Acarologia is proudly non-profit, with no page charges and free open access

Please help us maintain this system by encouraging your institutes to subscribe to the print version of the journal and by sending us your high quality research on the Acari.

Subscriptions: Year 2019 (Volume 59): 450 €
http://www1.montpellier.inra.fr/CBGP/acarologia/subscribe.php
Previous volumes (2010-2017): 250 € / year (4 issues)
Acarologia, CBGP, CS 30016, 34988 MONTFERRIER-sur-LEZ Cedex, France

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)

Acarologia is under free license and distributed under the terms of the Creative Commons-BY-NC-ND which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author and source are credited.
Hitherto from *Aesculus hippocastanum* L. are known *Aculus hippocastani* Fokeu 1890, *Shevtchenkella carinatus* Nalepa 1892 and *Shevtchenkella neocarinatus* Kiefer 1938. During inventory of Eriophyoidea from Xylophytes in surrounding area of Bruchsal *Aceria aesculi* n.sp., *A. hippocastani* n.sp., *Aculus aesculi* n.sp., *Eriophyes aesculi* n.sp. and *Tetra hippocastani* n.sp. were found on *Aesculus hippocastanum* L. December 1999. During the year 2000, *A. hippocastanum*-trees in Bruchsal were strongly attacked from *Aesculus* miner (*Phyllonorycter ohridella* Deschka & Dimic 1986, Insecta, Lepidoptera, Lithocoleidae). Population density of mites remained low. Therefore damage by mites besides miner damages could not be found. Mites go to wintering places on basis of buds as early as in September. I couldn’t find males of the new species from *Aesculus hippocastanum* L. during the year 2001. *Aceria aesculi* n.sp., *A. hippocastani* n.sp. and *Tetra hippocastani* n.sp. are frequent on inferior leaf surface. *Eriophyes aesculi* n.sp. and *Aculus aesculi* n.sp. are rare on Aesculus leaves. *Aceria aesculi* n.sp. differs from other new species of *Aesculus hippocastanum* by 3-rayed simple tarsal empodium, female genital coverflap and shield design. Tergites of *Tetra hippocastani* n.sp. are smooth and form a broad dorsal furrow. Sternites are microtuberculated, distance of microtubercles of sternites 1-30 is smaller than of the sternites 31-52. *Aculus aesculi* n.sp. differs from *Aculus hippocastani* in shield design, smooth female genital coverflap, 2nd ventral setae, dorsal setae and other characteristics. *Aceria hippocastani* n.sp. differs from *Aceria aesculi* n.sp. by 4-rayed simple tarsal empodium, shield design, smooth tergites, length of dorsal setae, length of forelegs and hindlegs. *Eriophyes aesculi* n.sp. has a typical shield design, median lines converged at shield margin, dorsal shield setae pointing up, 4-rayed simple tarsal empodium, smooth tergites, femal genital coverflap with 8 converged furrows.

*Aceria aesculi* n.sp.

**Female:** (all measurements are given in µm) 159 (range of 10 specimens, 155-163) long, 40-42 wide
Fig. 1. *Aceria aesculi* n.sp., Female. — Dorsal view (D.V.); Ventral view (V.V.); Female genital cover (FGC); Tarsal empodium (TE); Tarsal solenidion (TS).
Aceria hippocastani n.sp.

**FEMALE:** 128 (range of 10 specimens, 110-145) long, 35-40 wide and 26 thick (at shield margin), white, wormlike. Gnathosoma 21-26, chelicerae 23-27 long. Dorsal shield 22-23 long and 35-40 wide. Shield pattern (Fig.2). Dorsal tubercles on shield margin, dorsal setae 21-26 long, projecting backward, 18 apart. Foreleg 27 long, tibia 4, tarsus 8, foretibial setae 5, patellar seta 30, patella 5, femoral seta 15, trochanter 3. Tarsal solenidion 7, tarsal empodium 7, **4-rayed**, simple. Hindleg 24 long, tibia 3, tarsus 7; tarsal solenidion 8-9, tarsal empodium 9, **4-rayed**, simple. First forecoxal tubercles 12 apart, setae 10; second forecoxal tubercles 10 apart, setae 20; hind coxal tubercles 20 apart, setae 40. Opisthosoma with 52-60 microtuberculated dorsal annuli and 54-57 microtuberculated ventral annuli. Lateral tubercles 32-34 apart, on ventral annuli 8-9, setae 20 long; 1st ventral tubercles 26 apart, on ventral annuli 18-21, setae 50 long; 2nd ventral tubercles 19 apart, on ventral annuli 31-34, setae 15 long; 3rd ventral tubercles 10 apart, on ventral annuli 48-53, setae thick and 20 long. Caudal setae 85, accessory setae 4 long.

---

Femal genitalia: genital cover flap 8 long and 18 wide, with 10 longitudinal ribs, genital tubercles 11 apart, setae 15 long.

---

**Aceria hippocastani** n.sp., Female. — Dorsal view (D.V.); Ventral view ((VV); Female genital cover (FGC); Tarsal empodium (TE); Tarsal solenidion (TS); Ventral annuli (VA).
Fig 3: Aculus aesculi n.sp., Female. — Dorsal view (DV); Female genital cover (FGC); Tarsal empodium (TE); Tarsal solenidion (TS); Lateral view (S)
Aculus aesculi n.sp.

**Female**: 195 (range of 10 specimens, 180-210) long, 75 wide and 70 thick (at shield margin) light brown, fusiform. Gnathosoma 36-38, chelicerae 35-47. Dorsal shield 43 long and 75 wide. Shield pattern (Fig.3a). Dorsal tubercles on shield margin, dorsal setae 39-48 long, projecting backward, 37 apart. Shield lobe rounded, 12 long and 23 wide. Foreleg 44-47 long, tibia 9-10, tarsus 8-10, foretibial seta 10, patellar seta 30, patella 7, femoral seta 15, trochanter 5. Tarsal solenidion 9-10, tarsal empodium 7-8, 4-rayed, simple. Hindleg 39-41 long, tibia 8-12, tarsus 8-10; tarsal solenidion 9-10, tarsal empodium 7-8, 4-rayed, simple. First forecoxal tubercles 12 apart, setae 10 long; second forecoxal tubercles 8 apart, setae 20 long; hind coxal tubercles 20-28 apart, setae 40 long.


Eriophyes aesculi n.sp.

**Female**: 149 (range of 20 specimens, 135-160) long, 38-44 wide and 39-40 thick (at shield margin), pink, wormlike. Gnathosoma 25-26, chelicerae 28 long. Dorsal shield 26-27 long and 38-44 wide. Shield pattern (Fig.4). Dorsal tubercles 5 ahead of shield margin, dorsal setae 22 long, projecting up and forward, 14-15 apart. Foreleg 31-32 long, tibia 5-6, tarsus 7-8, foretibial seta 7-8, patellar seta 25-30, patella 5-6, femoral seta 10-12, trochanter 3. Tarsal solenidion 8-9, tarsal empodium 8-10, 4-rayed, simple. Hindleg 28-30 long, tibia 4-5, tarsus 6-7, tarsal solenidion 8-9, tarsal empodium 8, 4-rayed, simple. First forecoxal tubercles 9-10 apart, setae 10 long; second forecoxal tubercles 7-8 apart, setae 23-30 long; hind coxal tubercles 17-22 apart, setae 40 long.

**Tetra hippocastani** n.sp.

**FEMALE:** 147 (range of 11 specimens, 135-160) long, 48-64 wide and 35 thick (at shield margin), pink, fusiform. Gnathosoma 23-25, chelicerae 26-28 long. Dorsal shield 38-42 long and 48-64 wide. Shield pattern (Fig. 5). Dorsal tubercles 5 ahead of rear shield.
margin, dorsal setae 16-20 long, projecting backward, 25-27 apart, shield lobe acuminate, 10 long and 17 wide. Foreleg 33-37 long, tibia 7-8, tarsus 7-8, foretibial seta 7-8, patellar seta 20-25, patella 5-6, femoral seta 14-17, trochanter 4-5. Tarsal solenidion 7-8, tarsal empodium 7-8, 4-rayed, simple, antapicalis seta 10, apicalis seta 5. Hindleg 31-36 long, tibia 6-8, tarsus 6-8, tarsal solenidion 7-8, tarsal empodium 7-8, 4-rayed, simple. First forecoxal tubercles 13 apart, setae 10 long, second forecoxal tubercles 9-10 apart, setae 20 long, hind coxal tubercles 23-26 apart, setae 30 long. Opisthosoma with 22-24 dorsal annuli and 49-53 microtuberculated ventral annuli. Lateral tubercles 45-53 apart, on ventral annuli 9-12, setae 25-30 long; 1st ventral tubercles 29-35 apart, on ventral annuli 23-25, setae 43-50 long; 2nd ventral tubercles 16-20 apart, on ventral annuli 33-36, setae 15 long; 3rd ventral tubercles 22-25 apart, on ventral annuli 45-48, setae 25-30 long. Caudal setae 60-75, accessory setae 1 long.

Femal genitalia: genital cover flap 8 long and 22 wide, with 10 longitudinal ribs, genital tubercles 15-16 apart, setae 20 long.

Host: Aesculus hippocastanum L. (Hippocastanaceae).


REFERENCES


