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# NEW HOST DATA FOR TERRESTRIAL PARASITENGONA OF SERBIA WITH NOTE ON Allothrombium clavatum Saboori, Pešić & Hakimitabar, 2010

## SUMMARY

*Allothrombium clavatum* Saboori, Pešić & Hakimitabar, 2010 was described from Montenegro, based on two damaged specimens. This species was reported for the first time from Serbia on aphid Aphis craccivora. In this paper, new host and metric data are given. Further, on 7 localities, in different parts of Serbia, larvae of three trombidiid mite species on A. craccivora have been found.

**Keywords:** *Allothrombium clavatum,* new metric data, *Aphis cracccivora,* Serbia.

## INTRODUCTION

Fauna of terrestrial Parasitengona of Serbia is poorly known. Hitherto only thirteen species of this fauna have been reported from Serbia: Allothrombium fuliginosum (Hermann, 1804); Abrolophus stanislavae Haitlinger, 1986; A. quisquiliarus (Hermann, 1804); Balaustium nikae Haitlinger, 1996; Erythraeus (Zaracarus) budapestensis Fain & Ripka, 1998; Eutrombidium trigonum (Hermann, 1804); Microtrombidium parvissimum Gabryś, 1999; Charletonia cardinalis (C. L. Koch, 1837) (Mąkol & Wohltmann 2012, 2013; Haitlinger 2007, 2012) and Abrolophus montenegrinus Saboori, Šundić & Pešić, 2012; Leptus eslamizadehi Saboori, 2002; Erythraeus (Erythraeus) mariolae Haitlinger, 1994; Charletonia krendowskyi Feider, 1954; Erythraeus (Erythraeus) serbicus Šundić, Haitlinger, Petanović, Jovičić & Hakimitabar 2015 (Šundić et al., 2015).

Allothrombium clavatum Saboori, Pešić & Hakimitabar, 2010 is new record of fauna terrestrial Parasitengona of Serbia. This species was described from Montenegro, based on two damaged specimens by Saboori, et al., 2010. Scutum was drawn without PL setae and sensillae (S) therefore figure of scutum, new host and metric data are given (Fig. 1, Table 1). Also trombidiid species found on Aphis craccivora Koch, 1854 in Serbia are listed.

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## MATERIAL AND METHODS

Total two larvae of mites *Allothrombium clavatum* were collected in Serbia from host *A. craccivora* (Hemiptera: Aphididae) during the June 2013. The specimens of *A. craccivora* were collected in Serbia from alfalfa (*Medicago sativa* L.). Sampling of aphids and larvae of mites was done at different intervals for four years (2011-2014). Aphids were collected directly from plant stems and placed in plastic tubes in 70% ethanol. Samples were labelled and transferred to the laboratory for identification based on morphological characters using a stereoscopic microscope (Bio-Optica, Type: 1000). In the laboratory, mates were separated from the aphids and preserved in 75% alcohol, cleared in Nessbitt's solution and mounted in Faure medium (Walter & Krantz, 2009). All measurements are given in micrometers (μm) and calculated using a Carl Zeiss Axioscope A1 microscope, and Carl Zeiss Axio Imager A2 with differential interference contrast and phase contrast. The terminology and abbreviations follow Makol (2007).

## RESULTS AND DISCUSSION

*Allothrombium clavatum* Saboori, Pešić & Hakimitabar, 2010: 515—519, figs: 1-6.

Material: 2 larvae, Serbia, locality Cerje, Ušće, 29 June 2013.

Distribution: Montenegro, Serbia.

Polyphagous species *A. craccivora* is a widely distributed species that has been reported as a pest of many crops on several continents (Blackman and Eastop, 2000, Berberet et al., 2009), but its origins are clearly in Europe (Blackman and Eastop, 2007). In Serbia, this species has been reported on about 30 host plants (Petrović-Obradović, 2003). *Aphis craccivora* has been recorded as pests of alfalfa in this country (Jovičić et al., 2014).

On 7 localities, in different parts of Serbia, we have found larvae of mites on this aphid (Table 2). Total 33 mites were found on 21 aphids, among them 2 mites *Allothrombium clavatum*, 5 mites *Erythraeus* (*E.*) *serbicus* and 26 mites *Allothrombium fuliginosum* (Hermann, 1804). Most captured specimens of *A. craccivora* were attached by one mite. Maximum 3 mites *Erythraeus* (*E.*) *serbicus* were attached on this host. The most of mites were attached on wingless adults. Most of the mites were located above the thorax of the aphids. Only a few individuals were attached on the abdomen of *A. craccivora*. Mites were present on this aphid in period June-August. The first individuals of mites were collected at the beginning of June at Central Serbia (Belosavci and Donja Šatornja), (Table 2).

**Remarks**

Morphological variability *A. clavatum* in specimens from Serbia is distinctly differs of *A. clavatum* specimens from Montenegro, especially in metric data of SD, W, AA, ASB, PSB, MA (Table 1). Anterior border of scutum rounded, posterior border of scutum is slightly 3 lobed (in original description posterior border of scutum is more prominent 3 lobed) (Fig.1).

Table 1. Metric data for *Allothrombium clavatum* Sabori, Pešić & Hakimitabar 2010. H-holotype, P-paratype, specimens from Montenegro; S1, S2-specimens from Serbia

| | H | P | S1 | S2 | | Holotype | Paratype | S1 | S2 |
|---|---|---|---|---|---|---|---|---|---|
| IL | 329 | 247 | 848 | 630 | *or* | 6 | - | 6 | 7 |
| IW | 235 | 272 | 548 | 503 | *bs* | 7 | - | 8 | 9 |
| SD | 64 | 57 | 84 | 85 | Ta I (L) | 40 | 50 | 54 | 58 |
| W | 62 | 62 | 83 | 82 | Ta I (H) | 20 | 22 | 22 | 21 |
| AW | 53 | 45 | 54 | 55 | Ti I | 42 | 46 | 35 | 40 |
| PW | 65 | - | 67 | 70 | Ge I | 25 | 30 | 22 | 27 |
| AA | 38 | - | 47 | 42 | Fe I | 42 | 47 | 43 | 43 |
| SB | 37 | 32 | 35 | 38 | Tr I | 32 | 35 | 28 | 32 |
| ASB | 31 | - | 46 | 51 | Cx I | 50 | 45 | 53 | 52 |
| PSB | 33 | - | 42 | 40 | Leg I | 231 | 253 | 235 | 252 |
| MA | 17 | - | 33 | 33 | Ta I (L) | 45 | 43 | 45 | 51 |
| AP | 26 | - | 22 | 29 | Ta II (H) | 19 | 17 | 20 | 19 |
| AL | 28 | 28 | 28 | 33 | Ti II | 41 | 37 | 33 | 35 |
| PL | - | 33 | 33 | 43 | Ge II | 23 | 25 | 20 | 22 |
| AM | 32 | 35 | 31 | 31 | Fe II | 41 | 40 | 41 | 37 |
| S | - | 35 | 37 | 45 | Tr II | 34 | 32 | 28 | 23 |
| LSS | 53 | 57 | 65 | 59 | Cx II | 50 | 52 | 51 | 45 |
| HS | 22 | 25 | 23 | 21 | Leg II | 234 | 229 | 218 | 213 |
| SL | - | 31 | 32 | 33 | Ta III (L) | 45 | 50 | 50 | 54 |
| SS | 25 | 28 | 24 | 25 | Ta III (H) | 15 | 16 | 18 | 16 |
| DS | 22-30 | 25-28 | 26-29 | 27-33 | Ti III | 44 | 47 | 41 | 42 |
| PDS | 20 | 22 | 20 | 21 | Ge III | 25 | 26 | 22 | 25 |
| *1a* | 32 | 30 | 33 | 35 | Fe III | 37 | 40 | 46 | 38 |
| *1b* | 27 | 29 | 30 | 32 | Tr III | 37 | 40 | 25 | 28 |
| *2b* | 32 | 35 | 35 | 30 | Cx III | 47 | 50 | 52 | 48 |
| *3a* | 31 | 30 | 26 | 26 | Leg III | 235 | 235 | 236 | 235 |
| 3*b* | 32 | 35 | 25 | 34 | IP | 700 | 735 | 689 | 700 |

Leg setal formula for specimens from Serbia: Leg I: Ta 1ω, 2ζ, 1ε, 13n; Ti 2φ, 1κ, 5n; Ge 2σ, 1κ, 4n; Fe 5n; Tr 1n; Cx 2n. Leg II: Ta 1ω, 1ε, 12n; Ti 2φ, 5n; Ge 2σ, 1κ, 3n; Fe 4n; Tr 1n; Cx 1n. Leg III: Ta 12n; Ti 5n; Ge 2σ, 3n; Fe 4n; Tr 1n; Cx 1n.

NDV= 24 + 6 = 30

Metric data of species from Montenegro and Serbia are given in Table 1.

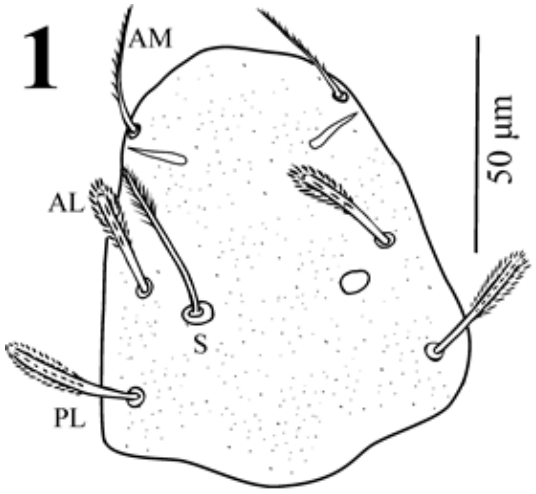


Figure 1. Allothrombium clavatum Saboori, Pešić & Hakimitabar 2010, Scutum

Table 2. Parasitengonae mites found on *Aphis craccivora* in Serbia

| Locality name | Geographic coordinates | Mites | Host | Number of mites |
|---|---|---|---|---|
| Belosavci, Topola | 44° 20’ 31’’ N<br>20° 40’ 58’’ E | *Allothrombium fuliginosum* | *A. craccivora* | 2 |
| Braničevo, Golubac | 44° 41’ 54’’ N<br>20° 32’ 29’’ E | *Allothrombium fuliginosum* | *A. craccivora* | 4 |
| Cerje, Ušće | 43° 29’ 59’’ N<br>20° 36’ 50’’ E | *Allothrombium clavatum* | *A. craccivora* | 2 |
| Donja Šatornja, Topola | 41° 11’ 11’’ N<br>20° 33’ 09’’ E | *Allothrombium fuliginosum* | *A. craccivora* | 5 |
| Kotraža, Lučani | 43° 41’ 48’’ N<br>20° 14’ 45’’ E | *Allothrombium fuliginosum* | *A. craccivora* | 6 |
| Ovča, Beograd | 44º 52’ 49’’ N<br>20º 32’ 13’’ E | *Allothrombium fuliginosum* | *A. craccivora* | 3 |
| Rusko selo, Kikinda | 45° 45’ 16’’ N<br>20° 33’ 47’’ E | *Erythraeus serbicus* | *A. craccivora* | 5 |
| Rusko selo, Kikinda | 45° 45’ 16’’ N<br>20° 33’ 47’’ E | *Allothrombium fuliginosum* | *A. craccivora* | 6 |

## CONCLUSIONS

*Allothrombium clavatum* is new record of fauna terrestrial Parasitengona of Serbia. Morphological variability A. clavatum in specimens from Serbia is distinctly differs of A. clavatum specimens from Montenegro. Larvae of three mite species on A. craccivora were found: Allothrombium clavatum, Erythraeus (E.) serbicus and Allothrombium fuliginosum. This is the first investigation of the occurrence of trombidiid mites on this aphid in Serbia.

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