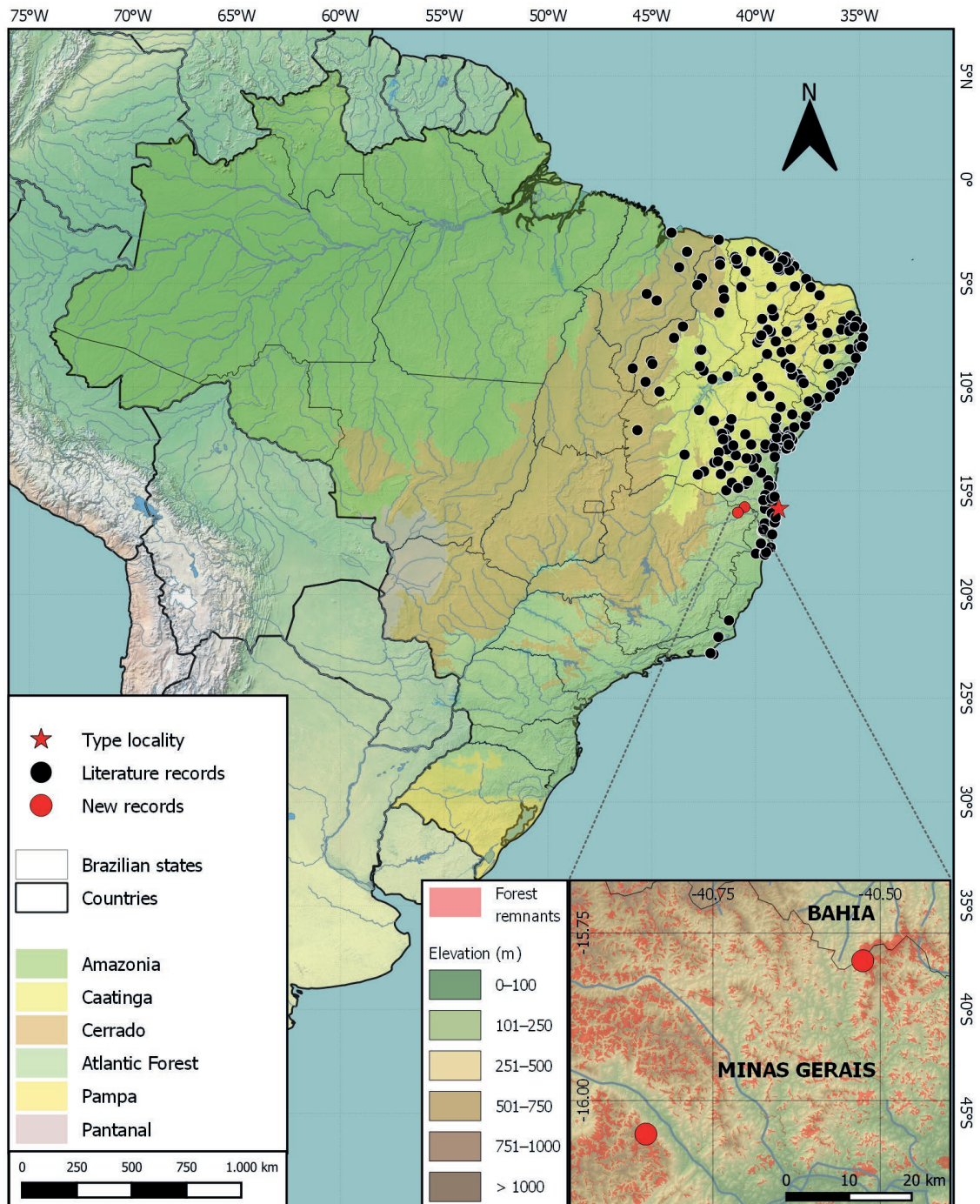


Figure 2. Known geographic range of *Micrurus ibiboboca* based on literature records (Vanzolini *et al.* 1980, Guedes *et al.* 2014, Pires *et al.* 2014, Nogueira *et al.* 2019) and new records (this study). Geographic coordinates from the sources of records and gazetteers (Paynter & Traylor 1991, Vanzolini 1992, IBGE 2011). Brazilian ecoregions based on IBGE (2019). Note: Guedes *et al.* (2014) cite the Caatinga populations as '*Micrurus sp.*'. Dataset available as a supplementary material.

The two specimens cited here agree with the diagnosis of *Micrurus ibiboboca* in color pattern and in the number of ventral and subcaudal plates. *Micrurus ibiboboca* is the sixth venomous coral snake known for Minas Gerais; the other five species are *M. brasiliensis* Roze, 1967, *M. corallinus* (Merrem, 1820), *M. decoratus* (Jan, 1858), *M. frontalis* (Duméril *et al.* 1854), and *M. lemniscatus* (Linnaeus, 1758) (Costa & Bérnils 2018, Nogueira *et al.* 2019). The record of *M. ibiboboca* increases the snake species richness known for Minas Gerais to 160, which makes MG the second Brazilian state in number of snake species (Costa & Bérnils 2018), and provides site-locality environmental variables useful for modeling the species' niches or geographic range. Since *M. ibiboboca* is a species of medical importance, its confirmed record in Minas Gerais is of public health interest. This record will also be useful for updates of the 'Brazilian list of reptiles and its federative units' (Costa & Bérnils 2018) and may aid in future delimitations of the state's priority areas for conservation (Drummond *et al.* 2005).

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