

Predation attempt by *Oxybelis aeneus* (Wagler) (Mexican Vine-snake) on *Basiliscus plumifrons* (Cope)

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Oxybelis aeneus is a broadly distributed vine snake of the New World (Keiser, 1982; Savage, 2002). Its enormous range stretches from Arizona and southern Texas, through Mexico, Honduras, Belize, Guatemala, Nicaragua, Costa Rica, Panama, and into South America where it is found in Colombia, Ecuador, north-western Peru on the Pacific versant, and as far south as Brazil and Bolivia on the Atlantic versant (Keiser, 1974, 1982; Dixon and Soini, 1986; Keiser, 1991; Pérez-Santos and Moreno, 1991; Lehr et al., 2002; Savage, 2002; Hernandez, 2004; Uetz, 2006; Cisneros-Heredia and Touzet, 2007; AGFD, 2008). It is also found on Trinidad and Tobago and other islands such as offshore atolls around Belize (Campbell, 1998; Platt et al., 2002).

O. aeneus is easily recognised from other *Oxybelis* sp. vine snakes by its light-grey dorsum and black mouth lining. It is a common colubrid snake within its range, inhabiting open areas, grassland with scrub, forest edges, clearings within forest, abandoned pastures, riparian premontane wet forest, premontane rain forest, in addition to lowland wet and dry forest (Franzen, 1996; Savage, 2002). It is often encountered among vegetation at 0.3 m to 1.8 m perch heights (Franzen, 1996; Savage, 2002) and can occur in densities of up to 180 individuals per hectare. It is mildly venomous and possesses enlarged grooved back fangs (Savage, 2002; McConnell, 2008).

Dietary information for this species is mostly known and its wide prey base includes lizards, amphibians, arboreal mammals, small rodents, small birds and fledglings, insects and also fish (Henderson, 1982; Campbell, 1998; Savage, 2002; Hetherington, 2006). Studies indicate that lizards, particularly anoles, are important prey for *O. aeneus* (Keiser, 1967; Henderson, 1982; Wilson and Cruz-Díaz, 1993; Lee, 1996; Savage, 2002). *O. aeneus* has been reported to consume *Norops rodriguezii*, *Norops bourgeaui*, *Norops uniformis*, *Basiliscus vittatus*, *Iguana iguana*, *Sceloporus* sp., and a number of *Cnemidophorus* sp. (Campbell, 1998; Savage, 2002; Diener, 2007).

Here we document an attempt by an adult *O. aeneus* to kill a sub-adult *Basiliscus plumifrons* in a lowland wet *Manicaria* forest north of Tortuguero, Costa Rica (Myers, 1990; Lewis et al., in press). In June 2002 we were photographing a sub-adult *B. plumifrons* dur-



Fig. 1. *Oxybelis aeneus* grasping sub-adult *Basiliscus plumifrons*. Photograph by Paul Grant.

ing the day that was basking in a *Heliconia* sp. plant in edge habitat. Whilst taking the photo, an adult *O. aeneus* struck at the lizard from above and within a concealed area of vegetation behind the plant. The snake grasped the individual by the nape (Fig. 1). The lizard attempted to escape by dislodging the snake using its legs. However, it ceased struggling after a short duration, possibly from energy expenditure, partial asphyxiation, possible envenomation or some combination of the three.

Interestingly, the snake held the lizard in its jaws for 4-5 minutes before attempting to swallow. The snake, unable to swallow the lizard due to its large size, ceased consumption and dropped the lizard. After several minutes of subdued, immobile behaviour, the basilisk recovered and escaped into nearby vegetation. If envenomation occurred, it is possible that the lizard was able to overcome the snake's mild venom from its grooved rear fangs and/or did not receive a lethal dose.

The larger *Oxybelis fulgidus* that is found in similar habitats to *O. aeneus* has been recorded to have a similar diet of birds and lizards but has also taken larger lizard prey such as *Ctenosaura similis* (Hayes, 2002; Savage, 2002; Endo et al., 2007). Most snakes are physi-

ologically limited in the size of their prey choice by swallowing capability (Arnold, 1993) which could explain why the snake terminated consumption of the basilisk on this occasion.

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