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Discovery of the *Podarcis tauricus* population in the Czech Republic (Squamata: Lacertidae)

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Abstract. We discovered a local population of the lizard *Podarcis tauricus* (Pallas, 1814) in the South Moravia, Czech Republic, in 2019. Previously, this species was never reported from the Czech Republic. Its nearest known distribution lies 207 km far away in Hungary. An origin of this remote population remains unclear. Nevertheless, our findings of syntopically occurring adult males, adult females (including gravid one), subadults and juveniles show that it is viable, with an evident potential to reproduce.

Key words. New record, distribution, ecological niche, niche overlap, competition, Crimean wall lizard, Balkan wall lizard, South Moravia, Bzenec, Váté písky, Natural National Monument, protected area.

INTRODUCTION

The Crimean wall lizard, resp. Balkan wall lizard, *Podarcis tauricus* (Pallas, 1814) is among widely distributed species of genus *Podarcis* Wagler, 1930. Its distribution area (summarized in e.g. Kabisch 1986, Gasc et al. 1997) reaches from Greece and north-western Turkey north to Hungary and Romania, and along the Black Sea coast to the Crimea Peninsula (type locality of the species) (Fig. 1).

Psonis et al. (2017) recommended to split the currently recognised polytypic species *P. tauricus* to reflect the recent knowledge on phylogeography of this and related wall lizard species (see also Oliverio et al. 2000, Poulakakis et al. 2005, and Çördük et al. 2018). They suggested to synonymize *P. t. thasopulae* (Kattinger, 1942) with *P. t. tauricus* and elevate it to a species level, while separate *P. t. ionicus* (Lehrs, 1902) as a distinct Albanian-Greek clade representing a separate species complex.

If compared with other wall lizards, *P. tauricus* has a distinct ecology and ethology. It climbs much less and is adapted to live in open grassland steppe habitats, sandy areas with a sparse vegetation and similar open, sunny, flat and dry localities with low vegetation (e.g. Tabačišin et al. 2005, Strugariu et al. 2008, Mollov & Valkanova 2009, Kukuškin 2007, 2008, Ljubisavljević et al. 2010, Kukuškin & Doronin 2013, Tomović et al. 2014). It is a small, diurnal, heliothermic and actively foraging ground dwelling lizard. It can live syntopically with other lizards, e.g. the

European green lizard, *Lacerta viridis* (Laurenti, 1768) (Babocsay 1997, Nagy et al. 2012), with which it shares the same main distribution type (Sillero et al. 2014).

Northwest borders of the species range are in Hungary, where *P. tauricus* distribution is predominantly east of the Danube in the lowlands between Danube and Tisza. There are also distribution records from the district Hajdu-Bihar at the east, and it has a relic distribution in the north-eastern district Szabolcs-Szatmár as well (Dely & Kovács 1961, Dely 1965, 1982). It occurs also in neighboring north-western Romania (Cogălniceanu et al. 2013). No distribution records for lowlands of Transcarpathia neighboring with the Szabolcs-Szatmár were given by Ŝerbak & Ŝerban (1980). The distribution in Hungary is continually connected with the distribution in Serbia in south (Tomović et al. 2014), keeping east of the Danube and forming west borders of species range (*P. tauricus* is not known from Croatia – Ivan Cizelj in litt. 2019). The westernmost record from Hungary, west of the Danube, is Tihany (Kabisch 1986), the northernmost record is Szada, east of the Danube (Csekés 2010, 2011).

The Crimean wall lizard was not on the list of herpetofauna of former Czechoslovakia. However, Štěpánek (1949), Lác (1968) and Ponec (1978) did not excluded its occurrence in some Slovakian localities – e.g. Burda and the Slovak Karst. Rozínek et al. (1974) reported this species from the Vihorlat Mountains in eastern Slovakia, but without any documentation or any consequent confirmation. Rehák (1992), taking into consideration ecological requirements of *P. tauricus* and

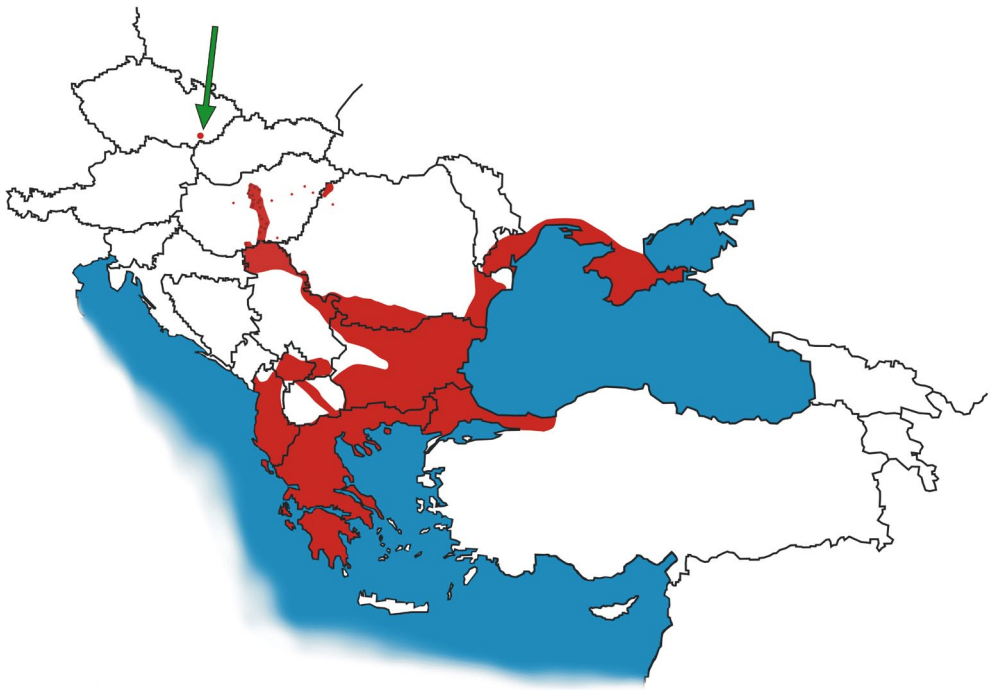

Fig. 1. The distribution range of *Podarcis tauricus* (Pallas, 1814) (modified according to Dely & Kovács 1961, Dely 1965, Kabisch 1986, Gasc et al. 1997, Cogălniceanu et al. 2013, Tomović et al. 2014, and Çördük et al. 2018). Arrow indicates the Váté písky National Natural Monument.

pattern of its distribution in Hungary, would expect an eventual occurence of this species rather in the Tisza lowlands than in the hilly areas mentioned by previous authors, but pointed out that the range of *P. tauricus* apparently does not reach the Slovakian borders.

There is no mention about the *Podarcis tauricus* in the last monograph on reptiles of the Czech Republic (Moravec et al. 2015). As the only one representative of the genus *Podarcis* in the Czech Republic is recognised the Common wall lizard, *Podarcis muralis* (Laurenti, 1768).

Our present study describes a discovery of a viable local population of the Crimean wall lizard, *Podarcis tauricus*, near Bzenec, South Moravia, Czech Republic, in 2019.

MATERIAL AND METHODS

Locality

Our study area is within the protected area of the Váté písky National Natural Monument near Bzenec in South Moravia on the northern edge of the Pannonian lowland. The local soil environment is formed by wind-blowing sands, which contrast with the clayey-clay deposits in the neighboring floodplain of the meandering Morava River. These blown sands permeate water and dry very easily. The occurrence of sand dunes and the special composition of sand earned the region the nickname "Moravian Sahara". Most of the sandy areas were forested in the first half of the 19th century and they are now covered with pine monocultures.

A narrow lane along the railway line remained free of vegetation thanks to the construction of the railway line in 1840, for which it was necessary to create a forest-free fire-fighting belt for the operation of steam locomotives. It preserved area of sands as a home to unique plant and animal communities associated with the local specific environment. Today it is a natural monument called "Váté písky". Its protection was declared in 1992. Previously there was a protected natural formation declared in 1990. It extends from both sides of the railway line in a lane up to 60 m wide and 5.5 km long on an area of 95.41 hectares at elevation 190 m a. s. l. (Grulich et al. 2002, Trnka 2008, AOPK ČR 2019).

From the phytogeographic point of view, the territory lies in thermophyticum, the phytogeographical district of the Pannonian thermophyticum. The vegetation cover has a transitional sub-Atlantic-Pannonian character (for details see Chytrý 2007, and Chytrý et al. 2007). In places where *P. tauricus* occured, we highly recorded the following typical representatives of vegetation: *Corynephorus canescens*, *Stipa borysthenica*, *Festuca vaginata* subsp. *dominii* (Kubát et al. 2002) nowadays *Festuca psammophila* subsp. *dominii* (Kaplan et al. 2019), *Hierochloë repens*, *Spergula pentandra*, *Gypsophila paniculata*, *Helichrysum arenarium*, *Verbascum phoeniceum*, *Linaria genistifolia*, *Jasione montana*, *Rumex acetosella*, *Silene viscosa*, *Thymus serpyllum*, *Seseli annuum*, *Hypericum perforatum*, *Agrostis vinealis*, *Hieraceum pilosela*, *Echium vulgare*, and more. There were also solitary *Pinus sylvestris* and *Quercus robur* near the finding. Near the path there were larger growths of mosses and *Cladonia* genus lichens. From the botanical point of view, this *Podarcis tauricus* habitat is a combination of subatlantic species, some of which reach the southeastern boundary of their distribution area, and the Pannonian species that reach the northwest boundary of their distribution area.

A succesive overgrowth of sand is noticable in treeless areas. These are grasslands dominated by the subatlantic type of grass *Corynephorus canescens* (alliance *Corynephorion canescentis* Klika, 1931) and areas of continental (Pannonian) sandy-steppe vegetation dominated by *Festuca psammophila* subsp. *dominii* and *Stipa borysthenica* (alliance *Festucion vaginatae* de Soó, 1929). The local xerothermophilic and psammophilic vegetation supports an extremely rich fauna of invertebrates, with very high abundance of a potential lizard prey.

Field work

We visited the study area seven times from 11 May to 9 September 2019. The basic method of obtaining data on the occurrence of local lizards was the browsing in systematically selected transects to ensure the most complex data on their abundance and dispersion. Sites of individual findings were evaluated with respect to their character and photographically documented. The lizards found were according to the possibilities photographed and examined (coloration, external morphology, basic measurements, pholidosis, fitness, tail regeneration, injuries, external parasites). The time was recorded in Central European Summer Time format.

Biometrics

Body dimensions were measured using standard methodology (e.g. Moravec et al. 2015): L – longitudo corporis (snout-vent length), Lie – longitudo inter extremitatum (extremities distance), Lcd – longitudo caudae (tail length), Lc – longitudo capitis (head length), Ltc – latitudo capitis (head width). Meristic characters (standard nomenclature sec. Moravec et al. 2015) examined were: scutum rostrale, scuta supranasalia, scuta postnasalia, scutum frontonasale, scuta praefrontalia, scutum frontale, scuta supraocularia, scuta frontoparietalia, scutum interparietale, scuta parietalia, scutum occipitale, squamae collares, pori femorales.

Field research at the study area by days

11 May 2019. Weather originally cloudy, later it cleared. Air temperatures around 18 °C. KB and ZL led an excursion for young naturalist – students of secondary school. Ema Konečná, one of students, observed a lizard in a sparse steppe vegetation, and collected it under the stone where the lizard fled. ZL noticed lizard's unusual coloring and deduced it could be the Crimean wall lizard, *Podarcis tauricus*. Consequently, DF and IR confirmed this determination clearly. Collected specimen was a gravid female. It was collected at 15:20. Abundant *Lacerta viridis* observed at the same site.

11 July 2019. 10:00–19:30. Weather clear, sunny, late afternoon, partly cloudy, calm. Air temperatures 22–26 °C. DF, JF and IR observed three adult *P. tauricus*, one of them with the autotomized, almost completely missing (90%) tail. All specimens were recorded in a sparse steppe vegetation in the same site – identical with the place of discovery – from 10:30 to 13:30. Dozens of subadult and adult *Lacerta viridis* were observed simultaneously at the site and around. An extent of color variation observed in local *L. viridis* population was surprising. Many of them possessed very unusual coloration, frequently with a pattern pretty resembling *P. tauricus*. Another lizard species – *Lacerta agilis* Linnaeus, 1758 was recorded about 300 m from the *P. tauricus* site in a places with densier grassy coverage and scrub, and dozens of them closer to Morava river out of the area with a steppe character. Moreover, *Coronella austriaca* Laurenti, 1768 (2 ex.) and juvenile *Bufotes viridis* (Laurenti, 1768) (2 ex under stone, 1 ex in a burrow) were found syntopically with *P. tauricus*.

17 July 2019. 09:00–17:00. Weather clear, sunny, calm. Air temperatures 20–26 °C. KB, DF a BM recorded three *P. tauricus* hatchlings (i.e. this year juveniles) in a sparse steppe vegetation on edge of rail causeway with a densier vegetation (at 10:00, 10:15 and 16:30). Moreover, the adult male with a regenerated tail was seen in a sparse steppe vegetation and collected when escaped on rail causeway. All specimens were in the same site as previous ones. Dozens of subadult and adult

Fig. 2. Map indicating the area (yellow, in red frame) of the recorded occurrence of *Podarcis tauricus* (Pallas, 1814) at Váté písky NNM.

Lacerta viridis were observed simultaneously at the site and around, with subadults and females possessing an atypical color pattern.

10 August 2019. 9:20–12:45. Weather almost clear, calm. Air temperatures 24–30 °C. AR (with the assistance of Hana Reiterová and Lucie Reiterová) recorded five specimens of *P. tauricus* in a sparse steppe vegetation at the same site as previous observations from 10:00 to 11:00: adult male with regenerated tail, adult specimen, subadult, and two this year juveniles (one of them with 30% of its tail missing). Dozens of subadult, adult and this year juveniles *Lacerta viridis* were observed simultaneously at the site and around, with subadults and females possessing an atypical color pattern. A subadult *Bufotes viridis* was found under a part of a pine stump.

13 August 2019. 12:30–14:15. Weather partly cloudy, moderate to strong wind. Air temperatures 18–24 °C. BM recorded three specimens of *P. tauricus* in a sparse steppe vegetation and on curb close to rails at the same site as previous observations: two adult males with regenerated tail and one this year juvenile. Totally 13 specimens of *Lacerta viridis* (subadults, adults and this year juveniles) were encountered at site as well.

5 September 2019. 9:20–14:30. Weather clear, moderate wind. Air temperatures 18–24 °C. DF, BM, AR (with the assistance of Mojmír Vlašín) recorded 16 specimens of *P. tauricus* in a sparse steppe vegetation from 9:30 to 13:30: nine this year juveniles, one subadult male with regenerated tail, three adult males with regenerated tail, two adult females (one of them with regenerated tail), one adult specimen. Specimens were at the same site as previous observations but with higher dispersion. Dozens of subadult, adult and this year juveniles *Lacerta viridis* were observed simultaneously at the site and around. The activity of all lizards rapidly decreased after 14:00 (last *P. tauricus* observed at 13:30). Moreover, one specimen of *Lacerta agilis* was observed at site, and an exuvia of *Coronella austriaca* was found.

9 September 2019. 13:30–14:30. After heavy rain, wet, overcast. Air temperatures around 14 °C. IR visited the locality for a comparative inspection also in very poor weather condition. As expected no activity of any reptile was recorded.

Ecology

In total we encountered *Podarcis tauricus* 32 times. Repeated encounters with the same specimens are not excluded. However, the used methodology (counting of encountered lizards in non-overlapping transects) guarantees a very low probabilty of a repeated counting of the same specimen in the frame of one-day visit to locality. We observed *P. tauricus* on an area of approximately five hectares, with a distance between extreme finds about one kilometer (Fig. 2). We estimate a total abundance of the discovered *P. tauricus* population to be at least dozens specimens. Records of juveniles and gravid female clearly indicate a reproduction.

We observed *P. tauricus* exclusively in places with a sparse steppe vegetation (Figs. 3–5). Places with a densier vegetation cover are used just to escape when disturbed. It lives syntopically with highly predominant (according to our observations at least ten time more abundant) *Lacerta viridis*. Thus, it represents for *P. tauricus* a significant competitor and predator as well.

Although both species significantly overlaps in site, we noted some habitat utilization differences between *P. tauricus* and *L. viridis*. While *L. viridis* prefers higher and simultaneously rugged vegetation and enters places with a sparser coverage rather occassionally, *P. tauricus* keeps almost exclusively just on sandy, sparsely overgrown places. Thus, although both species can overlap in the same place, there is a significant difference in usage time of this place. Moreover, an observed overall activity of *P. tauricus* during the day was shorter than in *L. viridis*.

The third lizard species, *Lacerta agilis*, which is very abundant in more humid places with much densier vegetation closer to the river, enters the *P. tauricus* site with comparatively very low

Table 1. Biometric data (in mm) on *Podarcis tauricus* (Pallas, 1814): adult males (n=3) and an adult female. For dimension abbreviations see Biometrics

	♂	♂	♂	min (mean) max	♀
L	54.0	58.6	59.4	54.0 (57.3) 59.4	46.3
Lie	24.9	27.2	25.5	24.9 (25.9) 27.2	26.8
Lcd	regenerated	regenerated	regenerated	–	regenerated
Lc	13.5	14.5	13.2	13.2 (13.7) 14.5	11.7
Ltc	8.8	9.2	8.6	8.6 (8.9) 9.2	7.2

frequency and apparently rather accidentally. Thus its competition with *P. tauricus* is negligible. *Lacerta agilis* and *L. viridis*, partly overlap, but the space partitioning is evident among these two species here. *L. viridis* prefers drier, warmer and more sunny and open habitat if compared with *L. agilis*. If compared with *P. tauricus*, *L. viridis* performs much higher ecological valence and lives also in places with densier vegetation which *P. tauricus* avoids.

Our observations indicate that hatchlings of *P. tauricus* appear sooner than hatchlings of *L. viridis*. The first hatchlings of *P. tauricus* were recorded on 17 July 2019, while the first hatchlings of *L. viridis* on 10 August 2019.

We did not find ticks or any other external parasites in the examined individuals of *Podarcis tauricus*. No ticks were recorded from syntopic *Lacerta viridis* as well.

Morphology and coloration

Metric measurements (minimum/mean/maximum) in mm (n = number of specimens) are in Tables 1 and 2, meristic characters in Table 3.

The frequency of regenerated tails was significantly higher in adults than in juveniles. Regenerated tails were recorded in seven adult males (100%), three adult females (min. 33%), five adults of undetermined sex (min. 20%), two subadults (min. 50%) and fifteen juveniles (min. 7%). It probably indicates a very high predation pressure from highly abundant *L. viridis*. The difference in frequency of regenerated tails in adults (min. 80%), and juveniles (min. 7%) could be result that the juveniles are swallowed whole or/and their contact with predators takes a short time so far or/and juveniles are fast enough to escape predators.

Pholidosis, meristic and metric characters of all specimens we had opportunity to examine are in the frame of known variation, and its coloration corresponds to usual coloration for this species (Kabisch 1986), see Figs. 6–12. We did not observe any special color aberrations described e.g. from Crimea (Kukuškin & Doronin 2013). We did not record significant assymetries in paired meristic characters of examined specimens of *Podarcis tauricus* that could be interpreted as ontogenetic defects indicating some developmental instability.

Table 2. Biometric data on *Podarcis tauricus* (Pallas, 1814): this year juveniles (n=2) and a subadult. For dimension abbreviations see Biometrics

	juvenile	juvenile	subadult
L	29.0	29.8	40.0
Lie	15.7	15.0	22.8
Lcd	45.0	55.2	regenerated
Lc	8.2	8.8	10.4
Ltc	4.7	4.9	6.1

Table 3. Meristic characters (paired characters for both sides: left side/right side). SE = serrated edge

	adult male 1	adult male 2	adult male 3	adult female	subadult	this year juvenile 1	this year juvenile 2
scutum rostrale	1	1	1	1	1	1	1
scuta supranasalia	1/1	1/1	1/1	1/1	1/1	1/1	1/1
scuta postnasalia	1/1	1/1	1/1	1/1	1/1	1/1	1/1
scutum frontonasale	1	1	1	1	1	1	1
scuta praefrontalia	1/1	1/1	1/1	1/1	1/1	1/1	1/1
scutum frontale	1	1	1	1	1	1	1
scuta supraocularia	4/4*	5/4**	11/4***	4/4	4/4	4/4	4/4
scuta frontoparietalia	1/1*	1/1	1/1	1/1	1/1	1/1	1/1
scutum interparietale	1	1	1	1	1	1	1
scuta parietalia	1/1****	1/1	1/1	1/1	1/1	1/1	1/1
scutum occipitale	1	1	1	1	1	1	1
squamae collares	9	10	12	10	11	12	11
	SE	SE	SE	SE	SE	SE	SE
pori femorales	16/16	15/15	15/16	17/16	14/15	16/16	16/16

* two small scales between supraoculare and frontoparietale on right side;
** an aditional small scale between the second and the third supraoculare on the left side;
*** left supraocularia divided into small scales;
**** the right parietale is partially longitudinally divided.

DISCUSSION

The origin of *Podarcis tauricus* population at Váté písky remains unknown for now. It is more than two hundred km far from the nearest known distribution, which is in Hungary (Fig. 1). The distance to Szada (northenmost distribution in Hungary) is 207 km, and to Tihány (westernmost distribution in Hungary) 227 km. Thus, its natural origin seems to be unlikely, although rails and other communications are potential corridors for eventual migration. Future field works at convenient sites along these corridors (namely in neighboring Slovakia – Zahorie area – where number of well developed sandy sites with sparse vegetation can represent a suitable habitat for *P. tauricus*, similarly as more distant sandy steppe localities around Štúrovo – e.g. Čenkov – which lies only about fifty kilometres from northenmost distribution in Hungary) could help to get important data for more correct evaluations. The probability that this population is autochtonous, representing a relic distribution, is very low, although this imagine could be supported by the fact that distribution pattern of *P. tauricus* in Hungary includes more geographically isolated populations (Fig. 1). Future genetic analyses will be important to contribute to our knowledge regarding origin of this *P. tauricus* population.

The locality represents rather an exceptional environment if compared with surroundings. It shares many similarities with localities within the range of the species (e.g. Pannonian sand steppes in Hungary, or so called "European Sahara" (Deliblatska peščara) in Serbia, which is home to the marginal *P. tauricus* population – Ljubisavljević et al. 2010) and it is evident that it meets ecological requirements of the Crimean wall lizard. In other words, if somebody knowledgable would intend to introduce this species into the Czech Republic, this site is the right one (although by far not the only one). This option is very probable because attempts to introduce not native species of herpetofauna are not unknown in our country, including South Moravia.

A possible alternative to intentional introduction is the accidental one, e.g. by very frequent cargo trains passing through the locality or by trucks using nearby roads. This imagine is supported by the fact that great numbers of cargo transportations here originate from Hungary and

Fig. 3. Habitat of *Podarcis tauricus* (Pallas, 1814), Váté písky NNM, 11 July 2019. Photo by DF.

Fig. 4. Habitat of *Podarcis tauricus* (Pallas, 1814), Váté písky NNM, 11 July 2019. Photo by IR.

Fig. 5. Habitat of *Podarcis tauricus* (Pallas, 1814), Váté písky NNM, 10 August 2019. Photo by AR.

Fig. 6. *Podarcis tauricus* (Pallas, 1814) – gravid female, Váté písky NNM, 11 May 2019. Photo by Anna Šnajdrová.

Fig. 7. *Podarcis tauricus* (Pallas, 1814) – adult male, Váté písky NNM, 17 July 2019. Photo by DF.

Fig. 8. *Podarcis tauricus* (Pallas, 1814) – hatchling, Váté písky NNM, 10 August 2019. Photo by AR.

other countries in which the species natural range is situated, and enormous amounts of various materials are transported.

Taking into consideration that the lizard *Podarcis tauricus* was not recorded at our study area previously, although this is frequently visited by professional and amateur naturalists, including field herpetologists, it is very probable that its existence there is a new phenomenon. However, local *P. tauricus* population could remain undiscovered for a long time as well because of its co--existence with very numerous *Lacerta viridis*, which coloration is locally exceptionally variable and especially many subadults and females possess a color pattern resembling *P. tauricus*. Much less frequent, unexpected and not sought Crimean wall lizards could be easily overlooked. The incredible similarity of coloration of some young *L. viridis* females and *P. tauricus* is a phenomenon already reported for eastern Slovakian populations of *L. viridis* (Zwach 2009).

The very restricted area of recently known dispersion of *P. tauricus* at the Váté písky supports an idea that *P. tauricus* appeared here newly. However, it can be also just icomplete knowledge. There is number of suitable places around and *P. tauricus* distribution can be much wider. We focused primarily on the place of the present discovery of *P. tauricus*. As well as before here, the species can be easily overlooked in other parts of the territory.

A future of the desribed *P. tauricus* population is not easy to predict. We can expect that it exists on the edge of species ecological valence, and thus it is very vulnerable and could be very sensitive, e.g. to some exceptional weather events, especially in the case that its distribution is so small and isolated as known at present. On the contrary, a climate warming, well evident in South Moravia, could have a positive influence to ensure convenient conditions for the population.

An important factor is the management of vegetation coverage on the site. According to our observations, *P. tauricus* prefers sparsely overgrown places. However, this habitat with sparse vegetation is relatively short-lived. Without active management it ceases to exist by natural succession. In the last few years the succession in the Váté písky has been actively blocked by the pulling of turf (the last interventions were in 2017). A continuation of such management is necessary to preserve the type of vegetation and habitat preferred by *P. tauricus* and thus to ensure long term existence of the newly discovered population of *P. tauricus*. Nagy et al. (2012) reported a grazing as a positive factor to meet habitat requirements of *P. tauricus*.

Fig. 9. *Podarcis tauricus* (Pallas, 1814) – adult male, Váté písky NNM, 5 September 2019. Photo by DF.

Fig. 10. *Podarcis tauricus* (Pallas, 1814) – adult male – dorsal side of head, Váté písky NNM. Photo by DF.

Fig. 11. *Podarcis tauricus* (Pallas, 1814) – adult male – lateral side of head, Váté písky NNM. Photo by DF.

We did not find any ticks on examined lizards at Váté písky this year, and in past years we recorded ticks just very rarely on local *L. viridis*. On the other hand, in localities in Central Bohemia, the infestation of *L. viridis* by ticks is very high (Fischer & Rehák 2010, Fischer et al. 2016). It can be associated with much drier character of habitat at Váté písky.

A high incidence of regenerated tails is worthy of notice. A predatory pressure may be important. Apart of number of mammal and bird predators, there is an abundant population of the Smooth snake, *Coronella austriaca*, which diet includes a significant proportion of lizards. However, requirements of lizard predators are well covered by abundant European green lizards, *Lacerta viridis*. Thus, this lizard itself can be the most important predator of *P. tauricus* here.

The co-existence of *P. tauricus* with abundant and significantly predominant *Lacerta viridis* is a special issue. This much bigger and stronger lizard represents for *P. tauricus* potential problem both, as a predator and a competitor as well, because it is known to feed occassionally on lizards (including conspecific ones) (Kabisch 1986) and to have overlapping food spectrum (Mollov et al. 2012). Nevertheless, *P. tauricus* is known to live syntopically with *L. viridis* in Hungary (e.g. Csekés 2010, 2011) and their co-existence is facilitated through some niche segregation by the choice of different vegetation elements of the habitat (Babocsay 1997). An age-dependent habitat shifting in *Lacerta viridis* was reported from sandy grassland habitats in Hungary by Babocsay (1997) when only young specimens are abundant at *Podarcis tauricus* sites and following year disappear and are replaced by new hatchlings. Nagy et al. (2012) reported that *L. viridis* is much more frequent on the non-grazed fields what can be explained by the different extents of cover and heights of the vegetation, and possibly, the interspecific competition. Mollov et al. (2012)

Fig. 12. *Podarcis tauricus* (Pallas, 1814) – adult male – ventral side of head, Váté písky NNM. Photo by DF.

reported some partitioning of trophic niche between *L. viridis* and *P. tauricus*. There are records of syntopic occurrence and some niche partitioning of *P. tauricus* with another lizard species, e.g. *Lacerta agilis* in the Crimea (Sviridenko & Popov 2007) or *Eremias arguta* (Pallas, 1773) in Crimea (Kukuškin 2008).

CONCLUSIONS

Our results indicate that the population of *Podarcis tauricus* at Váté písky near Bzenec is viable, reproducing and apparently with a potential to expand to another suitable places. Whatever its origin, in every case it represents an interesting model population for further research. A future screening of this population will show if the Crimean wall lizard should be recognised as a new member of herpetofauna of the Czech Republic.

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