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NOTA CORTA

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Predation of *Micrurus* cf. *carvalhoi* (Serpentes: Elapidae) by *Cariama cristata* (Cariamiformes: Cariamidae)

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ABSTRACT

Predation upon *Micrurus* coral snakes is rarely seen, and therefore seldom reported. In this work we document a new predation record of *Micrurus* cf. *carvalhoi* by *Cariama cristata,* thus contributing with information about the trophic relationship between this venomous snake species and its predators.

Keywords. Red-legged seriema, Coral snake, Diet, Trophic ecology.

RESUMEN

Los eventos de depredación de las serpientes corales *Micrurus* son raramente avistados, y por lo tanto, difícilmente registrados. En este estudio documentamos un nuevo registro de depredación de *Micrurus* cf. *carvalhoi* por *Cariama cristata*, contribuyendo así con información sobre la relación trófica entre esta especie de serpiente venenosa y sus depredadores.

Palabras clave. Chuña patirroja, Serpiente coral, Dieta, Ecología trófica.

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Since predation interactions may regulate biological communities on a population level (Sih *et al.* 1998), studying natural history is important, because it allows us to unravel the role of animals in food webs. Several species of reptiles have birds as predators. For example, *Micrurus* coral snakes have among their main predators, birds of the family Falconidae (Jackson and Franz 1981, Brugger 1989, Sazima and Abe 1991, DuVal *et al.* 2006). In addition, they are consumed by crocodilians (Dixon and Soini 1986), mammals (Jackson 1979), snakes (Belson 2000), frogs (Minton 1949), and spiders (Nunes *et al.* 2010) besides being cannibalistic (Roze 1996). In this work, we present the first predation record of *Micrurus* cf. *carvalhoi* by *Cariama cristata* (Linnaeus, 1766) in an area of Atlantic Forest of southeastern Brazil.

We documented the predation event on 2 December 2017, at 15:13 h, in the municipality of Viçosa, state of Minas Gerais, southeastern Brazil. The interaction occurred on the border of a forest fragment (20°44' South, 42°52' West, 750 m elevation, WGS 84). After a rainy morning, an adult *C. cristata* was seen holding an already dead individual of *M.* cf. *carvalhoi* by the head (Fig. 1). The bird took flight carrying away the prey as soon as it noticed our approximation. As two species of coral snakes with triadal patterns occur in the area (Costa *et al.* 2010) and as it was not possible to observe the head of the specimen, we identify it as *Micrurus* cf. *carvalhoi*, due to the number of triads and small red rings (see Silva Jr *et al.* 2016).

Even though this is the first record of predation by *C. cristata* upon *M.* cf. *carvalhoi*, this bird was already reported

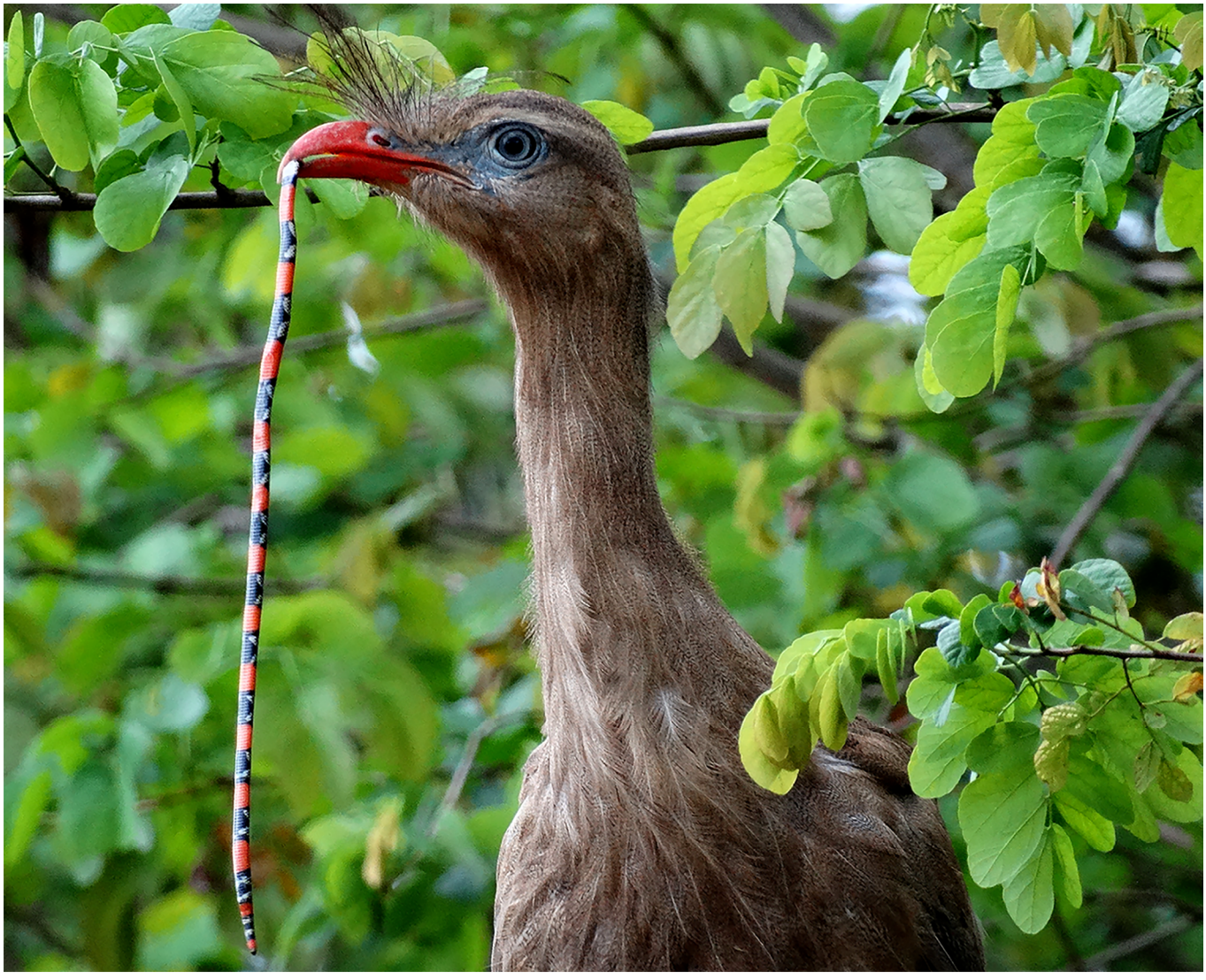

Figure 1. *Cariama cristata* preying upon *Micrurus* cf. *carvalhoi* in the municipality of Viçosa, Minas Gerais, southeastern Brazil.

preying upon the congeneric species *M. pyrrhocryptus* (Cope 1862, Pueta 2002). Also, *M. carvalhoi* was already recorded as prey of the bird *Herpetotheres cachinnans* (Linnaeus, 1758) (Sazima and Abe 1991). This reinforces the hypothesis that the aposematic coloration and other defensive strategies of coral snakes are poorly efficient against predator birds (Pueta 2002, Du Val *et al.* 2006, Costa *et al.* 2014) and that *C. cristata* might have resistance against the toxins in the venom of coral snakes. Despite that, it is known that several coral snakes have fossorial habits (Roze 1996). This kind of habit may make it difficult to birds such as *C. cristata* to encounter those snakes. Nevertheless, the heavy rains recorded on the day of the present record may have made the snake to go to the surface due to the flooding of the subsurface space where it probably lived, as documented for another fossorial reptile (Hayes *et al.* 2015), increasing the odds of this predation event. Once predation events are usually difficult to be seen in nature (Pombal Jr. 2007), our record assists in filling a gap in the relation between this snake species and its predators in a natural environment.

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AUTHOR'S CONTRIBUTION

MAPC documented the record, gathered literature, and wrote the manuscript. EMAV organized and helped write the manuscript. CLA also wrote, revised, and improved the manuscript. RNF revised and improved the manuscript.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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