## First report of leucism in Anguis fragilis

## DANIEL JABLONSKI & ADRIÁN PURKART

Department of Zoology, Comenius University in Bratislava, Ilkovičova 6, Mlynská dolina, 842 15 Bratislava, Slovakia \*Corresponding author Email: daniel.jablonski@balcanica.cz

The common European slow-worm (......)

I a member of family Anguidae distributed from the Europe including the British The common European slow-worm (Anguis fragilis) is central Balkans to western Europe including the British Islands (Jablonski et al., 2016). Although it is a common reptiles species and quite diverse in coloration, colour aberrations (e.g. albinism, melanism or ventral blue coloration) are generally very rare in this genus (Robert et al., 1965; Knight, 1966; Jablonski & Meduna, 2010; Gleed-Owen et al., 2012; Hails, 2017). According to the best of our knowledge, leucism has never been reported for this species and genus.

During a field trip on 19th September 2017 six juvenile specimens of A. fragilis were observed during cloudy weather under an artificial refuge (large piece of metal) that had been placed in the grassy area. Three were leucistic and three with normal juvenile coloration for the species given their size (Fig. 1). These individuals were around 9-10 cm of total length with an intact tail. The coloration of leucistic juveniles was pinkish with dark eyes. The vertebral strip and lateral coloration were visible and lightly brown. The locality is at 51.4141°N, -1.7195°E near Marlborough, Wiltshire, United Kingdom. Together with slow worms there were three Vipera berus (Linnaeus, 1758) (two adults, one juvenile) under the shelter. At the same locality Natrix helvetica (Lacepède, 1789) were very abundant. After photographs were taken, all individuals were released.

Leucism with diminished number of iridophores and very low number of melanophores and xanthopores is known and reported in reptiles, predominantly in snakes (Bechtel, 1995; Krecsák, 2008). Therefore, is it not surprising that this colour aberration is found in A. fragilis but there is also a possibility that the reports of previous authors did not distinguish between leucism and albinos. Individuals with this colour defect have probably lower levels of survival since they would be conspicuous to predators. This is probably the reason why such aberrated adult individuals are rarely observed in nature (see Gezova et al., 2018). Due to the rarity of similar observation in the genus Anguis, any other such information will be much appreciated.

## **ACKNOWLEDGMENTS**

We would like to thank Stephen Todman who informed us about this observation and provided photographs. This work



Figure 1. The leucistic and normal coloured individuals of A. fragilis from Marlborough, United Kingdom

was supported by the Slovak Research and Development agency under the contract no. APVV-15-0147.

## REFERENCES

Bechtel, H.B. (1995). Reptile and Amphibian Variants: Colors, Patterns, and Scales. Krieger Publishing Company, Malabar, Florida. 224 pp.

Gezova, S., Drugac, P., Purkart, A., Jablonski, D. (2018). Albinism in two snake species recorded from Slovakia. Russian Journal of Herpetology 25: 79-82.

Gleed-Owen, C. (2012). Anguis fragilis (slow-worm): Melanism. Herpetological Bulletin 120: 34-35.

Hails, E.L. (2017). The first record of a slow-worm (Anguis fragilis) from the UK with blue ventral scales. Herpetological Bulletin 140: 37.

Jablonski, D. & Meduna, P. (2010). Blue color of the ventral body part of Eastern slow worm Anguis colchica (Nordmann, 1840). Herpetology Notes 3: 295-296.

Jablonski, D., Jandzik, D., Mikulíček, P., Džukić, G., Ljubisavljević, K., Tzankov, N., Jelić, D., Thanou, E., Moravec, J., Gvoždík, V. (2016). Contrasting evolutionary histories of the legless lizards slow worms (Anguis) shaped by the topography of the Balkan

- Peninsula. BMC Evolutionary Biology 16:99.
- Knight, M. (1966). Birth of albino slow-worms. *British Journal of Herpetology* 3: 259-260.
- Krecsák, L. (2008). Albinism and leucism among European Viperinae: a review. *Russian Journal of Herpetology* 15: 97-102.

Robert, J.C., Nicolet, M., Guyard, A. (1965). Sur un cas d'albinisme chez l'Orvet. *Anguis fragilis* L. *Bulletin de la Société d'Histoire Naturelle du Doubs* 67: 27-29.

Received: 5 September 2018