SIBUMBELLA ESTERAE N. SP., N. GEN., WITH THE DESCRIPTION OF THE NEW SUBFAMILY SIBUMBELLINAE (ACARI: PROSTIGMATA: TROMBELLIDAE) FROM CROATIA

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The new subfamily Sibumbellinae (Trombellidae) and new genus Sibumbella for the type species Sibumbella esterae n. sp. from Croatia are described.

Key words: Acari, Trombellidae, Sibumbellinae, Sibumbella esterae, new subfamily, new genus, new species, Croatia


U radu su opisane nova potporodica Sibumbellinae (Trombellidae) i novi rod Sibumbella za tipsku vrstu Sibumbella esterae n. sp. iz Hrvatske.

Ključne riječi: Acari, Trombellidae, Sibumbellinae, Sibumbella esterae, nova potporodica, novi rod, nova vrsta, Hrvatska

INTRODUCTION

During a visit to Croatia, a specimen whose main features were typical of the family Trombellidae (SOUTHCOTT, 1987) was collected. This specimen differs from all known genera in this family (based on larvae) in details of the scutum. Therefore, based on this new species, a new genus and new subfamily have been created. In Croatia 16 species belonging to terrestrial Parasitengona were known hitherto (HAITLINGER, 2004). Trombellid mites have not been reported from Croatia and only one species known from larvae was previously found in Europe (BERLESE, 1902; FEIDER, 1958).

The subfamily Trombellinae was created by THOR (1935), who divided the family Trombidiidae Leach into 10 subfamilies. FEIDER (1955) formally proposed the family
Trombellidae and Southcott (1982) the genera Chyzeria, Ralpseudyna, Nothotrombicula, Audyana and Trombella (= Womersleya sic) in the family Trombellidae. Later the family Trombellidae included Womersleya Radford, Nothrotrombidium Womersley, Durenia Vercammen-Grandjean, Parathrombella Andre, Neonothrotrombidium Robaux, Ralpseudyna Vercammen-Grandjean and Maiputrombella Southcott (Southcott, 1982; 1986). Trombella, Chyzeria, Durenia, Audyana and Nothrotrombidium are known only as larvae or with adults. Now, the family Trombellidae is restricted only to four genera: Trombella, Nothrotrombidium, Womersleya and Durenia. Details of the decision are explained by Southcott (1987). Southcott (1987) proposed the following definition for larval Trombellidae: »with one dorsal propodosomal scutum, which projects anteriorly to a narrowed extension or nasus. Dorsal scutum with eight setae, comprising 2 ALs, 2 PLs, 2 AMs, and 2 well separated sensillary setae, placed between ALs and PLs. Eyes 2 + 2. Leg segmental formula 6,6,6. Coxae separated. Pedotarsal claws 1,1,1, or 1,1,2. Supracoaxalae absent«.

MATERIAL AND METHODS

The larva was collected from herbaceous plants. The specimen was preserved in ethanol and then mounted in Berlese’s medium. All measurements are in micrometers. The holotype is deposited at the Museum of Natural History, Wroclaw University, Poland (MNHWU). The terminology is based on Haitlinger (1999).

RESULTS

Family – Trombellidae Thor, 1935

Sibumbellinae n. subfamily

Diagnosis

One dorsal scutum with six setae: barbed pair PL, pair AM and sensillary pair S placed beyond PL, at posterior border of scutum. Scutum without nasus or with long, narrowing, anterior part. Coxal setal formula 2,1,1. Pedotarsal claws 1,1,1. Palpal setal formula 1,1,2,7. Genu I–III and femur I–III both with many solenidia. Anterior part of ventral base of gnathosoma wide.

Sibumbella n. gen.

Diagnosis

With features as in the diagnosis for the subfamily.

Type species: Sibumbella esterae n. sp.

Sibumbella esterae n. sp.

Diagnosis

fD 28, fV 20, fSoTa 0-1-1, fSoTi 1-2-2, fSoGe 4-4-6, fSoFe 7-5-8, TaI 76, TiIII 58.
Etymology

The name of the species has been derived from the name Estera.

Material

Locus typicus: holotype larva, Croatia, Šibuljina n. Starigrad, 6.VII.2002, from plants; leg. R. Haitlinger; MNHWU.

Description

Idiosoma longer than wide with 28 barbed dorsal setae arranged 2-6-6-6-6-2 (Fig. 1). Eye cornea 8 μm (proximal) and 12 μm (distal) across, both on platelet. Scutum longer than wide with straight posterior border and convex and narrowing anterior borders. It bears six setae: one pair of barbed scutalae PL, barbed AM and sensillary setae (S) placed at posterior border of scutum, both damaged. Two lines surrounding setae AM present (Fig. 3).

Ventral surface with a pair of setae 3a and 20 barbed setae beyond coxae III arranged 7-5-2-2-2-2 (Fig. 2). Two coxalae 1b, coxala 2b and coxala 3b, all barbed (Figs. 8–10). NDV=28+20=48. Gnathosoma with relatively wide base and weakly barbed hypostomalae (sc1) (Fig. 4); chelicerae as in Fig. 6. Palpfemur and palpgenu, each with one barbed seta, palptibia with three barbed setae (Fig. 5). Palptarsus with six barbed setae and one nude seta (Fig. 7). Metric data are given in Tab. 1.

Setal formula of legs. Leg I: Ta 1ω, 18B; Ti 2φ, 1κ, 6B; Ge 6σ, 1κ, 4B; Fe 8σ, 5B; Tr 1B (Fig. 8).

Leg II: Ta 1ω, 1ε, 15B; Ti 2φ, 7B; Ge 4σ, 4B; Fe 5σ, 7B; Tr 1B (Fig. 9).

Figs. 1–2. Sibumbella esterae n. sp. 1. Idiosoma, dorsal view. 2. Idiosoma, ventral view.
Leg. III: Ta 16B; Ti 1φ, 7B; Ge 4σ, 5B; Fe 7σ, 6B; Tr 1B (Fig. 10). Leg lengths: I 296, II 290, III 328. Ip=914.

Remarks
The larva collected in Croatia has the following features which differ from other larval trombellid genera: 1) scutum without nasus or scutum with long narrowing anterior part; 2) scutum with six setae (with sensillary setae) – feature common with Chyzeridae; 3) position on sensillary setae S: placed beyond scutalae PL at posterior border of scutum.

*Sibumbella* differs from the genus *Womersleya* in pedotarsal claws formula 1,1,1 vs 1,1,2 and lack large solenidion on tibia III vs large solenidion present; from *Durenia* in pedotarsal claws formula 1,1,1 vs 1,1,2 and from *Nothrotrombidium* in coxal setal formula 2,1,1 vs 1,1,1, and hypostomalae present vs absent hypostomalae. Based on the above-mentioned characters a new species, a new genus and a new subfamily have been created.

The definition by SOUTHcott (1987) for the family Trombellidae needs reformulation. I propose a new definition of this family taking into consideration the diagnostic characters for the new subfamily. Larva: Trombidioidea with one dorsal propodosomal scutum, which projects anteriorly to a narrowed extension or nasus or weakly narrowing in anterior part. Dorsal scutum with 6 or 8 setae, 2 AL, 2 PL, 2 AM and 2 S or 2
Tab. 1. Metric data for *Sibumbella esterae* n. sp. from Croatia

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eye* proximal cornea, eye** distal cornea

AL, 2 AM, 2 S. Sensillary setae S placed between AL and PL setae or beyond setae PL. Eyes 2+2. Leg segmental formula 6,6,6. Coxae separated. Pedocoxal formula 2,1,1 or 1,1,1. Pedotarsal claws 1,1,1 or 1,1,2. Supracoxalae absent.

Subfamily Trombellinae: dorsal scutum with 8 setae, propodosomal scutum, which projects anteriorly to a narrowed extension or nasus; sensillary setae S placed between scutalae AL and PL.

Subfamily Sibumbellinae: dorsal scutum with 6 setae, propodosomal scutum with short narrowing anterior part; sensillary setae S placed beyond scutalae PL.

REFERENCES

BERLESE, A. 1902: Descrizione e figura della Trombella otiorum n. sp. Riv. pat. veg. 1, 17–128.


