

## NOTES

# PREDATORY ATTACKS OF GREEN ANACONDAS (*EUNECTES MURINUS*) ON ADULT HUMAN BEINGS

Jesús Antonio Rivas

Dept. of Ecology & Evolutionary Biology  
University of Tennessee, Knoxville TN 37996-0900, USA  
e-mail: anaconda@prodigy.net

Large constrictors snakes are potentially dangerous to people due to their size and strength (Branch and Haacke 1980). However, there are no documented attacks by green anacondas (*Eunectes murinus*) on humans. The lack of documentation may be due to low human population in areas where anacondas are common, and to the nature of their behavior and the habitat where they live. In this note I document predatory strikes by green anacondas on two of my field assistants while conducting field research on green anaconda in the Venezuelan llanos.

The first attempt was by a large female (Lin; 54 kg, 5.04 m total length) that had had a serious mouth infection at the time I captured it and implanted a radio-transmitters in it. Two months after implantation, my assistant (female, 1.56 m and 55 kg) followed the transmitter signal with the intention of assessing the status of the snake's infection. The snake was in a shallow channel, approximately 80 cm deep, which was partly covered by emergent aquatic vegetation (*Eleocharis* sp., Cyperaceae). Without being seen, the snake emerged from water striking and grabbing her by the knee. Fortunately, the pants tore, and the snake did not get a firm hold by which to drag my helper into the water. The snake immediately struck again with her mouth open to about 180 degrees, this time at a height level with my helper's waist. However, her prompt retreat resulted in an unsuccessful attack.

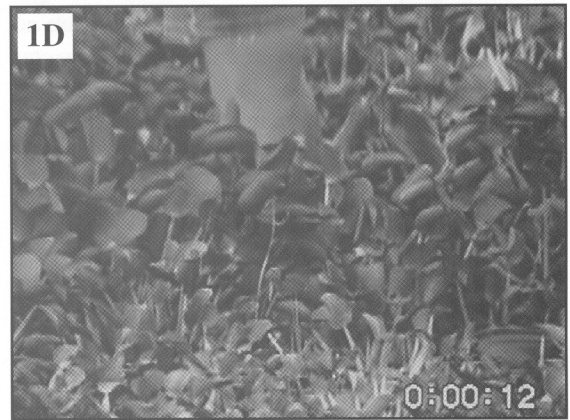
The other event was on another of my helpers

(male, 1.74 m 57 kg) while we were looking for snakes in a river covered by aquatic hyacinth (*Eichhornia* sp.). After we walked by the snake without detecting it, the snake followed my helper, tongue flicking at him for approximately 2.5 m, raising itself up to 25 cm above the aquatic vegetation. The snake was seen and filmed by a photographer behind us who warned us about the snake. I managed to grab the snake by mid-body just as it struck to my helper who in turn jumped backwards. Both, me pulling the snake backwards and he moving out of reach made the snake fail and snap into the air (Figure 1A–F, extracted from the tape). Upon catching and subduing the animal (Pen), She measured 445 cm in total length and 39 kg in weight. The overall appearance of the snake was healthy but very thin.

I believe that both attacks were predatory attempts of the snakes on my helpers. In the first instance the following evidence suggests that the snake must have been foraging when attacked the researcher: First, she had not eaten during the two months she had been radio-tracked, and probably longer, due to the oral infection. Second, eight days before the incident the snake thoroughly tongue flicked at me (male, 1.77 m, 83 kg) in a similar situation but lost interest after approximately 5 min (perhaps estimating that I was above her prey-size range). Finally, four days after the incident I saw the snake with a distended midsection that indicated a recent meal. Lin's attack is unlikely to have been defensive. In my experience catching anacondas of all sizes, I have found that large individuals are very unlikely to attack when disturbed. Indeed, to the present I have caught and processed more than

---

<sup>1</sup>Current address: 17126 Lawson Valley Road, Jamul, CA 91935, USA.



**Figure 1** Sequence of the anaconda following and tongue flicking to my helper for about 2.5 meters. Notice in 1F, right before the strike, the curvature of the neck is adopting the S-shaped position typical of a readiness to strike.

120 animals larger than 4 m and none tried to bite until I (or one of my helpers) had either, dragged the animal out of the water by its tail, or secured a firm grip on the animal's neck (Rivas 1999). Large individuals tended to swim away when disturbed. Recaptured animals are, if anything, even more skittish than naive ones and try to escape as soon as they detect the proximity of the researchers. Thus, the proximity of the researcher is unlikely to have induced a defensive strike.

Anacondas can capture prey as large as adult capybaras, adult white tailed deer and full grown spectacled caiman (Rivas 1999); consequently, a prey as heavy as 55 kg (the weight of the first target) is within the range of prey sizes that a snake as large as Lin could take. Given the snake's later behavior (which was most likely foraging), the size of both snake and potential prey, along with the fact that the researcher had not disturbed the snake, (the snake struck while submerged under enough water for a safe escape), I consider that it was a predatory strike. Lin was being followed by telemetry, thus enhancing the number of times she encountered a human being. This artificially high encounter rate with people might have exceeded the threshold of abundance that makes a potential prey item profitable despite the high risk of attacking a large potentially dangerous prey (Stephen and Krebs 1986).

The second event was performed by large animal that was fairly thin for her size (Rivas 1999). Pen was performing predatory tongue-flicking directed towards the person following him for a relatively long distance. Given the date of this event (March) it is likely the snake had given birth the year before (November to December) and was hence in need of a large meal to recover from her reproductive investment. She was probably in a large energetic deficit and taking the risk of attacking a large prey was a good way to overcome it. The prey/predator mass ratio of this event (1.46), while impressive, falls within the reported prey/predator ratios reported for other snakes (Greene 1992).

Both attacks were on people that were looking for anacondas in places that people often do not walk. We had been staying in these places for longer than people normally do, when they use these areas at all. Thus, both occurred after a par-

ticularly high exposure. Although anacondas are not "man-eaters" by nature, they are generalists and will take any prey that they can subdue and swallow. Thus, the potential exists for anacondas to prey on people.

## ACKNOWLEDGEMENT

I thank M. Muñoz and E. George for their crucial (although unwilling) contribution of being attacked by the snakes. S. Owens, from Tomwil Entertainment, Inc., filmed the attack of the snake, E. George extracted the picture from the film, and Discovery Channel provided permission to use them. I am in debt with G. Burghardt, R. Owens, and two anonymous reviewers for editorial comments in the manuscript. I also thank M. Quero, P. Azuaje, M. Urcera, J. Thorbjarnason, and the Estación Biológica Hato El Frío for their contribution with my research. This research was sponsored by joint grants from CITES, Profaua (the Venezuelan Fish and Wildlife Service), The Wildlife Conservation Society (formerly New York Zoological Society), and The National Geographic Society.

## LITERATURE CITED

- Branch, W.R. and W.D. Haacke. 1980. A fatal attack on a young boy by an African rock python (*Python sebae*). *J. Herpetol.* 14:305-307.
- Greene, H.W. 1992. The ecological and behavioral context for pitviper evolution. In: J. A. Campbell and E. D. Brodie (eds.) *Biology of Pitvipers*, pp. 107-118. Selva, Tyler, Texas.
- Rivas, J.A. 1999. Life history of the green anaconda (*Eunectes murinus*) with emphasis on its reproductive biology. Unpubl. Ph.D. Thesis at the Univ. of Tennessee at Knoxville.
- Stephen, D.W. and J.R. Krebs. 1986. *Foraging Theory*. Princeton University Press, Princeton, New Jersey.