Acarologia

A quarterly journal of acarology, since 1959
Publishing on all aspects of the Acari

All information:
http://www1.montpellier.inra.fr/CBGP/acarologia/
acarologia@supagro.fr

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 2018 (Volume 58): 380 €
http://www1.montpellier.inra.fr/CBGP/acarologia/subscribe.php
Previous volumes (2010-2016): 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.
A NEW SPECIES OF THE GENUS CALEPITRIMERUS,
FAMILY ERIOPHYIDAE (ACARI: ERIOPHYOIDEA)
ON CHAMAECYPARIS OBTUSA" "NANA GRACILIS".
(SIEB. ET ZUCC.) (CUPRESSACEAE).

RUDIGER DOMES 1
(Accepted November 2004)

CALEPITRIMERUS NEW SPECIES
GERMANY ERIOPHYOIDEA

SUMMARY: A new species of the genus Calepitrimerus is described. Calepitrimerus chamaecyparis n.sp. was found 2002 on false cypress (Chamaecyparis obtusa "nana gracilis" (Sieb. et Zucc.). It prefers squamiform needles on new growth as a vagrant.

Résumé: Une espèce nouvelle du genre Calepitrimerus est décrite. Calepitrimerus chamaecyparis n.sp. a été récolté en 2002 sur Chamaecyparis obtusa "nana gracilis" (Sieb. et Zucc.) et vit de préférence sur les aiguilles squamiformes des jeunes branches comme vagrant.

Hitherto no species of Eriophyidae was described from false cypress (Chamaecyparis obtusa" "nana gracilis" (Sieb.et Zucc.). Within the family Cupressaceae species of Calepitrimerus have been identified only for Thuja occidentalis L.and T. plicata. On T. occidentalis is C. occitihuiae Keifer, 1953 and C. thuyae (Garm, 1883), on Thuja plicata is C. glacialis Keifer, 1961.

C. chamaecyparis differs from C. occitihuiae and C. thuyae as well as from C. glacialis. The new species is differentiated from C. occitihuiae by shield design, absence of accessory setae hl, tarsal empodium 7-rayed, structure of female genital coverflap, number of dorsal annuli of the protogyne and length of all ventral setae. From C. glacialis the new species is differentiated by shield design, structure of the genital coverflap, by having a 5-rayed tarsal empodium, length of scapular setae (sc) and second ventral setae and number of dorsal annuli. C. chamaecyparis is characterized by 5-rayed tarsal empodium, strongly developed cephalothorax -and abdominal ridges, shield design, frontal shield lobe with many $\frac{3}{4}$ μm long small teeth on anterior side, 34-43 dorsal annuli, last 7 dorsal annuli broader and without abdominal ridges, genital setae 3a 20 long. The mites are vagrants, favoring the lower surface of the squamiform needles. They do not produce any injury. During winter month,when deutogyne female exist, males are normally not to find. They die at the end of protogyne phase before the winter months begin. That is not the same with C. chamaecyparis n. sp. There are also males among deutogyne females in winter, which differs from habit of males, which appear during protogyne phase.

1. Kirrlacher Straße 3, 76646 Bruchsal, Germany
Caleptrimerus chamaecyparis n. sp.

FEMALE (protogyne): (all measurements are given in μm) 120-150 long, (X̄ = 164, n = 12), 44-56 wide and 58 thick (at hind shield margin), white, fusiform. Gnathosoma 34, chelicerae 33 long. Dorsal shield 53-62 long, 44-56 wide, anterior lobe 20 broad, 13 long, blunt, extends 12 over gnathosoma, with many little teeth on anterior side; shield design as in Fig.1, median line absent; scapular tubercles 14 ahead of rear shield margin, scapular setae 5 long, projecting upwards, 18 apart. Forelegs 30 long, tibia 6-7, tarsus 6, foretibial setae 8, genual setae 23, genu 5, femoral setae 12, trochanter 3. Tarsal solenidion 6, tarsal empodium 5-6, 5-rayed. Forecoxal tubercles (la) Ct1-Ct1 10-13 apart, setae 1b 12 long; forecoxal tubercles (tb) Ct2-Ct2 8 apart, setae 1a 20 long; coxal tubercles 2a Ct3-Ct3 21-25 apart, setae 2a 50-52 long. Opisthosoma with 48-58 dorsal annuli and 66-76 ventral annuli, microtuberculate. Lateral tubercles (c2) Lt-Lt 45-53 apart, on ventral annuli 9-13, setae c2 20 long; 1st ventral tubercles (d) Vt1-Vt1 25 apart, on ventral annuli 22-25, setae d 50-53 long; 2nd ventral tubercles (e) Vt2-Vt2 15 apart, on ventral annuli 38-44, setae e 35-38 long; 3rd ventral tubercles (f) Vt3-Vt3 21 apart, on ventral annuli 59-71, setae f 22-23 long. Caudal setae h2 40 long, 9 apart, accessory setae h1 5 long, 5 apart. Femal genital cover flap 21-22 × 8-10, with 8-12 lines; genital tubercles 3a 13-15 Gt-Gt apart, setae 3a 15 long.

MALE: (from June) 105-143 long, (X̄ = 129, n = 10), 48-58 wide and 55 thick (at hind shield margin), white, fusiform. Gnathosoma 33, chelicerae 32 long. Dorsal shield 53 long and 48-53 wide; anterior lobe 19 broad, 9 long, blunt, extends 6 over gnathosoma, with small teeth an anterior side, shield design (Fig.1), median line partly present; scapular tubercles 15 ahead of rear shield margin, scapular setae sc 5 long, projecting up, 18 apart. Forelegs 29 long, tibia 6, tarsus 6, foretibial setae 6, genual setae 20, genu 5, femoral setae 11-12, trochanter 3. Tarsal solenidion 5, tarsal empodium 5, 5-rayed. Hindlegs 27 long, tibia 6, tarsus 5, genual setae h2 45 long, 4 apart. Female genital cover flap 22 × 9, with longitudinal lines, some incomplete; genital tubercles 3a Gt-Gt 14 apart, setae 3a 20 long.

FEMALE (deutogyne): 138-190 long (X̄ = 170, n = 11), 57-62 wide and 52 thick (at hind shield margin), white, fusiform. Gnathosoma 34, chelicerae 33 long. Dorsal shield 56-59 long, 57-62 wide, anterior lobe 26 broad, 12 long, blunt, extends 7 over gnathosoma, with small teeth on anterior side (Figs. 1 + 2); shield design as in Fig.2 with median line absent; scapular tubercles 7 ahead of rear shield margin, scapular setae sc 5-7 long, projecting upwards and centrally, 16 apart. Forelegs 30-34 long, tibia 6-7, tarsus 6-7, foretibial setae 7-8, genual setae 24, genu 5, femoral setae 12-13, trochanter 3. Tarsal solenidion 6-8, tarsal empodium 6, 5-rayed. Hindlegs 28-32 long, tibia 5-6, tarsus 6, genual setae 8, genu 5, femoral setae 12-13, trochanter 3. Tarsal solenidion 6-7, tarsal empodium 5-6, 5-rayed. Forecoxal tubercles (1b) Ct1-Ct1 10-13 apart, setae 1b 12 long; forecoxal tubercles (1a) Ct2-Ct2 8 apart, setae 1a 20 long; coxal tubercles (2a) Ct3-Ct3 21-25 apart, setae 2a 50-52 long. Opisthosoma with 43-44 dorsal annuli and 65 ventral annuli, microtuberculate. Lateral tubercles (c2) Lt-Lt 45-53 apart, on ventral annuli 9-13, setae c2 20 long; 1st ventral tubercles (d) Vt1-Vt1 25 apart, on ventral annuli 22-25, setae d 50-53 long; 2nd ventral tubercles (e) Vt2-Vt2 15 apart, on ventral annuli 38-44, setae e 35-38 long; 3rd ventral tubercles (f) Vt3-Vt3 21 apart, on ventral annuli 59-71, setae f 22-23 long. Caudal setae h2 40 long, 9 apart, accessory setae h1 5 long, 5 apart. Male genitalia (Fig.1) 17-18 broad, genital setae 3a 10 long, Gt-Gt 12 apart.
Fig. 2: C. chamaecyparis n. sp. Deutogyne, female and nymph. DVF. — Dorsal view female. VVF. — Ventral view female. DAN. — Anterior dorsal view, Nymph. FGC. — Female genital coverflap. MFVA. — Ventral annuli, female. NVA. — Ventral annuli, nymph.
NYMPH: 95-105 long, 30-45 wide and 25-28 thick (at hind shield margin), white, fusiform. Gnathosoma 20, chelicerae 22 long. Dorsal shield 38-45 long, 30-45 wide, anterior lobe 20 broad, 8 long, extends 7 over gnathosoma, without small teeth on anterior side; shield design as in Fig.1, median line partly present, scapular tubercles 5 ahead of rear shield margin, scapular setae 6-8 long, projecting upwards, Dt-Dt 15-17 apart. Forelegs 19-24 long, tibia 3-5, tarsus 5, foretibial setae 3-5, genual setae 17-20, genu 2-4, femoral setae 7-8, trochanter 2-3. Tarsal solenidion 4-5.5, tarsal empodium 4-5.5, 4-5-rayed. Hindlegs 17.5-22 long, tibia 2.5-3, tarsus 5, genu 2-4, genual setae 7, femoral setae 7-8, trochanter 2-3. Tarsal solenidion 4-5.5, tarsal empodium 4-6, 4-5-rayed. Forecoxal tubercles 1b Ct1-Ct1 8-11 apart, seta 1b 6-8 long, forecoxal tubercles 3a Ct2.Ct2 7-8 apart, seta 3a 10-15 long; coxal tubercles 2a Ct3-Ct3 15-18 apart, seta 2a 20-22 long. Opisthosoma with 39-47 dorsal annuli and 41-49 ventral annuli, microtuberculate. Lateral tubercles (c2) Lt-Lt 27-32 apart, on ventral annuli 9-10, setae c2 10-11 long; 1st ventral tubercles (d) Vt1-Vt1 17-19 apart, on ventral annuli 15-20, setae d 20-25 long; second ventral tubercles (e) Vt2-Vt2 10-12 apart, on ventral annuli 21-30, setae e 8-15 long; 3rd ventral tubercles (f) Vt3-Vt3 10-13 apart, on ventral annuli 34-45, setae f 15-18 long. Caudal setae h2 20 long, 7-8 apart, accessory setae h1 4-5 long, 3 apart. Femal genital cover flap absent, genital tubercles (3a) on ventral annuli 10, Gt-Gt 5-7 apart, setae 3a 5-10 long.

EGGS: (from early in January): 52 × 33 × 32 µm.

HOST: Chamaecyparis obtusa cultivar "nana gracilis" (Sieb.et Zucc.).


REFERENCES


