SOME DATA REGARDING THE SPREADING OF *MESONISCUS GRANIGER* (ISOPODA, ONISCIDEA, MICROCHETA) IN THE PIATRA CRAIULUI MASSIF

A. GIURGIUCA and A. I. NAIE

"E.Racovitza" Speleological Institute, 11 Frumoasa Str., Bucharest, 010985, Romania

Abstract — Our paper presents new data on the presence of *Mesoniscus graniger* in the Piatra Craiului Massif and a comparison of the altitudinal distribution of this species in the Northern Carpathians, Romanian Carpathians, and in the South–Danube Carpathians.

INTRODUCTION

*Mesoniscus graniger* (Frivaldsky, 1863) ranges from the Northern Carpathians (Eastern Slovakia — Mlejnek & Ducháč, 2003) to the Dinarids and the Julian Alps (Tabacaru, 1969). In Romania, the distribution of *Mesoniscus graniger* is linked with the Carpathian system: the species was not found in any location from Dobrogea or the Romanian Plain and, with one exception, *Mesoniscus graniger* was found only on a limestone substratum (Giurginca, 2003).

Although the distribution of *Mesoniscus graniger* in the Romanian Carpathians is well documented (Gruner and Tabacaru, 1963; Giurginca, 2003), there are still some places that can yield new data. The Piatra Craiului Massif is one such place.

Situated in the east of the Meridional Carpathians, the Piatra Craiului Massif is well-known from the geomorphological and speleological points of view (Constantinescu, 1973, 1976), but still needs to be investigated from the biospeleological point of view.

MATERIAL AND METHODS

Two field trips gave one of us (A.N.) the opportunity to collect fauna from the Piatra Craiului Massif. On the first field trip, between the 28th of June and the 7th of August 2003, we investigated the fauna of the following caves (peștera = cave): Peștera cu Liliieci (near Zârnești in the northern part of the Piatra Craiului Massif); and Peștera Dâmbovicioarei, Peștera Dracilor, Peștera Hoților, Peștera cu Ciuperci, Peștera Vacilor, Peștera de Sus din Valea Rea, and Peștera Dobrești [all in the Cheile Dâmbovicioarei — Cheile Brusturețului (cheile = gorge) in the southern part of the Piatra Craiului Massif].

On a second field trip, between the 13th and 23rd of October 2003, we visited Peștera cu Liliieci (again), together along with Avenul Gaura Gonjii and Peștera din Carieră in the northern part of the Piatra Craiului Massif; and Peștera Urușilor (Peștera de la Colțul Surpat), Peștera Lupului, Peștera Bursucului (Peștera Decolmatată), and Peștera Dobrești (again) in the southern part of the massif.

*Mesoniscus graniger* was found only in five caves — Peștera cu Liliieci, Peștera de Sus din Valea Rea, Peștera Hoților (Peștera cu Ciuperci), Peștera Dobrești and Peștera Dâmbovicioara.

RESULTS AND DISCUSSION

Up to the present time, *Mesoniscus graniger* was known from only two caves in the Piatra Craiului Massif: Peștera Dâmbovicioarei, which is located in Valea Dâmbovicioarei at 940m absolute altitude (leg. Orghidan, 1962 in Gruner & Tabacaru, 1963); and Peștera Dracilor, which is located on the right slope of Bazinul Dâmbovicioarei at 960m absolute altitude (leg. Tabacaru & Dancău, 1964 in Giurginca, 2003).

Our study allows us to record for the first time the presence of *Mesoniscus graniger* in the following four caves:

Peștera cu Liliieci (leg. A. I. Nae, 29 VII 2003): in this cave, situated at 950m absolute altitude, the animals were found on the cave’s clayey floor.

Peștera de Sus din Valea Rea (leg. A. I. Nae, 1 VIII 2003): in this cave, which is located at 925m, *M. graniger* was found on a clayey floor with a scattering of small pieces of limestone.

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Peștera Hoților (Peștera cu Ciuperci) (leg. A. I. Nae, 1 VIII 2003): the absolute altitude of this cave is 986m, and *M. graniger* was collected from rotten wood.

Peștera Dobrești (leg. A. I. Nae, 2 VIII 2003): in this cave, situated at 1200m absolute altitude, *M. graniger* was found under stones on the clayey floor and on very wet walls covered with an extremely fine film of water. As far as our information goes, this is the first time in Romania that *M. graniger* was collected on the walls of a cave.

All these caves are quite high cave stations for *M. graniger*. From the point of view of altitude Peștera Dobrești is second only to Peștera Zmeilor de la Onceasa (Bihor Mountains), which is situated at an altitude of 1300m altitude. Peștera Dobrești is the highest cave inhabited by *M. graniger* in the Southern Carpathians. Even the lowest station from the Piatra Craiului Massif — Peștera de Sus din Valea Rea at 925m altitude — is among the highest recorded cave stations of *M. graniger* in Romania.

In the Southern Carpathians, *M. graniger* is known from 22 caves and six endogean locations. Unfortunately, we could not identify the 15 small caves from the Cernioara Valley or their altitude, so we know the precise altitude of only seven caves: the six caves from the Piatra Craiului Massif and one cave from Bazinul Cernei (Peștera no. 64 with an absolute altitude of 920m). The repartition of caves as a function of altitude is presented in Table 1. It is noteworthy that in the Southern Carpathians all the caves inhabited by *M. graniger* are situated well above the altitude of 900m and thus are among the highest caves inhabited by *M. graniger* in Romania.

Within the limits of the Romanian Carpathians, *Mesoniscus graniger* was found in 74 caves. The high-

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Table 1. Repartition of the caves and the endogean stations with *Mesoniscus graniger* in the Southern Carpathians as a function of altitude: full square — cave station; X — endogean station.

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Table 2. Altitudinal repartition of the caves and the endogean stations with *Mesoniscus graniger* from the Romanian Carpathians: full square — cave station; X — endogean station.

Table 3. Repartition of the caves with *Mesoniscus graniger* from Serbia: full square — cave station.
est altitude recorded (1300m) is in the Bihor Mountains, while the lowest (200m) is in the Banat Mountains. Nearly half of the caves inhabited by Mesoniscus graniger in the Romanian Carpathians are between 500m and 600m altitude (see Table 2).

If we compare the altitudinal repartition of caves with Mesononiscus graniger in the Romanian Carpathians with that of such caves in the Northern Carpathians (in Slovakia and Hungary, as presented by Mléjnek & Ducháč, 2003), we can easily perceive the same preference here for an altitude between 500m and 600m. However, there are also some differences. In Slovakia, Mesoniscus graniger is found at higher altitudes than in the Romanian Carpathians (up to 2000m). As in Romania, in the Northern Carpathians there is no record of a cave inhabited by Mesoniscus graniger lower than 200m.

There are some differences between the altitudinal repartition of caves with M. graniger in the Romanian Carpathians and that of such caves in both East (South-Danube Carpathians) and West (Valjevo Piedmont) Serbia (for the detailed distribution of M. graniger in Serbia, see Plijakić, 1970, 1973, 1975, 1977).

In Serbia, most caves inhabited by M. graniger are situated between 300 and 400m, i.e., they are 100m lower than their counterparts in Romania (see Table 3). The highest altitude recorded for a cave in Serbia is only 600m, half the highest altitude recorded in the Romanian Carpathians. Also, in Serbia M. graniger is encountered at a low altitude (less than 200m), a situation not found in Romania or in the Northern Carpathians.

The altitudinal repartition of Mesoniscus graniger in Romania seems to support the opinion of Mléjnek and Ducháč as to the large ecological valence of Mesoniscus graniger.

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REFERENCES


