

First records of the Dice Snake (*Natrix tessellata*) from the North-Eastern part of the Czech Republic and Poland

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Abstract. A stable reproducing population of *Natrix tessellata* is reported from the Czech Silesia (Czech Republic) for the first time. This report also brings the first corroboration of the occurrence of this species from the Polish Silesia (Poland). Both findings extend the known range from the nearest known Moravian locality for ca 144 and 154 km, respectively, to the North-East.

Keywords. *Natrix tessellata*, range extension, new distribution records, Silesia, Czech Republic, Poland.

Natrix tessellata is a semiaquatic snake, having a large area of distribution extending from Central Europe to Northern Egypt and North-Western China (Gruschwitz et al., 1999; Baha El Din, 2006). The northernmost European populations (of usually isolated, relict records) are reported from Germany and the Czech Republic (Gruschwitz et al., 1999).

Our report brings the first written information about the discovery of an isolated but stable and reproductive population of *N. tessellata* near the town of Havířov (Czech Republic, Silesia, 49°47'N, 18°25'E, 252 m a.s.l.), and about the marginal occurrence of this species in Poland. The occurrence of *N. tessellata* in Czech Silesia has already been postulated (Vlček, 1998). The population was discovered on May the 10th, 2009. It is located out of the currently known range of the species and its origin is not exactly known. The range of *N. tessellata* is hereby extended ca 144-154 km North-Eastward from the nearest known Moravian locality of the species (**Brno Reservoir**; Mikátová, Zavadil and Laňka, 2001; Fig. 1). The discovered population is linked to a system of seven water reservoirs near the Sušanka Brook. **In the past, the water reservoirs had the purpose of settling the water from a coalmine.** This location is

very often visited by fishermen. Herpetological research of the locality confirmed the occurrence of *N. tessellata* in the surroundings of five reservoirs. During ten visits made in May 2009 near one of the reservoirs (Fig. 2) where these snakes appear to be more abundant, ca 72 adults and 9 juveniles were found.

From an ecological perspective, we consider the following aspects to be important for this population:

1. The presence of steep slope, banks built from dark mullock (mullock = waste rock acquired in the course of coal mining). It absorbs and accumulates warmth and creates an optimal warm microclimate in the location (Fig. 3).

2. Diametrically big (70 cm) tubing, partly embedded in the soil which, when directed parallel to the West bank of the reservoir, provides ideal covering and thermal conditions for snakes. Snakes can probably hibernate under it and females may lay eggs there.

Food offer for this ichthyophagous snakes was represented by the following observed fish species: *Rutilus rutilus*, *Scardinius erythrophthalmus* and their crossbreeds, *Alburnus alburnus*, *Leuciscus cephalus*, *Perca fluviatilis*, *Esox lucius*, *Carassius auratus* and *Cyprinus carpio*. Other amphibian and reptile species found in the area were *N. natrix*, *Lacerta agilis* and *Pelophylax kl. esculentus*.

The location in which *N. tessellata* was recorded in Poland lies 9,5 km North-Eastward from town of Havířov. The second author (BN) observed and photographed one juvenile specimen (Fig. 4) on the Polish side of the Olse River between the villages of Kaczyce Górne and Brzezówka (49°48'N, 18°34'E; 241 m a.s.l.) **on July the 13th, 2009.** *Natrix tessellata* has never been recorded from Poland until now (Juszczyk,

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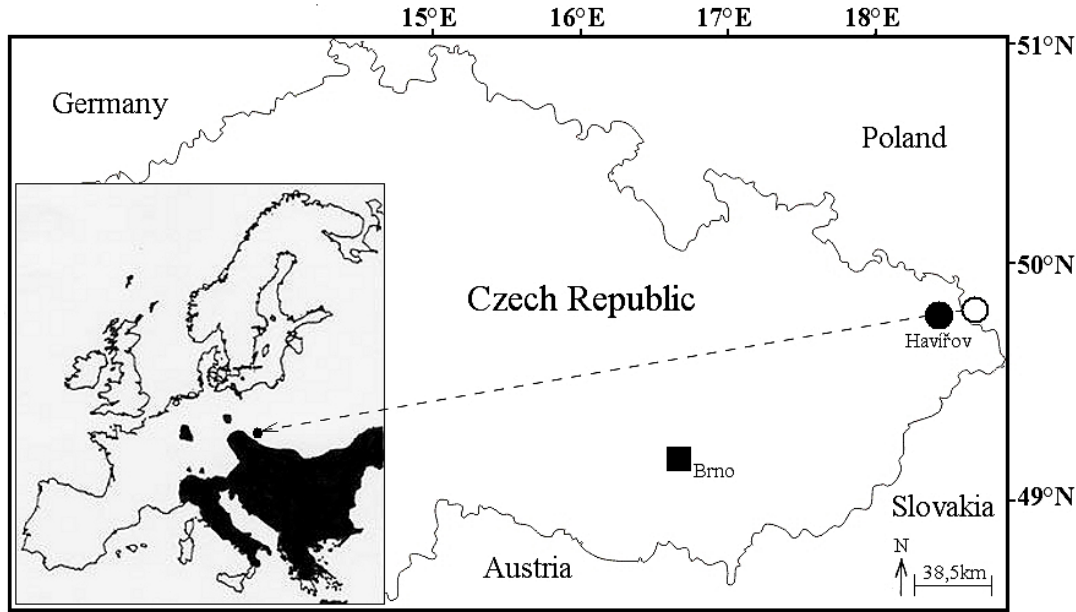


Figure 1. Schematic map of the Czech Republic showing the recently discovered locality in Czech Silesia (black point) and the place of the finding in the Polish Silesia (open point) with the nearest previously known locality (black square) of *N. tessellata*.

1987; Najbar, 1995; Gruschwitz et al., 1999; Berger, 2000). Therefore, this is the first document report on the occurrence of the dice snake in Poland. The Olse River, in these sites, offers suitable ecological conditions for the existence of *N. tessellata* populations (Fig. 5).

The list of amphibian and reptile species from this site corresponds to the one from near the town Havířov (Polášek, 1988). The possible connection between the *N. tessellata* locality discovered in Poland to population from Havířov will be the subject of a future study.



Figure 2. Water reservoir near the town of Havířov (Czech Silesia, Czech Republic), where the population of *N. tessellata* was found. The highest density of snakes was observed at this location. Photograph: P. Vlček.



Figure 3. Gravid female *N. tessellata* absorbing the warmth from the surface of the bank, which is built from mining mullock (cloudy, air temperature: 20°C, temperature of substratum surface: 26°C). Photograph: P. Vlček.



Figure 4. Juvenile specimen of *N. tessellata* (Olse river, southern Poland). Photograph: B. Najbar.



Figure 5. The habitat from the Olse river (where the state boundary between the Czech Republic and Poland lies) where the occurrence of *N. tessellata* was recorded (in the photo: the right bank of river). Photograph: B.Najbar.

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