

Further evidence of nocturnal
activity of *Vipera ammodytes*
(LINNAEUS, 1758)

Nose-horned Vipers, *Vipera ammodytes* (LINNAEUS, 1758), are predominantly diurnal, with rarely documented evidence of nocturnal activity during the warmest time of the year (SCHREIBER 1912; KARAMAN 1939; BRUNO 1967; MUSHELISHVILI 1970; BANNIKOV et al. 1971; STREET 1979; KREINER 2007). BOULENGER (1913), however reports them to be principally nocturnal in warm localities, appearing in quantities during moonlit nights.

On 16 April 2015, during a reptile and amphibian survey within the Croatian EU Natura 2000 Integration Project NIP, an adult male *V. ammodytes*, measuring 89.5 cm in total length, was found by the authors at 21:00 h, near the village Kestenovac, municipality of Vojnić, near Karlovac, Croatia (45.222428°N, 15.635120°E, 175 m a.s.l.). It was moving about, crossing the macadam road and tried to escape into shrubbery between the road and the nearby stream, hissing loudly, apparently disturbed. Before it was captured, the snake actively moved and hissed for approximately 15 minutes. Its cloacal temperature was 14.1 °C, while the ambient air temperature at 60 cm above ground was 12.6 °C (measured with a Mastercool 52226 Dual Temp Infrared Probe Thermometer).

Prior to this snake encounter, fresh snake excrement was observed on the macadam road, at a place most probably crossed by the viper. At the same locality several other reptile and amphibian species were active at that time: *Zamenis longissimus* (LAURENTI, 1768), *Rana temporaria* LINNAEUS, 1758, *Hyla arborea* (LINNAEUS, 1758), and *Bombina variegata* (LINNAEUS, 1758). No Nose-horned Vipers were encountered by either author during the day, despite searching through several appropriate habitats in the area, under favorable weather conditions.

Since most reptile surveys, at least in Croatia, are done during the day, it is most probable that the potential nocturnal activity of many species is still insufficiently known. The observed synchronous and syntopic nocturnal activity of several other reptiles and amphibians, which constitute a potential prey for *V. ammodytes* is consistent with the possibility that the observation of this viper's nocturnal activity was not an isolated case. However, further surveys are needed to assess the full extent of this behavior.

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