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Adding some poison to menu: First report of a cathartid vulture preying on a venomous snake

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American vultures (Cathartidae) are the only representative of the Catarthiformes order. Five species of cathartids occur in Brazil: *Coragyps atratus* (Bechstein, 1793), *Sarcoramphus papa* (Linnaeus, 1758), *Cathartes aura* (Linnaeus, 1758), *Cathartes burrovianus* Cassin, 1845, and *Cathartes melambrotus* Wetmore, 1964. Vultures are known as scavengers, feeding basically on the carrion and carcasses of dead vertebrates (Sick, 1997), even though some species have been reported preying on alive calves (Lowney, 1999), eggs of birds, alive lizards and turtles (Sexton, 1975; Fowler, 1979; Marini and Melo, 1998) and even fruits (Pinto, 1965; Batista-da-Silva and Souza, 2014). However, predation on live prey is rarely reported in the literature.

The Lesser Yellow-headed Vulture, *Cathartes burrovianus*, is a common vulture species in Brazil and is usually associated with riparian forests and wetlands (Sick, 1997). Despite Sick (1997) has reported *Cathartes* preying on reptiles and the popular quoting of *C. burrovianus* as an active predator, the only known published predation record on alive prey is recent and describes an individual of *C. burrovianus* preying upon a non-venomous colubrid snake, *Xenodon merremii* (Wagler, 1824) (Almeida et al. 2010). Here we present the first documented report of *C. burrovianus* preying on a venomous snake, the Moojen's lancehead, *Bothrops moojeni* Hoge, 1966.

On 1 September 2014, 13:04 h, one individual of *Cathartes burrovianus* was observed on the ground watching the bushes near a wooden bridge on a roadside in the municipality of Corguinho, western Brazil (19°48'00.86"S, 55°13'33.32"W). After few seconds, the vulture got into the vegetation and performed an attack, pecking three times the prey that was on the ground, subsequently pulling it out from the bushes to the road (Figure 1). Once in the road, the prey could be identified as a *Bothrops moojeni* (*ca.* 1000 mm total length). The snake was still alive and moving, and after receiving a few more peckings on its head, the vulture flew away to a nearby pasture carrying its prey in the beak.

Bothrops moojeni is locally known as caiçaca. This species belongs to the Viperidae family and occurs exclusively in the Cerrado domain in central and southeastern Brazil (Campbell and Lamar, 1989), inhabiting areas near gallery forests and swamps (Nogueira et al. 2003).

Predation on *Bothrops moojeni* has been reported only once before. In this case, a spider preyed upon a juvenile lancehead (Ávila and Porfirio, 2008). Therefore, to the best of our knowledge, the present record is the first report of predation of this snake species by a vulture. The attack was similar to that observed by the same vulture species upon *Xenodon merremii* (Almeida et al. 2010), but differs from it by the massive pecking on the pitviper's head, while the head of *X. merremii* remained intact. Although *Xenodon merremii* is not a venomous snake, we highlight its well-known mimicry of *Bothrops* species (Lavilla et al. 1979). Thus, our observation corroborates that being venomous or not do not avoid predation by the vulture *Cathartes burrovianus*.

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Figure 1. Sequence of the predation of *Cathartes burrovianus* on *Bothrops moojeni* observed in Corguinho municipality, Mato Grosso do Sul state, Brazil. A- An individual of *Cathartes burrovianus* observing the bushes near a road; B- After attacking the prey on the bushes, the vulture started to pull it out to the road; C- Once in the road the prey could be identified as *Bothrops moojeni*; D- The vulture flew away to a nearby pasture with the snake on the beak; E- Once in the pasture the vulture continued to eat the snake while it was still moving; F- Close-up view exhibiting the attacks concentrated on the snake´s head.

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