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NEW OBSERVATIONS ON THE HERPETOFAUNA FROM DOMOGLED-VALEA CERNEI NATIONAL PARK AND PORȚILE DE FIER NATURAL PARK (ROMANIA)

ALEXANDRU IFTIME

Abstract. The results of herpetological studies within the Domogled-Valea Cernei National Park and Porțile de Fier (Iron Gates) Natural Park, from the south-western Romania, are presented; the 22 species identified in the field are presented together with data on the biotope where they were found.

Résumé. On présente les résultats des études hépétologiques dans le Parc National Domogled-Valea Cernei et dans le Parc Naturel Porțile de Fier (sud-ouest de la Roumanie). Les 22 espèces, identifiées sur le terrain, sont présentées avec les données du biotope où ils ont été trouvées.

Key words: Domogled-Valea Cernei, Porțile de Fier, amphibians, reptiles, biotope.

INTRODUCTION

The region of the two large protected areas, Domogled – Valea Cernei National Park and, respectively, Porțile de Fier Natural Park, is relatively well studied from the herpetofaunal point of view, even from a historical perspective. Due to its spectacular landscapes, its popularity as a touristic and balneological objective and, not the least, due to the extremely extensive works from the „Porțile de Fier” I and II hydro-electric power plants, which generated important disturbances within local ecosystems, the region which I am dealing with was visited and studied since the 19th century by numerous naturalists. Among them there were some herpetologists who left valuable papers. Among them I mention J. Frivaldszky (1823) and I. Frivaldszky (1865), then Mehely (1894, 1902, 1918), Mojsisovics (1889), Werner (1897), Kirîțescu (1901, 1930), Călinescu (1931), Fuhn (1960, 1975), Fuhn & Vancea (1961), Stroescu (1982), Lambert & Cogălniceanu (1999), Cogălniceanu, Aioanei & Matei (2000). 34 amphibian and reptile species were reported, including two species whose records are most likely erroneous. The aim of this paper is not the completion of this list but bringing new data on the distribution of different species of the region, as well the way in which the local ecosystem stands the anthropic impact, including the dam lake from the Danube gorges, an artificial lake built 20 years ago.

MATERIAL AND METHOD

The paper bases on the observations made on the spot, in May and September 2000, August 2001, May 2002 and April 2004. They were made in numerous localities from the Danube gorges and Cerna valley. The amphibians and reptiles were searched for by the method of the active transect (see Cogălniceanu, 1997). Photos of the observed species as well as of the biotopes were made.

English translation by Mihaela Barcan Achim.

RESULTS

I have identified 22 amphibian and reptile species:

AMPHIBIA

Urodela

Family Salamandridae

Salamandra salamandra: It was reported from Herculane, Orșova, Gura Văii, Vârciorova (Fuhn, 1960, 1975), Șvinița, Cerna-village (Cogălniceanu, Aioanei & Matei, 2000); I also report it from Cerna valley, Grăniceri brook. The populations live mainly in the old beech forests or in beech woods mixed with other deciduous trees; it breeds in pools among limestone rocks or in brooks. The record from the Grăniceri brook represents the lowest altitude recorded as yet (120 m, in comparison with the previous „record” of 140 m, Nera Gorges, Fuhn, 1960)¹ for this species generally associated with a mountain habitat.

Triturus alpestris: reported from Herculane (Fuhn, 1960); I add as a record site Cerna village. It breeds in temporary ponds and lives in the beech forest of the region.

Anura

Family Discoglossidae

Bombina variegata: recorded from Herculane, Orșova, Dubova, Mraconia, Poncova, Plavișevița (Fuhn, 1960, 1975), Topolnița (Lambert & Cogălniceanu, 1999), lower valley of Topolnița by Drobeta-Turnu-Severin (Cogălniceanu, Aioanei & Matei, 2000); I add Slătincul Mare, Cerna valley upstream Herculane, Cerna-village, this species being abundant everywhere. It is an opportunist species, occurring in natural pools and puddles, in the ponds of the trout farms, in rivers and brooks, etc., being the most frequent amphibian of the region.

Family Bufonidae

Bufo bufo: recorded from Cerna valley, Orșova, Plavișevița, Vârciorova (Fuhn, 1960, 1975), Mraconia (Lambert & Cogălniceanu, 1999); I add Coronini, Liubcova, Berzasca, Cozla, Svinița, Dubova, Ogradena, Ieșelnița, Cerna-village. It breeds in ponds and natural lakes (Cerna-village) or in dam lakes (Portiile de Fier lake). Sometimes it is the victim of the traffic. Probably, it is spread all over the region.

Bufo viridis: recorded from Herculane, Orșova, Baziaș, Gura Văii, Ieșelnița, Poncova, Mraconia, Ada-Kaleh (Fuhn, 1960, 1975), Topolnița (Lambert & Cogălniceanu, 1999); I add Berzasca, Liubcova, Cozla, Svinița. It is less frequent in the region than *Bufo bufo*; it breeds in lakes and ponds.

Family Hylidae

Hyla arborea: recorded from Herculane, Baziaș, Orșova, Plavișevița, Ada-Kaleh, Drobeta-Turnu-Severin, Ieșelnița (Fuhn, 1960, 1975); I add Svinița, Ogradena. It is not a frequent species in the region.

¹ Fuhn's record from „Demian“ (ap. Pașcovschi), i.e. Damian forest lodge, may give the wrong altitude: some topographic maps give an altitude of ca. 200 m for this point.

Family Ranidae

Rana ridibunda: reported from Herculane, Baziaș, Orșova, Plavișevița, Adakaleh, Dubova, Mraconia (Fuhn, 1960, 1975), Topolnița (Lambert & Cogălniceanu, 1999), Drobeta-Turnu-Severin (Cogălniceanu, Aioanei & Matei, 2000); I add Ogradena, Coronini, Liubcova, Berzasca, Cozla, Svinița. It is abundant everywhere, living in natural ponds, in dam lakes, in rivers, in the ponds of the trout farms, in trenches, etc.

Rana dalmatina: reported from Bahna, Orșova, Ieșelnița (Fuhn, 1960, 1975), Mehadia, Herculane, Topleț (Teleagă, 1976); I found it in some of these locations, but in increasingly low numbers, which suggests a decline.

Rana temporaria: reported from Mehadia (Teleagă, 1976); I add Herculane, Cerna valley, Cerna-village. It is frequent in beech and mixed forests; it breeds in permanent and temporary ponds, including those at the edge of the rivers.

REPTILIA

Chelonia

Family Testudinidae

Testudo hermanni: reported from Mehadia, Cerna valley, Iablanița, Herculane, Plugova, Bolvașnița, Pecinișca, Topleț, Orșova, Ogradena, Dubova, Mraconia, Plavișevița, Gura Văii, Vârciorova, Dudașul Schelei, Drobeta-Turnu-Severin, Șimian, Bahna, Schitu Topolniței, Izvoru Bârzii, Balotești, and some other localities from Topolnița valley (Fuhn & Vancea, 1961; Fuhn, 1975), Baziaș, Valea Mare, Liborajdea, Berzasca, Sirina Gorges (Bădescu & col., 2001); I add Șvinița. All over the range, the populations strongly feel the effects of the destruction or degradation of the habitat and of the illegal collectings; in spite of this some populations remain relatively numerous, maybe because they had not been reached by poachers yet. Within the populations from Gura Văii, the large number of individuals (ca 30%) with an undivided supracaudal plate is noticeable; this is already reported by Călinescu (1931). The maintaining of this feature within the same population for more than 70 years (I have seen it in all age classes) proves that it is about a relatively stable feature of this population, the high frequency of the undivided supracaudal plate owing to the genetic drift generated by the absence of a gene flow with other populations of the area; this is the result of the anthropic impact which generated the rarefaction of populations and the appearance of new barriers for the dispersion of this not very mobile species. It is a very rare species at the national level, requiring a strict protection.

Squamata

Family Scincidae

Ablepharus kitaibelli: reported from Dubova, Orșova, Vodița (Fuhn & Vancea, 1961, Fuhn, 1975); Fuhn (1975) asserts that personally he did not find any specimen; Stroescu (1982) found the species at Stârmina, outside Porțile de Fier National Park. I add Gura Văii, where I found a specimen, in an area of forest with bushy undergrowth including Butcher's Broom (*Ruscus aculeatus*) (2002), and Svinița (2004), a new locality extending westwards the range of this species in Romania; obviously, this species is very rare. It is rare at the national level, requiring strict protection.

Family Lacertidae

Lacerta agilis: reported from Cerna valley, Orșova, Baziaș (Fuhn & Vancea, 1961; Fuhn, 1975), Gura Văii (Stroescu, 1982), Herculane, Ieșelnița, Ponicoval, Izvoru Bârzii (Lambert & Cogălniceanu, 1999); I add Cazanele Mici. The subspecies *L. a. agilis* is found at all these sites, excepting Gura Văii where I found *L. a. chersonensis*, between Orșova and Gura Văii being the range limit between the two subspecies. The species frequents the skirts of the deciduous and mixed forests, rocky areas, grassy patches with bushes and even some depreciated habitats.

Lacerta viridis: reported from Baziaș, Zlatița, Mraconia, Ponicoval, Svinița, Plavișevița, Orșova, Mehădia, Herculane, Vârciorova, Gura Văii, Bahna, Drobeta-Turnu Severin, Ada-Kaleh (Fuhn & Vancea, 1961; Fuhn, 1975), Ieșelnița, Izvoru Bârzii (Lambert & Cogălniceanu, 1999); I add Tișovița, Liubcova, Coronini, Cazanele Mici. It is an extremely frequent and abundant species within the region, occurring in forest skirts, sub-Mediterranean bush areas, boulders, limestone slopes, and even trenches and other constructions. Everywhere it has a high density.

Lacerta praticola: reported from Herculane, Mehădia, Coronini, Zlatița, Plavișevița, Dubova, Ogradena, Orșova, Vârciorova (Fuhn & Vancea, 1961, Fuhn, 1975), Topenia, Hinova (Stroescu, 1982); I add Tișovița, Cerna valley upstream Herculane, Svinița, Slătinecul Mare. The populations remarked in the Cerna valley and at Tișovița, in 2000, were relatively numerous. It is a rare species at national level, requiring strict protection.

Podarcis muralis: reported from Herculane, Mehădia, Baziaș, Moldova Veche, Zlatița, Plavișevița, Ieșelnița, Mraconia, Ponicoval, Dubova, Ogradena, Cazane, Svinița, Tișovița, Moldova Veche, Orșova, Ada-Kaleh, Vârciorova, Drobeta-Turnu Severin (Fuhn & Vancea, 1961; Fuhn, 1975); I add Liubcova, Coronini, Berzasca, Bahna, Slătinecul Mare. The populations, numerous and dense, occur in different habitats: limestone slopes, boulders, landslides, areas with stumps and logs, and even constructions: houses, parapets, bridges, pools, etc. Probably, it is the most abundant reptilian species of the region.

Podarcis taurica: reported from Baziaș, Vârciorova, Drobeta-Turnu Severin, Jidoștița (Fuhn & Vancea, 1961; Fuhn, 1975), Oglănic valley, Schela Cladovei (Stroescu, 1982); I add Gura Văii, where there is a numerous population, living in a habitat of mixed forest on the slope, with boulders and bushes of Mediterranean type.

Family Anguidae

Anguis fragilis: reported from Herculane, Orșova, Plavișevița, Ogradena, Ieșelnița (Fuhn & Vancea, 1961; Fuhn, 1975). I add Cerna valley, upstream Herculane. It occurs in mixed forests and bushes, as well as in hayfields and meadow forests or rocky slopes.

Family Colubridae

Natrix tessellata: reported from Herculane, Mehădia, Baziaș, Plavișevița, Ieșelnița, Orșova, Gura Văii (Fuhn & Vancea, 1961; Fuhn, 1975), Mraconia (Lambert & Cogălniceanu, 1999); I add Ogradena, Vârciorova, Cerna valley upstream Herculane, Bahna. It is a frequent species on the banks and shores of waters, especially in Porțile de Fier lake, but also in Cerna, Bahna rivers, etc. It is

more abundant in the region than *N. natrix*, a species I did not find; the numerical increase of the species *N. tessellata* in the region is also due to the proliferation (both in number of species, by the penetration of new species from downstream [see Bănărescu, 2002], and in the number of individuals) of the goby populations, which breed in Porțile de Fier lake and in the lower flow of some rivers (Cerna, Bahna, etc). As a matter of fact, I have observed this species feeding on gobies (*Neogobius melanostomus*, *N. kessleri*) at Ogradena. The relative abundance of *Natrix tessellata* is remarkable and this is gladdening, all the more so as in other regions (Histria), where the species was very abundant in the past, a numerical decline is recorded now, especially due to a strong parasite infestation (I. Ghira, personal communication).

Coluber caspius: reported from Baziaș, Plavișevița, Mraconia, Tișovița, Orșova, Herculane, Gura Văii (Fuhn & Vancea, 1961, Fuhn 1975), Schela Cladovei (Stroescu, 1982), Ieșelnița (Lambert & Cogălniceanu, 1999); I add Svinița. It favours drier places than *Elaphe longissima*, occurring on stony slopes, in the forest skirts, in areas with bushes, rocks and boulders. It is a rare species at the national level, requiring a strict protection; within the studied region it occurs relatively rarely. I could observe the sporadic presence of a form of a very dark colour; its background colour was a blackish grey-lead hue instead of the silvery-grey of the more common morph; the presence of this dark coloured *Coluber caspius* could explain the past records (Mojsisovics, 1889; Werner, 1897; Călinescu, 1931) of *Coluber viridiflavus*, with a similar dark colour.

Coronella austriaca: reported from Herculane, Mehadia, Ieșelnița (Fuhn & Vancea, 1961; Fuhn, 1975), Schitu Topolniței (Stroescu, 1982); Fuhn (1975) considers that it is a rare species. I add Ogradena, Coronini, Cazanele Mici. It occurs in rocky places, rocky slopes, forest skirts, areas with bushes; often, it is a victim of the traffic. It is a rare species, requiring a strict protection.

Elaphe longissima: reported from Herculane, Baziaș, Orșova, Mehadia (Fuhn & Vancea, 1961; Fuhn, 1975); it is considered rare by Fuhn (1975). I add Ieșelnița, Liubcova, Tișovița, Cazanele Mici. It lives in extremely different habitats: rocky areas, debris, deciduous forests, bushes and even ruins; it can be occurred in wetter habitats than *Coluber*. Often, it is killed in traffic; it is a rare species, requiring strict protection.

Family Viperidae

Vipera ammodytes: reported from Baziaș, Moldova Nouă, Ciclova, Mehadia, Herculane, Șvinița, Plavișevița, Mraconia, Ponicova, Dubova, Orșova, Reșița, Cazane, Veterani cave, Cerna valley, upstream Herculane – around the dam, Pecinișca, Cerna-village, Vârciorova, Jidoștița, Gura Văii, Drobeta-Turnu-Severin and some localities in the Topolnița valley (Fuhn & Vancea, 1961; Fuhn, 1975), Valea Mare, Liborajdea, Berzasca, Sirina Gorges (Bădescu & col., 2001); I found it in some of these localities, in a decreasing abundance, from 2000 to 2004. It is found in different habitats: deciduous forests, forest skirts, rocky areas (mainly limestone), bushy and stony areas, sometimes ruins. In the past it was abundant, but, as a result of the local people's intense persecution and of the destroying of its habitat, the species vanished from the surroundings of the human settlements; for the time being it is the victim of an intense illegal trade, illicit collectors operating especially in the Cerna valley. It is also killed in road traffic.

DISCUSSIONS

I found 22 species from the 34 previously reported from the region; most of the species I did not identify (*Triturus cristatus*, *T. dobrogicus*, *T. vulgaris*, *Bombina bombina*, *Pelobates fuscus*, *P. syriacus*, *Rana lessonae*, *Emys orbicularis*, *Natrix natrix*) are linked to the floodplain biotope, which was mostly destroyed when the Pořtile de Fier I dam and lake were built. In fact, most of the reports are from the period before the dam construction and refer precisely to the narrow strip of the floodplain. We can infer that these species are either extinct in the area (for some species as *Triturus dobrogicus* and *Pelobates syriacus*, Fuhn (1975) already reported the disappearance of the local populations) or are much reduced, both in area of occupancy and in absolute numbers. The low frequency of the opportunist species *Natrix natrix* is probably linked to the proliferation of *N. tessellata*, as the local conditions, prey availability, etc., now favour *N. tessellata* more than *N. natrix*. Another species we did not find, *Vipera berus*, is very rare in the region, where the more thermophilous *V. ammodytes* is prevalent, an aspect already noted by Fuhn (1975); as regards *Coluber viridiflavus*, its report, already questioned by Fuhn & Vancea (1961), seems to be due to the confusion with the dark form of the similar species *Coluber caspius*. Still, we cannot express any opinion on the correctness of the reports of *Elaphe quatuorlineata*, recorded by J. Frivaldszky (1823), Mojsisovics (1889), Werner (1897) and Călinescu (1931); the presence of this species, at least in the past, cannot be ruled out entirely.

On the other hand, we recorded the high frequency of some adaptable species, which could not only survive to the changes generated by the construction of the dam lake, of the road, etc., but also thrive under these circumstances; *Bufo bufo*, *Rana ridibunda*, *Podarcis muralis*, *Lacerta viridis*, *Natrix tessellata* are such species. They are distributed in almost all studied area, in a relatively high number. Among the amphibians, those species which can breed in the dam lake are favoured (*Bufo bufo*, *Rana ridibunda*). *Lacerta agilis* is less numerous, being bound to a wetter habitat; in this species I remarked the prevalence of the western and mountain subspecies *L. a. agilis*, within the largest part of the studied area, excepting Gura Văii, where the eastern and plain subspecies *L. a. chersonensis* penetrates, in association with another „steppe” species, *Podarcis taurica*. Some species associated with the mountain beech and coniferous forest belt are also relatively frequent and widely distributed: *Salamandra salamandra*, *Bombina variegata*, *Rana temporaria*, *Anguis fragilis*; in exchange, *Triturus alpestris* appears to have undergone a range reduction, not being present in Herculane, where Fuhn (1960) reported it, but only in Cerna-village, much upstream, maybe because of the destroying of its breeding pools, as I did not encounter suitable pools for this purpose in the Herculane area.

Another species category is that of the species bound to the thermophilous forest habitat, eventually upon rocky ground; they survived the anthropic disturbances which affected their habitat, but in relatively low number. Among these species there are *Rana dalmatina*, which has apparently declined both in area of occupancy and in number of individuals (I have noticed such a decline in this species in other areas in southern Romania), *Testudo hermanni*, also in numerical decline, highlighted by the above-mentioned genetic drift, *Ablepharus kitaibelli*, for which I report a new western limit of its range in Romania, *Lacerta praticola*, *Coronella austriaca*, *Coluber caspius*, *Elaphe longissima* and *Vipera ammodytes*, the last one in a marked decline, mainly because of the intense illegal collectings.

I can conclude by underlining that the herpetofauna of the region was strongly altered as a result of the construction of the Porțile de Fier dam lake, on this occasion most of the species bound to a floodplain habitat disappearing completely or almost completely; at the same time, the region still shelters the populations of some species which are considered rare at a national or even European level, the new localities where I found most of these species proving their wider range, even in this well studied region; this situation justifies the intensification of the preserving measures of the natural habitats and of the protected species of the area.

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OBSERVAȚII NOI ASUPRA HERPETOFAUNEI PARCULUI NAȚIONAL DOMOGLED-VALEA CERNEI ȘI PARCULUI NATURAL PORȚILE DE FIER (ROMÂNIA)

REZUMAT

Sunt expuse rezultatele unor investigații herpetologice pe teritoriul Parcului Național Domogled-Valea Cernei și Parcului Natural Porțile de Fier, din sud-vestul României; cele 22 specii identificate în teren sunt prezentate împreună cu date legate de biotopul în care au fost găsite.

LITERATURE CITED

- BĂDESCU, B., C. BALAȘ, I. MORAC, O. BALEA, M. SURU, I. HEINZ, 2001 – Arealele protejate din județul Caraș-Severin. Edit. Timpul, Reșița. 75 pp. (in Romanian).
- BĂNĂRESCU, P., 2002 – Fish species having enlarged their ranges and/or increased their number in Romania and the Danube basin. Proceedings of the Institute of Biology of the Academy of Romania, 4: 12-21.
- CĂLINESCU, R., 1931 – Contribuțiuni sistematice și zoogeografice la studiul amfibienilor și reptilelor din România. Memoriile Secțiunii Științifice a Academiei Române, București, 7: 119-291. (in Romanian)
- COGĂLNICEANU, D., 1997 – Practicum de ecologie a amfibienilor: Metode și tehnici în studiul ecologiei amfibienilor. Edit. Universității din București. 122 pp. (in Romanian)
- COGĂLNICEANU, D., F. AIOANEI, B. MATEI, 2000 – Amfibienii din România. Determinator. Edit. Ars Docendi, București. (in Romania)
- FRIVALDSZKY, I., 1865 – Allatani kirandulas Orsova es Mehadia videkere. In: Jellemzo adatok Magyarorszag faunajahoz, Pesta. 274 pp. (in Hungarian)
- FRIVALDSZKY, J., 1823 – Monographia Serpentum Hungariae. Musei Naturalis Hungariae.
- FUHN, I., 1960 – Amphibia. In: Fauna R.P.R. Edit. Academiei R.S.R., București, 14 (1): 1-288. (in Romanian)
- FUHN, I., 1975 – Amphibia și Reptilia. Pp. 301-303. In: M. Ionescu (coord). Fauna, în seria monografică a grupului de cercetări complexe „Porțile de Fier”. Edit. Academiei R.P.R., București. (in Romanian)
- FUHN, I., ST. VANCEA, 1961 – Reptilia. In: Fauna R.P.R. Edit. Academiei Române. București, 14 (2): 1-352. (in Romanian)
- KIRIȚESCU, C., 1901 – Contributions à l'étude de la faune herpétologique de Roumanie. Bulletin de la Société des Sciences, Bucarest, 10: 303-328.
- KIRIȚESCU, C., 1930 – Cercetări asupra faunei herpetologice a României. București. 117 pp. (in Romanian)
- LAMBERT, M. R. K., D. COGĂLNICEANU, 1999 – Preliminary observations addressing herpetofaunal diversity in southern Romania (august 1997). British Herpetological Society Bulletin, 68: 31-35.
- MEHELY, L., 1894 – *Lacerta praticola* Eversm. In: Mathematische und Naturwissenschaftliche Berichte von Ungarn, 12: 255-261.

- MEHELY, L., 1902 – *Lacerta taurica* Pall., a magyar fauna új gykya. Allatani Közlemenyek, 1: 58-72. (in Hungarian)
- MEHELY, L., 1918 – Amphibia. Reptilia. Pp. 1-12. *In: Fauna Regni Hungariae*. Budapesta.
- MOJSISOVICS, A., 1889 – Zoogeographische Notizien über Sudungarn aus den Jahren 1886–1888. Verhandlungen der Naturwissenschaft von Steiermark, Graz.
- STROESCU, D., 1982 – Contribuții la studiul reptilelor din zona Porților de Fier II. *In: Conservarea naturii pe baze ecologice – studii și cercetări; lucrări susținute la cea de-a VII-a conferință națională de ocrotirea a naturii, Drobeta-Turnu Severin.* (in Romanian)
- TELEAGĂ, R., 1976 – Broaștele brune din Banat. Studiu sistematic și biologic. Teză de doctorat. Universitatea București. 200 pp. (in Romanian)
- WERNER, F., 1897 – Die Reptilien und Amphibien Österreich-Ungarns und der Occupationslander, Wien. 160 pp.

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Muzeul Național de Istorie Naturală "Grigore Antipa"
Șos. Kiseleff nr. 1, 011341 București 2, România
e mail: aiftime@antipa.ro

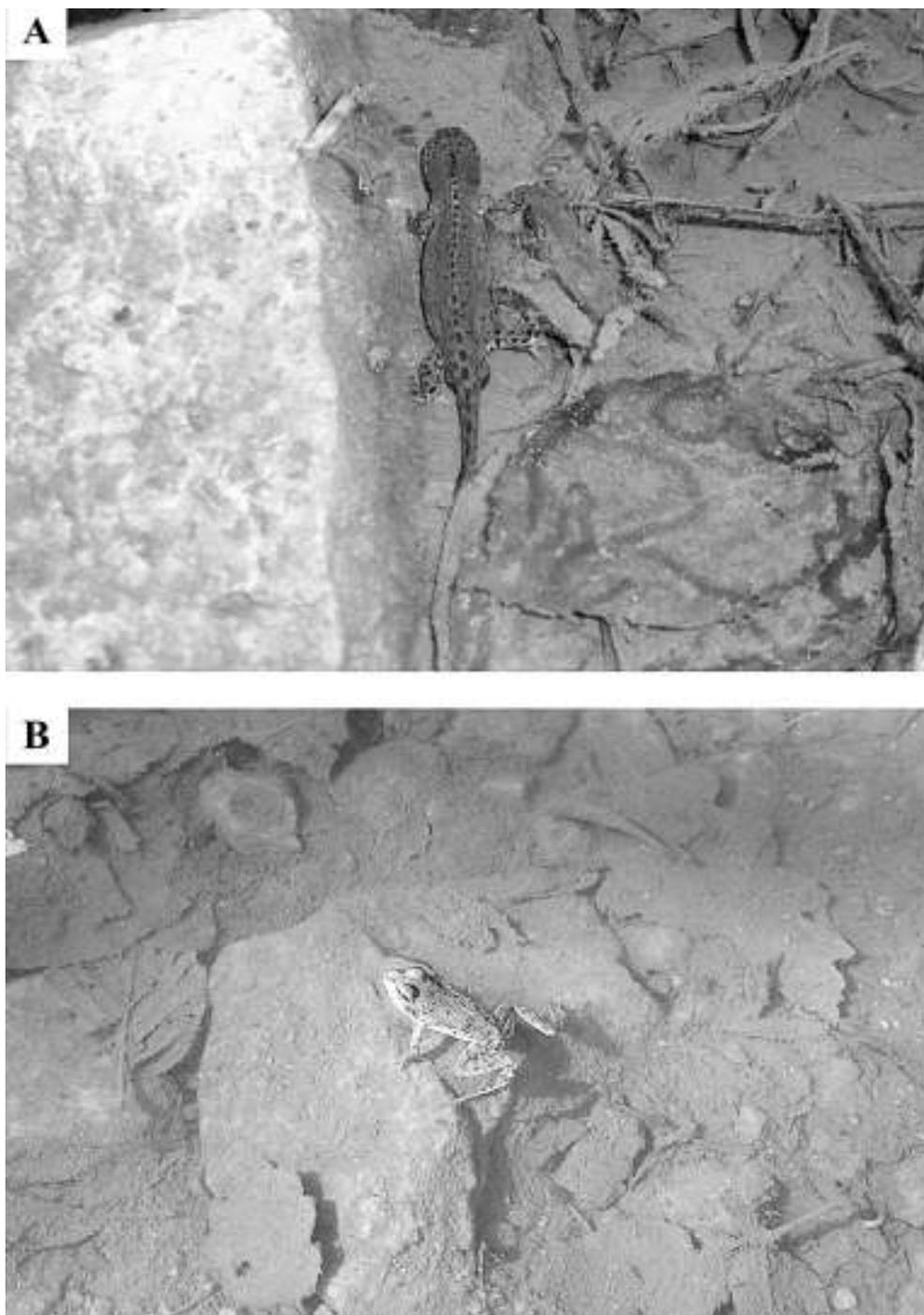


Fig. 1 – A: *Triturus alpestris*, adult male, Cerna-village; B: *Rana ridibunda*, juvenile, Oglânic valley (photos by A. Iftime).

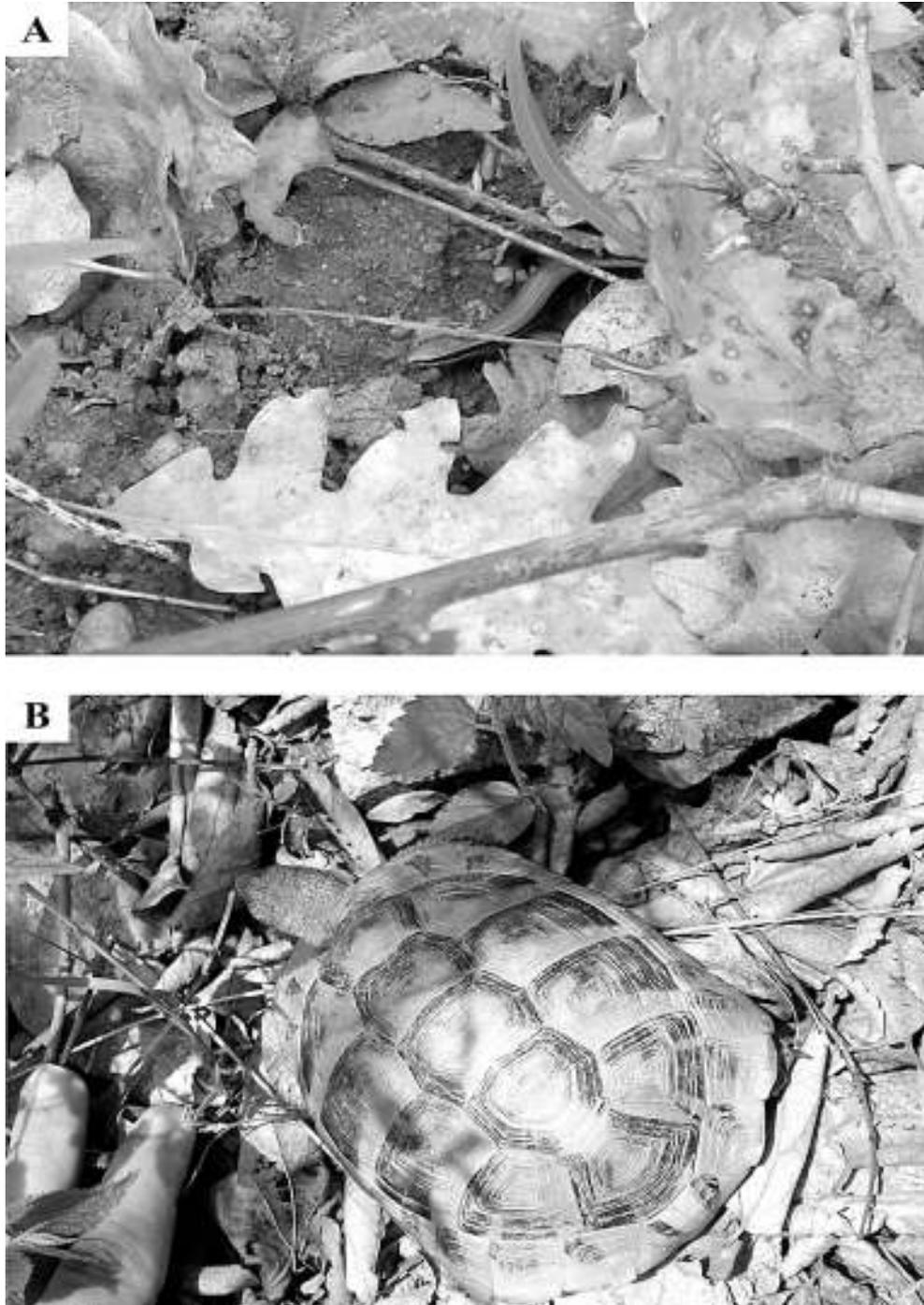


Fig. 2 – A: *Ablepharus kitaibelli*, Svinița; B: *Testudo hermanni*, sub-adult with „normal” divided supracaudal, Gura Văii (photos by A. Iftime).



Fig. 3 – A: *Coronella austriaca*, adult male, Cazanele Mici; B: *Natrix tessellata*, adult male, Cerna valley (photos by A. Iftime).