

## Two new records of ascarid parasites observed in snakes (Colubridae) of Albania

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While the terrestrial reptile fauna of Albania is well described (Mizsei *et al.* 2017), information about the diversity of helminth parasites in these reptiles are poorly known (Jablonski *et al.* 2015). Forty species of reptiles occur in Albania including 17 species of snakes. Snakes are well known as hosts for intestinal parasites with a number of different parasite groups recorded (Baker 1987).

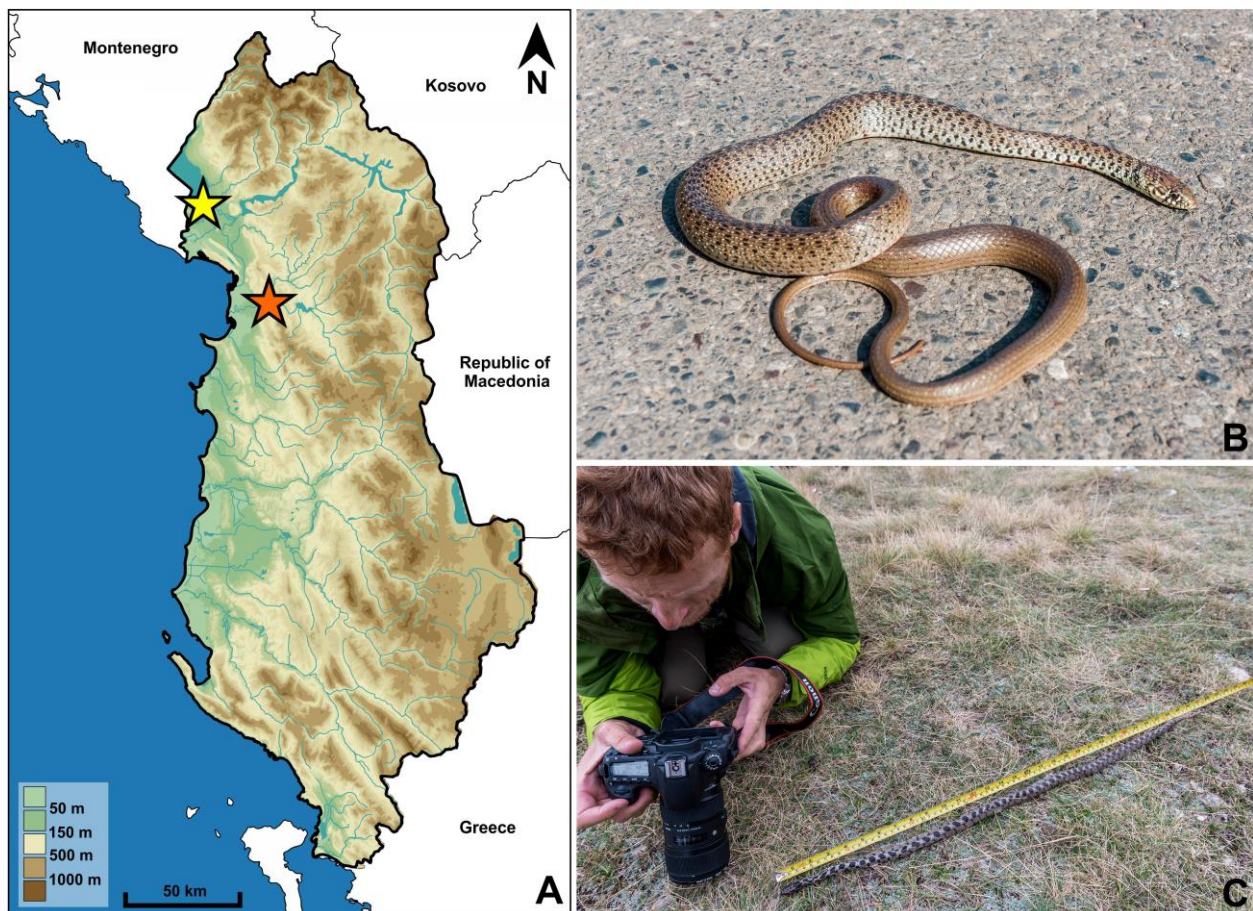
Herein we present records of parasites collected during our research work in Albania in 2015 (Fig. 1A). These parasites were collected in two snake species of the family Colubridae – *Hierophis gemonensis* (Laurenti, 1768) and *Telescopus fallax* (Fleischmann, 1831). Both species are common snakes in Mediterranean parts of Albania but exhibit different ecology and life histories (Mizsei *et al.* 2017). For example *H. gemonensis* is diurnal and feeds on lizards and small mammals, *T. fallax* is nocturnal feeding mainly on geckos or other small lizards (Kreiner 2007).

First record consists of: one *H. gemonensis* (adult male, total length 910 mm) found on 9 June 2015 near Zogaj village (42.06921°N, 19.41103°E, 30 m elevation, WGS84). The second record was a *T. fallax* (adult female, total length 825 mm) found on 20 September 2015 close to Skuraj village (41.69926°N, 19.76684°E, 29 m elevation, WGS84). Both snakes were fresh road-kills (Fig. 1B, C) found in the Mediterranean areas. The body cavity of both specimens was opened in the field and the digestive tract was removed. The esophagus, stomach, small and large intestine and lungs were opened and visually examined for helminths. Six and three Nematoda individuals were found in the small intestine of the first and the second snake, respectively. The Nematoda were fixed in 70% ethanol and were sent to CRB at the Department of Biology, Pennsylvania State University to determine the species. The specimens were cleared in a drop of glycerol and studied using a compound microscope. These Nematoda were identified based on Sprent (1978, 1988) and Anderson *et al.* (2009) as *Ophidascaris schikhobalovi* (Mozgovoy, 1950) from *H. gemonensis* and *Hexametra quadricornis* (Wedl, 1861) from *T. fallax*. These Nematoda were subsequently deposited in the Harold W. Manter Museum, University of Nebraska at Lincoln, USA (voucher numbers HWML 110054 for *O. schikhobalovi* and 110055 for *H. quadricornis*, respectively).

*Ophidascaris schikhobalovi* originally described as *Amplichaecum schikhobalovi* by Mozgovoy (1950) is known from a variety of snakes and lizards including representatives of the Colubridae: *Hemorrhoids* (as *Coluber*) *ravergieri*, *Elaphe dione*; Natricidae: *Natrix natrix*, *Natrix tessellata*; Elapidae: *Naja oxiana*; Viperidae: *Macrovipera* (as *Vipera*) *lebetina*; Agamidae: *Phrynocephalus mystaceus* and

Lacertidae: *Eremias velox* from Central Asia and Russia (Baker 1987). It should be noted that Sprent (1988) suggested *O. schikhobalovi* as a synonym of *O. excavata* Hsu and Hoeppli, 1931, however he was unable to verify synonymy based upon different spicule to body length ratio reported in the original descriptions. Sharpilo (1976) considered the host list for *O. schikhobalovi* to contain *N. natrix*, *N. tessellata*, *E. dione* and *H. ravergeri*. Sprent (1988) suggested that other species, i.e., *O. najae*, occur in elapid snakes of Asia; *O. excavata* in terrestrial reptiles of Asia. *Ophidascaris schikhobalovi* in *H. gemonensis* is a new host record. Albania is a new locality record and the first country in Europe where this parasite was recorded.

*Hexametra quadricornis* is widespread and has been reported from snakes (Colubridae, Elapidae, Typhlopidae, Viperidae) and lizards (Agamidae, Lacertidae) from southern Europe, Africa, Asia, Oceania and Russia (see Baker 1987). *Hexametra quadricornis* was previously reported in *T. fallax* from Bulgaria by Biserkov (1995). Albania is a new locality record for *H. quadricornis*. Additional parasitological research is needed to ascertain the diversity of the parasites in the reptiles of Albania.



**Figure 1.** A – the map of Albania with records of *Ophidascaris schikhobalovi* (yellow star) and *Hexametra quadricornis* (orange star) collected from *Hierophis gemonensis* (B) and *Telescopus fallax* (C), respectively.

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