

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

Haitlinger, R.: *Sibumbella esterae* n. sp., n. gen., s opisom nove potporodice Sibumbellinae (Acari: Prostigmata: Trombellidae) iz Hrvatske. *Nat. Croat.*, Vol. 14, No. 2., 141–146, 2005, Zagreb.

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*, *Ralphaudyna*, *Nothrotrombicula*, *Audyana* and *Trombella* [= *Womersleya* sic] in the family Trombellidae. Later the family Trombellidae included *Womersleya* Radford, *Nothrotrombidium* Womersley, *Durenia* Ver-cammen-Grandjean, *Parathrombella* Andre, *Neonothrotrombidium* Robaux, *Ralphaudyna* Ver-cammen-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, 2AMs, 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. Supracoxalae 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, Wrocław 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.

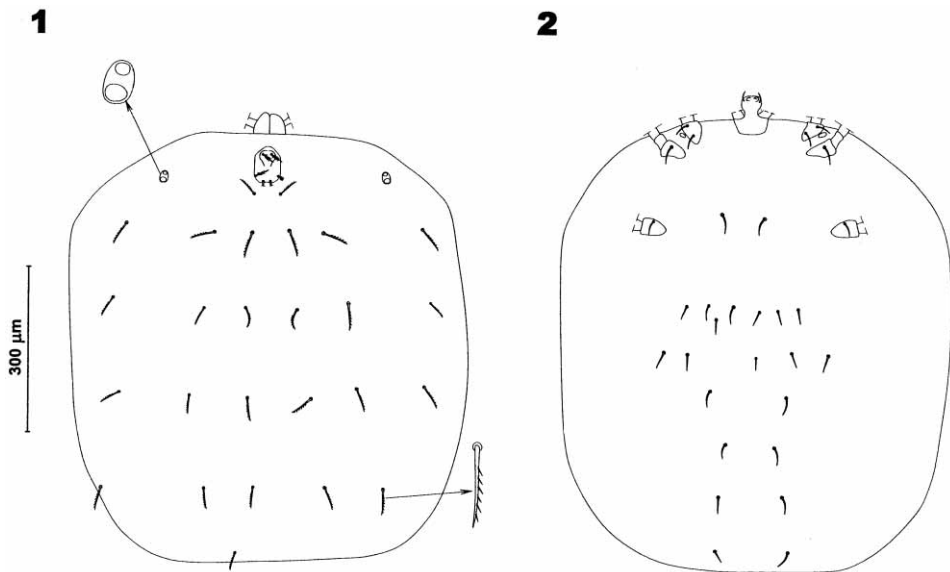
Description

Idiosoma longer than wide with 28 barbed dorsal setae arranged 2-6-6-6-2 (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).

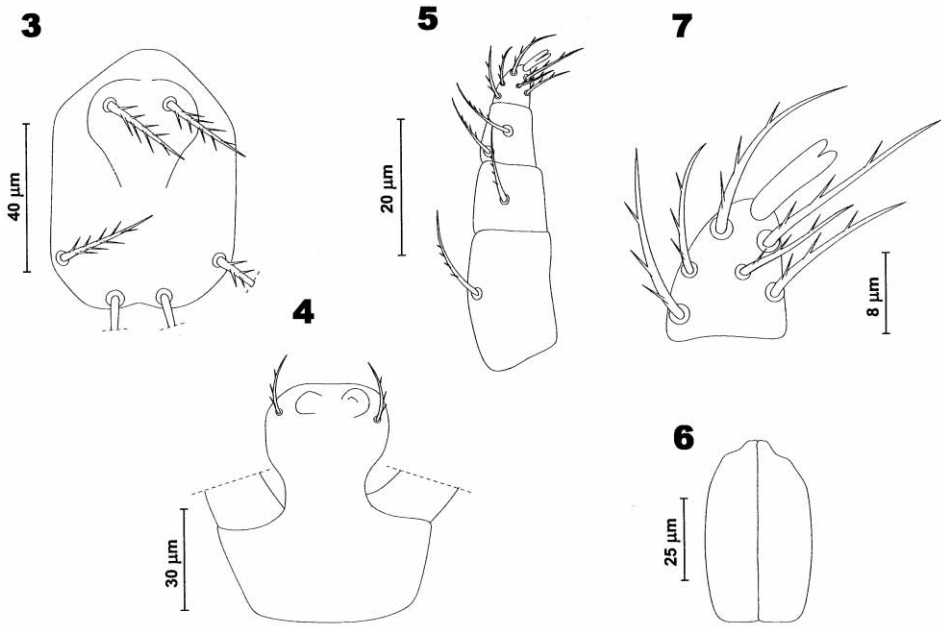
Ventral surface with a pair of setae 3a and 20 barbed setae beyond coxae III arranged 7-5-2-2-2-2 (Fig. 2). Two coxalae 1b, coxala 2b and coxala 3b, all barbed (Figs. 8–10). NDV=28+20=48. Gnathosoma with relatively wide base and weakly barbed hypostomalae (sc1) (Fig. 4); chelicerae as in Fig. 6. Palpfemur 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 1 ω , 18B; Ti 2 ϕ , 1 κ , 6B; Ge 6 σ , 1 κ , 4B; Fe 8 σ , 5B; Tr 1B (Fig. 8).

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



Figs. 1–2. *Sibumbella esterae* n. sp. 1. Idiosoma, dorsal view. 2. Idiosoma, ventral view.



Figs. 3–7. *Sibumbella esterae* n. sp. 3. Scutum. 4. Base of gnathosoma. 5. Palp, dorsal view. 6. Chelicerae. 7. Palptarsus with fragment of palptibia.

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.

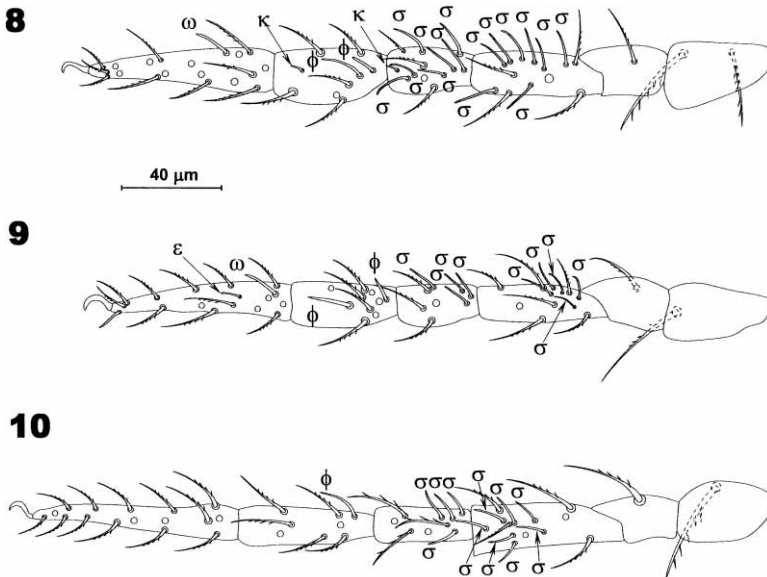
Sibumbella differs from the genus *Womersleya* in pedotarsal claws formula 1,1,1 vs 1,1,2 and lack large solenidion on tibia III vs large solenidion present; from *Durenia* in pedotarsal claws formula 1,1,1 vs 1,1,2 and from *Nothrotrombidium* in coxal setal formula 2,1,1 vs 1,1,1, and hypostomalae present 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

IL	787	PsFd	30
IW	698	PsGd	24
L	72	eye*	8
W	46	eye**	12
AW	16	TaI	76
PW	36	TiI	50
AA	8	GeI	40
SB	14	FeI	60
ISD	50	TrI	26
AP	42	CxI	44
AL	20	TaII	76
PL	24	TiII	46
AM	18	GeII	36
S	broken	FeII	58
DS	32–46	TrII	28
2a	32	CxII	46
1b*	40	TaIII	86
1b**	38	TiIII	58
2b	44	GeIII	42
3b	44	FeIII	62
GL	72	TrIII	40
sc1	?20	CxIII	40

eye* proximal cornea, eye** distal cornea



Figs. 8–10. *Sibumbella esterae* n. sp. 8. Leg I, tarsus-coxa. 9. Leg II, tarsus-coxa. 10. Leg III, tarsus-coxa.

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.

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