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Current state of reptiles of western podillia

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The results of the research of the current state of reptiles in Western Podillia were presented. Morphometric traits were described; habitat, spread and number of 9 reptile species belonging to 2 lines and 5 families were studied. The regional extinction of *Elaphe longissima,* which was at the edge of the habitat, was identified. It has been established that the borders of habitats are in the territory of Western Podillia: for *Natrix tessellata* and *Lacerta.viridis* – the northern one, for *Lacerta vivipara* – the southern one.The survey of the found species was made. It was shown that *Lacerta agilis* appeared to be the most numerous species among reptiles, although its number decreased due to human transformed natural habitats.Such species as *Emys orbicularis, Anguis fragilis, Lacerta viridis*, *Lacerta vivipara, Coronella austriaca* and *Vipera berus* are in a dangerous situation. These species are found sporadically, and there are all reasons to consider them as those which have decreased their number considerably.*Natrix natrix* and *Natrix tessellata* are common species. The analysis of reptile occurrence within the region of research has shown that, as to their number, species gravitate to the east and south-east of the region, covering the areas along the left bank of the Dniester River ("Dnistrovskyi canyon") in Western Podillia Prydnistrovia (administrative territories of Zalishchyky, Bucha, Borshchiv districts of Ternopil region). In Tovtry ridge, they mostly concentrate in the territories of Zbarazh, Pidvolochysk, Husiatyn districts of Ternopil region and Kamianets-Podilsk and Chemerov districts of Khmenlnytskyi region.It is worth mentioning that the area with the highest reptile occurrence coincides with that of reserve "Medobory" and to a lesser degree with the territory of NNP "Podilski Tovtry". To a great extent the area of reptile concentration coincides with the territory of natural park "Dnistrovskyi canyon", in particular, closer to the hills of the Dniester River on a tract Beramiany – Ustechko, Zalishchyky – Kasperivtsi (Obizhev and Kasperivskyi reserves) and the outskirts of Dzvenyhorod village, Borshchiv district. In general, the state of reptiles in the region tends to the reduction of the number and diversity of these representatives.
Key words: herpetofauna; west Podillia; spread; number

Introduction

Many zoologists studied herpetofauna of the west region of Ukraine at different times (Andrzejowski, 1832; Belke, 1859; Bayger, 1907; Bayger, 1909; Bayger, 1937; Andreiev, 1953; Marisova, 1961; Tatarinov, 1973; Shcherbak, 1980; Piliavskiy, 1983; Barabash, 1999; Shaitan, 1999), but most of the researches concerned mainly the Carpathian area, partly Ternopil region, mostly its northern areas. In fact, Western Podillia (physical-geographical region of Ukraine, which lies along the left bank of the Dniester River) remained unstudied. At the same time, the information of many authors as to the taxonomic status, population structure and morphological traits of reptiles of this region has limited and sometimes controversial character.
The purpose of this work was to study spread, number and morphological traits of reptiles of Western Podillia.

Materials and methods

The results of the field research carried out during a period of reptile seasonal activity in 2005-2015 were the materials for this work, enlarged with literature data and the results of studying the collection funds of the Museum of Zoology of the National Scientific-Natural Museum of National Academy of Sciences of Ukraine (ZM NSNM), Kyiv and Zoological Museum in St. Petersburg (Russia). The research material of external morphological traits of 9 reptile species (322 individuals) was used.

Morphological characterization of the species was carried out on live material according to the traits which were chosen beforehand and taxonomically grounded (Bannikov, Ischenko, Rustamov, & Shcherbak, 1977; Darevskiy, Shcherbak, & Tatarinov, 1989). The calculation of the number was done with a route method The length of survey routes was always 1000 m and the lane width was 2 m (Dinesman & Kaletskaia, 1952; Darevskiy et al., 1989; Roy W. McDiarmid 2012; Robert J. Ward , Richard A. Grifths, John W. Wilkinson & Nina Cornish 2017).

Results and discussions

Ten reptile species out of thirteen, found in the west of Ukraine, were registered in the territory of Western Podillia (Tatarinov, 1973; Shaitan, 1999).

***Emys orbicularis* (Linnaeus, 1758)**. Carapace is convex, oval, dark color with a radiant picture (carapace type is – radiant) (Karmeshev & Shevchenko, 2001), plastron is black, limbs are dark with yellow spots. The comparison with the representatives of the southern region of Ukraine showed a distinct difference in its structure which proved the belonging of the tortoise of the studied area to a nominative sub-species (Bannikov et al., 1977; Fritz, 1992; Karmeshev & Shevchenko, 2001; Ananieva, Orlov, Halikov, & Darevskiy, 2004).

The species was first mentioned by E. Eichwald (Eichwald, 1830), later it was found in the outskirts of Kamianets-Podilskyi city by G. Belke (Belke, 1859). It appears sporadically all over the territory of Western Podillia (Shaitan, 1999), it was not found in Opillia (an adjacent territory) though (Barabash, 1999). It was found in flood lands of the Strypa, Seret, Tupa, Zbruch rivers, in ponds and lakes, where its number/population is 1-3 ind./km. This species was not seen in reserve "Medobory". Based on the calculations made on the studied territory, *E. orbicularis* is a small-in-number species (1-2 ind./ км^2), but some authors (Tatarinov, 1973) consider it to be a typical representative of local fauna. Researchers state a much larger number of the species in other regions: in Trans-Carpathian area – 5-8 ind./km (Shcherbak, 1980); in the south of Ukraine – 10-25 ind./25 m of a coastline (Karmeshev & Shevchenko, 2001), 1-3 ind./100 m, sometimes up to 175-380 ind./ha (Kotenko, 2007).

Taking into account low abundance of this species in the region, absence of *E. orbicularis* in some areas, tendency to its habitat loss in Ukraine (Shcherbak, 1966; Shcherbak, 1980; Karmeshev & Shevchenko, 2001), it is expedient to take protective measures aimed at its preservation. The species was included to the II supplement of Bern convention (Zagorodniuk, 1999). The factors of the number decrease are biotope transformation (land reclamation of flood lands of the rivers, destruction of egg laying places).

The results of morphometric measurements in mm (29 individuals) are as follows: 17♂♂, 12♀♀).

L. car. ♂♂ 55,4-235,2 (131,5 ± 10,0), ♀♀ 42,8-180,0 (122,4 ± 8,9); Lt. car. ♂♂ 52,3-222,0 (128,5 ± 6,6), ♀♀ 40,0-170,0 (110,0 ± 6,80); Al. t. ♂♂ 28,6-108,1 (65,1 ± 3,50), ♀♀ 25,0 – 97,0 (63,0 ± 22,63); L. cd. ♂♂ 51,0 – 120,2 (86,5 ± 4,5), ♀♀ 35,0 – 80,0 (59,0 ± 5,0).

***Anguis fragilis* (Linnaeus, 1758)** is well spread in Western Podillia. The finding of this species was first mentioned in the work of E. Eichwald (Eichwald, 1830). G. Belke noticed it in the outskirts of Kamianets-Podilskyi city (Belke, 1859).

A. fragilis is spread all over the region, but it is seen sporadically everywhere. The number of this species in Dnistrovskyi canyon (a tract from the Strypa river to Kamianets-Podilskyi city) is 5-6 ind./km, in Tovtry ridge – 1-2 ind./km. The total number of the species within the area of Western Podillia is small.

The generalization of morphometric data, in particular a close position of prefrontal carapaces and totally separated frontal-nasal and frontal carapaces, gives every ground to state the spread of a nominative sub-species in this area.

The results of morphometric measurements in mm (14 individuals) are as follows: 8 ♂♂, 6 ♂♂).

L. ♂♂ 165,5 – 230,0 (186,7 ± 4,50), ♀♀ 110,0 – 240,0 (156,6 ± 7,50). L. cd. ♂♂ 175,0 – 228,0 (200,8 ± 7,80), ♀♀ 108,0 – 216,0 (157,4 ± 8,50). L./L.cd. ♂♂ 0,85 – 1,0 (0,90 ± 0,02), ♀♀ 0,82 – 1,25 (0,93 ± 0,02); L.c. ♂♂ 11,8 – 17,0 (14,74 ± 0,40), ♀♀ 9,8 – 16,0 (12,26 ± 0,35). Lt. c. ♂♂ 8,7 – 13,0 (10,12 ± 0,20), ♀♀ 6,2 – 12,4 (8,48 ± 0,27). Al. c. ♂♂ 6,7 – 10,3 (8,03 ± 0,20), ♀♀ 4,6 – 9,7 (6,90 ± 0,22). Sq. ♂♂ 25 – 32 (28,40 ± 0,25), ♀♀ 25 – 30 (27,80 ± 0,50).

***Lacerta viridis* (Laurenti, 1768)**. In Ukraine a northern areal border of this species lies across Podillia (Ternopil, Khmelnytsk and Vinnytsia regions) (Bannikov et al., 1977). The species was first mentioned by E. Eihwald (Eichwald, 1830). According to K. F. Kessler (Kessler, 1853), green lizard is found everywhere in Podilsk hubernia, and O. Andrzheiovskyi (Andrzejowski, 1832) states that this species is spread up to the Dnister and Buh rivers. According to H. Belke (Belke, 1859), green lizard is often seen in the outskirts of Kamianets-Podilskyi city, and Ya.V. Bedriaha (Shcherbak, 1993) received a sample of this species from Podilsk hubernia. Groups and individuals from the studied territory are kept in the museum funds (ZM NSNM, St Petersburg imperial ZM).

It is a small-in-number representative of herpetofauna of Western Podillia, which is found exclusively in the area of Western-Podillia Prydnistrovia. It prefers slopes exposed to the east. The species has a spotty nature of its spread. It was found in the valley of the Dnister river, Beremiany village – 3-6 ind./km (Sobolenko, 2003); and also in the outskirts of Hubyn, Khmeleva, Kasperivtsi villages, the population number is 0.6-1.2 ind./км. The species was also found in forest clearings in the outskirts of Melnytsia-Podilska city and Dovzhok village, where 4 individuals were counted on a 50-m route. The number of this species varies greatly in other locations. It is equal to 2-14 ind./100 m in the Carpathian region (Shcherbak, 1980). In the Left-bank Forest-steppe zone of Ukraine (Kotenko, 1988) 1-5 ind./km are found, the number is much higher – 4-6 ind./10 m – in the optimal conditions in the places of its larger concentration. The tendency to the number decrease has been recorded in recent years (Shcherbak, 1966; Karmeshev & Shevchenko, 2001; Kotenko 2007), which corresponds to the situation in Western Podillia. Negative tendencies result from the destruction of natural biotopes.

According to literature data (Tarashchuk, 1950; Sytnik, 2004), confirmed by the authors' observations, green lizard displaces speedy lizard from the habitat.

Based on the data of morphometrics, we can state that Western Podillia populations belong to nominative sub-species.
The results of morphometric measurements in mm (47 individuals) are as follows: 27 ♂♂, 20 ♀♀).
L. ♂♂ 98,0 – 135,0 (114,9 ± 4,50), ♀♀ 85,4 – 112,2 (100,7 ± 3,51). L. cd. ♂♂ 145,0 – 250,0 (198,5 ± 2,50), ♀♀ 134,0 – 208,0 (169,8 ± 0,61). L./L. cd. ♂♂ 0,65 – 0,43 (0,54 ± 0,20), ♀♀ 0,70 – 0,45 (0,57 ± 0,18). Sq. ♂♂ 46 – 56, ♀♀ 50 – 57. P. fm. ♂♂ 14 - 18 , ♀♀ 13 – 18 . Ventr. ♂♂ 24 – 32, ♀♀ 25 – 31. L. ab. ♂♂ 4 – 5, ♀♀ 4 – 5.

***Lacerta agilis* (Linnaeus, 1758).** This is the most numerous and widespread species of lizards in Ukraine. The habitat of this species is the whole territory of Western Podillia (Shcherbak, 1980). The species is represented by two subspecies in the west of Ukraine: *L. a. agilis* Linnaeus, 1758 and *L. a. chersonensis* Andrzejowski, 1832. It inhabits both natural and human transformed habitats. While it could be rarely seen on a larger territory of the left bank of Dnister canyon, green lizard inhabits those biotopes. Its discoveries near Kamianets-Podilskyi city are mentioned in the work of H. Belke (Belke, 1859). Two individuals from Ternopil region, Zalishchyky district, dated from September 20, 1940, are kept in the funds of ZM NSNM.

According to the results of our research speedy lizard is the dominant species of Western Podillia. It is registered on the exits of limestone cliffs with thick shrubs in natural reserve "Medobory", where, according to literature sources (Shaitan, 1999), the abundance of the species in some places was 125 ind./km, and according to own research findings were 120-145 ind./km. In other places there were 23-25 ind./km ("Voroniaky"). In Borshchiv district the indicator of the species number in June, 2015 was 42 individuals per route km. It is obvious that the number of the species on the studied territory is rather high and remains stable during many years. This observation corresponds to the statistics of other researchers, received in different regions of Ukraine (Shcherbak, 1980; Barabash, 1999; Karmeshev & Shevchenko, 2001; Kotenko, 2007). They all consider speedy lizard to be numerous and the most widespread species among overland reptiles.

The results of morphometric measurements in mm (67 individuals) are as follows: 35 ♂♂, 32 ♀♀).
L. ♂♂ 64,3 – 87,1 (74,80 ± 0,25), ♀♀ 65,4 – 92,5 (78 ± 0,18). L. cd. ♂♂ 90,7 – 142,9 (116,15 ± 0,30), ♀♀ 92,4 – 165,0 (129,15 ± 0,32). L./L.cd. ♂♂ 0,72 – 0,54 (0,62 ± 0,35), ♀♀ 0,86 – 0,55 (0,68 ± 0,50). P. f. ♂♂ 10 – 15 (M = 12,85 ± 0,13), ♀♀ 10 – 15 (M = 12,36 ± 0,16). Ventr ♂♂ 127 24 – 32 (M = 28,35 ± 0,30), ♀♀ 25 – 31 (M = 28,75 ± 0,25). L. ab. ♂♂ 2 – 4 (M = 2,70 ± 0,16), ♀♀ 2 – 4 (M = 2,85 ± 0,23).

***Lacerta vivipara* (Jacquin, 1787).** This species for Podilsk hubernia was first mentioned by K.F. Kessler (Kessler, 1853). Later G. Belke (Belke, 1859) found this lizard on the banks of the Dnister river. It prefers damp places. According to V.I. Tarashchuk (Tarashchuk, 1959), a southern border of viviparous lizard habitat covers a larger part of Ternopil, Khmelnytsk and Vinnytsia regions. However, the author does not mention definite places where this species is found due to the lack of data.

The species in the region is not numerous. It is seen sporadically in the northern and partly eastern parts of the studied territory; it was not found in Western Podillia Prydnistrovia area. The species number ranges from low – 1-2 ind./100 m (July, 2002, the outskirts of Kamianets-Podilskyi city) to moderate – 4-5 ind./100 m in "Voroniaky" district. According to literature data, in Holytskyi reserve (Opillia) the number of viviparous lizard is 12 individuals per 200-m route, in the outskirts of Berezhany city – 20-25 ind./2 km (Barabash, 1999). Its population is quite numerous in the Carpathian region, in particular in mountainous area, namely 7-9 ind./100 m and 77 ind./ha (Andreiev, 1953; Shcherbak, 1980).

The results of morphometric measurements in mm (26 individuals) are as follows: 12♂♂, 14 ♀♀).
L. ♂♂ 34,0 – 60,7 (46,87 ± 1, 06), ♀♀ 34,8 – 67,0 (50, 88 ± 1,20). L.cd. ♂♂ 41,4 – 96,0 (68,13 ± 1,60), ♀♀ 41,0 – 97,0 (62,22 ± 1,70); (t = 7,06). L./L.cd. ♂♂ 0,57 – 0,83 (0,71 ± 0,20), ♀♀ 0,99 – 0,58 (0,78 ± 0,20). Sq. ♂♂ 29 – 40 (M=34,55 ± 0,25), ♀♀ 28 – 32 (M = 30,60 ± 0,20). P.f. ♂♂ 9 – 13 (M = 11,85 ± 0,13), ♀♀ 7 – 12 (M = 10,05 ± 0,12). Ventr. ♂♂ 21 – 28 (M = 25,20 ± 0,30), ♀♀ 25 – 30 (M = 27,45 ± 0,20). L.ab. ♂♂ 3 – 4 (M = 3,60 ± 0,16), ♀♀ 3 - 4(M = 3,45 ± 0,23).

***Natrix natrix* (Linnaeus, 1758).** According to E. Eichwald (Eichwald, 1830) and O. Andrzheiovskyi (Andrzejowski, 1832), this is species is found everywhere in Podillia. G. Belke (Belke, 1859) mentioned the presence of grass snake in the outskirts of Kamianetsk-Podilskyi city. Individuals from this location, gathered by O. M. Nikolskyi at the beginning of XX century (Nikolskiy, 1916) are kept in Zoological Museum in St. Petersburg.

According to literature sources, there are not many places where grass snake can be found in Western Podillia. Nevertheless, this species has to be considered as the common one which is seen on the banks of rivers, ponds, flood plains, forest clearings. According to the results of the research the number of the species ranges considerably depending on a biotope. The species was seen in the clearings of leafy forests of reserve "Medobory" – 1-2 individuals per route kilometer, its number was larger – 20-23 ind./km – along left tributaries of the Dniester River on a tract Strypa-Zbruch. This species is common for other regions of Western Ukraine (Opillia and Carpathians) (Shcherbak, 1980; Barabash, 1999)), and it is considerable in number in so-called Azov-Chornomorsk eco-corridor (Kotenko, 2007).

In recent years grass snake has been seen more often near houses in rural areas, which is probably connected with a large number of green toads and the availability of places suitable for egg laying (heaps of manure and compost).

Unlike many other reptiles of our fauna, there is no tendency towards the decrease of its number.

The results of morphometric measurements in mm (60 individuals) are as follows: 24 ♂♂, 36♀♀).
L. ♂♂ 550,3 – 920,1 (738,0 ± 6,0), ♀♀ 670,2 – 920,1 (818,0 ± 5,50). L.cd. ♂ 135,4 – 220,2 (182,0 ± 4,50), ♀♀ 180,1 – 260,3 (222,0 ± 4,00); Sq. ♂♂ 18 (5,0%), 19 (92,0 %), 20 (3,0%); ♀♀ 18 (4,5%), 19 (89,5%), 20 (6,0%). Ventr. ♂♂ 173 – 180 (M = 175,80 ± 0,65), ♀♀ 163 – 178 (M = 169, 60 ± 0,71). S cd. ♂♂ 64 – 68 (M = 66,3 ± 0,65), ♀♀ 60 – 66 (M = 64.1 ± 0,50). L. ab. ♂♂ 7 (15,5%), 8 (84,5%); ♀♀ 7 (11,0%), 8 (89,0%). Temp. ♂♂ 1+ 2 (16,0%), 1 + 3 (62,5%), 1 + 4 (21,5%); ♀♀ 1 + 2 (24,0%), 1 + 3 (58,0%), 1+4 (18,0%). A. ♂♂ 1/1, ♀♀ 1/1.

***Natrix tessellata* (Laurenti, 1768).** The species was not noticed in the territory of Western Podillia till the mid of the 50ties of XX century. According to V.I. Tarashchuk (Tarashchuk, 1959) its habitat was within a northern border of the steppe zone. And the reptile was seen sporadically on a continental part. So far the number of this species records in Podillia is not significant. The snakes, brought from Ternopil region, Zalishchyky district, Holihrady village and also from Kaspirovskyi reservoir and the

outskirts of Horodok city, are kept in ZM NSNM (Shcherbak, 1993). According to our research, this species is quite common in Dnistrovskyi canyon, exclusively in a coastal zone.

The species number on a tract Monastyrska-Kamianets-Podilskyi is rather large – 15-18 ind./km, it is a bit smaller – 4-9 ind./km – in a lower current of the Strypa, Koropets, Seret, Zbruch rivers. The northern locations of the species findings in Western Podillia are the outskirts of Terebovlia city, where, on the average, 2-3 individuals per 200 m of a coastal line are recorded, and the outskirts of Skala-Podilska city – 5-6 ind./km. Its number is higher in Trans-Carpathian area (within 8-15 ind./km) comparing to that in Podillia (Shcherbak, 1980). The number of the species is even higher in the south of Ukraine (within Azov-Chornomorsk eco-corridor), namely 3-26 ind. per 100 m of the route (Kotenko, 2007).

The species is considerable in number in the studied region, without a tendency to its number decrease.

The results of morphometric measurements in mm (64 individuals) are as follows: 39♂♂, 25♀♀).

L. ♂♂ 420,0 – 700,0 (559,0 ± 4,50), ♀♀ 480,3- 750,1 (612,0 ± 0,56); L.cd. ♂♂115,0 – 175,0 (148,0 ± 4,0), ♀♀ 120,0 – 180,0 (148,0 ± 0,50). L./L.cd. ♂♂ 3,40 – 4,21 (3,78 ± 0,40), ♀♀ 3,51 – 4,50 (3,88 ± 0,30). Sq. ♂♂ 18 (5,0%), 19 (92,0%), 20 (3,0%); ♀♀ 18 (4,5%), 19 (89,5%), 20 (6,0%). Ventr. ♂♂ 172 – 180 (M = 175,80 ± 0,65), ♀♀ 164 – 177 (M = 169,50 ± 0,70). S.cd. ♂♂ 64 – 68 (M = 66,2 ± 0,65), ♀♀ 61 – 66 (M = 64,0 ± 0,50). L.ab. ♂♂ 7 (15,0%), 8 (85,0%); ♀♀ 7 (11,5%), 8 (88,5%). Temp. ♂♂ 1+2 (16,0%), 1 + 3 (62,5%), 1 + 4 (21,5%); ♀♀ 1 + 2 (24,5%), 1 + 3 (58,0%), 1 + 4 (17,5%). A. ♂♂ 1/1, ♀♀ 1/1.

***Elaphe longissima* (Laurenti, 1768)**. This snake was first mentioned by O. Andrzheiovskyi (Andrzejowski, 1832), and he considered it to be a numerous reptile species. At the beginning of XX century J. Bayger found it in the outskirts of Orihovets city in the flood land of the Zbruch river (Bayger, 1907). Later he noticed the species in the outskirts of Zalishchyky city (Bayger, 1909). In the middle of XX century V.I. Tarashchuk (Tarashchuk, 1959) mentioned the findings of forest snake in Zalishchyky district, Ternopil region. The last information about forest snake was also from Zalishchyky district (Horodok city) (Piliavskiy, 1983) and it was dated back to the end of the 70ties of the last century. So, findings of this species belong to Western Podillia Prydnistrovia. The search for this species in the territory of Western Podillia for the last 30 years has not been a success, which proves that it is a regionally vanished species.

***Coronella austriaca* (Laurenti, 1768).** In the west of Ukraine this is a wide-spread nominative species C. a. austriaca (Laurenti, 1768) (Bannikov et al., 1977; Ananieva et al., 2004). E. Eichwald (Eichwald, 1830) stated that in Podillia the snake is seen everywhere. G. Belke (Belke, 1859) saw it near Kamianets-Podilskyi city. Some snakes of this species, brought from Ternopil region, Zalishchyky district, Pechorna and Dobrovliany villages (Shcherbak, 1993), are kept in ZM NSNM of Ukraine's NAS. The species is found sporadically in the studied region and it deserves to be called a rare species. In the last decades researchers (Barabash, 1999) found only one individual in Dnistrovskyi canyon on Red hill (Beremiany village, Bucha district). The largest number of this species is in the outskirts of Kasperivtsi village, Zalishchyky district, where 1-2 individuals are found on 2-3 km of the route. The total number of the species within the region is very small. Taking into account this fact, it is required to pay special attention to its preservation. The snake is a relatively common species (Kotenko, 2007) in the Left-bank Prydniprovia, its population density in the south of the steppe-zone of Ukraine is low or critical (Karmeshev & Shevchenko, 2001).

The results of morphometric measurements in mm (11 individuals) are as follows: 3♂♂, 8 ♀♀).

L. ♂♂ 430,0 – 700,0 (552,0 ± 6,20), ♀♀ 450,2 – 780,4 (612,0 ± 5,80). L.cd. ♂♂ 88,0 – 170,0 (132,0 ± 4,50), ♀♀ 86,1 – 120,5 (100,05 ± 6,50). L./L.cd. ♂♂ 3,20 – 6,50 (4,67 ± 0,50), ♀♀ 3,31 – 6,81 (5,10 ± 0,50). Sq. ♂♂ 19 (100,0%), ♀♀ 19 (100,0%). Ventr. ♂♂ 139 – 180 (M = 156,0 ± 0,50), ♀♀ 143 – 192 (M = 166,50 ± 0,70). S.cd. ♂♂ 48 – 60 (M = 56,0 ± 0,50), ♀♀ 49 – 58 (M = 52,50 ± 0,50). L.ab. ♂♂ 7 (85,0%), 8 /7 (5,0%), 8 (10,0%); ♀♀ 7 (85,0%), 8/7(4,0%), 8 (11,0%). Temp. ♂♂ 2 + 1 (12,0%), 2 + 2 (88,0%); 2 + 1 (15,0%), 2 + 2 (85,0%). A. ♂♂ 1/1, ♀♀ 1/1.

***Vipera berus* (Linnaeus, 1758).** According to E. Eichwald (Eichwald, 1830) these snakes were often found in Podillia, K.F. Kessler (Kessler, 1853). stated the same. The sample, obtained by A.A. Browner in the outskirts of Slavuta city (Khmelnytskyi region), is kept in Zoological museum of ZM NSNM of Ukraine's NAS.

According to current data, the snake is found sporadically, and it has to be considered as a rare species of the region. In 2010, 1-2 ind./km were found on the tract Kasperivtsi-Ustechko-Beremiany. The largest number of this species – 3-4 ind./km of the route – is in Tovtry ridge (reserve "Medobory"). In the Carpathians it is a common species with the population density 5ind./1500 m on the average, and in some places – 5-10 ind./500m (Shcherbak, 1980). A scattered spread and a low number of the species in this territory lead to a conclusion that in the conditions of Western Podillia this snake definitely requires to be preserved.

The results of morphometric measurements in mm (4 individuals) are as follows: 1♂♂, 3♀♀).

L ♂♂ 380,0 – 595,0 (468,0 ± 4,50), ♀♀ 421,2 – 632,0 (526,0 ± 2,50). L.cd. ♂♂ 56,0 – 88,0 (72,0 ± 5,0), ♀♀ 45,4 – 75,1 (62,0 ± 3,50). L./L.cd. 5,70 – 8,0 (6,50 ± 0,50), ♀♀ 7,23 – 9,81 (8,20 ± 0,50). Sq. ♂♂ 20 (2,0%), 21 (92,0%), 22 (3,0%), 23 (3,0%); ♀♀ 20 (1,0%), 21 (94,0%), 22 (3,0%), 23 (2,0%). Ventr. ♂♂123 – 150 (M = 135,50 ± 0,25), ♀♀ 123 – 155 (M = 139,30 ± 0,50). S.cd. ♂♂ 30 – 46 (M = 40,06 ± 0,32), ♀♀ 25 – 38 (M = 29,02 ± 1,30). L. ab. ♂♂ 8 (8,5%), 8/9 (5,0%), 9 (72,5%), 9/10 (12,0%), 10/10 (2,0%); ♀♀ 8(8,0%), 8/9 (6,0%), 9 (70,0%), 9/10 (10,0%), 10/10 (6,0%). A. ♂♂ 1, ♀♀ 1.

General tendencies of spread and distribution of the reptile number in the region. The analysis of reptile occurrence within the region of research has shown that, as to their number, species gravitate to the east and south-east of the region, covering the areas along the left bank of the Dnister river ("Dnistrovskyi canyon") in Western Podillia Prydnistrovia (administrative territories of Zalishchyky, Bucha, Borshchiv districts of Ternopil region). In Tovtry ridge, they mostly concentrate in the territories of Zbarazh, Pidvolochysk, Husiatyn districts of Ternopil region and Kamianets-Podilsk and Chemerov districts of Khmenlnytskyi region (Fig.1).

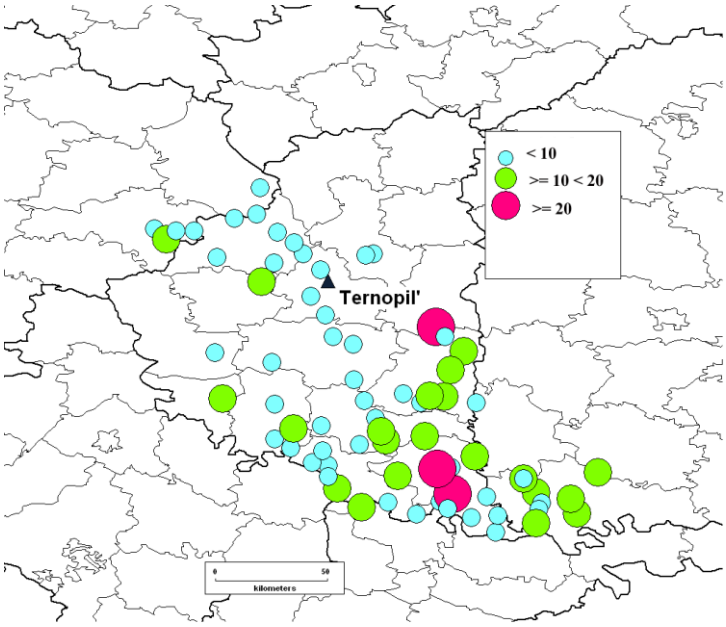

Fig. 1 Average occurrence (ind./km) of 9 reptile species in the territory of Western Podillia.

Note. Symbols show the number of individuals of any kind of a reptile species per accounting unit.

It is worth mentioning that the area with the highest reptile density coincides with that of reserve "Medobory" and to a lesser degree with the territory of NNP "Podilski Tovtry". To a great extent the area of reptile concentration coincides with the territory of natural park "Dnistrovskyi canyon", closer to the hills of the Dnister river on a tract Beramiany – Ustechko, Zalishchyky – Kasperivtsi (Obizhev and Kasperivskyi reserves) and the outskirts of Dzvenyhorod village, Borshchiv district.

Conclusions

Thus, within the studied region 9 reptile species have been found: *Emys orbicularis*, *Anguis fragilis, Lacerta viridis*, *Lacerta agilis, Lacerta vivipara, Natrix natrix, Natrix tessellata, Coronella austriaca, Vipera berus.*
Elaphe longissima, which was last seen in the region over 30 years ago, has not been found.
The borders of habitats are in the territory of Western Podillia: for *N. tessellata* and *L. viridis* – the northern one, for *L. vivipara* – the southern one.
L. agilis appeared to be the most numerous species among reptiles, its number definitely decreased due to human transformed natural habitats though.
The least numerous species were *E. orbicularis*, *A. fragilis, L. viridis, L. vivipara*, *C. austriaca*та, *V. berus*.
N. natrix and *N. tessellate* are common species. There are all grounds to classify *N. tessellate* as an invasive species, as it inhabited reservoirs of Western Podillia in the 60-70ties of XX century; it occurred after the water regime of the Dniester River was changed as a result of its regulation which in turn caused ichthyofauna change.
The area of the highest reptile occurrence coincides with the territory of reserve "Medobory" and natural park "Dnistrovskyi canyon".

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