

# EAT OR BE EATEN



## NOTES ON OPHIOPHAGY (EATING SNAKES) AND CANNIBALISM DUE TO CROWDING IN SEVERAL BOIGA SPECIES FROM THAILAND.

Joachim Bulian, 22/2 Moo 4,  
Tumbon Thungtao, Amphur Bannasan,  
84120 Suratthani, Thailand.

### INTRODUCTION

The author reports experiences of ophiophagy and cannibalism due to crowding in some *Boiga* species from Thailand. The reaction of *Boiga dendrophila* to other ophiophagous snakes (*Naja kaouthia* and *Bungarus fasciatus*) is described. The behaviour, and possible cause of this behaviour are briefly discussed.

### OBSERVATIONS

Several authors have confirmed that most species of the genus *Boiga* eat other snakes. Smith (1943) described that a *Boiga cyanea* ate an *Oligodon taeniatus*, two young *Calloselasma* and two *Trimerurus albolabris*. Cox (1991) described an attempt by a *Boiga saengsomi* to eat *Boiga cyanea*. Vit (1976) reported cannibalism in *Boiga cyanea*. This list of examples is not exclusive and further examples can be found in the literature.

Of the *Boiga* species I maintained a large female *Boiga cyanea* ate several smaller specimens of the same species as well as a *Trimerurus albolabris* (Bulian 1994). In addition *Rhabdophis subminiatus*, *Elaphe radiata* and *Chrysopelea ornatus ornatissima* were also eaten by *Boiga cyanea* (Bulian 1999). A two-month-old *Boiga nigriceps* ate a similarly sized relative, but regurgitated it, half digested, four days later.

Petzold (1982) proposed that when members of the same species are eaten it is likely to be a case of cannibalism caused by crowding. The *Boiga dendrophila*

*melanota* that I maintained digested two *Elaphe radiata*, two *Ahaetulla prasina*, a *Dendrelaphis pictus* as well as a juvenile *Python reticulatus*. An adult *Chrysopelea ornata ornatissima* was not bothered by the *Boiga dendrophila* and lived in the terrarium as the *Boiga*'s for several months. Aside from snakes *Boiga dendrophila* also accepts lizards as food. A 170 cm long mangrove nightsnake managed to capture an almost 100 cm long *Varanus nebulosus* and consume and digest it.

I observed a very interesting behaviour in *Boiga dendrophila melanota* when one evening I placed a freshly killed, almost adult monocle cobra (*Naja kaouthia*) in the terrarium of two, 180 cm long males. I assumed that the *Boiga*'s would eat the cobra during the evening. After about 10 minutes the *Boiga*'s clearly became restless in their hiding place, an upturned flowerpot. About two to three minutes later they shot out of their hiding place in a panic and tried to escape from the terrarium, they never touched the cobra. Due to the extremely excitable behaviour of the *Boiga*'s it was impossible for me to open the door of the terrarium to remove the cobra. I decided to wait until both *Boiga*'s had calmed down. Their attempts to escape the terrarium in panic lasted for a total of two hours. After that the animals appeared exhausted and coiled themselves in the corner of the terrarium furthest from the cobra. I then removed the cobra from the cage. When I checked the next morning both *Boiga*'s were calm and lying under the flowerpot.

To determine if this reaction of *Boiga dendrophila* to *Naja kaouthia* was an exceptional or a normal reaction, several weeks later I placed an 85 cm long live *Naja kaouthia* in a small plastic terrarium within the terrarium of another two female *Boiga dendrophila*.

The reaction in the second experiment was identical to the first observation. The *Boiga*'s reacted with increased excitement, almost panic, to the *Naja*. It did, however, take 19 minutes before the *Boiga*'s exhibited a first reaction. This delay was probably due to the cobra not being put directly into the terrarium, but placed in a separate plastic terrarium.

During the next few weeks I repeated the same experiment with both groups of *Boiga dendrophila melanota* with an almost adult Krait (*Bungarus fasciatus*). The Krait was 75 cm long, and was confined to a small plastic terrarium and placed into the terrarium of the mangrove night snakes in the evening. The same panic and escape behaviour was observed in this case.

## DISCUSSION

My observations appear to show that *Boiga dendrophila melanota* can determine from the odour of other snakes whether they are food or whether the snakes could be dangerous to them. The details of how this distinction is made are not clear. That this is behaviour that is learnt from previous experience can be excluded, since such an experience can be had only once, namely when another snake is eating the mangrove night snake. It also appears that the ability to differentiate between food and enemies is not limited to *Boiga dendrophila melanota*. An escape response was observed with *Elaphe radiata* that was placed in the *Boiga*'s terrarium. Apparently this is an inherited behaviour. In his book Greene (1999) describes the

possibility that snakes differentiate between food and enemies by smell. It would certainly be interesting to know how, for instance, a *Boiga dendrophila* would react to an ophiophagous snake from South America, since in that case the ability to recognise the snake as dangerous cannot be inherited.

## LITERATURE

- Bulian J. (1994) *Boiga cyanea* (Dumeril, Bibron & Dumerik, 1854) Freilandbeobachtungen, Haltung und Zucht. Sauria, Berlin 16/4, Blz.. 3-9
- Bulian J. (1999) *Observations on Boiga cyanea*. Litteratura Serpentina 19 (6), 175-183.
- Cox, M. J. (1991) *The snakes of Thailand and their husbandry*, Krieger Publishing Company Malabar, Florida, Blz.. 1-526.
- Greene, H. (1999) *Schlangen. Faszination einer unbekanntem Welt* Birkh.,user Verlag, Basel.
- Petzold, H. G. (1982) *Aufgaben und Probleme bei der Erforschung der Lebensäußerungen der Niederen Amnioten (Reptilien)*, Wissenschaftliche Und Kulturelle Mitteilungen Aus Dem Tierpark Berlin - Milu Bd. 5 (4/5) Blz.. 485 - 786.
- Smith, M. A. (1943) *The Fauna of British India, Ceylon And Burma; Reptilia and Amphibia Vol III.-Serpentes* 581 Seiten Reprint Edition, 1981; Today & Tomorrow, Printers and Publishers, New Dehli.
- Vit, Z. (1976) *Kannibalismus u Boiga cyanea.*, Akvar. terar. (Prag) 19, Blz.111-112.

*Translated by Ron Winkler.  
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*After finding the head the full grown Ahaetulla prasina is swallowed in a minute.*



*Boiga dendrophila melanota eating an Ahaetulla prasina.*