

## First record of partial melanism in Horvath's rock lizard (*Iberolacerta horvathi*) from Slovenia

PRVA NAJDBA DELNO MELANISTIČNE HORVATOVE KUŠČARICE (*IBEROLACERTA HORVATHI*) V SLOVENIJI

Teo DELIĆ, Ruđera Boškovića 10, 21 000 Split, Croatia; E-mail: tejc86@gmail.com  
Anamarija ŽAGAR, University of Ljubljana, Biotechnical Faculty, Department of Biology, Večna pot 111, SI-1000 Ljubljana, Slovenia; CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, Campus Agrário de Vairão, 4485-661 Vairão, Portugal; E-mail: anamarija.zagar@gmail.com

Horvath's rock lizard (*Iberolacerta horvathi* (Mehely, 1904)) is a species of the family Lacertidae with a relatively small distributional range confined to southern Austria, north-eastern Italy and parts of Slovenia and western Croatia (Gasc et al. 1997). In Slovenia, it is known from localities in the Julian Alps (Breljih 1954), mountainous parts (above 650 m a.s.l.) of the Alpine and Dinaric regions (Tome 1996, 2001), lower altitudes at Cerknica, Rakek, and Planina (Žagar et al. 2007), from 200 to 1100 m a.s.l. in the Kolpa Valley and other parts of the Kočevska region (Žagar 2008, Krofel et al. 2009), and from the Karavanke Mts. (Cafuta 2010). Adult individuals of this species measure up to 6 cm from snout to the vent and have dorsally flattened head and trunk (Mršić 1997, Arnold 2002). Typical colouration of the body's dorsal side is grey, brown or light brown with two contrasting darker (dark brown) temporal stripes (De Luca 1989, Mršić 1997, Arnold 2002). Dark occipital line or, alternatively, dark dots of dark brown colour are present in the middle of the back, but can also be absent (De Luca 1989). Individuals differ in the amount of dark brown spots on the back from no, middle or large number of spots that can in some cases be joined together in large irregular hues (De Luca 1989). Ventral side of the body is whitish or yellowish (Mršić 1997, Arnold 2002), or even greenish (De Luca 1989), with underside of the head usually whiter than belly (Žagar A., personal observations). Black spots are rarely present on

the belly of adult lizards, but when so, they are distributed around the edge of the throat and belly (De Luca 1989). Many adult animals have particularly characteristic olive-green reflection of the back (De Luca 1989, Mršić 1997, Arnold 2002).

On 19.05.2011, the first stated author caught a male of *I. horvathi* on Žurgarska stena at Žurge near Čabar in Slovenia (904 m a.s.l.). Both dorsal and ventral body colouration of this male was darker than typical of this species. The body's dorsal side resembled normal colouration of the species, but was slightly darker and did not have an olive-green reflection. The back was grey with black temporal stripes and black spots in two lines above the temporal stripe that were absent closer to the hind legs, but continued in one line along the middle dorsal side of the tail. The belly and underside of the head were almost black with a yellowish reflection. The colour of the iris (eye) was dark grey. The observed coloration is characteristic of melanism – occurrence of an increased amount of dark pigmentation in an organism, resulting from the presence of melanin (Webster's Revised Unabridged Dictionary 1913). The individual was photographed from ventral and dorsal views (Figs. 1-2). Standard biometric measurements are given in Tab. 1. Other members of this species observed at the same locality had normal colouration.

**Table 1.** Standard biometric measurements of a melanistic Horvath's rock lizard (*Iberolacerta horvathi*) male from Žurgarska stena, Slovenia.

**Tabela 1.** Standardne biometrične meritve melanističnega samca horvatove kuščarice (*Iberolacerta horvathi*) iz Žurgarske stene, Slovenija.

Snout-vent length / dolžina glave in trupa	48.0 mm
Head length / dolžina glave od konice gobca do ovratnika	17.1 mm
Pileus length / dolžina pileusa	11.6 mm
Head width / širina glave	7.3 mm
Head height / višina glave	5.1 mm
Tail length / dolžina repa	95.0 mm
Weight / teža	2.5 g

Melanism occurs sporadically in some lacertids. It is especially common in *Podarcis* populations on small islands and in *Dalmatolacerta* at high altitudes (Arnold et al. 2007). In Slovenia, two cases of melanism in lacertids have been reported previously for different species: *Podarcis siculus* (Krofel 2005) and *Algyroides nigropunctatus* (Jagar & Ostanek 2011). According to the available literature, the find of this partly melanistic individual of *Iberolacerta horvathi* from Slovenia seems to be the first record of partial melanism reported in this species. The finding is even more important, as cases of dark pigmentation in lacertids from the genus *Iberolacerta* are only few (i.e., for *I. galani*, Arribas et al. 2006).

## References

- Arnold E.N. (2002): A Field Guide to the Reptiles and Amphibians of Britain and Europe, 2nd edition. HarperCollins Publishers, London, 288 pp.
- Arnold E.N., Arribas O., Carranza S. (2007): Systematic of the Palaearctic and Oriental lizard tribe Lacertini (Squamata: Lacertidae: Lacertinae), with descriptions of eight new genera. *Zootaxa* 1430: 1-86.
- Arribas O., Carranza S., Odierna G. (2006): Description of a new endemic species of mountain lizard from Northwestern Spain: *Iberolacerta galani* sp. nov. (Squamata: Lacertidae). *Zootaxa* 1240: 1-55.
- Brellh S. (1954): Prispevek k poznavanju favne plazilcev slovenskega ozemlja. *Biološki vestnik* 3: 128-131.
- Cafuta V. (2010): First record of Horvath's rock lizard (*Iberolacerta horvathi*) in the Karavanke Mts., Slovenia. *Natura Sloveniae* 12(1): 127-128.
- De Luca N. (1989): Taxonomic and biogeographic characteristics of Horvath's rock lizard (*Lacerta horvathi* Mehely, 1904 Lacertidae, Reptilia) in Yugoslavia. *Scopolia* 18: 1-48.
- 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., Zuiderwijk 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.
- Jagar T., Ostanek E. (2011): First record of a melanistic Dalmatian *Algyroides* (*Algyroides nigropunctatus*) in Slovenia. *Natura Sloveniae* 13(1): 61-62.
- Krofel M., Cafuta V., Planinc G., Sopotnik M., Šalamun A., Tome S., Vamberger M., Žagar A. (2009): Distribution of reptiles in Slovenia: a review of data collected until 2009. *Natura Sloveniae* 11(2): 61-99.
- Krofel M. (2005): First record of a melanistic Italian Wall Lizard (*Podarcis sicula*) in Slovenia. *Natura Sloveniae* 7(1): 41-43.
- 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. (2001): Plazilci (Reptilia). In: Kryštufek B. (Ed.), Raziskava razširjenosti evropsko pomembnih vrst v Sloveniji. Končno poročilo. Ljubljana, Prirodoslovni muzej Slovenije, pp. 480-545.
- Webster's Revised Unabridged Dictionary. Available on: <http://machaut.uchicago.edu/websters>, (3.11.2011)
- 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): 43-44.
- Žagar A. (2008): The lowest altitudinal record of Horvath's Rock Lizard (*Iberolacerta horvathi*) in Slovenia. *Natura Sloveniae* 10(2): 59-62.



**Figure 1.** Ventral view of a partially melanistic Horvath's rock lizard male (*Iberolacerta horvathi*) found on 19 May 2011 at Žurgarska stena, Kočevska region, Slovenia (Photo: Miha Krofel).

**Slika 1.** Trebušna stran delno melanističnega samca horvatove kuščarice (*Iberolacerta horvathi*), najdenega 19.5.2011 na Žurgarski steni, Kočevsko, Slovenija (Foto: Miha Krofel).