

Article

A new larval species of *Allothrombium* (Acari: Prostigmata: Trombidiidae) from Sicily

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Abstract

Allothrombium sicilianum **sp. nov.** (Acari: Prostigmata: Erythraeidae) is described from Sicily. It is the fourth known species of the genus *Allothrombium* with one seta on coxa II.

Key words: Acari, Trombidiidae, *Allothrombium*, new species, larva, Sicily

Introduction

The genus *Allothrombium* Berlese, 1903 includes 20 species based on larvae or larvae and adults (Saboori *et al.* 2010). Among them, there are only three species having one seta on coxae II: *A. epihyllus* Shiba, 1976 from Malaysia, *A. monochaetum* Goldarazena and Zhang, 1997 from Spain and *A. clavatum* Saboori, Pěšić and Hakimitabar, 2010 from Montenegro (Shiba, 1976; Goldarazena and Zhang, 1997, Saboori *et al.*, 2010). To date, there are six species of *Allothrombium* known from Italy: *A. incarnatum* Oudemans, 1905, *A. pergrande* Berlese, 1903, *A. wolffi* Krausse, 1925 based on adults, *A. fuliginosum* (Hermann, 1804), *A. meridionale* Berlese, 1910 based on adults and larvae and *A. neapolitanum* Oudemans, 1910 based on larva (Małol, 2000). In this paper, the seventh *Allothrombium* species is described from Italy.

Material and methods

In May 2010, two larvae of *Allothrombium* were collected in Sicily. Specimens were preserved in ethanol and later mounted in Berlese's medium. Measurements are expressed in micrometers (µm). The terminology of structures and abbreviations follow Goldarazena & Zhang (1997) and Saboori *et al.* (2010).

Holotype and paratype are deposited in the Museum of Natural History, Wrocław University (MNHU), Poland.

Allothrombium sicilianum sp. nov.

Diagnosis

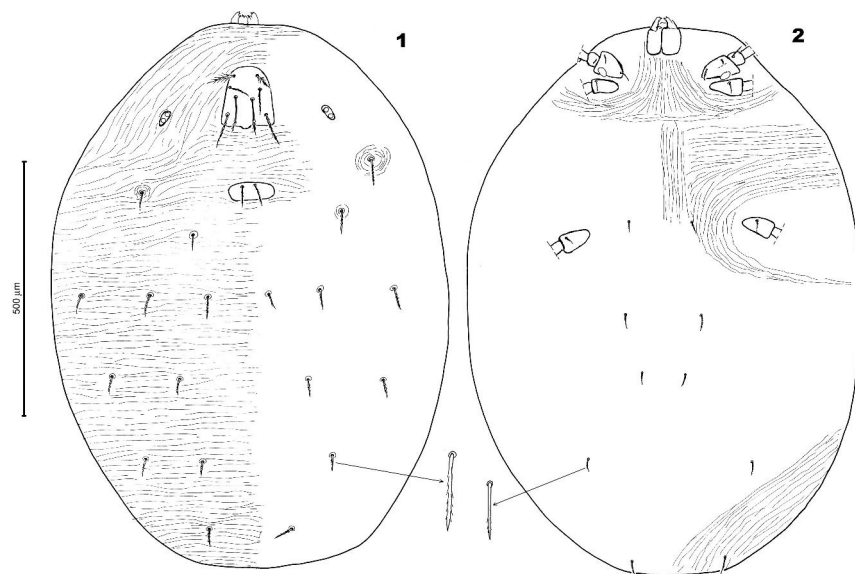
Coxa II with one seta, tarsus III with inner claw reduced, AM 27–32, AW 60–68, W 74–75, TaI 62–66, TiI 45–47.

Description. Larva:

Idiosoma: Oval, strongly ornamented dorsally, with 19 setae (20 in paratype) placed on small platelets, all with short setules. Two pairs of eyes situated lateral to scutum, both on platelet (Fig. 1). Scutum rounded anteriorly with one small lobe posteriorly; bearing three pairs of setae (AM, AL, PL) and one pair of trichobothria (S). AM with some relatively long setules, AL and PL both with short setules, S with relatively long setules on distal ½. PL > AL > AM. S placed closer to AL than PL (Fig. 3). Scutellum wider than long, with two setae placed near its anterior border; both with short setules.

Ventral side of idiosoma: With one pair of setae *3a* and four pairs of setae posterior to coxae III; all these setae with short setules. Ventral surface ornamented as in Fig. 2. Proximal seta *1a* and distal seta *1b* (damaged) on coxa I; both with relatively long setules. Coxa II with seta *2b* and coxa III with seta *3b*; both having short setules in their distal part (Figs. 6–8).

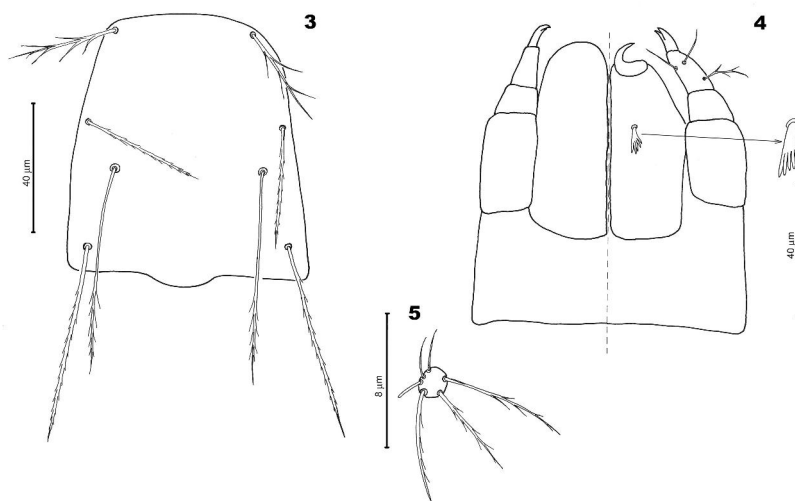
Gnathosoma: One pair of hypostomal setae, distally with five finger-like digitations. Oral seta invisible. Palpfemur and palpgenu without setae. Palptibia with three setae, two nude and one seta with relatively long setules (Fig. 4). Palptarsus with 5 setae and a solenidion; among them three setae with setules (Fig. 5). fPp= 0-0-0-BNN₂-BBNN_ω.



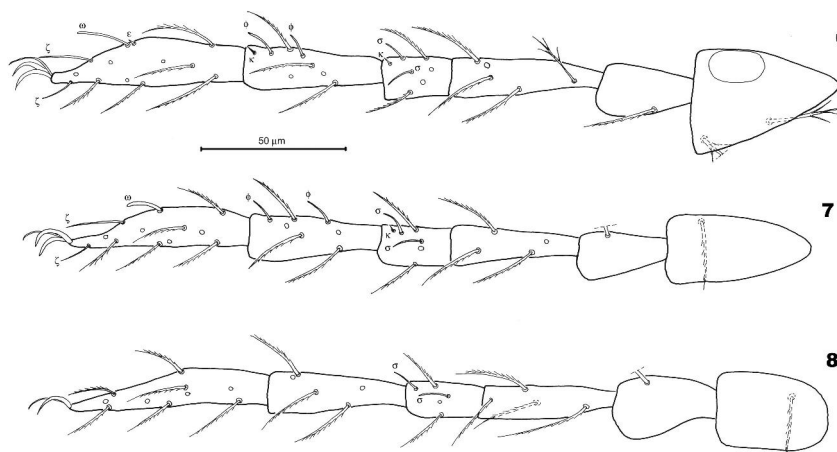
Figures 1–2. *Allothrombium sicilianum* sp. nov. (larva). 1. Idiosoma and gnathosoma, dorsal view; 2. Idiosoma and gnathosoma, ventral view.

Leg lengths: leg I 272 holotype, 263 paratype; leg II 255, 237; leg III 268, 279. IP = 795, 779.

Legs (Figs. 6–8): Legs setal formula: Leg I: Ta 1 ω , 1 ϵ , 2 ζ , 9B, Ti 2 ϕ , 1 κ , 5B, Ge 2 σ , 1 κ , 4B, Fe 5B, Tr 1B, Cx 2B (Fig. 6). Leg II: Ta 1 ω , 2 ζ , 9B, Ti 2 ϕ , 5B, Ge 2 σ , 1 κ , 3B, Fe 4B, Tr 1B, Cx 1B (Fig. 7). Leg III: Ta 10B, Ti 5B, Ge 2 σ , 3B, Fe 4B, Tr 1B, Cx 1B (Fig. 8). Tarsus III with inner claw reduced.



Figures 3–5. *Allothrombium sicilianum* sp. nov. (larva). 3. Scutum; 4. Gnathosoma; 5. Palptarsus.



Figures 6–8. *Allothrombium sicilianum* sp. nov. (larva). 6. Leg I; 7. Leg II; 8. Leg III.

For measurements see Table 1.

Type material

Holotype larva collected from herbaceous plants near Lago di Villarosa n. Enna, ~960 m a.s.l., (37° 35' N, 14°12' E), Enna province, Sicily region, Italy; one paratype with the same data as holotype; leg. R. Haitlinger, 30.05.2010.

Etymology

Named after the island where the holotype was collected.

Table 1. Measurements of *Allothrombium sicilianum* **sp. nov.** (larva). H – holotype, P – paratype.

Character	H	P	Character	H	P
IL	1003	648	<i>1a</i>	37	-
IW	673	502	<i>1b</i>	-	-
AW	60	68	<i>2b</i>	38	37
PW	68	69	<i>3b</i>	38	37
L	84	-	TaI	66	62
W	75	74	TiI	47	45
AM	32	27	GeI	23	27
AL	38	30	FeI	54	52
PL	62	50	TrI	31	29
AA	46	46	CxI	51	48
SB	46	60	TaII	62	45
ISD	42	37	TiII	44	44
AP	32	32	GeII	24	28
MA	29	23	FeII	43	40
ASB	64	-	TrII	30	30
PSB	24	-	CxII	52	50
LSS	62	64	TaIII	67	66
HS	36	38	TiIII	46	53
SS	28	28	GeIII	28	28
SL	58	48	FeIII	45	47
PSL	10	10	TrIII	36	33
GL	68	66	CxIII	46	52
DS	48–54	37–48	IP	795	779
S	64	-			

Remarks

Three species of *Allothrombium* have one seta on coxa II: *A. monochaetum*, *A. epiphyllus* and *A. clavatum*. *Allothrombium sicilianum* **sp. nov.** differs from *A. monochaetum* in the shorter AM (27–32 vs. 38–52), AW (60–68 vs. 70–74), AA (46 vs. 58–60), LSS (62–64 vs. 74–80) Ta I (62–66 vs. 75–81), Ti I (45–47 vs. 52–60), Ta III (66–67 vs. 76–80), leg I (263–272 vs. 329–351) and number of normal setae on Ta I (9 vs. 17); from *A. clavatum* in shape of dorsal setae, small lobe of posterior border of scutum vs. 3 lobed posterior border of scutum, longer DS (37–54 vs.

22–30), Ta I (62–66 vs. 40–50), leg I (263–279 vs. 231–253) and number of normal setae on Ta I (9 vs. 14); and from *A. epiphyllus* in the shorter L (84 vs. 103), W (74–75 vs. 100), DS (37–54 vs. 63–75) and leg I (without coxae) (215–221 vs. 245).


References

- Goldarazena, A. & Zhang, Z.-Q. (1997) Notes on larvae of *Allothrombium* (Acari: Trombidiidae) in Navarra-Nafarroa (northern Spain) with description of a new species ectoparasitic on aphids (Homoptera: Aphididae). *Systematic & Applied Acarology*, 3: 219–225.
- Mağol, J. (2000) Catalogue of the world Trombidiidae (Acari: Actinotrichida: Trombidoidea). *Annales Zoologici*, 50: 599–625.
- Saboori, A., Pešić, V. & Hakimitabar, M. (2010) A new species of the genus *Allothrombium* (Acari: Trombidiidae) from Montenegro. *Biologia*, 65: 515–519.
- Shiba, M. (1976) Taxonomic investigation on free-living Prostigmata from the Malay Peninsula. *Nature and Life in Southeast Asia*, 7: 83–229.

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چکیده

گونه جدید *Allothrombium sicilianum* sp. nov. (Acari: Prostigmata: Erythraeidae) از سیسیل توصیف می‌شود. این چهارمین گونه از جنس *Allothrombium* است که یک مو روی پیش‌ران پاهای دوم دارد.