THE SPREADING OF THE GENUS *MESONISCUS* IN THE ROMANIAN CARPATHIANS

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The author draws an inventory of the caves and the MSS locations from the Romanian Carpathians inhabited by *Mesoniscus graniger*.

1. INTRODUCTION

Mesoniscus graniger (Frivaldsky, 1863) is one of the two species belonging to the genus *Mesoniscus* Carl, 1906 – the sole representative of the family Mesoniscidae Verhoeff, 1908.

Unlike *Mesoniscus alpicola* (Heller, 1858) found only in Lombardia and the North – Eastern Alps, *Mesoniscus graniger* has a greater range: from the Northern Carpathians (Eastern Slovakia), all along the Carpathians, the Bihor and the Banat Mountains to the Dinarids and the Iulian Alps (Gruner et Tabacaru, 1963; Tabacaru, 1969).

The sole comprehensive inventory of the stations with *Mesoniscus graniger* from the Romanian Carpathians belongs to Gruner and Tabacaru who carried out a revision of the family Mesoniscidae in 1963. Afterwards, many of our colleagues collected a large amount of material from locations previously unknown or unpublished. Therefore, we considered worth gathering all the unpublished data along with our new locations in order to continue and complete the work of Gruner and Tabacaru.

2. A BRIEF HISTORY OF THE FAUNISTIC INVESTIGATIONS CONCERNING *MESONISCUS* IN ROMANIA

1921. Apparently, Bokor is the first to mention *Mesoniscus* from Romania and, namely, from the following caves: Köros – Barlang (a cave we could not identify), Peştera din Valea Misitului (peştera = cave), Peştera Meziad, Peştera Zmeilor de la Onceasa, Peştera Ferice, Probabarlang (another cave we could not identify), Peştera Fânaţe and Peştera Socolovăţ.

1930. Verhoeff mentions *Mesoniscus* from two locations: Dej, where he found the animals under rocks from a shady forest (this is the sole location from our country where *M. graniger* is found outside the limestone mountains) and from Postăvarul Forest (beside Braşov).

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1939. Strouhal records the presence of *Mesoniscus* from the Bucegi Mountains, under very big rocks from the higher level of the forest and from the alpine region.

1944. Chappuis describes two subspecies of *M. alpicola* from the Romanian Carpathians: *M. alpicola vulgaris* (found in Peştera Igriţa, Peştera Fânaţe and Peştera Bătrâna) and *M. alpicola meridionalis* (found in the Southern Carpathians and in Banat, in the south of Hunedoara, in Peştera Sohodolul Reşiţei and in a forest nearby Cioclovina).

1950. Varvara Radu records the presence of *Mesoniscus* from the Peştera Călăţea in her paper about the stomach of *M. alpicolus.*

1950. V. Gh. Radu, in his revision of the species *M. alpicolus vulgaris* (Chappuis, 1944), mentions *Mesoniscus* from Peştera Călăţea and Peştera Igriţa.

1963. Gruner and Tabacaru, in their revision of the family Mesoniscidae, show that the genus *Mesoniscus* has only two species (*M. alpicola* and *M. graniger*) and that all individuals collected in our country belong to *M. graniger.* Also, their paper includes a comprehensive inventory of the stations with *Mesoniscus graniger* from the Romanian Carpathians.

1964. Dancău and Tabacaru in a paper concerning the cave fauna of Oltenia and Banat and its zoogeography record the presence of *Mesoniscus graniger* in caves from the Cernişoara Valley and from Corcoaia.

1977. V.Gh. Radu, in a paper concerning the taxonomy of the genus *Mesoniscus*, describes a new subspecies (*M. graniger moldavicus*) from a series of localities from the Oriental Carpathians: Chiril and Crucea (Suceava), Sabasa (Neamţ), Barnar and Slănic (Bacău), Soveja (Vrancea) and Ciucaş (Buzău). Also, he records the presence of *M. graniger* from the following caves of the Apuseni Mountains: Peştera Măgura, Peştera Drăcoaia, Peştera Coliboaia, Peştera Corbasca, Peştera Igriţa, Peştera Faţa Pietrei, Peştera Fânaţe, Peştera Călăţea, Peştera de la Vadu-Crişului, Peştera Izbândiş and Peştera Huda lui Papară.

1978. M. Şerban, M. Alb and L. Neagu record the ecology of *M. graniger* from the Peştera de la Vadu-Crişului.

1982. E. Ruşdea, working also on animals from Peştera de la Vadu-Crişului, establishes the dynamics of the *M. graniger* population.

1984. E. Ruşdea investigates the evolution of the morphological characters during the ontogeny at *M. graniger* from Peştera de la Vadu-Crişului.

3. INVENTORY OF THE *MESONISCUS GRANIGER* STATIONS FROM THE ROMANIAN CARPATHIANS

The altitude and the geographical distribution of the caves follows C. Goran, 1982. Abbreviations: Rs: right slope, Ls: left slope, Aa: absolute altitude, F: fossil cave, A: active cave, D:developement.

1. Apuseni Mountains

Bihor Mountains

The Basin of Arieşului Mare Valley – the Basin Gârdişoara Valley:

Coiba Mare Sinkhole:

- 10 VI 1971, leg. Gh. Racoviţă ("faune de la pierre enfoncée"), Aa: 1030m.

The Basin of Someşului Cald – the Basin of Ponorului Valley

Peştera Zmeilor de la Onceasa (Rs, Aa: 1300m, F, D: 340m):

- Bokor,1921 in Gruner et Tabacaru, 1963.
- 10 V 1956, leg.I.Tabacaru (Gruner et Tabacaru, 1963).

The Basin of Crişului Negru Valley

The Basin of Bulzului (Fânaţe)Valley

Peştera Fânaţe (Ls, Aa: 560m, F, D: 450m):

- Bokor, 1921 in Gruner et Tabacaru, 1963.
- 8 IX 2000, leg.A.Giurginca

Dej: at the edge of a shady forest among rocks (Verhoeff, 1930).

The Basin of Sighiştel Valley:

Peştera Coliboaia (Rs, Aa: 555m, A, D: 655m) :

- 23 IX 1958, leg. V. Puşcariu (Gruner et Tabacaru, 1963).
- 7 IX 2000, leg. A. Giurginca.

Peştera Măgura (Rs, Aa: 550m, F, D: 1885m):

- 24 – 30 VII 1959, leg. C. Pleşa and Boşica (Gruner et Tabacaru, 1963).
- 5 IX 1960, leg.C. Pleşa.
- 22 V 1968, leg. Anca Burghele.
- 12 VII 1969, leg. I. Tabacaru, D. Danielopol and Doina Zincenco.
- 5 IX 2000, leg. A. Giurginca.

Peştera Pişolca (Rs, Aa: 475m, A, D: 264m):

- 23 V 1968, leg. Anca Burghele.

Peştera Drăcoaia (Rs, Aa: 470, F, D: 170m):

- 1960–1961, leg. C. Pleşa.
- 21 V 1968, leg. Anca Burghele.
- 13 VII 1969, leg. I. Tabacaru and D. Danielopol.
- 5 IX 2000, leg. A. Giurginca.

Peştera Rip – rip (Ls, Aa: 440m, F, D: 155m):

- 24 V 1968, leg. Anca Burghele.

Peştera Tibocoaia (Rs, Aa: 445m, F, D: 74m) :

- 1960–1961, leg. C. Pleşa.
- 20 XI 1960, leg. C. Pleşa (Gruner et Tabacaru, 1963).
- 6 IX 2000, leg. A. Giurginca.

Peştera Corbasca (Ls, Aa: 500m, F, D: 300m):

- 26 IX 1958, leg. V. Puşcariu (Gruner et Tabacaru, 1963).
- 13 VII 1969, leg. I. Tabacaru, D. Danielopol and Doina Zincenco.

Peştera de la Faţa Pietrii (Rs, Aa: 515m, F, D: 60m):
– 14 X 1960, leg. C. Pleşa and Pintea – Alb (Gruner et Tabacaru, 1963).
– 1960–1961, leg. C. Pleşa.
The Basin of Văii Crăiasa
Huda de la Chişcău (Ls, Aa: 455m, A, D: 148m):
– 7 IV 1964, leg. C. Pleşa.
– 2–8 XI 1964, leg. C. Pleşa.
Bihor Mountains
The Basin of Crişul Pietros – Măgura Ferice Zone
Peştera Ferice (Ls, Aa: 410m, A, D: 1380m):
– Bokor, 1921 in Gruner et Tabacaru, 1963.
– 25 VII 1954, leg. P. Samson (Gruner et Tabacaru, 1963).
– 20–21 VIII 1966, leg. I. Tabacaru and D. Danielopol.
Munţii Pădurea Craiului Mountains
The Basin of Crişul Negru – The Basin of Meziad and Beiuşele Valleys
Peştera Meziad (Ls, Aa: 435m, D: 4750m):
– Bokor, 1921 in Gruner et Tabacaru, 1963.
– 4 X 1955, leg. I. Tabacaru (Gruner et Tabacaru, 1963).
– 10 VII 1969, leg. I. Tabacaru, D. Danielopol, Doina Zincenco, Ilinca Juvara.
– 8 II 1970, leg. Gh. Racoviţă.
– 8 II 1974, leg. Gh. Racoviţă.
The Basin of Steazelor and Cuţilor Valleys
Peştera din Valea Steazelor (Ls, A):
– 26 VII 1962, leg. Ştefania Avram.
– 11 XI 1965, leg. Gh. Racoviţă.
Peştera Hârtopul Bonchii (Ls, Aa: 530m):
– 7 IX 1970, leg. A. Kommes.
The Basin of Albioara – Sohodol – Runcşor Valley
Peştera Ciur Izbuc (Ls, Aa: 510m, D: 1030m).:
– 23 VII 1966, leg. Gh. Racoviţă.
– 19 VII 1967, leg. Gh. Racoviţă.
The Basin of Vida Valley
Peştera Cubleş (Ls, Aa:430m, F, D: 350m):
– 26 VI 1961, leg. C. Pleşa (Gruner et Tabacaru, 1963).
The closed plateaus and Basins between theCrişului Negru Valley and Crişului Repede Valley: The Basin of Mnierei Valley:
Peştera Călăţea (Aa: 370m, A, D: 1200m):
– summer of 1948, leg. V. Gh. Radu (Radu, 1950).
– 24 X 1964, leg. Maria Alb.
Cărmăzan – Zece Hotare – Bătrânu Valea Peştireului Zone
Peştera Bătrânului (Aa: 550m, A, D: 1633m):
– 29 VI 1961, leg. C. Pleşa (Gruner et Tabacaru, 1963).

The Basin of Crişului Repede – middle Basin of Iadei Valley (the graben Remeţi) – Iadului Valley

Peştera de sub peretele din Valea Leşului (Rs, Aa: 650m, A, D:1295m):
- 26 VI 1970, leg. Gh. Racoviţă.

Peştera Toderea Fanului (Dl. Rujetului)(Aa: 915m, F, 26m):
- 7 IX 1970, leg. A. Kommes.

Peştera Corn (Ls, Aa: 515m, A, D: 350m):
- 15 VI 1956, leg. I. Tabacaru (Gruner et Tabacaru, 1963).
- 11 VII 1969, leg. I. Tabacaru şi D. Danielopol.

The Lower Basin of Iadei Valley and Ponoare Zone

Poşiştăul din Dealul Pleş (Aa: 575m, F, D: 15m):
- 16 V 1966, leg. Gh. Racoviţă.

The Basin of Mişidului Valley – Luncilor Valley

Peştera Cotuna (Rs, Aa: 538m, F, D: 139m):
- 16 VI 1966, leg. Anca Burghele.

The Gorge of Crişului Repede between Bucea and Vadul Crişului, left slope

Peştera Vântului (Ls, Aa: 300m, D: 3056m):
- 14 IX 1960, leg. Coman (Gruner et Tabacaru, 1963).

Peştera Izbândiş (Rs, F, Aa: 320–350m, D: 240m):
- 2 VIII 1963, leg. C. Pleşa.
- 30 I 1966, leg. C. Pleşa.
- 6 VII 1969, leg. I. Tabacaru, D. Danielopol, Doina Zincenco.

Peştera Vadul Crişului (Ls, Aa: 305m, A, D: 1000m):
- 1 IV 1955, 1958 – 1959, leg. C. Pleşa (Gruner et Tabacaru, 1963).
- 5 IX 1960, leg. C. Pleşa.
- 30 IX–1 X 1960, leg. C. Pleşa.
- 5 X 1961, leg. C. Pleşa.
- 14 VI 1966, leg. Anca Burghele.

Peştera Deventului (Ls, Aa: 360m, A, D: 38m):
- 8 V 1959, leg. C. Pleşa (Gruner et Tabacaru, 1963).
- 5 IX 1960, leg. C. Pleşa.
- 13 VI 1966, leg. Anca Burghele.
- 23 VIII 1966, leg. Anca Burghele.

The left Slope of Crişului Repede downstream of Vadul Crişului –Deblei Valley

Peştera Gălăşeni (Aa: 370m, A, D: 2495m):
- 25–26 VI 1964, leg. C. Pleşa.
- 25 X 1964, leg. Maria Alb, C. Pleşa and I. Sălăjan.
- 2–8 XI 1964, leg. C. Pleşa.
- 7 VII 1969, leg. I. Tabacaru, D. Danielopol and Doina Zincenco.

Peştera Igriţa (Aa: 328m, A, D: 717m):
- Bokor, 1921 in Gruner et Tabacaru, 1963.

– 1950, leg. V. Gh. Radu (Radu, 1950).
– 1 IV 1955, leg. I. Tabacaru (Gruner et Tabacaru, 1963).
– 1960–1961, leg. C. Pleşa
– 18 VIII 1966, leg. Anca Burghele.

II. Eastern Carpathians

As far as our information goes, from the Eastern Carpathians are known only seven localities: **Chiril** (Aa: 800–850m) and **Crucea** (Aa: 750–800m) from Suceava County, **Sabasa** (600–650m) from Neamţ County, **Barnar** (we could not find this locality) and **Slănic** (Aa: 650m) from Bacău County, **Soveja** (Aa: 900m) from Vrancea County and **Ciucaş** (Aa: 900–950m) from Buzău County. In all these localities, *Mesoniscus graniger* was found under big stones or under heaps of stones (Radu, V., 1977).

Oltului – Perşani Mountains

Vârghişului Basin:

Peştera Mare de la Mereşti (Ls, F, Aa: 600m, D: 1578m):

– 15 VIII 1958, leg. Margareta Dumitrescu and T. Orghidan (Orghidan şi Dumitrescu, 1962–1963).

– 13–17 V 2000, leg. A. Giurginca.

Cave nr. 6 from Vârghişului Keys (Rs, F, Aa: 586m, D: 10m):

– 23 VII 1957, leg. Margareta Dumitrescu and T. Orghidan: many ex. in the litter from the entrance (Orghidan şi Dumitrescu, 1962–1963)

Cave nr. 7 from Vârghişului Keys (Rs, F, Aa: 586m, D: 35m):

– 23 VII 1957, leg. Margareta Dumitrescu and T. Orghidan (Orghidan and Dumitrescu, 1962–1963).

Cave nr. 9 from Vârghişului Keys (Rs, F, Aa: 657m, D: 500m):

– 18 III 1959, leg. Margareta Dumitrescu şi T. Orghidan (Orghidan and Dumitrescu, 1962–1963).

Cave nr. 12 from Vârghişului Keys (Rs, F, Aa: 632m, D:25m):

– 26 VII 1957, leg. Margareta Dumitrescu and T. Orghidan (Orghidan and Dumitrescu, 1962–1963).

Cave nr. 16 from Vârghişului Keys (Rs, F, Aa: 604m, D: 35m):

– 14 VIII 1957, leg. Margareta Dumitrescu and T. Orghidan (Orghidan and Dumitrescu, 1962–1963).

Cave nr. 23 from Vârghişului Keys (Rs, F, Aa: 586m, D: 8m):

– 24 VIII 1957, leg. Margareta Dumitrescu and T. Orghidan (Orghidan and Dumitrescu, 1962–1963).

– 24 I 1958, leg. Margareta Dumitrescu and T. Orghidan (Orghidan and Dumitrescu, 1962– 1963).

Cave – abri nr. 32 (Ls, F, Aa: 582m, D: 4m):

– 20 IX 1957, leg. Margareta Dumitrescu and T. Orghidan (Orghidan and Dumitrescu, 1962–1963).

Cave nr. 34 from Vârghişului Keys (Ls, F, Aa: 595m, D: 17m):
- 25 IX1957, leg. Margareta Dumitrescu and T. Orghidan (Orghidan and Dumitrescu, 1962–1963).

Cave nr. 38 from Vârghişului Keys (Rs, F, Aa: 627m, D: 15m):
- 22 I 1958, leg. Margareta Dumitrescu and T. Orghidan (Orghidan and Dumitrescu, 1962–1963).

Oltului – Grohotişu Mountains
Piatra Craiului Massif
The right slope of Dâmbovicioarei Basin
Peştera Dracilor (Rs, Aa: 960m, F, D: 30m):
- 4 VIII 1964, leg. I. Tabacaru and Dancău

Piatra Craiului Massif – Rucăr – Bran Corridor
Dâmbovicioarei Valley
Peştera Dâmbovicioarei (Ls, F, Aa: 940m, D: 555m):
– 2 VI 1962, leg. T. Orghidan (Gruner et Tabacaru, 1963).

The Basin of Moeciu Valley from the limestones of Fundata Massif (Grădiştei Valley)
Peştera Fundata (Ls, F, Aa: 790m, D: 12m):
– 14 XII 1957, leg. I. Tabacaru (Gruner et Tabacaru, 1963).

Timişului Mountains
Postăvaru Massif
– Postăvaru Forest, 1000–1100m altitude (Verhoeff, 1930).

III. Southern Carpathians

Bucegi Mountains
– 7VI1910, "obere Waldregion und hochalpin, im Boden unter sehr grossen Steinen" (leg. Strouhal, 1939), 1600–1700m altitude.

Sebeşului Mountains
Ponorici – Luncani Basin
– in the forest, under stones, close to Cioclovina (Village Cioclovina), (Chappuis, 1944).
– 7 VI 1959, leg. I. Tabacaru: under stones at the entrance of Ponorici Cave (Village Ponorici, Commune Pui, altitude: 850m) (Gruner et Tabacaru, 1963), Aa: 620m.

Mehedinţi Mountains
The right slope of Motrului Mare Basin, Cloşani Village Aa: 430m
– 20 VIII 2000, in MSS at a depth of – 70cm, leg.A.Giurginca şi V.Ilie.

Mehedinţi Plateau
Zăton – Bulba Valley
– 1 V 1961, leg. I. Tabacaru: under stones at the entrance of Podul Natural Cave (Commune Ponorici), Aa: 365m (Gruner et Tabacaru, 1963).

Cernişoara Valley:

– VI–VIII 1961, leg. I. Tabacaru, in 15 small caves (Gruner et Tabacaru, 1963).
– 11 X 1962, leg. E. Şerban, endogeous.
The right slope of Cerna between Iauna Valley and Bidini
Cave nr. 64 from Cerna Basin (Aa: 920m, F, D: 57m):
– 4 X 1966, leg. D. Danielopol, Ilinca Juvara, E. Şerban.
Cernei Mountains
The right slope of Cerna – Băile Herculane
– at Băile Herculane (Chappuis, 1944), Aa: 186m.

IV. Banat Mountains

Locvei Mountains
Camenița Basin
Peştera Filip Gârnic (Aa: 450m, A, D: 78m):
– 21 III 1960, leg. V. Decu (Gruner et Tabacaru, 1963).
Boşneag Basin (Valea Mare)
Peştera Padina Matei (Aa: 580, A, D: 103m):
– 12 VIII 1961, leg. Botoşăneanu and Negrea (Gruner et Tabacaru, 1963).
Peştera Gaura Haiducească (Aa: 540m, A, D: 372m):
– 9 V 1961, leg. I. Tabacaru (Gruner et Tabacaru, 1963).
– Dancău and Tabacaru, 1964.
The left slope of Nerei Keys
Peştera Gaura Porcariului (Ls, Aa: 200m, F, D: 152m):
– 9 X 1961, leg. Botoşăneanu and Negrea (Gruner et Tabacaru, 1963).
Aninei Valley
Lăpuşnicului Valley
Peştera Vălei (Aa: 730m, F, D: 177m):
– 10 X 1961, leg. Botoşăneanu and Negrea (Gruner et Tabacaru, 1963).
Miniş Basin – Plopa Valley
Peştera Ponor Plopa (Aa: 570m, A, D: 760):
– 7 VIII 1961, leg. Botoşăneanu and Negrea (Gruner et Tabacaru, 1963).
The left slope of Caraşului Keys and Socolovăț Plateau
Peştera Socolovăț (Ls, Aa: 535m, F, D: 130,5m):
– Bokor,1921 in Gruner et Tabacaru, 1963
– 7 VIII 1960 (Gruner et Tabacaru, 1963).
– Dancău and Tabacaru, 1964.
Peştera de după Cârşă (Ls, Aa: 225m, A, D: 736m):
– 10 VIII 1960, leg. I. Tabacaru (Gruner et Tabacaru, 1963).
– Dancău and Tabacaru, 1964.
Domanului Mountains
The right slope of Caraşului Keys
Peştera Popovăț (Rs, Aa: 421m, A, D: 1120m):

–4 VIII 1960, leg. I. Tabacaru (Gruner et Tabacaru, 1963).
–Dancău and Tabacaru, 1964.
–16 VII 2002, leg. V. Ilie.

Peştera Tolosu (Peştera Trei Cazane) (Rs, Aa: 335 m, A, D: 1075):
–27 IX 1961, leg. Botoşăneanu and Negrea (Gruner et Tabacaru, 1963).

The Basin Doman – Valea Stârnic

Peştera Stârnic (Ls, Aa: 370 m, F, D: 700m):
–3 VIII 1960, leg. I. Tabacaru (Gruner et Tabacaru, 1963).
–Dancău and Tabacaru, 1964.

The Basin Comarnic – Toplița

Peştera Comarnic (Ponicova Valley, Aa: 469 m, A, D: 5229m):
–5 VIII 1960, leg. I. Tabacaru (Gruner et Tabacaru, 1963).
–Dancău and Tabacaru, 1964.

The Basin Râu Mare

Peştera Gaura Turcului (Sohodolu Mare Valley, Aa: 500 m, A, D: 438):
–17 VII 2002, leg. V. Ilie.

4. DISCUSSIONS

Within the limits of the Romanian Carpathians, *Mesoniscus graniger* was found in 70 caves and 12 MSS locations.

In the Apuseni Mountains, *Mesoniscus graniger* is known from 1 MSS location and 29 caves. The highest altitude recorded – 1300 m – is that of Zmeilor Cave from Onceasa from the Bihor Mountains, while the lowest altitude – 300 m – is that of Toderea Fanului Cave from the Pădurea Craiului Mountains.The repartition of the other caves in function of the altitude is given in Table 1.

Table 1

Altitude (meters)	300–400	400–500	500–600	600–700	700–800	800–900	900–1000	1000–1100	1100–1200	1200–1300
Number of caves	7	8	11	1	–	–	1	–	–	1

Outside the caves, *Mesoniscus* was found in only one location: under rocks nearby Coiba Mare Sinkhole (Bihor Mountains) at an altitude of 1030 m.

In the Oriental Carpathians, *Mesoniscus graniger* is known from 13 caves and from 7 MSS locations. The highest altitude recorded – 960 m – is that of Dracilor Cave (Piatra Craiului Massif), while the lowest altitude – 582 m – is that of Cave-abri no. 32 from Vârghişului Keys. In Table 2 we present the repartition of the caves in function of the altitude.

Table 2

Altitude (meters)	500–600	600–700	700–800	800–900	900–1000
Number of caves	5	5	1	–	2

The repartition of the MSS locations in function of the altitude is shown in Table 3.

Table 3

Altitude (meters)	600–700	700–800	800–900	900–1000	1000–1100
Number of MSS locations	2	1	1	2	1

In the Southern Carpathians, *Mesoniscus graniger* was found in 16 caves and in 6 MSS locations. Unfortunately, we could not identify the 15 small caves from the Cernişoara Valley or their altitude; the altitude of the sole remaining cave – Cave no. 64 from the Cerna Basin – is quite high (920 m) being the highest altitude recorded for the Southern Carpathians. The 5 MSS locations are: Băile Herculane (186 m altitude), Podul Natural (365 m altitude), Cloşani (430 m), Cioclovina (620 m) and Ponorici (850 m) and the upper region of the forest – the alpine region of the Bucegi Mountains (approx. 1600–1700 m).

In the Banat Mountains, *Mesoniscus graniger* is known from only 13 caves, their repartition in function of the altitude is shown in Table 4. The highest altitude recorded – 730 m – is that of Vălei Cave (Aninei Valley), the lowest altitude recorded – 200 m – is that of the Gaura Porcariului Cave (the left slope of the Nera Keys).

Table 4

Altitude (meters)	200–300	300–400	400–500	500–600	600–700	700–800
Number of caves	2	2	3	5	–	1

For the moment, there are too few MSS locations (only 14) in order to draw a conclusion about their altitudinal repartition but they seem to cluster between 600 m and 1100 m altitude.

An overall view of the altitudinal repartition of the caves inhabited by *Mesoniscus graniger* in the Romanian Carpathians is given in Table 5.

Table 5

Alt. (m)	200–300	300–400	400–500	500–600	600–700	700–800	800–900	900–1000	1000–1100	1100–1200	1200–1300
No. of caves	2	9	11	21	6	2	–	4	–	–	1

Regarding the caves, the highest altitude recorded – 1300 m, Zmeilor Cave from Onceasa – is in the Bihor Mountains while the lowest altitude recorded – 200 m, Gaura Porcariului Cave – is in the Banat Mountains. Nearly half of the caves inhabited by *Mesoniscus graniger* in the Romanian Carpathians are between 500 m and 600 m altitude.

However, we consider this as a partial result as we need more data from the Southern and the Eastern Carpathians in order to establish the altitudinal repartition of *Mesoniscus graniger*.

5. CONCLUSIONS

Mesoniscus graniger inhabits the entire chain of the Romanian Carpathians, in caves as well as in MSS. It is recorded in 29 caves and 1 endogeous locations in the Apuseni Mountains, in 13 caves and 7 MSS locations in the Eastern Carpathians, in 16 caves and 6 MSS locations in the Southern Carpathians and only 13 caves from the Banat Mountains.

As our inventory shows, the spreading of *Mesoniscus graniger* in Romania, is related to the Carpathian system. It was found in no location from Dobrogea or the Romanian Plain. Excepting one location, *Mesoniscus graniger* was found only on a limestone substratum.

We can record 17 new locations.

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