REPRODUCTION OF *BOTHROPS ALTERNATUS* (DUMÉRIL, BIBRON & DUMÉRIL, 1854) IN CAPTIVITY.

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INTRODUCTION

Bothrops alternatus is probably one of the best known species of *Bothrops*, because of its characteristic rounded lateral markings shaped like a French telephone. The lance-shaped head is brown with rounded blotches which are narrowly edged with yellow. Only one subspecies of this South American pit-viper is recognised. The distribution area is Argentina, Uruguay, Brazil and southern Paraguay. *Bothrops alternatus* is a ground-dwelling species of open areas, watercourses and rocky terrain. Females are much larger than males; adult specimens can obtain a length of 150 cm. No sexual dimorphism in terms of colour has been recorded.

BOTHROPS ALTERNATUS IN THE TERRARIUM

The author obtained two males of about 100 cm and one female of about 140 cm in November 1979. The snakes were obtained from another snake keeper and therefore accustomed to living in captivity. The animals were each separately housed in a terrarium of 120x80x60 cm (lxwxh) furnished with some large pieces of tree bark and with a layer of 10 cm wood chips as substrate. In the winter the day time temperature was 27^{0}C in the coldest part of the terrarium. Heat was provided by a light bulb. At night

the temperature dropped to 15°C. In the summer a day time temperature of about 30°C was maintained, dropping at night to about 22°C. No day-light ever entered into the terraria, because they were kept in the basement of the building where the "Atrox" exhibition was permanently held. The snakes received constant artificial light for around thirteen hours a day. One day after they arrived all three snakes ate living rats and only the female hid herself under the cork.
A faecal examination showed the presence of flagellata. Flagyl was administered to all three snakes

COPULATION

The female, which was a very beautiful specimen, ate very well (sometimes she took fifteen full grown mice). The males never accepted more than one rat every fifteen days and their characters were not so placid as that of the female: they were very easily irritated and very quick in their movements.
In December 1979 one of the two males and the female were transferred into one of the terraria on public display. The animals did not show any annoyance towards the hundreds of persons who weekly crossed in front of the terrarium. On 3 February the animals copulated for at least two and a half hours. In the next few days many copulations occurred and many visitors had the opportunity to see the snakes mating.
During the next two weeks both animals ate regularly. On 20 February the male was transferred into another terrarium because he constantly tried to copulate and the female was visibly annoyed. During the following three months both snakes ate regularly, only the male was much more active during the day time. In June the female was visibly

Distribution map of *Bothrops alternatus*.

fattening near the cloaca and where previously she had always shown interest in rats, she now refused food.

THE YOUNG ONES

On 25 July, in the morning, I found twelve young *Bothrops alternatus* (about 20 cm long, with a body weight of about 15 g). One of them was malformed and so discarded. All the remaining young ones displayed a very aggressive character, biting anything which moved nearby. They were separated into terraria with a temperature of 26^{0}C, a little dish for water and a piece of cork bark as a hiding place. They were all of a dull colour (in the beginning stages of the shedding process).
The mother rested for one week and then took two rats. At the twelfth day after birth, some of the young snakes shed their skins and young mice (just with their eyes open) were offered to them. Only three snakes ate, the other six were annoyed by the mice and bit them only as a defence, without eating them. The remaining two offspring did not show any interest in the mice and therefore were force-fed with freshly killed pink mice and a multi-vitamin compound. After fifty days from birth only six specimens ate well voluntarily and their weight was about 35 g, the other five were smaller and we had to force-feed them weekly. After three months eight specimens ate voluntarily and they were sexed as five females and three males. The other three *Bothrops alternatus* were given to snake keepers and at that time it was not possible to check their sex, because they were too small.
In 1982 and in 1983 we bred more *Bothrops alternatus* from the same mother and the other male. Also in these two litters some young (75%) were difficult to induce to feed. Experimentally they were

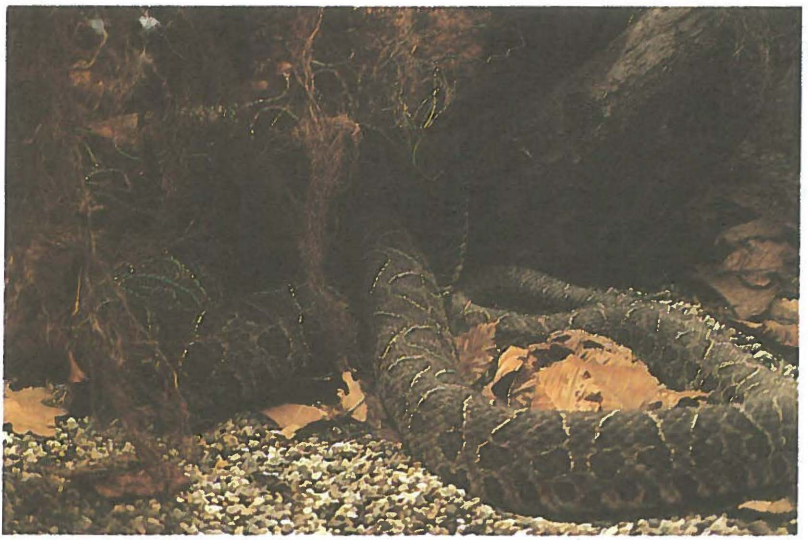

Fig. 1. *Bothrops alternatus*, in copula. Foto: V. Pezzano.

Fig. 2. *Bothrops alternatus*, juvenile. Foto: V. Pezzano.

also offered lizards and frogs, but mice were most favourably received.

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