

Langzeituntersuchung einer Kreuzotter-Population (*Vipera berus*) über 16 Jahre in Brandenburg

Norbert Otte

Katzlerstr. 19, D-10829 Berlin, norbert.otte@web.de

Long-term study of an adder population (*Vipera berus*) in Brandenburg over 16 years

As part of a long term study over 16 years and with 481 surveys overall I made 3,754 observations of adders of all age classes (2,475 observations of adults, 790 observations of subadults and 489 observations of juveniles) within an adder population in Brandenburg between 2003–2018. The population size ranged from 21–74 adult and subadult individuals. The abundance of adult and subadult individuals ranged between 2.1–7.4 ind./ha, on average at 5 ind./ha within the suitable adder habitat (10 ha). Overall 576 individuals of all ages classes have been captured. The recapture rate of juveniles was 21 %, for one year old snakes 40 %, for two years old snakes 50 % and for at least three years old adult snakes 53,3 %. Yearly survival rates of known adult individuals varied in males between 25–81 % and in females between 38–77 %. 32 adders (5.5 %) reached a minimum age of 7 years, as an age limit two females reached 11 years and one male reached 10 years. First birth took place mid of August, in 2018 it was July the 25th. The impact of the number of hours of sunshine on the pregnancy period was analysed. The number of hours of sunshine since ovulation and the daily length of sunshine proved to be the most important factors. Morphometric data of 28 females pregnant for the first time have been recorded. In average these females were 56.9 cm long and had a mass of 119 g. 58 % of all females for which the exact age was known were four years when they reproduced for the first time. 51 of 91 females reproduced only once, at most a female reproduced five times. For two females and one male individual life cycles with home ranges were presented. Home range sizes were 10.8 ha, 9.7 ha and 2.1 ha. As a maximum distance one male migrated 1,320 m, a female 860 m and a juvenile 320 m. Furthermore, I present data on aspects such as phenology, colonisation of habitat types, exchange rates of individuals and location of hibernation sites. Finally, the impact of predators as well as the trend of the population are discussed.

Key words: Reptilia, *Vipera berus*, long-term study, adder, Brandenburg, Germany, population structure, recapture rate, age, reproduction, home range size, predators.

Zusammenfassung

Im Rahmen der 16jährigen Untersuchung einer Kreuzotter-Population in Brandenburg wurden im Zeitraum von 2003–2018 bei insgesamt 481 Kartierungen 3754 Nachweise von Kreuzottern aller Altersklassen erbracht (2475 Adulte, 790 Subadulte und 489 Juvenile). Die Populationsgröße schwankte zwischen 21–74 adulten und subadulten Tieren. Die Populationsdichte der adulten und subadulten Tiere lag für die als Lebensraum geeignete Fläche (10 ha) zwischen 2,1–7,4 Ind./ha, im Ø bei etwa 5 Ind./ha. 576 Kreuzottern aller Altersklassen wurden individuell erfasst. Die Wie-