

*NEOBISIUM BLOTHROIDES* (TÖMÖSVÁRY, 1882)  
(NEOBISIIDAE, PSEUDOSCORPIONES): AN ENDEMIC  
SPECIES FROM ROMANIA

B.P.M. ČURČIĆ<sup>1</sup>, VASILE DECU<sup>2</sup>, R.N. DIMITRIJEVIĆ<sup>1</sup>

The species "*Obisium*" *blothroides* was discovered and described from a single cave nr. Mehadia, Romania. At that time, Mehadia was part of the Austro-Hungarian Empire, which accounts for the later hence further mistake made by BEIER (1932, 1963) who claimed that the species inhabits "SO-Ungarn". However, *Neobisium blothroides* can be regarded as an endemic and relict form inhabiting a number caves in Romania, already cited in this paper. Although its habitus resembles that of cavernicolous pseudoscorpions, the presence of anterior and (reduced) posterior eyes supports the view that it is in the phase of intense colonization of underground milieux in the area studied.

*Key words:* pseudoscorpions, *Neobisium blothroides*, endemism, relicts, cave fauna, Romania.

#### INTRODUCTION

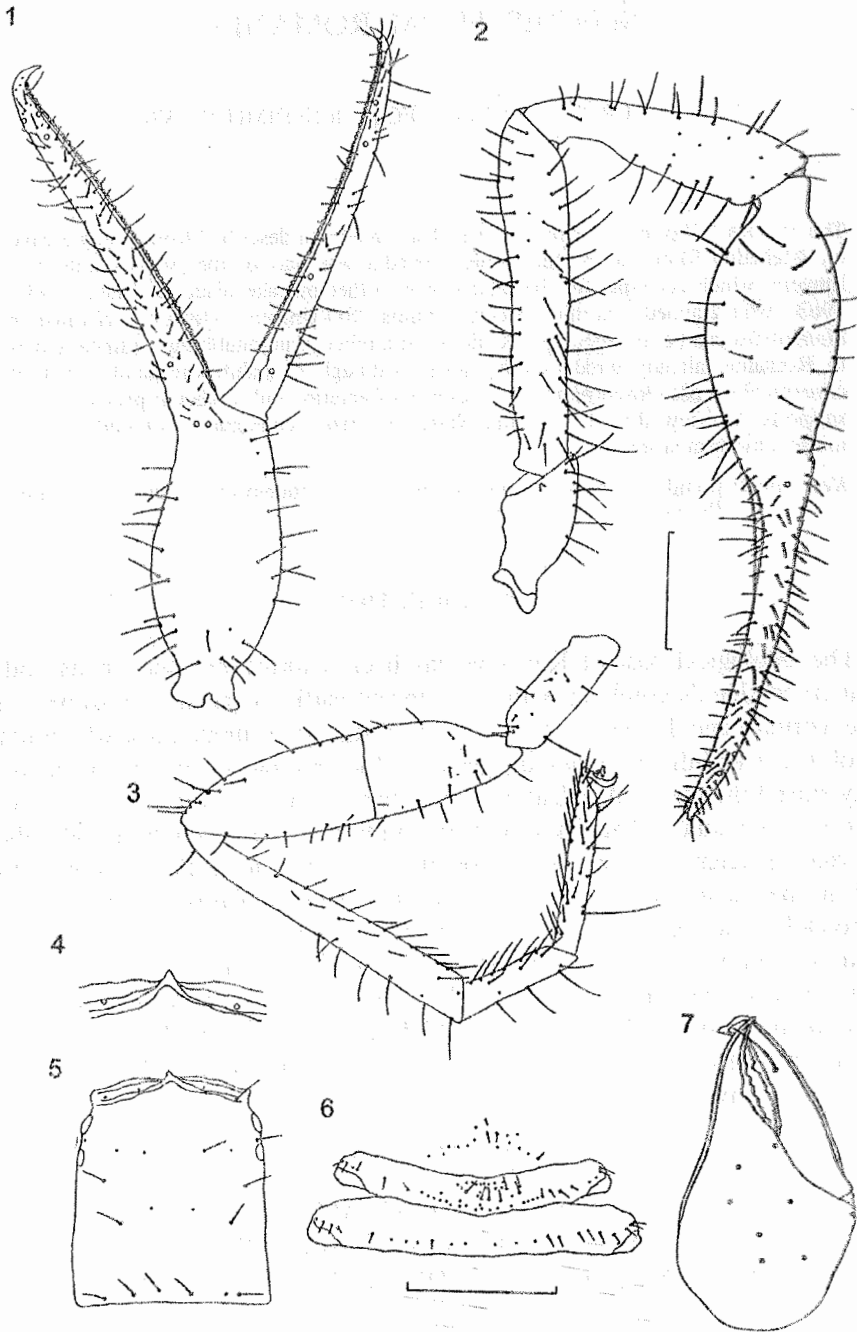
The geological past of Romania has been a tormented one; in its soil, very ancient fixed shields combine with more recent earths, formed by sedimentation in the pre-Tertiary and Tertiary seas. There are lofty young mountains, which make up most of the Carpathian mountain ranges. More remote or more recent volcanic activity raised the chain of volcanoes in Eastern Transylvania and isolated cones in the Western Mountains and elsewhere. In addition to this, erosion brought about by Quarternary glaciers, gradual descent of running water into valleys, unloosing of the lateral gradients, formation of new (dry) land in flood plains, and advance of the Danube Delta towards the sea have completed the details of Romania's hilly regions.

In the present study, four samples of cave pseudoscorpions collected in Romanian caves have been analyzed, diagnosed and described; they all belong to *Neobisium blothroides* (Tömösváry), which is here considered to be a relict and endemic form of the underground habitats that are otherwise widely distributed in the area under investigation.

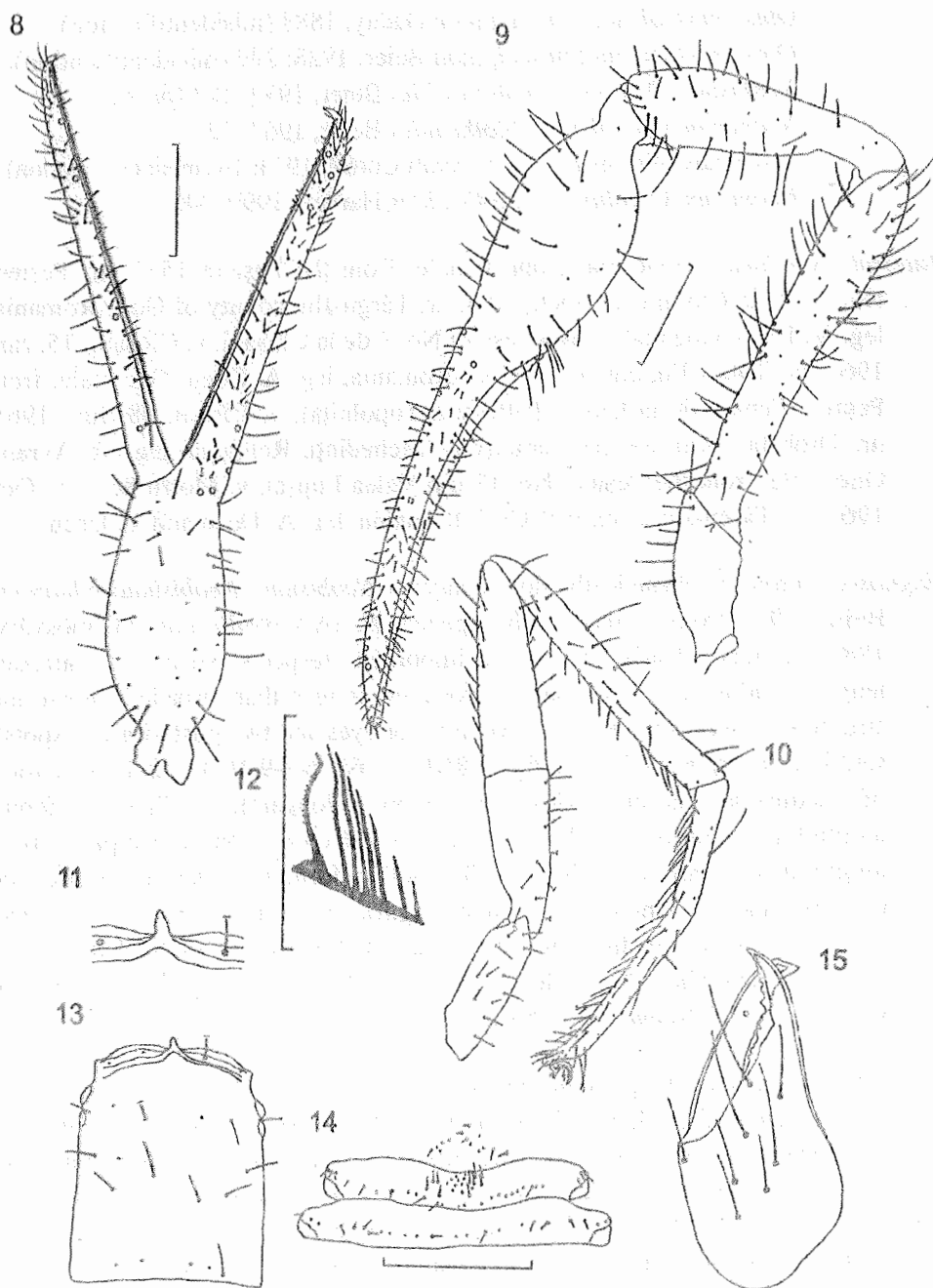
#### SYSTEMATIC PART

NEOBISIIDAE J. C. CHAMBERLIN  
*NEOBISIUM* J. C. CHAMBERLIN  
*NEOBISIUM BLOTHROIDES* (TÖMÖSVÁRY, 1882)  
(Figs. 1–28)

*Synonyms* – *Obisium blothroides* Tömösváry, 1882: 224.



Figs. 1-7. - *Neobisium blothroides* (Tömösváry, 1872): Male, from Peștera 1572, nr. Târgu-Jiu;  
 1 - pedipalpal chela; 2 - pedipalp; 3 - leg IV; 4 - epistome; 5 - carapace; 6 - genital area;  
 7 - chelicera. Scales = 0.25 mm (Figs. 4, 7) and 0.50 mm (Figs. 1-3, 5, 6).



Figs. 8–15. – *Neobisium blothroides* (Tömösváry, 1872): Male, from Peștera Femeii de la Cireșu, (=Peștera Topolnița), nr. Drobeta – Turnu Severin; 8 – pedipalpal chela; 9 – pedipalp; 10 – leg IV; 11 – epistome; 12 – flagellum; 13 – carapace; 14 – genital area; 15 – chelicera. Scale lines = 0.25 mm (Figs. 11, 12, 15) and 0.50 mm (Figs. 8–10, 13, 14).

*Obisium (Obisium) praecipuum* Daday, 1888 (misidentification).

*Obisium (Obisium) praecipuum* Beier, 1928: 299 (misidentification).

*Neobisium (Neobisium) blothroides* Beier, 1932: 103 (part.).

*Neobisium (Neobisium) blothroides* Beier, 1963: 127.

*Neobisium (Neobisium) blothroides* Ćurčić, 1974: 16 (misidentification).

*Neobisium (Neobisium) blothroides* Harvey, 1990: 348.

*Material examined.* – One male, one female, from the Peștera 1572, nr. Peștera No. 14 de la Cloșani, 15. Oct. 1964, nr. Târgu-Jiu, county of Gorj, Romania, leg. V. Decu. One male, from Peștera No. 4 de la Cloșani, v. Cloșani, 15. Jan. 1961, nr. Târgu-Jiu, county of Gorj, Romania, leg. A. Decu. One male, from Peștera Femeii de la Cireșu (=Peștera Topolnița), v. Cireșu, 08. Jun. 1965, nr. Drobeta-Turnu Severin, county of Mehedinți, Romania, leg. Șt. Avram. One male, from the Peștera No. 13 din Valea Lupșei, v. Motru Sec, 15. Oct. 1960, nr. Târgu-Jiu, county of Gorj, Romania, leg. A. Decu and V. Decu.

*Diagnosis* – From its phenetically close congener *Neobisium (Neobisium) biharicum* Beier, 1939 from Romania, the species *N. (N.) blothroides* (Tömösváry, 1882) differs clearly in many important respects such as: carapace length/breadth ratio (as long as broad vs. longer than broader), form and structure of eyes (four eyes vs. two anterior eyes and two posterior eye spots), setation of tergites I–V (6-6-6-6/8-8/10 vs. 6/7-6/7-9/10-11/12-10/12), form of pedipalpal articles (less vs. more elongate), pedipalpal femur length/breadth ratio (4.60-4.80 vs. 5.19-7.13; Beier, 1963), pedipalpal tibia length/breadth ratio (2.90-3.10 vs. 3.33-4.00), form and disposition of chelal teeth (of unequal length vs. of equal length), carapace length (1.00-1.18 mm vs. 1.18-1.45 mm), pedipalpal tibia breadth (0.42-0.90 mm vs. 0.34-0.41 mm), and pedipalpal chelal finger length in males (1.72 mm vs. 1.80-2.03 mm) and females (1.95-2.10 mm vs. 1.95 mm).

*Description* – Carapace longer than broad (Figs. 5, 13, 21; Table 1), epistome large and triangular (Figs. 4, 11, 20). With two well-developed anterior eyes and two reduced eyes (spot-like). One or two mesosetae are borne distal to each anterior eye. Setal carapacial formulae:  $4 + 6 + 6 + 9 = 25$  (female), and  $4 + 6 + 6 + 6 = 22$ ,  $4 + 7 + 6 + 7 = 24$  and  $4 + 6 + 6 + 5 = 21$  (males). The normal formula is probably  $4 + 6 + 6 + 6 = 22$ . Carapace slightly reticulate throughout.

Abdominal tergites with 7-7-9-11-12-12-11-11-10-9 setae (female) and with 6-7-10-11-12-11-11-11-11-9, 7-6-10-12-11-11-11-11-10-9, 6-6-8-11-10-11-9-10-9-9 and 6-7-9-12-12-12-12-11-11-10 setae (males). Female genital area (Fig. 28): sternite II







Table 1

Linear measurements (in millimetres) and morphometric ratios in *Neobisium blotroides* (Tömösváry) from some caves in Romania. Abbreviations: F = female, MM = males

Character	F	MM
Body		
Length (1)	4.79	3.76 – 4.27
Cephalothorax		
Length (2)	1.18	1.00 – 1.10
Breadth (2a)	1.00	0.80 – 0.855
Ratio 2/2a	1.18	1.25 – 1.29
Abdomen		
Length	3.60	2.70 – 3.24
Chelicerae		
Length (3)	0.805	0.67 – 0.77
Breadth (4)	0.42	0.36 – 0.38
Length of movable finger (5)	0.50	0.44 – 0.49
Ratio 3/5	1.61	1.52 – 1.60
Ratio 3/4	1.92	1.86 – 2.03
Pedipalps		
Length with coxa (6)	8.835	7.64 – 8.74
Ratio 6/1	1.84	1.85 – 2.30
Length of coxa	1.14	0.845 – 0.99
Length of trochanter	0.98	0.68 – 0.83
Length of femur (7)	1.895	1.64 – 2.01
Breadth of femur (8)	0.35	0.23 – 0.32
Ratio 7/8	5.34	5.75 – 7.13
Ratio 7/2	1.605	1.64 – 1.83
Length of patella (tibia) (9)	1.46	1.345 – 1.40
Breadth of patella (tibia) (10)	0.41	0.34 – 0.37
Ratio 9/10	3.56	3.78 – 4.00
Length of chela (11)	3.36	3.04 – 3.51
Breadth of chela (12)	0.74	0.55 – 0.69
Ratio 11/12	4.54	4.90 – 5.60
Length of chelal palm (13)	1.41	1.24 – 1.48
Ratio 13/12	1.905	2.00 – 2.07
Length of chelal finger (14)	1.95	1.80 – 2.03
Ratio 14/13	1.38	1.37 – 1.46
Leg IV		
Total length	6.32	5.60 – 6.15
Length of coxa	0.64	0.585 – 0.66
Length of trochanter (15)	0.77	0.66 – 0.74
Breadth of trochanter (16)	0.26	0.21 – 0.24
Ratio 15/16	2.96	3.00 – 3.14
Length of femur + patella (17)	1.71	1.52 – 1.73
Breadth of femur + patella (18)	0.41	0.36 – 0.38
Ratio 17/18	4.17	4.22 – 4.805
Length of tibia (19)	1.54	1.355 – 1.44





