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An unexpected location of *Vipera berus* in the vicinity of Rovinj (Istria, Croatia).

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Abstract
We report on the sighting of a *Vipera berus* specimen in the hinterland of the west coast of Istria.

Keywords: Vipera berus, Istria, Croatia

The Common Adder has the largest and most northern distribution of all viper species. It occurs from the British Isles in the west to the Island of Sakhalin in the Far East.

Historical lowland distribution south of the Italian Alps has been reported from the Po Valley in Italy (GINANNI, 1774; LANFOSSI, 1826; MASSALONGO, 1853; PRADA, 1840). It seems, that all these populations have become extinct at least since the 1940s (GENTILLI, SCALI & SACCHI, 2006).

In south-eastern Europe *Vipera berus* is distributed on the Balkan Peninsula (ssp. *bosniensis*). Here the species prefers wetlands at low altitudes (Sava River) or higher altitudes in montane to alpine climate zones.

According to JELIĆ et al., 2013, adders in the northwest of Croatia belong to the nomotypical subspecies *Vipera berus berus*. These authors designate the border between the nomotypical subspecies and *Vipera berus bosniensis* approx. as follows: Snežnik Mountain – Kapela Mountain – Varaždin. A wide overlapping zone between the two subspecies can be found along this border. Adders with *bosniensis* morphology have been observed within the *berus berus* distribution, but also vice versa.

Here we report on a specimen, photographed by the 2nd author in August 2006 in the vicinity of the town of Rovinj, Istria, Croatia. The viper had been observed basking in a stone wall adjacent to a few cut tree trunks, next to a sheep pasture. A second visit to the area in May 2012 resulted in no additional observation. For conservation reasons the exact locality is not given.

The habitat, where the adder has been found, as well as the climate in this area are rather untypical for *Vipera berus*. The west of the Istrian Peninsula belongs to the mediterranean climate zone. The average temperature for August is 27,4°C, the average precipitation for the same month is less than 100 mm (annual average is 14.3°C and 950 mm respectively).

Only a few records point to similar coastal locations with (possible) warm and dry habitats (DEPOLI, 1898 [vicinity of Rijeka], PAWLOWSKI & KRÄMER, 2009* [surroundings of Senj]).

**The forwarded pictures from the 1st author of the dead "Vipera berus" from the surroundings of Senj (altitude 200 – 300 m asl), in reality, show a road killed specimen of Telescopus fallax!*

The nearest confirmed locations are from the Snežnik Mountain, above 500 m a.s.l. (ROK GRŽELJ, pers. comm.), Malo Tešnje, Obruč Mountain and Čabarska Polica (JELIĆ et al., 2013).

Recent observations of the Common Adder have been indicated in the Raša River Valley in east Istria (I. PERANIĆ, pers. comm.). But these observations have not been confirmed yet.

The external morphology of the observed adder resembles that of a typical *Vipera berus bosniensis*.

On both sides of the head there are 1.5 rows of suboculars, the central ones are in contact with the supralabials. The head scales are more fragmented than in average northern adders. There are small scales between the frontal and the parietal scale and two rows of small scales between the frontal and supraocular scale. The head morphology of this adder resembles *Vipera b. bosniensis* specimens, from the Sava River east of Zagreb, whereas the dorsal colour pattern looks more like that from mountain populations.

In this context, it has to be stated, that Istria was part of the ancient Po Valley however the extinct adders from the Po Valley belong to the Alpine clade according to their colour pattern that is typical for the nominate form.

Due to the location of the observed adder, close to the town of Rovinj within farmland and the unusual climate for the species, a translocation – unknowingly or intentional cannot be excluded. However, the likelihood to find a released adder by chance is extremely small, giving grounds that a small population may exist at this new location.

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Figure 1. Habitat, where *Vipera berus* has been observed.

Figure 2. & Figure 3. *Vipera berus* in situ, close to Rovinj, Istria, Croatia