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**NOTES ON THE HERPETOFAUNA OF SOUTH-EASTERN PLAIN
AREAS FROM ROMANIA**

Covaciu-Marcov Severus-Daniel¹, Cicort-Lucaciu Alfred-Ștefan¹,
Sas Istvan¹, Filimon Aniela¹

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ABSTRACT

In the studied region we encountered 7 species of amphibian (Triturus dobrogicus, Triturus vulgaris, Bombina bombina, Pelobates fuscus, Pelobates syriacus, Epidalea (Bufo) viridis, Pelophylax (Rana) ridibundus) and 4 species of reptiles (Emys orbicularis, Lacerta agilis, Lacerta viridis, Natrix natrix). The herpetofauna of the studied region is one typical for the plain areas from Romania. Pelobates syriacus was recorded for the first time in Ialomița County.

INTRODUCTION

In the last few years, studies about the composition and the geographic distribution of Romania's herpetofauna have picked up. However, these studies are limited to only certain regions of the country, mainly to the north-west, Moldova and Dobruja (e.g. Covaciu-Marcov et al 2002, 2003, 2004, 2005, 2006a,b, 2007, 2008, Strugariu et al 2006, 2007, 2008, 2009a, Gherghel et al 2007, 2008). Unlike these areas, the plain areas from the south-eastern part of the country are very poorly represented. The few studies that took place here were actually focused on the Danube's meadow (Török 2001, Iftime 2005a, Iftime&Iftime 2007).

Sporadic and dissipated data are comprised in the synthesis volumes from the Romanian specialty literature (Fuhn 1960, Fuhn&Vancea 1961, Cogăliceanu et al 2000, Iftime 2005b). But these data are much more reduced than the ones from other regions – for example a common species in Romania like the smooth newt was not indicated in Braila County until 2005 with the exception of the Danube's meadow. Unlike other areas of the country, the plain areas from the south-east and especially the Danubian floodplain were extremely affected by human activities, a fact that also had a strong negative impact on the herpetofauna (Iftime 2005a).

Thus, the present paper brings new contributions to the knowledge of the composition and the geographic distribution for the herpetofauna of the south-eastern plain areas of Romania.

¹ University of Oradea, Faculty of Sciences, Department of Biology

MATERIAL AND METHODS

The field works were made in the beginning of April, 2008. We used the transect method (Cogălniceanu 1997). This method was recently used in similar studies (Kati et al 2007) and is considered efficient with the exception of the snakes. The animals were not usually captured, because we mostly used the direct observation method (Brown 1997). The investigated habitats were as diverse as possible, in an attempt to reveal a wide gamma of species belonging to the herpetofauna. The animals were captured either by hand or, for the amphibians and more especially the newts, with different types of nets. After determining and photographing, the animals were set free in their own habitat. Where it was necessary, we also determined the animals killed by the locals or by traffic.

The studied region comprises the extreme eastern sectors of the eastern plain areas of Romania, found near the Danube and the Siret rivers. More exactly, we are talking about the far east areas of the Baragan and Buzau Plains. The aspect of the relief is generally flat, being sometimes crossed by rare water courses. To the east, the region is bordered by the higher bank of the Danube. Almost entirely the area is severely affected by human activities, consisting of agricultural fields and pastures. We investigated a total of 19 localities.

RESULTS

In the studied region we've identified 11 species belonging to the herpetofauna. Among these, 7 are amphibians and 4 are reptiles (Table 1). We analyzed the distribution of these 11 species in all the 19 locations investigated. Thus, we identified 65 localities for the encountered species in the 19 field locations (Table 1). Among the amphibians, *Pelobates syriacus* was indicated for the first time for Ialomita County while the common newts are a premiere for the areas of the Braila County outside the Danube's meadow. Amid the reptiles, we are signaling a first ever indication for *Emys orbicularis* in this region.

DISCUSSIONS

The herpetofauna of the studied regions is one typical for the plain areas, being characterized by Danube crested newts, fire-bellied toads and spadefoot toads. Generally, it is a rather poor and uniform herpetofauna.

With the exception of three species (*Bombina bombina*, *Epidalea viridis* and *Pelophylax ridibunda*), all the other species are rare both as a number of localities and as number of encountered specimens. These three mentioned species are generally little demanding. Both *Bombina bombina* and *Pelophylax ridibunda* inhabit in high numbers the waters from the plain areas (Cogălniceanu et al 2000). *Epidalea viridis* is a typical species for the drier and warmer areas, being the best represented amphibian species from the arid areas of southern Romania – like Dobrudja (Covaciu-Marcov et al 2006b). Thus, its presence in large numbers in the investigated territory, also more arid (Mândruț 2006), is expectable.

The spadefoot toad is relatively well represented, being identified in 6 localities (Table 1). This fact was predictable, *Pelobates fuscus* being a digging toad and thus favored in the plain areas with light soil (Fuhn 1960). It is likely that it is even more numerous, but it is difficult to observe due to its nocturnal way of life. Its populations are concentrated around water courses, necessary for laying eggs. Also because of its nocturnal way of life, it is less affected by human activities brought to the plain areas, the only time frame when

it's actually vulnerable being its breeding period. The absence of breeding sites is the most important fact that determines the absence of the toad from certain areas of the studied territory.

Much rarer than the above mentioned species is *Pelobates syriacus*, identified in only one locality. However, this is the first indication for this species in Ialomita County. Although apparently surprising, this fact is a normal one, the eastern spadefoot toad being present both to the north-west, in Buzau County, and to the south, in the Danube's meadow, at Oltenita and Giurgiu (Cogălniceanu et al 2000, Iftime 2005 b). Thus the population from Gura Ialomiței is one linking the other two areas, apparently separated until now. This new information suggests a broader distribution of the species in this area and indicates the necessity of further studies in the Danube's meadow in order to establish, more accurately, the distribution of this species, found in Romania at the northern limit of its areal (Džukić et al 2008). *P. syriacus* was identified while breeding, in the canals situated along the abandoned railroads from Țândărei la Giurgeni, but we also observed dead bodies on the surrounding road.

Table 1

The distribution of the amphibians and reptiles in the localities of the studied region.

Td=*Triturus dobrogicus*, **Tv**=*Triturus vulgaris*, **Bb**=*Bombina bombina*, **Pf**=*Pelobates fuscus*, **Ps**=*Pelobates syriacus*, **Ev**=*Epidalea (Bufo) viridis*, **Pr**=*Pelophylax (Rana) ridibundus*, **Eo**=*Emys orbicularis*, **La**=*Lacerta agilis*, **Lv**=*Lacerta viridis*, **Nn**=*Natrix natrix*.

Locality	County	Td	Tv	Bb	Pf	Ps	Ev	Pr	Eo	La	Lv	Nn
Baldovinești	Brăila	-	-	X	-	-	-	X	-	X	-	-
Bărăganul – Br	Brăila	-	-	X	X	-	X	X	-	-	-	-
Berteștii de Jos	Brăila	-	-	X	-	-	X	X	-	-	-	-
Călinenii Noi	Vrancea	-	X	-	-	-	X	X	-	-	-	-
Cuza Vodă	Brăila	X	X	X	X	-	X	X	-	-	-	X
Făcăieni	Ilfov	-	-	X	X	-	X	X	-	-	X	X
Grădiștea	Brăila	-	-	-	-	-	-	X	-	-	-	-
Gura Ialomiței	Ilfov	-	-	X	-	X	X	X	-	-	-	-
Însurăței	Brăila	-	-	X	-	-	X	X	-	-	-	-
Luciu	Ilfov	-	-	-	-	-	X	X	-	-	-	-
Mihai Bravu	Ilfov	-	-	X	-	-	X	X	-	-	-	-
Mihail Kogăliceanu	Brăila	X	X	X	X	-	-	X	-	-	-	-
Movila Miresii	Brăila	-	-	X	-	-	-	X	-	-	-	-
Progresu	Ilfov	-	-	-	-	-	X	-	-	-	-	X
Stelnică	Ilfov	-	-	X	X	-	X	X	-	-	X	-
Șuțești	Brăila	-	-	X	-	-	-	X	-	-	-	-
Valea Cănepii	Brăila	-	-	-	-	-	-	X	X	-	-	-
Viziru	Brăila	X	X	X	X	-	-	X	-	-	-	X
Vlădeni	Ilfov	-	-	-	-	-	X	-	-	-	X	-
Total		3	4	13	6	1	12	17	1	1	3	4

Both newt species are rare in the area, the Danube crested newts being even less frequent than the smooth newts. This fact is suggested by the reduced number of localities in which they were identified, but also by the effort their capturing demands. All the identified newt populations are retreated in the canals and ditches from alongside the roads or between agricultural fields. This fact can lead to the disappearing of the newts, which are generally negatively affected by the presence of fish (Joly et al 2001, Denoël et al 2005). In the canals that are inhabited by fish, we only found common smooth newts. In all habitats in which we found newts, the average working time was 0.5 hours with two people in the water. Despite this fact, we only managed to find one *T. dobrogicus* and 6 *L. vulgaris* in each habitat, very little in comparison with other areas of the country. Further more, the number of investigated habitats is about double the one in which we actually found newts. Thus, the rarity is not caused by the lack of aquatic habitats but by the absence, almost entirely, of terrestrial ones. In all the cases, the aquatic biotopes inhabited by the newts are isolated from one another and surrounded by agricultural fields. Therefore, despite the fact that the newts have places to breed, they don't have where to live their terrestrial life. This is an even more limiting factor for the Danube crested newt, due to their bigger size. Similar situations were also signaled in other areas of Romania (Covaciu-Marcov et al 2009).

The reduced number of localities and species of reptiles must be looked at differently, probably being a consequence of the unfavorable period for them since the beginning of April 2008 was cold and windy. The green lizards are present in higher and steeper areas that flank the Danube or on bushy road sides.

The human impact is, presently, represented mainly by road kills. Practically, all the amphibian species except for the newts plus the grass snakes fall victim to this phenomenon. In the case of *P. fuscus*, we found stretches of roads of some few meters with more than 20 dead toads. Further more, many aquatic habitats are polluted with sewer water. It is problematic the survival itself of some of many of these species, due to the global impact over this region which is in fact completely transformed in agricultural fields.

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