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PROGRAM & ABSTRACTS



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POPULATION CHARACTERISTICS OF THE NOSE-HORNED VIPER (*Vipera ammodytes*) ON GOLEM GRAD ISLAND (NORTH MACEDONIA)

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The nose-horned viper (*Vipera ammodytes*) is the least studied species of European true vipers, regarding its population ecology and reproductive biology. We ran capture-recapture (CR) studies on this species during 12 years (2007-2018) on Golem Grad Island (Prespa Lake, North Macedonia). We captured 501 vipers (304 adults, 161 subadults, 36 newborns) and recaptured 240 individuals enabling us to estimate demographic traits. Females larger than 35.0 cm of snout-vent-length [SVL] (the smallest undoubtedly gravid female) and males larger than 37.0 cm SVL (the smallest male observed while mating) were considered adults. The largest captured individual was 66 cm long, indicating insular dwarfism. Fecundity data were gathered in the field (palpation) and from females collected for controlled parturition in order to obtain size at birth and define newborn size (up to 18.0 cm SVL). Intermediate sized snakes were considered subadults. Modelling of subadult and adult CR data implied sex- and age-specific capture probabilities (females and subadults being on the lower end); mean annual survival probabilities were in favour of the females (78% vs. 71%). Total population size was estimated at 2345 ($s=293.9$) individuals, indicating the highest reported density for this species (130 ind/ha, $s=16.4$). Adult sex-ratio was 1,4 (male/female) and the proportion of reproductive females ranged from 44% to 74%, suggesting a biennial cycle. Litter size varied from two to nine (average 4.5); this is particularly low for this species. Diet changed with ontogeny – juveniles fed mainly on *Scolopendra cingulata* and lizards, while adults mainly preyed on lizards and dice snakes.