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Subscriptions: Year 2021 (Volume 61): 450 €
http://www1.montpellier.inra.fr/CBGP/acarologia/subscribe.php
Previous volumes (2010-2020): 250 € / year (4 issues)
Acarologia, CBGP, CS 30016, 34988 MONTFERRIER-sur-LEZ Cedex, France
ISSN 0044-586X (print), ISSN 2107-7207 (electronic)

The digitalization of Acarologia papers prior to 2000 was supported by Agropolis Fondation under the reference ID 1500-024 through the « Investissements d’avenir » programme (Labex Agro: ANR-10-LABX-0001-01)

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THREE NEW SPECIES OF ERIOPHYID MITES
(ACARI: ERIOPHYOIDEA) ON SOPHORA JAPONICA L.

BY R. DOMES

(Accepted May 2008)

NEW SPECIES
ERIOPHYOIDEA
GERMANY

ESPÈCES NOUVELLES
ERIOPHYOIDEA
ALLEMAGNE

Summary: Epitrimerus sophorae, Vasates sophorae and Vasates sophoracolae, three new species of Sophora japonica.

Résumé: Epitrimerus sophorae, Vasates sophorae et Vasates sophoracolae sont décrites d’Allemagne sur Sophora japonica.

Pagoda tree (Sophora japonica L.) is an interesting park tree for Germany because of their late summer flowering and their resistance to low temperature. Eriophyds of these trees were not examined to date. Within the genus Sophora, the unique species Aculops sophorae was described by KUANG in 1989 from China for Sophora japonica var. pendula, whereas Aculus semenovi for Sophora alopecuroides, by SHEVTCHENKO, MARKOWSKI & SAMSUDINOVA in Russia and for Sophora microphylla, Aceria microphyllae by MANSON (1984) from New Zealand were identified. Not any of these mites could be found on Sophora japonica L. in Bruchsal (Germany), but three species were identified: Epitrimerus sophorae n. sp., Vasates sophorae n. sp. and Vasates sophoracolae n. sp. These mites colonize on leaves, flowers and young fruits without injury on the host plant.

Epitrimerus sophorae n. sp.
Female:
(All measurements are given in mμ).

Body size: 140-150 long (mean 145), 55-58 wide and 51 thick (at shield margin), white, fusiform.

Gnathosoma 25, chelicerae 23 long.
Dorsal shield 40 long, 55-58 wide, anterior lobe 5 long, 10 wide, shield design netlike (Fig. 1); scapular tubercles Dt-Sr 6, Dt-Dt 31 apart, setae (Sc) 30 long, directed back.
Forelegs 35 long, tibia 6-8, tarsus 7, foretibial setae 8, genual setae 20, genu 6, femoral setae 13, trochanter 4. Tarsal solenidion 9, tarsal empodium 9, 6-rayed. Hindlegs 33 long, tibia 6, tarsus 7, genu 6, genual setae 10, femoral setae 13, trochanter 4. Tarsal solenidion 9, tarsal empodium 9, 6-rayed.
Forecoxal tubercles (1b) Ct1-Ct1 11 apart, setae (1b) 10 long; forecoxal tubercles (1a) Ct2-Ct2 9 apart, setae (1a) 20 long; coxal tubercles (2a) Ct3-Ct3 25 apart, setae (2a) 40 long.
Opisthosoma with 29 dorsal annuli and 64 ventral annuli, microtuberculate; longitudinal ridge on dorsum, 24 wide.

Lateral tubercles (c2) Lt-Lt 47 apart, on ventral annuli 12-13, setae (c2) 40 long; 1st ventral tubercles (d) Vt1-Vt1 35 apart, on ventral annuli 24-25, setae (d) 50 long; 2nd ventral tubercles (e) Vt2-Vt2 17 apart, on ventral annuli 40-41, setae (e) 35 long; 3rd ventral tubercles (f) Vt3-Vt3 21 apart, on ventral
Fig. 1. — *Epitrimerus sophorae* n. sp. Female. — DVF. — Dorsal view. VVF. — Ventral view. GCF. — Genital cover flap. TS. — Tarsal solenidion. TE. — Tarsal empodium. VA. — Ventral annuli.
annuli 59-60, setae (f) 40 long. Caudal setae (h2) 110 long, 10 apart, accessoriae setae (h1) 4 long, 5 apart. Female genital coverflap 21 wide, 10 long with 14-16 longitudinal ridges, genital setae (3a) 40 long, genital tubercles (3a) 15 apart.

Vasates sophorae n. sp.

Female

Body size: 174 long, 60 wide and 51 thick (at hind shield margin), yellow, spindle shaped.

Gnathosoma 30, chelicerae 25 long. Dorsal shield 35 long, 60 wide, anterior lobe 7 long, 13 wide, pointed; shield design without median line, U-shaped line on discal cell margin, scapular tubercles touching, between indistinct netlike design (Fig. 2). Scapular tubercles Dt-Sr 5, Dt-Dt 27 apart, setae (Sc) 27 long, directed backwards. Forelegs 36 long, tibia 8, tarsus 6, foretibial setae 7, genual setae 25, genu 6, femoral setae 13, trochanter 4. Tarsal solenidion 8, tarsal empodium 11, 6-rayed. Hindlegs 34 long, tibia 6, tarsus 6, genu 6, genual setae 8, femoral setae 11, trochanter 3. Tarsal solenidion 10, tarsal empodium 9, 6-rayed.

Forecoxal tubercles (1b) Ctl-Ctl 9 apart, setae (1b) 10 long; forecoxal tubercles (1a) Ctl-Ctl 8 apart, setae (1a) 20 long; coxal tubercles (2a) Ctl-Ctl 19 apart, setae (2a) 30 long.

Opisthosoma with 28 dorsal annuli and 63 ventral annuli, microtuberculate, regular arched on dorsum. Lateral tubercles (c2) Lt-Lt 40 apart, on ventral annuli 11-12, setae (c2) 38 long; 1st ventral tubercles (d) Vtl-Vtl 31 apart, on ventral annuli 25-26, setae (d) 60 long; 2nd ventral tubercles (e) Vt2-Vt2 15 apart, on ventral annuli 40-41, setae (e) 25 long; 3rd ventral tubercles (f) Vt3-Vt3 18 apart, on ventral annuli 59-60, setae (f) 50 long.

Caudal setae (h2) 90 long, 9 apart, accessoriae setae (h1) 4 long, 5 apart.

Genitalia 20 wide, setae 28-35 long, Gt-Gt 13 apart.

Vasates sophoracolae n. sp.

Female

Body size: 170 long, 57-.60 wide and 53 thick (at hind shield margin), white, spindle shaped. Gnathosoma 25, chelicerae 20 long; setae antapicalis 10, setae apicalis 5 long.

Dorsal shield 40 long, 57-.60 wide, anterior lobe 6 long, 10 wide, rounded; shield design smooth (Fig. 3). Scapular tubercles Dt-Sr 0, Dt-Dt 28 apart, setae (Sc) 30 long, directed backwards. Forelegs 37 long, tibia 8, tarsus 7, foretibial setae 10, genual setae 25, genu 6, femoral setae 15, trochanter 5. Tarsal solenidion 8, tarsal empodium 11, 7-rayed. Hindlegs 36 long, tibia 7, tarsus 7, genu 6, genual setae 13, femoral setae 15, trochanter 4. Tarsal solenidion 10, tarsal empodium 11, 7-rayed.
Fig. 2. — Vasates sophorae n. sp. Female and male. — DVF. — Dorsal view, female. VVF. — Ventral view, female. GCF. — Genital coverflap, female. E. — Epiandrium. TS. — Tarsal solenidion. TE. — Tarsal empodium. VA. — Ventral annuli.

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Fig. 3. — *Vasates sophoracola* n. sp. Female and male. — DVF. — Dorsal view, female. VVF. — Ventral view, female. GCF. — Genital cover flap, female. E. — Epiandrium. TS. — Tarsal solenidion. TE. — Tarsal empodium. VA. — Ventral annuli.
Forecoxal tubercles (1b) Ct1-Ct1 11 apart, setae (1b) 10 long; forecoxal tubercles (1a) Ct2-Ct2 11 apart, setae (1a) 30 long; coxal tubercles (2a) Ct3-Ct3 24 apart, setae (2a) 45 long.

Opisthosoma with 43 dorsal annuli and 60 ventral annuli, microtuberculate, even arched on dorsum. Lateral tubercles (c2) Lt-Lt 52 apart, on ventral annuli 9-10, setae (c2) 40 long; 1st ventral tubercles (d) Vt1-Vt1 29 apart, on ventral annuli 19-20, setae (d) 40 long; 2nd ventral tubercles (e) Vt2-Vt2 15 apart, on ventral annuli 33-34, setae (e) 30 long; 3rd ventral tubercles (f) Vt3-Vt3 19 apart, on ventral annuli 49-50, setae (f) 35 long. Caudal setae (h2) 80 long, 10 apart, accessoriae setae (h1) 4 long, 6 apart. Genitalia 18 wide, setae 30 long, Gi-Gt 15 apart.

**Host:** *Sophora japonica* L.

**Relation to host:** Vagrant on leaves, flowers and young fruits. No apparent damage was observed.

**Type material**

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