

Species composition of the Amphibians and Reptiles in the Natura 2000 Site „Oranovski Prolom - Leshko”, Bulgaria

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Abstract. The Natura 2000 site „Oranovski Prolom - Leshko” (BG0001022) was studied in Jul 2013-Dec 2017 in order to supplement and summarize the information about the diversity and distribution of the herpetofauna. Two new species of amphibians (Caudata) and 8 new species of reptiles (4 Sauria and 4 Serpentes) have been registered. Thus the total number of the representatives of herpetofauna is 29 (10 amphibians and 19 reptiles).

Key words: Herpetofauna, Natura 2000, Bulgaria.

Introduction

The Protected Area „Oranovski Prolom - Leshko” (code BG0001022), a part of the Natura 2000 network in Bulgaria, was approved as a Site of Community Importance (SCI) by the European Commission in 2008 under the terms of the EU Habitats Directive (92/43/EEC). Data about the diversity and distribution of amphibians and reptiles in the area are scarce. In total, 19 species have been reported: 8 amphibians and 11 reptiles. The aim of the paper is to supplement and summarize data about the species composition and distribution of the herpetofauna in the SCI „Oranovski Prolom - Leshko”.

The species and their localities were registered during field trips in Jul 2013-Dec 2017.

Results and Discussion

There are 2 new species of amphibians (Caudata) and 8 new species of reptiles (4 Sauria and 4 Serpentes) registered. For the time being, the total number of the representatives of herpetofauna in the Protected area is 29 (10 amphibians and 19 reptiles).

Amphibia: *Lissotriton vulgaris* (Linnaeus, 1758) – Smooth Newt. A new species for the SCI. It was found only once in a small pool E of Gabrovo (N41°54'21" E22°58'51", 748 m, 2 ad. ♂ ♀, 24.04.2017). The two individuals have been of the nominate form *L. v. vulgaris*. ***Triturus ivanbureschi*** Arntzen & Wielstra, 2013 – Buresch`s Crested Newt. A new species for the SCI. It was registered twice – together with the previously mentioned species (E of Gabrovo, 1 ad. ♂, 23.04.2017, 2 ad. ♂♂, 24.04.2017) and in a small swamp NW of Obel (N41°59'01" E22°53'29", 1112 m, many individuals, 23.05.2016). Palatine teeth prints were taken from the two specimens captured on April 24, 2017 using the method proposed by

Naumov & Biserkov (2014). The arrangement of these teeth confirms the affiliation of the individuals to *T. ivanbureschi*. ***Salamandra salamandra*** (Linnaeus, 1758) – Fire Salamander. Data about the species presence and spreading in the area were published by Pulev & Sakelarieva (2009) and Malakova *et al.* (2017). The new studies show that the species is widespread above a certain altitude. The lowest record is at 435 m a.s.l. (NE of Zhelezmitsa, N41°56'13" E23°07'02", 3 larvae, 28.04.2016). The existence at lower altitudes is probably limited by the lack of suitable small water basins for the development of the larvae. One ad. individual with unusual daily activity was registered in a gully, in the shade, in sunny, warm (26.3°C), and dry (41%) weather (W of Zhelezmitsa, N41°55'57" E23°03'49", 658 m, 10.07.2016, 12:05 pm). ***Bombina variegata*** (Linnaeus, 1758) – Yellow-bellied Toad. Published data: Pulev & Sakelarieva (2009), Natura 2000 (2013), Pulev *et al.* (2015) and Malakova *et al.* (2017). ***Bufo bufo*** (Linnaeus, 1758) – Common Toad, ***Bufotes viridis*** complex (Laurenti, 1768) – Green Toad, ***Hyla arborea*** (Linnaeus, 1758) – Common Tree Frog, ***Rana dalmatina*** Fitzinger in Bonaparte, 1838 – Agile Frog. Data about the distribution of these taxa in the area were published by Malakova *et al.* (2017). ***R. graeca*** Boulenger, 1891 – Balkan Stream Frog. Published data: Pulev & Sakelarieva (2009), Pulev *et al.* (2015) and Malakova *et al.* (2017). ***Pelophylax ridibundus*** (Pallas, 1771) – Marsh Frog. Published data: Pulev *et al.* (2015) and Malakova *et al.* (2017). According to the results from the new studies, all the anuran species are widespread in the Protected area.

Reptilia: ***Testudo hermanni*** Gmelin, 1789 – Hermann's Tortoise. Published data: Pulev & Sakelarieva (2011a) and Malakova *et al.* (2018). ***T. graeca*** Linnaeus, 1758 – Spur-thighed Tortoise. Published data: Malakova *et al.* (2018). ***Mediodactylus kotschy*** (Steindachner, 1870) – Kotschy's Gecko. The species was registered at the border of the area in Zhelezmitsa (N41°55'31" E23°06'19", 309 m, 1 ad., 10.08.2017). ***Lacerta viridis*** (Laurenti, 1768) – Eastern Green Lizard. A new, widespread species for the SCI. ***Podarcis erhardii*** (Bedriaga, 1882) – Erhard's Wall Lizard. Published data: Pulev & Sakelarieva (2011a). The results from the new studies show that the species is widespread at lower altitudes. The highest locality was registered at 992 m a.s.l. (W of Korianska Mahala neighb., Leshko, N41°55'33" E22°55'58", 1 ad., 15.04.2016). It is of interest the record of 1 ad. ♀ winter active individual (N/NW of Tserovo, N41°58'14" E23°06'58", 512 m, 14.12.2017, 2:35 pm, 15.7°C). ***P. tauricus*** (Pallas, 1814) – Balkan Wall Lizard. Published data: Pulev & Sakelarieva (2011a) and Pulev *et al.* (2018b). According to the results from the new studies the species is widespread to a certain altitude. ***P. muralis*** (Laurenti, 1768) – Common Wall Lizard. A new species for the SCI. The species is widespread in Vlahina Mts., above a certain altitude. The lowest locality was registered at 593 m a.s.l. (W of Leshko, N41°56'03" E22°57'56", 2 ad., 15.10.2016). It is of interest the record of 1 juv. totally melanic individual (W/NW of Leshko, N41°56'11" E22°57'26", 647 m, 15.10.2016). Melanism of the species in Bulgaria is reported for the first time. ***Ablepharus kitaibelii*** (Bibron & Bory de Saint-Vincent, 1833) – Snake-eyed Skink. Published data: Pulev & Sakelarieva (2011a). The species is widespread in the higher parts of Vlahina Mts. The lowest registered locality was at 650 m a.s.l. (NW of Leshko, N41°56'13" E22°57'59", 1 subad., 15.10.2016), and the highest one was at 1367 m a.s.l. (Klikach summit, N41°55'43" E22°54'40", 3 ad., 1 juv., 15.04.2016), which is the second highest record in Bulgaria. ***Anguis fragilis*** Linnaeus, 1758 – Slow Worm. A new species for the SCI. Only 1 ad. road killed specimen was registered NW of Obel (N41°58'52" E22°52'57", alt. 1129 m) on 03.06.2017. ***Xerotyphlops vermicularis*** (Merrem, 1820) – Worm Snake. Published data: Pulev *et al.* (2018a). ***Malpolon insignitus*** (Geoffroy Saint-Hilaire, 1827) – Eastern Montpellier Snake. Published data: Pulev *et al.* (2018b). ***Natrix natrix*** (Linnaeus, 1758) – Grass Snake. A new species for the SCI. It is widespread in small streams and swamps. ***N. tessellata*** (Laurenti, 1768) – Dice Snake. A new species for the SCI. It has been registered only in Stara Reka river. ***Dolichophis caspius*** (Gmelin, 1789) – Caspian Whip Snake, ***Platyceps najadum***

(Eichwald, 1831) – Dahl's Whip Snake. Published data: Pulev & Sakelarieva (2011b). New data about their spreading has been collected. The locality of *P. najadum* registered on 17.09.2017 is the second highest one in Bulgaria – 847 m a.s.l. **Zamenis longissimus** (Laurenti, 1768) – Aesculapian Snake. A new species for the SCI. It is of interest the record of 1 subad. (on 31.08.2016) night active individual, and of 1 ad. individual (on 04.06.2017) with particularly defensive behavior – it was twisting its body to eight, rubbing his scales, and making a scraping sound. **Coronella austriaca** Laurenti, 1768 – Smooth Snake. Information about the species distribution in the Protected area was published by Pulev & Sakelarieva (2011b). New data have also been collected. **Telescopus fallax** (Fleischmann, 1831) – Cat Snake. A new species for the SCI. It is distributed in the lower parts of the area (unpublished data by Domozetski, Pulev & Manolev). **Vipera ammodytes** (Linnaeus, 1758) – Nose-horned Viper. Published data: Pulev & Sakelarieva (2011b). A widespread species, registered during the day, as well as at night.

Distribution of the snakes registered in the Protected Area „Oranovski Prolom – Leshko” during the current study (localities, specimens, and date):

Natrix natrix – SE of Tserovo (N41°57'06" E23°08'28", 763 m), 1 subad. striped morph (SM), 11.06.2016; E of Zheleznița (N41°55'25" E23°07'39", 421 m), 1 juv. SM, 09.07.2016; W of Zheleznița (N41°55'38" E23°04'18", 508 m), 1 ad. SM, 10.07.2016; SE of Plyangovtsi neighb., Obel (N41°57'22" E22°54'00", 808 m), 1 juv. SM, 23.05.2016; NW of Obel (N41°59'01" E22°53'29", 1112 m), 1 juv. non-striped morph, 12.06.2016; **Natrix tessellata** – Stara Reka river (N41°55'20" E23°06'19", 314 m), 1 juv., 23.07.2013, (N41°55'19" E23°06'09", 326 m), 1 ad., 25.04.2016, (N41°55'22" E23°05'52", 350 m), 1 juv., 25.04.2016; **Dolichophis caspius** – NW of Tserovo (N41°58'17" E23°06'02", 359 m), 1 juv., 04.06.2017; W of Tserovo (N41°57'32" E23°06'16", 320 m), 1 ad. road killed (RK), 28.07.2017; E of Tserovo (N41°57'35" E23°08'20", 777 m), 1 ad., 29.05.2016, (N41°57'21" E23°08'35", 812 m), 1 ad., 11.06.2016; N/NE of Dolno Tserovo neighb., Tserovo (N41°57'11" E23°06'18", 317 m), 1 ad. RK*, 27.06.2016; S of Dolno Tserovo neighb. (N41°56'20" E23°06'08", 309 m), 1 ad. RK*, 10.07.2016, (N41°56'16" E23°06'09", 322 m), 1 juv. RK, 28.04.2016; E of Dzhaleva Mahala neighb., Zheleznița (N41°56'07" E23°05'53", 348 m), 1 dead ad., 22.06.2014; W of Zheleznița (N41°55'38" E23°05'56", 448 m), 1 ad., 19.06.2016; NW of Zheleznița (N41°55'49" E23°05'07", 538 m), 1 shed skin (ad.), 19.06.2016, (N41°55'44" E23°04'32", 534 m), 1 shed skin (ad.), 10.07.2016, (N41°55'52" E23°03'45", 698 m), 1 shed skin (ad.), 10.07.2016; S of Gabrovo (N41°53'21" E22°56'48", 799 m), 1 shed skin (ad.), 09.10.2016; W of Leshko (N41°56'04" E22°57'42", 616 m), 1 shed skin (ad.), 15.10.2016; E of Padesh (N41°56'03" E23°02'56", 771 m), 2 shed skins (ad.), 29.07.2017; **Platyceps najadum** – NW of Tserovo (N41°58'20" E23°06'08", 363 m), 1 ad. RK*, 14.06.2014, (N41°58'28" E23°06'17", 389 m), 1 ad., 1 shed skin (ad.), 25.05.2014, (N41°58'26" E23°06'33", 405 m), 1 ad., 30.08.2015, (N41°58'17" E23°06'27", 472 m), 1 subad., 11.06.2016, (N41°58'19" E23°06'30", 476 m), 1 ad. RK, 29.07.2017; N of Tserovo (N41°57'52" E23°07'37", 629 m), 1 ad. RK*, 09.06.2014; SW of Korianska Mahala neighb., Leshko (N41°55'20" E22°56'31", 823 m), 1 ad., 14.05.2017, 1 ad., 1 subad., 17.05.2017; S of Zlatkovtsi neighb., Obel (N41°57'05" E22°55'01", 847 m), 1 shed skin (ad.), 17.09.2017. **Zamenis longissimus** – NW of Tserovo (N41°58'25" E23°06'19", 374 m), 1 juv. RK*, 07.05.2014; N of Tserovo (N41°57'54" E23°07'40", 606 m), 1 ad., 10.06.2014, (N41°57'47" E23°07'33", 648 m), 1 subad., 31.08.2016, 8:45 pm; S of Tserovo (N41°56'56" E23°07'58", 682 m), 1 ad., 04.06.2017; N of Dolno Tserovo neighb. (N41°57'02" E23°06'06", 330 m), 1 subad. RK, 13.05.2017; NW of Dolno Tserovo neighb. (N41°56'54" E23°05'51", 319 m), 1 ad. RK, 25.04.2016; NW of Debochitsa (N41°52'13" E22°56'54", 998 m), 1 ad., 28.04.2015; E of Gabrovo (N41°54'01" E22°57'32", 699 m), 1 ad., 09.10.2016; SE of Plyangovtsi neighb. (N41°57'22" E22°54'00", 808 m), 1 juv. striped morph, 23.05.2016; **Coronella austriaca** –

SW of Gabrovo (N41°53'08" E22°55'52", 1031 m), 1 juv., 11.09.2016; S of Yuruchka neighb., Obel (N41°57'51" E22°54'19", 932 m), 1 ad., 23.06.2015; *Vipera ammodytes* – NW of Tserovo (N41°58'18" E23°06'13", 397 m), 1 juv., 10.08.2016, 10:55 pm, (N41°58'14" E23°06'22", 466 m), 1 subad. RK, 03.06.2017, (N41°58'20" E23°06'41", 479 m), 1 juv. RK, 21.05.2017, (N41°58'14" E23°06'48", 470 m), 1 shed skin (ad.), 02.09.2017; N of Tserovo (N41°57'52" E23°07'37", 629 m), 1 ad. RK*, 27.06.2014; E of Dzhaleva Mahala neighb. (N41°56'06" E23°05'48", 321 m), 1 ad. ♂, 22.06.2014, 12:20 pm; E of Zheleznitsa (N41°55'16" E23°07'14", 364 m), 1 ad. ♀, 05.05.2015, 11:05 am; S of Gabrovo (N41°53'21" E22°56'48", 799 m), 1 shed skin (ad.), 09.10.2016, (N41°53'20" E22°56'52", 772 m), 1 juv., 09.10.2016, 1:35 pm; SW of Korianska Mahala neighb. (N41°55'20" E22°56'31", 823 m), 1 subad., 15.04.2016, 4:25 pm.

*specimens killed on the road more than 48 hours prior to the registration

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