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ERIOPHYES PLATANI, A NEW SPECIES (ACARI: ERIOPHYOIDEA) ON PLATANUS HYBRIDA BROT

BY R. DOMES

(Accepted April 2001)

NEW SPECIES
GERMANY
ERIOPHYOIDEA

SUMMARY: Eriophyes platani, a new species of Platanus hybridra Broth., is described from Germany. The mites live below epidermis of leaf upper side in mines (Stigmatonom) of Platanus leaf miners (Lithocolletis platani Strg.).

Besides Rhyncaphytoptus platani Keifer 1939, a new species, Eriophyes platani, is found in Bruchsal. From May females, eggs and nymphs live in the stigmatonom of platanus leaf miners (Lithocolletis platani Strg.) below the epidermis of leaf upper side of Platanus hybridra Broth. From July/August there are males too. Eriophyes platani feed on the periphery of the stigmatonom where the parenchymatous cells are viable, while in the middle of the stigmatonom cells are dead and brown discoloured.

At the end of September adult females leave leaves and migrate to the branchlets. They overwinter in bark fissures and cavities of the bark. During winter resting all measures of females are smaller than in summer, but there are only little differences in all other characteristics. Therefore one cannot distinguish between protogynes and deutogynes.

FEMALES: (all measurements are given in μm) 250 (range of 25 specimens, 220-290) long, 51 wide and 48 thick (at shield margin), white, wormlike. Gnathosoma 35-37, chelicerae 39 long. Dorsal shield 30 long and 51 wide. Shield pattern (Fig. 1). Dorsal tubercles 11 ahead of rear shield margin, dorsal setae 45 long, projecting up and forward, 18 apart.

Foreleg 39-40 long, tibia 6-8, tarsus 10, foretibial seta 10, patellar seta 30, patella 7, femoral seta 10, trochanter 4. Tarsal solenidion 12, tarsal empodium 9, 4-rayed simple.

Hindleg 35 long, tibia 4-5, tarsus 10; tarsal solenidion 12, tarsal empodium 10, 4-rayed, simple. First forecoxal tubercles 10 apart, setae 14 long; second forecoxal tubercles 8 apart, setae 30 long; hind coxal tubercles 22 apart, setae 50 long.

Opisthosoma with 69 microtuberculated dorsal annuli and 74 microtuberculated ventral annuli. Lateral tubercles 47 apart, on ventral annuli 7-8, setae 25 long; 1st ventral tubercles 37 apart, on ventral annuli 21-22, setae 80 long; 2nd ventral tubercles 19 apart, on ventral annuli 39-40, setae 15 long; 3rd ventral tubercles 18 apart, on ventral annuli 66-67, setae 20 long. Caudal setae 100-125, accessory setae 5 long.

Female genitalia: genital coverflap 8 long and 23 wide, with 8 longitudinal scoring, genital tubercles 18-19 apart, setae 20 long.

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FIG. 1. *Eriophyes platani* n.sp., female and male. DAF. — Anterior view, female; DVM. — Dorsal view, male; VVM. — Ventral view, male; FG. — External female, genitalia; MG. — Male genitalia (externe); TE. — Tarsal empodium; TS. — Tarsal solenidion.
NYMPH I: 120 long, 25-30 wide and 35 thick. Shield 23 long and 25-30 wide; dorsal setae 25 long, projecting up and forward, 13 apart.

Foreleg 22 long, tibia 4, tarsus 2.5 long, foretibial setae 3, patellar setae 15 long, femoral seta 7 long; tarsal solenidion 7, tarsal empodium 5 long.

Hindleg 17 long, tibia 25, tarsus 4 long; tarsal solenidion 7, tarsal empodium 5 long, 3-rayed.

Opisthosoma with 55 dorsal annuli and 46 ventral annuli. Lateral tubercles 30 apart, on ventral annuli 9-10, setae 11 long; 2nd ventral tubercles 11 apart, on ventral annuli 27-28, setae 8 long; 3rd ventral tubercles 17 apart, on ventral annuli 41-42, setae 10 long. Caudal setae 3.5 long, accessory setae 3 long. Genital tubercles 7 apart, on ventral annuli 9, setae 7 long.

NYMPH II: 150-165 long, 37 wide and 36 thick. Shield 28 long and 37 wide, dorsal setae 30 long, projecting forward, 18 apart.

Foreleg 26 long, tibia 4, tarsus 6 long, foretibial seta 5, patellar seta 25 long, femoral seta 10 long; tarsal solenidion 8, tarsal empodium 6 long, 3-rayed.

Hindleg 22 long, tibia 3, tarsus 5 long; tarsal solenidion 8, tarsal empodium 6 long, 3-rayed. Opisthosoma with 62 dorsal annuli and 66 ventral annuli. Lateral tubercles 34 apart, on ventral annuli 11-12, setae 20 long; 1st ventral tubercles 28 apart, on ventral annuli 23-24, setae 35 long; 2nd ventral tubercles 14 apart, on ventral annuli 37-38, setae 10 long; 3rd ventral tubercles 13 apart, on ventral annuli 60-61, setae 18 long. Caudal setae 70 long, accessory setae 3 long. Genital tubercles 9 apart, on ventral annuli 11, setae 10 long.

MALE (from August) 165-205 long, 44 wide and 38-42 thick (at hind shield margin), white and worm-like. Gnathosoma 30, chelicerae 32 long. Dorsal shield 29-36 long and 44 wide. Shield pattern (Fig. 1). Dorsal tubercles 4 ahead of rear shield margin, dorsal setae 34 long, projecting forward, 11 apart.

Foreleg 34 long, tibia 6, tarsus 7 long; foretibial seta 7, patellar seta 20, patella 5, femoral seta 13, trochanter 3. Tarsal solenidion 11, tarsal empodium 7, 4-rayed, simple.

Opisthosoma with 66 microtuberculated dorsal annuli and 75 microtuberculated ventral annuli. Lateral tubercles 42 apart, on ventral annuli 9-10, setae 25 long; 1st ventral tubercles 35 apart, on ventral annuli 23-24, setae 60 long; 2nd ventral tubercles 15 apart, on ventral annuli 41-42, setae 11 long; 3rd ventral tubercles 18 apart, on ventral annuli 70-71, setae 20 long. Caudal setae 80 long, accessory setae 5 long. Male genitalia (Fig. 1), genital setae 20 long, 16 apart.

Host: Platanus hybrida Brot.

Type material: Holotype: female on slide ZMHNR. A 16/01, Zoologisches Museum Hamburg, Germany. Paratype: (20) female on slide ZMH Nr. A 17/01, Zoologisches Museum Hamburg, Germany. Allotype: male on slide ZMHN. A 17/01, Zoologisches Museum Hamburg, Germany.

REFERENCES


