IMPROPHANTES IMPROBULUS (SIMON, 1929) (ARANEAE, LINYPHIIDAE) NEW RECORD FOR THE ROUMANIAN FAUNA

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Abstract. In this paper *Improphantes improbulus* (Simon, 1929) is presented for the first time in the literature about the Roumanian fauna. The new illustrations contribute to a better knowledge about morphological characterization of the species. The currently known distribution of this species in Roumania is also given.

Key words: *Improphantes improbulus,* new record, Roumania.

1. INTRODUCTION

According to Weiss & Urák (2000) only two species of genus *Improphantes* are known to belong to the Roumanian fauna: *I. decolor* (Westring, 1862) and *I. nitidus* (Thorell, 1875).

Improphantes improbulus is the third species of this genus recorded by us for the Roumanian fauna.

According to HEIMER and NENTWIG (1991) the species is spread in South Europe and East Europe. In Fauna Europea (HELSDINGEN, 2007) the species is cited from Austria, Bulgaria, Germany, France, Italy, South Russia, Slovakia and Spain. After PLATNIK (2007) the species has a palearctic spreading.

2. MATERIAL AND METHOD

The specimens (3 males, 4 females and 6 juveniles) were collected manually by the author, on the 27th of August 2008 from the cave entrance (Urşilor Cave / Peştera de la Colţul Surpat Cave), situated in Piatra Craiului Mountains (Roumania) (Fig. 1).

Examined specimens are deposited in the collection of the "Emile Racovitza" Speleological Institute from Bucharest, and preserved in 70% ethanol. In the identification of this species, the works of HEIMER and NENTWIG (1991) and E. SIMON (1929) were consulted. All measurements are in millimeters.

3. RESULTS AND DISCUSSIONS

Improphantes improbulus (Simon, 1929)

Three male and four female specimens were investigated in this study.

Dimensions: Male. Total length: 1.8–2.1 mm. Cephalotorax: length 0.82–0.94 mm, width 0.66–0.73 mm. Abdomen: length 0.98–1.2 mm, width 0.65–0.78 mm.

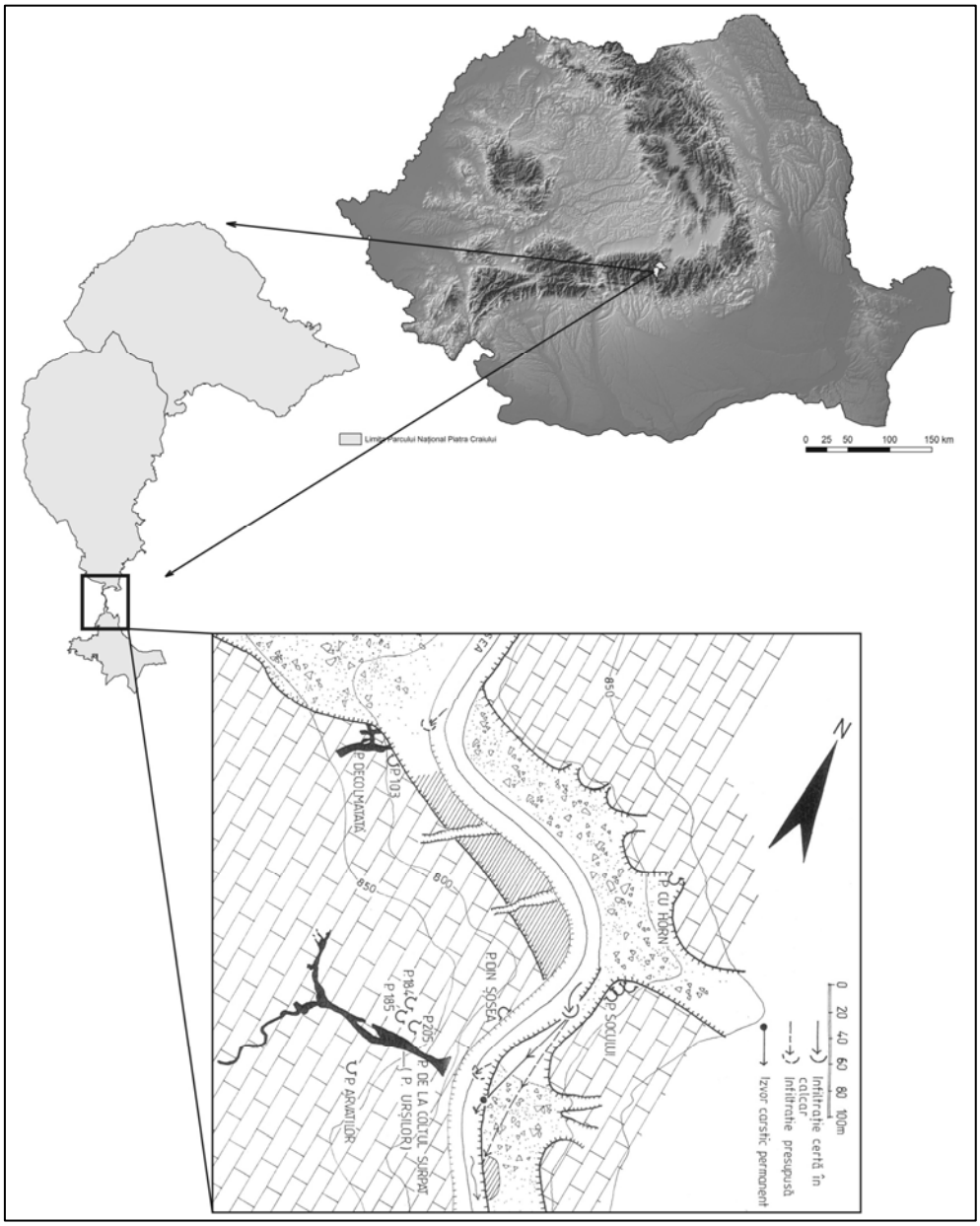

Fig. 1 – The present known distribution of *Improphantes improbulus* (Simon, 1929) in Roumania (map modified after T. Constantinescu, 1987, Hydrologic and speleologic study of Dâmbovița Gorges Contract No. 638).

The cephalotorax has a variable color, between yellowish brown and light grey, with a black marginal line. The sternum is blackish. The eyes have black borders which are confluent, with the exception of those from the median-posterior region. The abdomen is, in general, black-grey and is dotted in the upper part. Legs have a light yellow-brownish color. The legs measurements are shown in Table 1.

Table 1

The legs measurements (mm) of the *Improphantes improbulus* male

Leg	Femora	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.26	0.26	1.32	1.19	0.79	4.82
II	1.12	0.26	1.16	1.07	0.69	4.3
III	0.96	0.24	0.82	0.85	0.52	3.39
IV	1.25	0.24	1.25	1.22	0.69	4.65

Palp (Fig. 2). Femora 0.425 mm, patella 0.125 mm, tibia 0.137 mm.

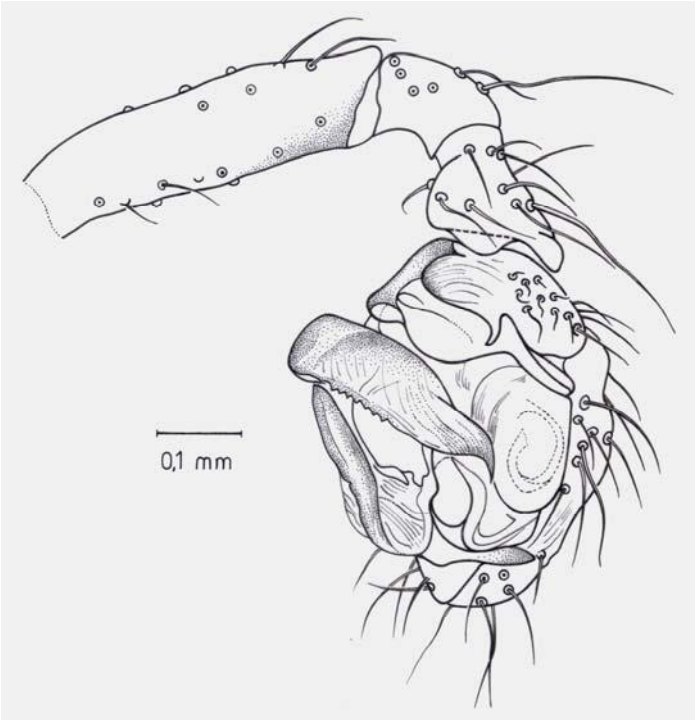

Fig. 2. *Improphantes improbulus* (Simon, 1929) – Male palp, ventral view (orig.).

Tibia presents, at the extremity from the base of the tarsus, a little globular and hairless prominence. The basal ascendant ramus of the paracymbium has, on the inner border, towards the middle, a little sharp black spur. The lamella

characteristica, very delicate, long and straight, is dorsally truncated in the third part and it finishes sinuously-apical with a pointed cusp.

Female. Total length: 2.0–2.5 mm. Cephalotorax: length 0.88–0.98 mm, width 0.66–0.77 mm. Abdomen: length 1.1–1.5 mm, width 0.77–1 mm.

Cephalotorax is dark yellowish-brown with a fine black marginal line. In the anterior part it has a more or less visible truncate spot that reaches forward to the eye, with three very fine lines. The sternum is blackish. The eyes have big black borders, confluent, with the exception of the median-posterior ones. The abdomen is black-grey, slightly lighter in the upper part.

Legs have brown yellowish color. The legs measurements are shown in the Table 2.

Table 2

The legs measurements (mm) of the *Improphantes improbulus* female

Leg	Femora	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.25	0.32	1.29	1.17	0.75	4.78
II	1.2	0.29	1.16	1.1	0.67	4.42
III	1.02	0.26	0.87	0.86	0.5	3.51
IV	1.27	0.26	1.19	1.19	0.62	4.53

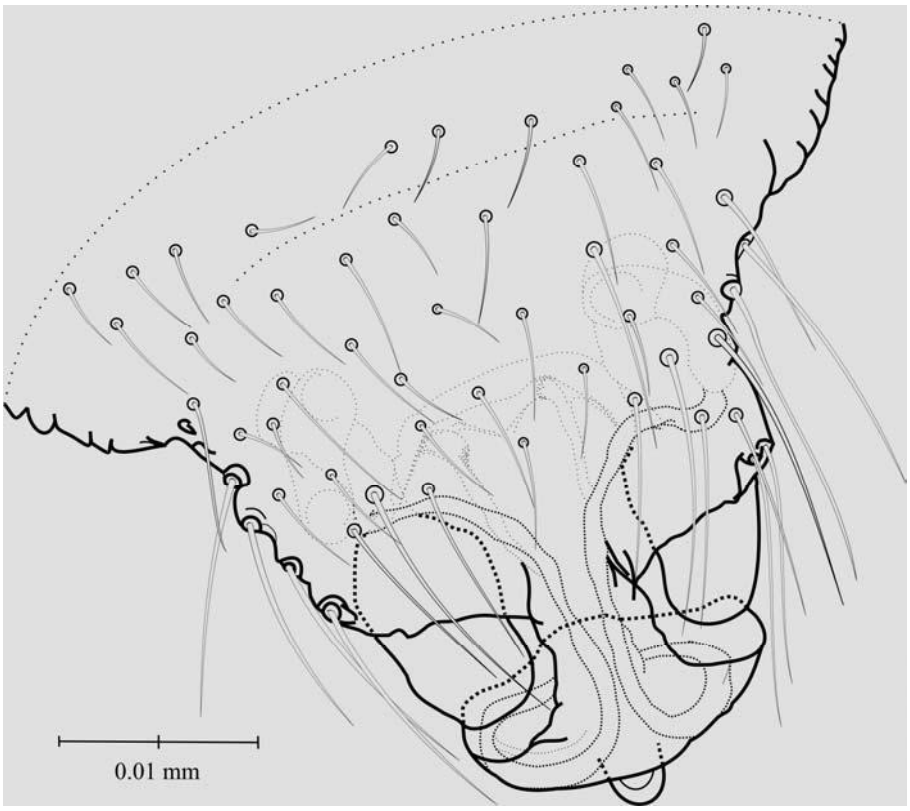

Fig. 3 – *Improphantes improbulus* (Simon, 1929) – Epigyne (orig.).

Epigyne. (Fig. 3). The epigyne plate is well developed, the scapus has the posterior extremity very wide and curved to the interior, its dorsal part is visible, viewed from the top. In the middle of the posterior border one can see from the top the extremity of a little tubercle. The copulatory channels follow, in general, the tract of the scapus, and are continuing up to the spermathecae.

4. CONCLUSIONS

This is the third species of the genus *Improphantes* recorded for the Roumanian fauna.

We specify the measurements of the collected individuals and the data is compared with the information from references. Following Heimer and Nentwig (1991) the total length of the body lies between 1.9–2.3 mm. The specimens that we have collected have the total length of the body between 1.8–2.5 mm.

The feature characteristics of the species do not differ from those mentioned in the original description of the species.

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