

NOTES ON THE BREEDING AND FEEDING OF THE LONG-NOSED CAUCASIAN VIPER,

(*VIPERA AMMODYTES TRANSCAUCASIANA*)

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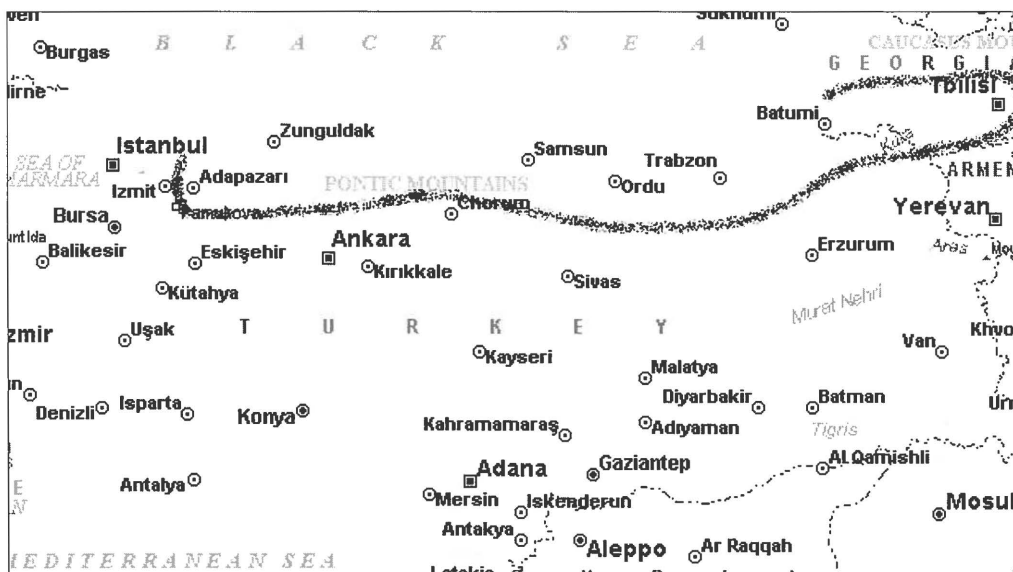
and weighed 3.66 - 3.98 g Although mature vipers preferred mice, the young preferred milk and crickets.

SUMMARY

Successful breeding of the rarest subspecies of Long-nosed Viper, *Vipera ammodytes transcaucasiana*, including notes on feeding, in the Department of Biology of Karadeniz Technical University, is reported. Ten neonate vipers were born during six birth cycles. The length of the neonates were measured and ranged from 144.0/20.2 - 168.5/26.5 mm (body/tail length)

REPRODUCTION, FEEDING

The Long-nosed Caucasian Viper, *Vipera ammodytes transcaucasiana* is distributed from the vicinity of Tbilisi, Republic of Georgia in the east, along the Black Sea coast to Adapazari in the west. Their preferred habitats include hazelnut orchard up to 700 m above sea level. Further information about habitats and details of distribution of this Viper can be found in Nilson *et al*, 1988; Kutrup, 1999; Tok and Kumiutas, 1996.



Distribution of *Vipera ammodytes transcaucasiana*



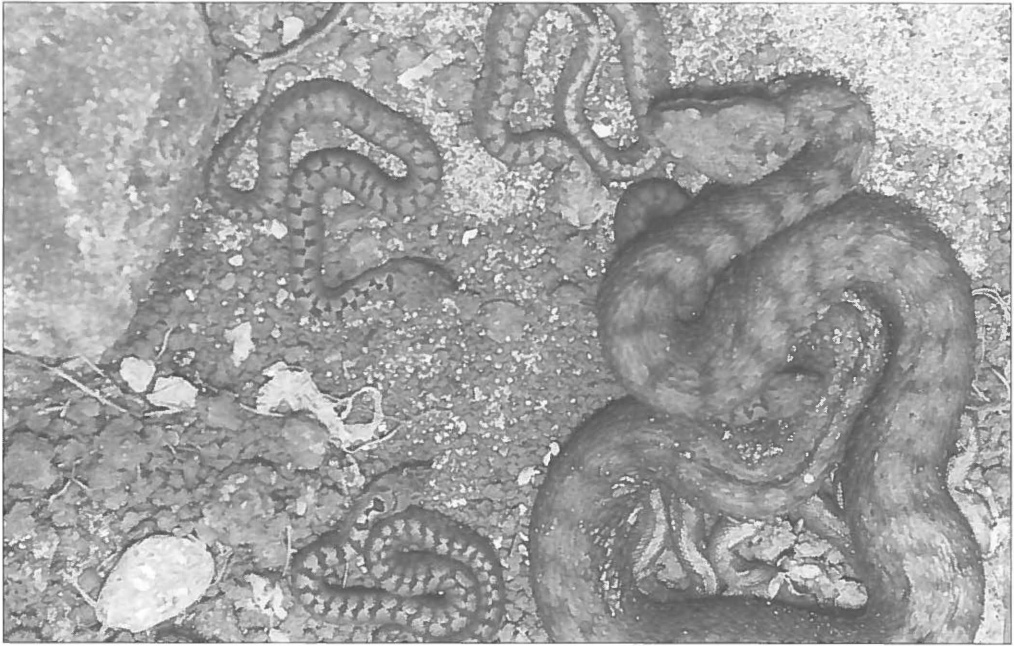


Photo: Dr. Bilal kutrup: Photo 1

Despite a continuous interest in Caucasian Vipers by herpetologists, both professional and amateur, there is little information about their reproduction and breeding. Recently some Russian herpetologists have been researching reproduction and breeding of some Vipers (Kudrjavitsev and Mamet, 1989, 1991, Mamet and Kudrjavitsev 1997). In western Europe, successful breeding of *Vipera latasti latasti* was reported by Platvoet in 1998.

Limited success has been achieved in captive breeding of the subspecies, *Vipera a. transcaucasiana*.

Successful breeding occurred in the Dept. of Zoology at K.T.U. General information on the breeding, feeding, temperature and humidity were recorded.

A pair of adult *Vipera a. transcaucasiana* were collected

in the province of Murgul-Artvin and brought to K.T.U. zoology laboratory on 18.07.1997. The female and male were kept in a terrarium, measuring 85x60x50 cm (LxWxH), with a 3-5 cm layer of hydrophilic gravel substrate. Wet sphagnum moss was placed in the corner of the terrarium. Several bricks and tree bark provided hiding places and different temperature zones, since the vipers are rather nervous. A small water container was present. The daytime temperature was maintained at 22-28° C by an incandescent lamp and allowed to drop to 18-22° C at night. The relative humidity in the enclosure was provided by a daily sprinkling with warm water. The air humidity was measured by Casella B5 5248 hygrometer and maintained above 70 %. The diet consists primarily of mice. Sometime lizards were also offered which the female occasionally accepted.

No	Body length (mm)	Tail length (mm)	Weight (g)
1	144.0	20.4	3.75
2	157.1	25.6	3.84
3	168.3	26.5	3.98
4	154.8	22.2	3.76
5	161.0	22.8	3.98
6	157.4	24.8	3.94
7	155.6	24.4	3.78
8	154.5	23.7	3.82
9	152.2	20.2	3.66
10	168.5	25.7	3.94

Table 1. The measurements of the new *Viper ammodytes trancaucayiana*



Photo: Dr. Bilal kutrup: Photo 2

NOTES ON THE LONG-NOSED CAUCASIAN VIPER,



Our intention was to hibernate both the male and female to promote reproductive activity in the spring, but in mid - August the female stopped eating, and continued to refuse food until 11.08.97. At this time the male was removed from the terraria. No copulation or courting behaviour was observed. On 11 August 1997, the female began to give birth. The first neonate Viper was born at 10.11 a.m. Followed by five neonates, born at 11.40 a.m. The seventh was born at 15.08 p.m. on the same day. On the following day, (12.08.97), only one neonate was born, at 12.04 am. The last two neonates (nine and ten) were born at 8.26 a.m. and at 13.22 p.m. on the 13.08.1997 (Figure 1). The birth period that began at almost ten o'clock on 11.08.1997, ended at 13.22 on 13.08.1997. A total of ten young Vipers were born during six birth cycles. The time between each birth cycle was not equal.

After the birth, the neonates discarded the membranes in which they were born (Figure 2). The measurements of the neonates are given in Table 1. The body length

of the new-born Vipers was 144.0-168.5 mm, the tail length was 20.2-26.5 mm and the weights were 3.66-3.98 g The neonates shed on the 2-3 rd day.

On August 15, fresh, unboiled cows milk was given to neonates, this was generally accepted. After one week, crickets, their most preferred food, was given the neonates. At this time, B-complex vitamin (0.2 g/100 cc) was added to the drinking water. After one month, small lizards, (young *Lacerta rudis*) with a total length of approximately 3-5 cm, were given. Initially they accepted the lizards, but we do not recommend this type of food until the neonates are several months old, as it seemed to cause some digestion problems. Occasionally regurgitated lizards, which had been swallowed by the neonates, were found in the terrarium. In their fourth month they accepted new-born mice. At the end of the December the juveniles were measured as 174.3 + 24.4 - 202.1 + 32.6 mm (body + tail length) and weighed 5.94 - 6.18 g (Figure 3).



Photo: Dr. Bilal kutrup: Photo 3



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