A new find of the adder (*Vipera berus*) in the Prekmurje region, NE Slovenia

NOVA NAJDBA NAVADNEGA GADA (*VIPERA BERUS*) V PREKMURJU

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In Slovenia, the adder (*Vipera berus*) lives mostly in mountainous parts of the Alps and Dinaric Mountains. It can be found almost exclusively in higher, cooler parts, and is very rare in the lowlands (Krofel *et al*. 2009). On April 12th, 2009, Tomaž Rauch photographed one adder (*Vipera berus*) individual with approximate length of 40 cm in Polanski log near Mala Polana in UTM square XM05 (Prekmurje region, NE Slovenia) (Fig. 1) (pers. comm.). The species was identified from the photograph by the author of this article. The locality of the find was on the edge of the Polanski log floodplain forest near swamp meadows with bushes. The most common tree species in Polanski log is the black alder (*Alnus glutinosa*; 85%), followed by ash (*Fraxinus angustifolia*; 12%) and oak (*Quercus robur*; 3%) (Laganis *et al*. 2008). We consider the above-mentioned photograph to be the first documentation of the adder occurrence in NE Slovenia, since the previously described individual observed in Bogojina in UTM square XM07 between World Wars I and II (Tome 1996, Krofel *et al*. 2009) has not been preserved in any collection. Recent data on poisonous snakebites of humans and animals in the surroundings of Vučja Gomila indicated that the adder still lives in this part of Slovenia (Krofel *et al*. 2009). The easternmost find of the adder in Slovenia after 1995 was from the Zasavje region (UTM square WM00) (Krofel *et al*. 2009) about 110 km away. This species was registered also in northern Croatia in UTM square XM23 (Jelić *et al*. 2009) about 30 km away. The adders living in northern Croatia along the Sava and Drava rivers belong to subspecies *V. b. bosniensis* (Kreiner 2007). Genetic analysis of the specimens from UTM square XM23 has not been implemented, but morphological analysis has shown that they also belong to *V. b. bosniensis* subspecies (Jelić *et al*. 2010). Adder is thought to be absent from the Pannonian plain in eastern Austria (Cabela *et al*. 2001). In Hungary, the nearest find was recorded in UTM square XM63 (Puky *et al*. 2005). Adders from SW Hungary also belong to *V. b. bosniensis* subspecies (Tóth & Farkas 2004, Puky *et al*. 2005, Kreiner 2007). The individual from Slovenia shows morphological characteristics similar to individuals of this subspecies from northern Croatia (Jelić *et al*. 2010), however, genetic analysis of the adders from NE Slovenia should be carried out for certain determination. The individual was found at approximately 160 meters above sea level, which is the lowest altitudinal adder record in Slovenia so far. Previously, the minimal altitudinal find was reported from about 200 m a.s.l. (Tome 1996). In spite of many reptile surveys in the Prekmurje region in recent years, no adders have been found. This might be due to low metapopulation densities or inappropriate survey methods. The number of adders in this region has probably been decreased in the past, mainly due to habitat destruction by intensive agriculture, by persecution and direct killing of adders by man and even by their use in folk medicine (Zadravec 1985). This find raises several questions on the population status, threats and needs for protection of the adder in NE Slovenia. Additional field work is needed to get a better picture. Due to possible transboundary nature of the adder metapopulation in this region, international cooperation with the neighbouring countries in research and management should be proposed.

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Figure 1. Adder (*Vipera berus*) found on April 12th, 2009, in Polanski log, NE Slovenia (photo: Tomaž Rauch).
Slika 1. Navadni gad (*Vipera berus*), najden 12.4.2009 v Polanskem logu, SV Slovenija (foto: Tomaž Rauch).