

On the distribution and ecology of a rare harvestman *Holoscotolemon jaqueti* in Central Europe

Valerián Franc*

Department of Biology and Ecology, Matthias Belius University,
Banská Bystrica

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Abstract

This article deals with the distribution and ecology of a rare and little-known harvestman *Holoscotolemon jaqueti* (Corti, 1905) in Central Europe. Recent localities are situated in the very little area in Southern Slovakia and Northern Hungary – orographic units Cerová vrchovina, Cserhát, Mátra and Bükk. It especially lives in cold and moist microhabitats: karst and pseudokarst caves, rock fissures and deeper scree strata; but in the warm Pannonian area only. Moreover, it is noticeable due to its appearance – pale colour and conspicuously large thorny pedipalpi; they are obviously used for preying upon springtails prevailingly. *Holoscotolemon jaqueti* requires more attention of arachnologists and conservationists. It ought to be listed among protected animals in Slovakia and Hungary as well.

Key words: harvestmen (Opiliones), *Holoscotolemon jaqueti*, relict soil fauna, protection of zoogenofund

Introduction

Harvestmen rank among less-attractive and, therefore, relatively little-known arthropods. Nevertheless, several species may be an exception of this “rule”. It especially concerns two specialised and obviously phylogenetically archaic families of Central-European harvestmen-fauna – Ischyropsalidae and Erebo-mastidae. A notable, little-known and perhaps mysterious harvestman *Holoscotolemon jaqueti* (CORTI, 1905) [fig. 1] belongs to the second family.

Material and methods

This species was described in the beginning of the 20th century from Romanian caves. Later it was also cited from Ukraine (MARTENS 1978), but voucher material is not available (obviously it was destroyed – dried up). New records of *Holoscotolemon jaqueti* from Central Europe are accesible from the 90s: It was found near Mátra

* Correspondence to: Valerián Franc, Department of Biology and Ecology, Faculty of Natural Sciences, Matthias Belius University, Tajovského 40, 97401 Banská Bystrica, Slovakia, e-mail: franc@fpv.umb.sk

by O. Merkl and published as a new species for Hungarian fauna (LENGYEL, MURÁNYI & KONTSCHÁN 2004). The further records are available from the following orographic units: Mátra, Bükk and Cerová vrchovina Mts. It was prevailingly collected individually and/or by sifting of detritus in underground habitats (rock fissures, screes and both karst and pseudokarst caves). The material was identified according to the key by ŠILHAVÝ (1971); it is mentioned under the invalid synonymum *Brigestus granulatus* Roewer, 1915 here (revised by S. Stašiov).



Fig. 1: *Holoscotolemon jaqueti* (4–5 mm)
Photo S. Korenko

Results

The review of records of *Holoscotolemon jaqueti* in Southern Slovakia and Northern Hungary is analysed below (tab. 1). These findings deserve special comment.

Mátraszőlös village (approximately 5 km NNW from the town Pásztó), sieved from the litter June 26, 1994, O. Merkl lgt. (LENGYEL et al. 2004); a new species for the Hungarian fauna. Despite the name of the village this place (a valley with older beech forest) is situated on the right bank of the river Zagyva, belonging to the orographic unit Cserhát. This remarkable finding was surprisingly published 10 years later, but, unfortunately, without detailed geographic and ecologic data.

Mátraháza (central massif of the Mátra Mts.), in the litter under the large stone in a beech forest, the beginning of October 1995 (VAN DER WEELE 1998). The author published it as the first record for the Hungarian fauna; because he did not know the Merkl's finding mentioned above, which was published delayed.

‘Nyáryho jaskyňa’ cave – included in the Nature Reserve (later only “NR”) Pohanský hrad, in the detritus in the rear part of this pseudokarst cave (near a fissure system with draught of a cold air) May 20, 1998, R. Mlejnek lgt. This founding was published as a new record for the Slovakian fauna (FRANC &

MLEJNEK 1999). The further 2 specimens were collected here later, on May 9, 2000, by R. Mlejnek as well.

NR Steblová skala, in the basalt scree (in the depth approximately 80 cm) March 15, 1999, R. Mlejnek lgt. This founding is especially remarkable because the surrounding habitats are apparently xerothermic with the occurrence of a lot of clearly thermophilous insects, spiders, etc.

'Alabástrom-barlang' cave, sieved in the detritus in the rear part of the cave April 22, 1999, V. Franc lgt. Meanwhile it is a single Central-European finding of this harvestman from a karst cave.

'Volcanic well' in the NR Ragač, in the gravel at the bottom (in the depth approximately 4.5 m) April 24, 1999, R. Mlejnek lgt.

'Pók-barlang' cave, in the gravel approximately 8 m from the entrance of this fissure pseudokarst cave July 7, 2000, R. Mlejnek lgt.

Table 1. Review of findings of *Holoscotolemon jaqueti* in Southern Slovakia and Northern Hungary

	Site	Orographic unit	DFS ¹	Altitude	Date	N ^{o2}	Collector
Hungary	Mátraszözlös	Cserhát	8084a	? 450 m	June 26, 1994	1	O. Merkl
	Mátraháza	Mátra	8185b	± 700 m	beginning of Oct. 1995	1	R. van der Weele
	'Alabástrom-barlang' cave	Bükk	7889c	± 520 m	April 22, 1999	1	V. Franc
	'Pók-barlang' cave ³	Cv ⁴	7885c	± 610 m	July 7, 2000	2	R. Mlejnek
Slovakia	'Nyáryho jaskyňa' cave ³	Cv ⁴	7885b	570 m	May 20, 1998 + May 9, 2000	1 2	R. Mlejnek
	NR Steblová skala ³	Cv ⁴	7785b/d	380 m	March 15, 1999	1	R. Mlejnek
	Studňa na Ragači	Cv ⁴	7785d	± 520 m	April 24, 1999	1	R. Mlejnek
	Dunivá hora Mt.	Cv ⁴	7885a/b	± 540 m	May 16, 2001	>10	V. Franc
	Šiatorská Bukovinka	Cv ⁴	7885a	± 350 m	June 19, 2007	1	V. Franc

1 the grid mapping code of the Databank of the Slovakian fauna, a letter indicates 1st, 2nd, 3rd or 4th quadrant of the mapping square

2 number of individuals

3 collected together with *Mesoniscus graniger* (Crustacea: Isopoda: Oniscoidea)

4 Cerová vrchovina Mts.

Dunivá hora, sieved from the leaf litter in a fissure between basalt boulders having draught of a cold air May 16, 2001, more than 10 specimens, V. Franc lgt., 2 of them coll. S. Stašiov. The first numerous finding of this species.

Šiatorská Bukovinka village, (7885a), sieved from the leaf litter in a shady valley below the castle June 19, 2007, V. Franc lgt., I. Mihál coll.

Discussion and conclusions

Holoscotolemon jaqueti is a rare, highly noticeable harvestman. It may be considered to be a relict species. Its distribution range is surprisingly little – recent records of this species merely concern three orographic units in Northern Hungary (Cserhát, Mátra and Bükk) and one orographic unit (Cerová vrchovina Mts) in Southern Slovakia having a 'trans-boundary' position. [The records from the former Yugoslavia (MARTENS 1978) probably refer to a different species of this genus.]

This species prefers colder terrestrial, especially underground habitats, including both karst and pseudokarst caves, rock fissures and deeper scree strata. On the other hand, these habitats have to be situated in the warm regions only. The appearance of *Holoscotolemon jaqueti* is quite conspicuous, having pale colour and large thorny pedipalpi; they are obviously capable for preying of springtails which are often abundant in mentioned habitats.

Holoscotolemon jaqueti deserves special attention of arachnologists and conservationists. It is highly advisable it will be added in the list of protected species in the Slovak republic.

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