

SPIDERS (ARANEAE) OF TWO VALLEYS IN THE KRKONOŠE MTS. (CZECH REPUBLIC)

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Abstract

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Spiders of three localities in the Krkonoše Mts. were studied: a) east-facing exposed rock walls in the Labský Důl valley, 1000 m a.s.l., b) west-facing exposed small rocks in the Obří Důl valley on the slope of Sněžka Mt., 1500 m a.s.l., c) the bottom of the Obří Důl valley with a rich herb vegetation, 1000 m a.s.l. Leeward rock walls exhibited a higher species diversity than windward rocks. Tall herb vegetation in a leeward site of a corrie exhibited a higher species diversity than short herb vegetation on the mountain summits. Notes are given on the presence of *Diplocentria bidentata*, *Lepthyphantes arciger*, *Meioneta milleri*, and *Micrargus georgescuae*. *Bolyphantes caucasicus* represent new records for Central Europe, *Maro lehtineni* for the Czech Republic.

Introduction

The Krkonoše Mountains (the Giant Mountains) form the northern geographical border of Bohemia and, after the Alps and Carpathians, represent the third highest mountain range in Central Europe. The high plateaus of the Krkonoše Mts. are at about 1400 m a.s.l., and Sněžka Mt. reaches an altitude of 1603 m.

Exploration of the arachnofauna in Krkonoše Mts. has a long tradition. German arachnologists took part in this in the past century, and Polish arachnologists joined in this century. Among the Czech arachnologists, BUCHAR (1967) made a study of spiders of Pančavská Louka peatbog, peatbogs under Violík Mt. and grasslands at Vysoké Kolo Mt. BUCHAR (1983) summarised all results of faunistical research in the Krkonoše Mts. BÍLEK (1985) carried out research in Rýchory ancient forest. ANTUŠ (1982) studied spiders of the Stráž hill in the protective belt of the Krkonoše National Park. RŮŽIČKA, ZACHARDA (1994) studied spiders and other invertebrates in stony debris.

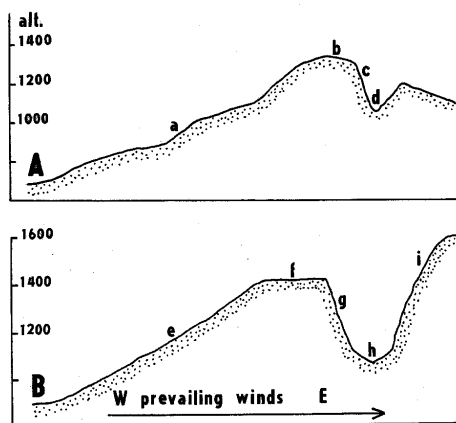


Fig. 1. A scheme of the localities studied (after JENÍK (1961)). A. Labský Důl valley: a- Mumlava river valley (WE orientation), b- Pančavská Louka peat-bog (data about spiders given by BUCHAR (1967)), c- Pančavská Jáma corrie, d- Labe river (NS orientation); B. Obří Důl valley: e- Bílé Labe river valley (WE orientation), f- Úpská Rašelina peat bog (data about spiders given by RŮŽIČKA, VANĚK (1997)), g- Úpská Jáma corrie (data about spiders of scree slope in the locality named "Krkonošova Zahrádka" given by RŮŽIČKA, ZACHARDA (1994)), h- Úpa river, i- Sněžka Mt. (data about spiders of scree slopes given by RŮŽIČKA, ZACHARDA (1994)).

The next stage in the research of epigeic invertebrates began at the beginning of the eighties. The workers of the National Park Administration started regular collections of epigeion within the framework of the programme „Biomonitoring“. RŮŽIČKA, VANĚK (1997) published results based on this material collected at Studniční Hora Mt. and Úpská Rašelina peatbog.

Spider material for the present study originated from two sources: (1) material collected by hanging desk traps on the rocky slopes of the Labský Důl and Obří Důl valleys; this research is a continuation of the study of extreme habitats without soil cover (RŮŽIČKA, in press); (2) material from the programme „Biomonitoring“ collected by pitfall traps at the bottom of the Obří Důl valley.

Study sites

Labský Důl valley in the western part, and Obří Důl valley in the eastern part are components of two main anemo-orographic systems in the Krkonoše Mts. (JENÍK, 1961, 1997). These systems consist of (1) a funnel-shaped windward section, (2) an accelerating summit section, and (3) a turbulent leeward section. Spiders were collected at three localities (Fig. 1).

Pančavská Jáma corrie in Labský Důl valley (1200 m a.s.l.). Vertical granite eastward-facing rocks in the leeward space of the valley. The traps were hung both on the bare rock walls in fully shaded gorges and on the sun-exposed rocks with sporadic plant tussocks.

Sněžka Mt. (1500 m a.s.l.) The traps were hung on the low mica-schist rock ridges in the upper part of Sněžka Mt., which forms the westward-facing wind-exposed slope of the valley.

Úpská Jáma corrie, tall-herb stands with numerous stones at the bottom of the Obří Důl valley (1200 m a.s.l.).

Material and methods

We automated the collecting of spiders on rocks using hanging desk traps (RŮŽIČKA, ANTUS, 1997). The traps, made of rigid plastic, consisted of a desk (i.e. a platform 25 x 20 cm) and a can (13 cm high and 10.5 cm in diameter) inserted in the center of the desk. The traps contained a mixture of 7% formaldehyde and 10% glycerol plus a few drops of a surfactant. Each trap was hung from a hooked nail, a band of emery tape was stuck on the back edge of the trap and shaped to form a transit between the desk and the rock surface. Six traps were placed in Pančavská jáma from 21 June 1997 to 6 August 1998, and six traps were placed at Sněžka Mt. from 22 June 1997 to 3 August 1998.

Epigeic spiders in Obří Důl were captured by using floor traps (NOVÁK, 1969). These traps consisted of a metal ring (diameter 60 cm, 15 cm high), which was inserted in the soil. The upper margin was arranged flush with the soil surface, and the soil inside the ring was removed. A glass with conservation fluid (4% formaldehyde) was inserted into the soil at the bottom of the inner space. Nine traps were used. The material was collected by Jan Vaněk from May to October in 1985, 1987 and 1991, 1993.

Results and discussion

Spiders on rocks

A total of 96 spider individuals belonging to 27 species were collected on the rocks in Pančavská Jáma, and a total of 29 spider individuals belonging to 14 species were collected on the rocks at Sněžka Mt. (Table 1).

The smaller number of species and specimens in the material from Sněžka Mt. seems to be the result of wind action. Leeward rocks of Pančavská Jáma offer more hospitable space for spiders, especially for net spiders, than the wind-exposed rocks at Sněžka Mt.

The records of *Diplocentria bidentata* (EMERTON), *Lepthyphantes arciger* (KULCZYŃSKI), *L. pulcher* (KULCZYŃSKI), *M. georgescuae* MILLIDGE and *Sitticus saxicola* (C. L. KOCH) are of interest. However, only *L. pulcher* is known as a specialised inhabitant of rocks.

Spiders in tall-herb vegetation

A total of 5598 spider individuals belonging to 72 species was collected during six years in tall-herb stands in the Úpská Jáma corrie (Table 2).

72 spider species collected in the leeward space of Úpská Jáma corrie during six years indicated an unequal distribution of biodiversity in anemo-orographic systems in comparison to 49 spider species collected (also during six years by the same method) on the windward summit of Studniční Hora Mt. (RŮŽIČKA, VANĚK, 1997). *Alopecosa taeniata* (C. L. KOCH), *Coelotes terrestris* (WIDER) and *Cybaeus angustiarum* L. KOCH prevailed among the large-sized species, whilst *Bolyphantes alticeps* (SUNDEVALL), *Diplocephalus latifrons* (O. P.-CAMBRIDGE) and *Centromerus pabulator* (O. P.-CAMBRIDGE) prevailed among the small species.

T a b l e 1. Survey of material from the rocks in Pančavská Jáma corrie (A) and Sněžka Mt. (B). ♂/♀/juv.

| | A | B |
|---|-------|-----|
| SEGESTRIIDAE | | |
| <i>Segestria senoculata</i> (L.) | -/-/1 | |
| LINYPHIIDAE | | |
| <i>Bathyphantes gracilis</i> (BL.) | | 1/- |
| <i>Bolyphantes caucasicus</i> TANA. | 1/1 | |
| <i>Bolyphantes luteolus</i> (BL.) | 1/- | |
| <i>Diplocentria bidentata</i> (EMER.) | | 2/- |
| <i>Diplocephalus cristatus</i> (BL.) | 3/- | |
| <i>Diplocephalus latifrons</i> (O. P.-C.) | 3/- | |
| <i>Erigone atra</i> BL. | | -/1 |
| <i>Labulla thoracica</i> (WIDER) | -/1 | |
| <i>Lepthyphantes alacris</i> (BL.) | 1/1 | |
| <i>Lepthyphantes arciger</i> (KULC.) | | 1/- |
| <i>Lepthyphantes pulcher</i> (KULC.) | 2/1 | |
| <i>Micrargus georgescuae</i> MILL. | 2/- | -/1 |
| <i>Meioneta</i> sp. | | -/1 |
| <i>Oreonetides vaginatus</i> (TH.) | | 1/- |
| <i>Sintula corniger</i> (BL.) | -/1 | |
| <i>Walckenaeria antica</i> (WIDER) | | -/1 |
| <i>Walckenaeria cuspidata</i> (BL.) | 1/- | |
| ARANEIDAE | | |
| <i>Araneus diadematus</i> CL. | -/1/2 | |
| LYCOSIDAE | | |
| <i>Acantholycosa norvegica sudetica</i> (L. K.) | | 5/- |
| <i>Alopecosa taeniata</i> (C. L. K.) | 21/5 | |
| <i>Pardosa riparia</i> (C. L. K.) | -/1 | 1/- |
| <i>Pardosa saltuaria</i> (L. K.) | | 7/2 |
| AGELENIDAE | | |
| <i>Histoipona torpida</i> (C. L. K.) | 1/- | |
| <i>Tegenaria silvestris</i> L. K. | 3/- | |
| HAHNIIDAE | | |
| <i>Cryphoea silvicola</i> (C. L. K.) | 2/3 | |
| <i>Hahnia montana</i> (BL.) | 1/- | |
| AMAUROBIIDAE | | |
| <i>Amaurobius fenestralis</i> (STRO.) | 8/- | |
| <i>Callobius claustrarius</i> (HAHN) | 5/1 | |
| <i>Coelotes atropos</i> (WALC.) | | 2/- |
| <i>Coelotes terrestris</i> (WIDER) | 1/1 | 2/- |
| CLUBIONIDAE | | |
| <i>Clubiona alpicola</i> KULC. | 2/1 | 1/- |
| GNAPHOSIDAE | | |
| <i>Haplodrassus signifer</i> (C. L. K.) | 3/- | |
| <i>Micaria pulicaria</i> (SUND.) | 1/- | |
| <i>Zelotes clivicola</i> (L. K.) | 1/1 | |
| SALTICIDAE | | |
| <i>Euophrys erratica</i> (WALC.) | 7/5 | |
| <i>Sitticus rupicola</i> (C. L. K.) | 1/- | |
| <i>Sitticus saxicola</i> (C. L. K.) | 1/- | |

BUCHAR (1970) described the allopatric occurrence of *C. terrestris* and *C. atropos* (WALCKENAER) in the Czech Republic, in comparison with the sympatric occurrence of these two species in the Slovak Republic. In the Czech Republic *C. terrestris* occurs in the forest zone, but *C. atropos* occurs in the alpine zone above the tree line. In the Úpská Jáma corrie we found these two species to be sympatric. However, *C. terrestris* prevails here, while *C. atropos* reaches its lowest altitude of occurrence in the area of the leeward corrie. Avalanches mechanically disturb woody plants in the avalanche path, which penetrates through the upper mountain forest and brings down various azonal sub-alpine and alpine communities.

Notes on selected species

Bolyphantes caucasicus Tanasevitch, 1990 (Fig. 2A, B)

Material: Czech Republic, Krkonoše Mts., Labský Důl valley, 4 August – 27 September 1997, desk trap on rocky slope, 1 ♂, 1 ♀, leg. V. Růžička; Czech Republic, Krkonoše Mts., Obří Důl valley, 27 September – 17 October 1985, 1 ♀, 19 August – 3 September 1987, 1 ♀, pitfall trap in herb vegetation on the valley bottom, leg. J. Vaněk. Material for

T a b l e 2. Survey of material from the mountain tall herb wetlands in the Úpská Jáma corrie. ♂/♀/juv.

| | 1985 | 1986 | 1987 | 1991 | 1992 | 1993 |
|---|--------|-------|-------|-------|-------|------|
| SEGESTRIIDAE | | | | | | |
| <i>Segestria senoculata</i> (L.) | | 2/- | | 1/-/1 | 1/-/1 | |
| DYSDERIDAE | | | | | | |
| <i>Harpactea lepida</i> (C. L. K.) | -/1 | -/4 | 2/- | | | |
| THERIDIIDAE | | | | | | |
| <i>Robertus lividus</i> (BL.) | 10/7 | 25/5 | 3/2 | 5/2 | 3/1 | 2/3 |
| <i>Robertus scoticus</i> JACK. | 1/- | -/1 | | | | |
| <i>Robertus truncorum</i> (L. K.) | | 2/1 | 1/- | | -/1 | |
| LINYPHIIDAE | | | | | | |
| <i>Allomengea scopigera</i> (GRUBE) | | -/2 | | | | |
| <i>Asthenargus helveticus</i> SCHEN. | | | | | 1/- | |
| <i>Bathyphantes similis</i> KULC. | -/8 | 5/16 | 1/4 | -/1 | -/2 | |
| <i>Bolyphantes alticeps</i> (SUND.) | 69/107 | 37/41 | 44/32 | 6/3 | 2/1 | |
| <i>Bolyphantes caucasicus</i> TANA. | -/1 | | -/1 | | | |
| <i>Bolyphantes luteolus</i> (BL.) | 2/2 | 4/- | | | | |
| <i>Centromerita bicolor</i> (BL.) | 2/1 | | | | | |
| <i>Centromerus pabulator</i> (O. P.-C.) | 29/27 | 29/69 | 72/19 | 8/2 | 1/8 | |
| <i>Centromerus sellarius</i> (SIMON) | 20/2 | 20/6 | 17/1 | 3/- | 3/1 | 2/- |
| <i>Centromerus sylvaticus</i> (BL.) | 5/2 | 4/1 | 2/1 | 1/- | -/1 | -/3 |
| <i>Diplocephalus cristatus</i> (BL.) | 4/9 | 5/4 | 1/6 | -/1 | -/3 | |
| <i>Diplocephalus helleri</i> (L. K.) | | 1/- | 1/- | 1/- | | |
| <i>Diplocephalus latifrons</i> (O. P.-C.) | 54/41 | 68/40 | 40/33 | 16/5 | 22/20 | 3/5 |
| <i>Diplostyla concolor</i> (WIDER) | 8/4 | 19/14 | 2/1 | 7/6 | 6/13 | |
| <i>Erigone atra</i> BL. | 5/1 | 2/- | | 2/- | | |
| <i>Erigone dentipalpis</i> (WIDER) | 1/1 | -/1 | | | | |
| <i>Evansia merens</i> O. P.-C. | | | | | -/1 | |
| <i>Gonatium rubellum</i> (BL.) | 2/- | | | | | |
| <i>Hilaira excisa</i> (O. P.-C.) | 27/2 | 17/- | 11/2 | 2/- | 2/- | |
| <i>Hilaira tatica</i> KULC. | -/1 | | | | | |
| <i>Lepthyphantes alacris</i> (BL.) | | -/1 | | | | |
| <i>Lepthyphantes alutatus</i> SIMON | 8/2 | 2/6 | 4/2 | 3/1 | 1/1 | |
| <i>Lepthyphantes cristatus</i> (MENGE) | | | | 1/- | -/3 | |
| <i>Lepthyphantes flavipes</i> (BL.) | -/1 | | 1/- | | | |
| <i>Lepthyphantes mengei</i> KULC. | | 4/- | 1/- | | 2/- | |
| <i>Lepthyphantes tenebricola</i> (WIDER) | 22/23 | 16/27 | 6/4 | 18/16 | 5/2 | 1/2 |
| <i>Leptorhoptrum robustum</i> (WEST.) | 1/- | | | | | |
| <i>Meioneta milleri</i> THAL. ET AL. | | 4/7 | | 1/2 | 1/1 | 2/- |
| <i>Meioneta rurestris</i> (C. L. K.) | 5/3 | 1/2 | 1/1 | | -/2 | 1/- |
| <i>Micrargus herbigradus</i> (BL.) | 4/- | 7/3 | -/1 | 1/2 | -/2 | --/1 |
| <i>Porrhomma convexum</i> (WEST.) | | 1/- | 2/- | | | |
| <i>Porrhomma egeria</i> SIMON | -/1 | 1/1 | 2/- | 1/- | | |
| <i>Saaristoa abnormis</i> (BL.) | 14/1 | 20/- | 8/- | 1/- | 2/- | 1/- |
| <i>Saloca diceros</i> (O. P.-C.) | 4/- | 11/1 | 4/1 | 12/2 | 5/- | |

Table 2. (cont.)

| | 1985 | 1986 | 1987 | 1991 | 1992 | 1993 |
|---|--------|---------|-----------|----------|----------|--------|
| <i>Sintula corniger</i> (BL.) | 1/3 | 6/2 | 2/- | 5/1 | 1/1 | |
| <i>Walckenaeria acuminata</i> BL. | 2/2 | 4/4 | -/1 | | 1/- | |
| <i>Walckenaeria atrotibialis</i> O. P.-C. | | | 2/1 | | | |
| <i>Walckenaeria dysderoides</i> (WIDER) | | | | 1/- | | |
| <i>Walckenaeria nudipalpis</i> (WEST.) | 1/- | 2/- | -/1 | | | |
| <i>Walckenaeria nodosa</i> O. P.-C. | | 1/3 | | | | |
| ARANEIDAE | | | | | | |
| <i>Araneus diadematus</i> CL. | | | | 1/- | -/1 | |
| LYCOSIDAE | | | | | | |
| <i>Alopecosa pulverulenta</i> (CL.) | 1/- | | 1/- | | | |
| <i>Alopecosa taeniata</i> (C. L. K.) | 366/92 | 449/121 | 170/88/28 | 195/57/8 | 209/62/4 | 22/18 |
| <i>Pardosa amentata</i> (CL.) | 1/1 | 8/- | | | 1/1 | -/1 |
| <i>Pardosa pullata</i> (CL.) | 2/2 | -/2 | 1/- | | | -/1 |
| <i>Pardosa riparia</i> (C. L. K.) | 11/3 | 28/- | 7/3 | 2/4 | 3/- | 2/5 |
| <i>Pardosa saltuaria</i> (L. K.) | 2/1 | 24/1 | 6/1 | | 2/- | |
| <i>Pirata hygrophilus</i> TH. | 1/2 | 4/5 | 2/2 | | 1/1 | |
| <i>Pirata piraticus</i> (CL.) | | | -/1 | | | |
| <i>Xerolycosa nemoralis</i> (WEST.) | 1/- | -/2 | 1/- | | | 1/- |
| AGELENIDAE | | | | | | |
| <i>Tegenaria ferruginea</i> (PANZ.) | | 1/- | | | | |
| <i>Tegenaria silvestris</i> L. K. | 1/1 | 3/- | | | | |
| CYBAEIDAE | | | | | | |
| <i>Cybaeus angustiarum</i> L. K. | 89/14 | 123/43 | 63/27/1 | 44/8 | 41/18 | 21/21 |
| AMAUROBIIDAE | | | | | | |
| <i>Callobius claustrarius</i> (HAHN) | 20/5 | 32/2 | 34/4/1 | 13/2 | 12/2 | 5/1 |
| <i>Coelotes atropos</i> (WALC.) | 13/2 | 6/2 | 4/1 | 3/- | 2/2 | 1/1 |
| <i>Coelotes terrestris</i> (WIDER) | 163/21 | 110/20 | 164/11/2 | 107/9 | 99/12 | 134/14 |
| CLUBIONIDAE | | | | | | |
| <i>Clubiona alpicola</i> KULC. | 3/7 | 9/12 | -/3 | 1/1 | -/1 | -/1 |
| <i>Clubiona reclusa</i> O. P.-C. | | 1/- | | | | |
| GNAPHOSIDAE | | | | | | |
| <i>Drassodes pubescens</i> (TH.) | 1/- | | | | | |
| <i>Drassyllus praeficus</i> (L. K.) | | | | | | -/1 |
| <i>Haplodrassus signifer</i> (C. L. K.) | 9/3 | 17/2 | 9/2 | 13/7 | 4/1 | |
| <i>Micaria pulicaria</i> (SUND.) | 2/3 | 9/19 | 5/2 | 3/1 | 4/2 | 3/- |
| <i>Zelotes clivicola</i> (L. K.) | 1/1 | | | | | |
| <i>Zelotes subterraneus</i> (C. L. K.) | 1/- | 4/2 | 4/1 | 1/- | 2/- | |
| THOMISIDAE | | | | | | |
| <i>Xysticus audax</i> (SCHR.) | 3/- | 4/- | | 2/- | | |
| <i>Xysticus luctuosus</i> (BL.) | 1/- | | | | | |
| SALTICIDAE | | | | | | |
| <i>Sitticus rupicola</i> (C. L. K.) | 6/3 | 11/6 | 1/2 | 9/- | 2/- | 1/- |

comparison: *Bolyphantes index* (THORELL, 1856). Sweden: Lappland, Lycksele lappmark, 27 June 1937, 1 ♀, leg. A. Holm; Lappland, Torne lappmark, Abisko National Park, 30 June 1930, 1 ♀, leg. A. Holm; Dalarna, Ore, 1 June 1986, 1 ♂, 2 ♀, leg. T. Kronestedt. Austria: N. Tirol, Seefeld Wildmoss, 31 May 1962, 2 ♀; Innsbruck, Achselkopf, 3 May 1986, 1 ♂, 1 ♀; Carinthia, Glockner road at 1 900 m., 1978/1980, 1 ♂; all leg. C. Thaler. The type material from the Caucasus and the material from the Harz Mts. was not available.

Description: Female: Total length 2.20 mm, carapace length 1.05 mm, width 0.87 mm. Carapace pale with a dark midline, abdomen white with a greyish pattern. Epigyne as in Fig. 2 A. Male: Total length 2.20 mm, carapace length 1.11 mm, width 0.93 mm. Carapace light brown with a dark midline, abdomen white with a greyish pattern. Paracymbium as in Fig. 2 B.

Differential diagnosis:

Epigyne with narrow stretcher (Fig. 2 A). Distal branch of male paracymbium with narrow tooth-like projection on outer margin (Fig. 2 B) *Bolyphantes caucasicus*

Epigyne with broad stretcher (Fig. 2 C). The distal branch of male paracymbium with broad trianglural projection on outer margin (Fig. 2 D).....*Bolyphantes index*

Notes: The dark background prevails in the abdomen coloration of *B. index* from Sweden, and the pattern is formed by clearly separated whitish spots. The coloration of specimens from Austria is not so striking, being light grey and pale without separate white spots. The prevailing colour pattern in *B. caucasicus* from the Czech Republic consists of separated white spots on a pale background.

B. index occurs in North Europe and in the Alps. THALER (1976) designated it as an arctic-alpine species. *B. caucasicus* was described from the Caucasus Mts. (TANASEVITCH, 1990). The specimen of *Bolyphantes index* from Šumava Mts. mentioned by BUCHAR (1989, 1993) was redetermined as *B. crucifer* (BUCHAR, pers. com.) The specimens of *Bolyphantes index* from Krkonoše Mts. mentioned in the check-list of the spiders of the Czech Republic (BUCHAR et al., 1985) were now redetermined as *B. caucasicus*. *B. index* must be deleted from the check-list of spiders of the Czech Republic. The species status of the material of *B. index* from Poland (PROSZYŃSKI, STAREGA, 1971) and Harz Mts. (WIEHLE, 1965) should be reconsidered.

B. index inhabits spaces among shrubs, tree roots, and dwarf shrubs, and it is able to climb on the lower tree parts (PALMGREN, 1975; MAURER, HÄNGGI, 1990; THALER, 1995); HEIMER, NENTWIG (1991) also included rock fissures. The Caucasian material of *B. caucasicus* originated from mountain grasslands, at an altitude of 1350-2550

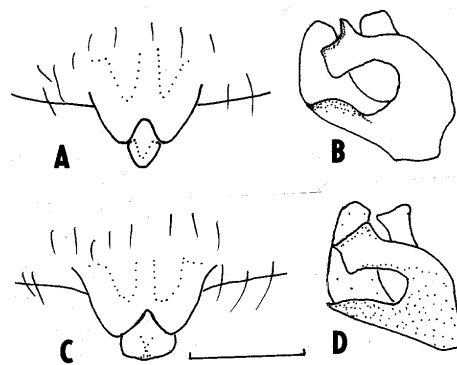


Fig 2. *Bolyphantes caucasicus* (A, B): A- epigyne, B- male paracymbium from behind; *Bolyphantes index* (Sweden) (C, D): C- epigyne, D- male paracymbium from behind. Scale line 0.2 mm.

m (TANASEVITCH, 1990). One pair of *B. caucasicus* was trapped in a hanging desk trap installed on a small rock on a steep grass slope in the upper part of Labský Důl valley. Two solitary females were trapped in a pitfall trap installed in herb communities at the bottom of the Obří Důl valley.

Diplocentria bidentata

Two specimens were captured at Sněžka Mt. The occurrence of this species in the Czech Republic is known at an altitude of 600-900 m from boulder accumulations in mountain valleys, and at an altitude of 350-450 m, exclusively from the lower margins of freezing scree slopes (RŮŽIČKA, HAJER, 1996).

Lepthyphantes arciger

One specimen was captured at Sněžka Mt. on a rock surface. Three specimens collected by ANTUŠ (1982) under a stone and on the rock surface during night collections at Stráž hill (protective belt of Krkonoše NP) represent the only record in the Czech Republic.

Lepthyphantes pulcher

Three specimens were captured on rocks in the Pančavská Jáma corrie. This species is known to be a specialised inhabitant of rock surfaces (ANTUŠ, 1982; RŮŽIČKA, 1992).

Micrargus georgescuae

Two specimens were captured in the narrow, shady avalanche gorge in the Pančavská Jáma corrie and one specimen at Sněžka Mt. The occurrence of this species in the Czech Republic is known from submontane wetland in the forest edge of the Šumava Mts. (880 m a.s.l.) and from cold gorges in Teplické Skály sandstone rocks (500-650 m a.s.l.) (RŮŽIČKA, unpubl.).

Meioneta milleri THALER, BUCHAR ET KŮRKA

Numerous specimens of *M. rurestris* (C. L. KOCH) and *M. milleri* were collected in the Úpská Jáma corrie, one female from the Sněžka Mt. remains undeterminable. The species *Meioneta rurestris* and *Meioneta milleri* were not distinguished in the study of RŮŽIČKA, VANĚK (1997). The material, formerly designated as *M. rurestris*, has now been redetermined. In total 82 males of *M. rurestris* and 21 males of *M. milleri* were collected at Studniční Hora Mt., on a stony alpine summit, and in total 10 males of *M. rurestris* and 33 males of *M. milleri* were collected in Úpská Rašelina peatbog. Females of these two species are indistinguishable (THALER et al., 1997).

Maro lehtineni

One male from the material collected at Studniční Hora Mt., 2 km west of Sněžka Mt. (RŮŽIČKA, VANĚK, 1997), remained undetermined. Now it has been determined as *Maro lehtineni* SAARISTO (determination confirmed by M. Saaristo). This species was described from Finland and was recorded from the Alps (THALER, 1983). It represents a new record for the arachnofauna of the Czech Republic.

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