

The lowest altitudinal record of Horvath's Rock Lizard (*Iberolacerta horvathi*) in Slovenia

NAJNIŽJA VIŠINSKA NAJDBA HORVATOVE KUŠČARICE (*IBEROLACERTA HORVATHI*) V SLOVENIJI

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During a reptile survey performed within the framework of the Biology Student Research Camp Kolpa 2008 from 16.7.2008 to 26.7.2008, nine autochthonous reptilian species were recorded (*Anguis fragilis*, *Lacerta viridis/bilineata*, *Podarcis muralis*, *Iberolacerta horvathi*, *Natrix natrix*, *Natrix tessellata*, *Coronella austriaca*, *Zamenis longissimus* and *Vipera ammodytes*). The most interesting were finds of 3 male and 1 female individuals of Horvath's Rock Lizard (*Iberolacerta horvathi*) in front of the entrance of the Bilpa cave close to the Kolpa river (Gauss Krüger coordinates: $y = 497408$, $x = 40941$) (Fig. 1). This site is located 200 meters above sea level (measured with handheld GPS), owing to which these finds qualify as the lowest altitudinal records of Horvath's Rock Lizard in Slovenia. Previously it had been assumed that its distribution is limited to high mountainous regions of the Julian Alps, Trnovski gozd and Mt. Snežnik (Brelj 1954, Tome 1996, Mršić 1997), considering that its minimal altitudinal find published in 1996 was 650 m a. s. l. (Tome 1996). It is only in recent years that specimens have also been found outside this range in the Dinaric mountains and at lower locations, with the lowest record at 370 metres a. s. l. (Žagar et al. 2008).

In order to reliably determine the species, all individuals were captured with a noose. We took standard morphometric measurements and descriptions (Arnold et al. 2007) and detailed photographs (Fig. 2). Measurements for snout-vent length were 44 mm, 49 mm and 54 mm for males, and 48 mm for the female (taken with metal

calipers to the nearest of 1 mm). Close to the locality of Horvath's Rock Lizards, one individual of Common Wall Lizard (*Podarcis muralis*) was observed. Both species have been observed to occur in sympatry and syntophy before (Tome 1996, Žagar et al. 2007, Žagar 2008). Here they were found at a distance of approximately 40 meters from each other. Microclimatic conditions observed at the site where Horvath's Rock Lizards were found differed from the ones where a Common Wall Lizard was observed: the entrance to the Bilpa cave was flat, more shady and moist, with rocks covered with moss (Fig. 1), when on the contrary the rocks with Common Wall lizard had a southern exposition, were sunny and dry and covered with scarce vegetation. Similar (shady and moist) conditions had also been recorded previously at the lower localities with Horvath's Rock Lizards in 2006 at the entrance to the Planina cave and at Rakov Škocjan (Planinc & Žagar, unpublished data).

New data on distribution of Horvath's Rock Lizard in Slovenia in recent years indicate a poor knowledge on the distribution of this species in the past. Therefore it seems that distribution of Horvath's Rock Lizard overlap much more with distribution of the Common Wall lizard than it had been believed in the past and also that two species occur together at several localities. However, from our preliminary data it seems that both species mostly live in different habitats. At present it is difficult to argue whether this is due to different preferences regarding abiotic factors of each species or if perhaps competition between the two or some other biotic factor might be involved. Additional research is needed to gain better understanding of the interspecific interactions within lizard communities in Slovenia.

Literature

- Arnold E.N. (2004): A Field Guide to the Reptiles and Amphibians of Britain and Europe, 2. edition. Harper Collins Publishers, London, 288 pp.
- Arnold E.N., Arribas O., Carranza S. (2007): Systematics of the Palaearctic and Oriental lizard tribe Lacertini. *Zootaxa* 1430: 1-86.

- Brelj S. (1954): Prispevek k poznavanju favne plazilcev slovenskega ozemlja. *Biol. vest.* 3: 128-131.
- Gasc J.P., Cabela A., Crnobrnja-Isailovic J., Dolmen D., Grossenbacher K., Haffner P., Lescure J., Martens H., Martínez Rica J.P., Maurin H., Oliveira M.E., Sofianidou T.S., Veith M., Zuijderwijk A. (Eds.) (1997): Atlas of amphibians and reptiles in Europe. Collection Patrimoine Naturels 29, Societas Europaea Herpetologica, Muséum National d'Histoire Naturelle & Service du Patrimoine Naturel, Paris, 496 pp.
- Mršič N. (1997): Plazilci (Reptilia) Slovenije. Zavod Republike Slovenije za šolstvo, Ljubljana, 167 pp.
- Tome S. (1996): Pregled razširjenosti plazilcev v Sloveniji. *Annales* 9/96: 217-228.
- Tome S. (1999): Plazilci, Reptilia. In: Kryštufek B., Janžekovič F. (Eds.), Ključ za določevanje vretenčarjev Slovenije. DZS, Ljubljana, pp. 284-305.
- Tome S. (2001): Plazilci (Reptilia). In: Kryštufek B., Kotarac M. (Eds.), Poročilo: Raziskava razširjenosti evropsko pomembnih vrst v Sloveniji. Prirodoslovni muzej Slovenije, Ljubljana, pp. 480-545.
- Tome S. (2001): Analiza stanja biotske raznovrstnosti za področje plazilcev. In: Ekspertne študije za Pregled stanja biotske raznovrstnosti in krajinske pestrosti v Sloveniji. MOP, ARSO, Ljubljana, pp. 265-271.
- Žagar A., Planinc G., Krofel M. (2007): Records of Horvath's Rock Lizard (*Iberolacerta horvathi*) from Notranjsko podolje region (central Slovenia). *Natura Sloveniae* 9(2), pp. 43-44.
- Žagar A. (2008): Importance of open areas for reptiles (Reptilia) in a forest landscape. University of Ljubljana, Biotechnical Faculty, Department of Biology, Ljubljana, 80 pp.
- Žagar A., Planinc G., Krofel M. (2008): New records of Horvath's Rock Lizard (*Iberolacerta horvathi*) from Slovenia. In: Pafilis P., Kotsakiozi P., Valakos E.D. (Eds.), 6th Symposium on the Lacertids of the Mediterranean Basin. Societas Hellenica Herpetologica, Mythimna Lesvos, pp. 68-69.



Figure 1. Habitat of Horvath's Rock Lizard (*Iberolacerta horvathi*) at the entrance to the Bilpa cave in Southern Slovenia (photo: Anamarija Žagar).

Slika 1. Habitat horvatove kuščarice (*Iberolaceta horvathi*) pred vhomom v jamo Bilpa, južna Slovenija (foto: Anamarija Žagar).



Figure 2. Photograph of a dorsal view of the head of an individual Horvath's Rock Lizard (*Iberolacerta horvathi*) (photo: Anamarija Žagar).

Slika 2. Fotografija glave osebkha horvatove kuščarice (*Iberolacerta horvathi*) s hrbtne strani (foto: Anamarija Žagar).