TWO NEW SPECIES OF CALEPITRIMERUS KEIFER (ACARI: ERIOPHYIDAE) FROM GREECE

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ABSTRACT - Two new species of the genus Calepitrimerus Keifer, Calepitrimerus parnisiensis n. sp. collected from Quercus ilex L. (Fagaceae) and Calepitrimerus ceratoniae n. sp. collected from Ceratonia siliqua L. (Fabaceae or Leguminosae) are described and illustrated.

Key words - Acari, Eriophyidae, Calepitrimerus parnisiensis n. sp., Calepitrimerus ceratoniae n. sp., Quercus ilex, Ceratonia siliqua, Greece.

INTRODUCTION

While studying eriophyoid mites in Greece two new species of the genus Calepitrimerus Keifer, 1938 were collected, Calepitrimerus parnisiensis and C. ceratoniae. Calepitrimerus parnisiensis n. sp. is the first species of this genus found on Quercus ilex, while C. ceratoniae n. sp. is the first eriophyid mite known to occur on Ceratonia siliqua (Amrine and Stasny, 1994).

The terminology and setal notation in the descriptions follow Lindquist (1996) and Baker et al. (1996). Measurements of holotype and range of paratypes (in parentheses) are given in micrometers (µm) and refer to the length of the structure, unless otherwise stated. Body length is measured from the anterior edge of the prodorsal shield to the tip of the anal lobe. Length of the legs is from the posterior margin of the apodeme between coxae I and II to the apical margin of the tarsus (excluding empodium and solenidion).

Genus Calepitrimerus Keifer

Calepitrimerus parnisiensis n. sp. (Figs. 1-8)

FEMALE (n = 6) - Holotype: Body fusiform, 196(172-206), width 85(80-88), whitish. Gnathosoma: 60(41-48), downcurved. Coxal setae (ep) 3(3-4), dorsal genual setae (d) 9(9-10), sub-apical setae (v) 2, cheliceral stylets 36(32-38). Prodorsal shield: 58(51-58), width 82(82-92), subtriangular, with a prominent lobe, 15(11-17). A roughly sculptured gnathotectum-like membrane present beneath lobe. Shield pattern with reduced admedian lines, distinct only from anterior edge to about middle of shield, a number of small circular indentations on lateral shield, while rest of shield covered by hyphaelike lines. Dorsal tubercles well developed, near posterior margin of prodorsal shield; scapular setae (sc) 15(14-15), 28(25-32) apart, directed up and centrad. Legs: With all usual segments and setae. Legs I 62(48-53), femora 10(9-14), femoral setae (bv) 14(12-17), genua 5 genual setae (l') 2(20-21), tibiae 11(10-12), tibial setae (l') 2(2-4), tarsi 8, inner fastigial setae (l') 27(25-28), outer fastigial setae (l') 30(26-30), ventromesal setae (u) 5(4-5), solenidia 8, knobbed, empodia 7(6-7), 5-rayed with the proximal pair directed parallel to empodium axis. Legs II 52(45-54), femora 12(12-14), femoral setae (bv) 13(13-14), genua 5, genual setae (l') 6(5-7), tibiae 8(7-8), tarsi 8, inner fastigial setae (l') 6(5-6), outer fastigial setae (l') 25(22-26), ventromesal setae (u) 5, solenidia 7(6-7), knobbed, empodia 6(5-6), 5-rayed as leg I. Coxae: Coxae I and II granulated. Sternal line absent. Coxal setae 1b 14(12-13), 15(15-18) apart, coxal setae 1a 16(15-19), 12(11-12) apart, coxal setae 2a 45(42-47), 31(31-35) apart. Coxisternal area with 6 slightly microtuberculate annuli. Genitalia: 18(20-25), width 23(22-25).
Department of Agricultural Zoology and Entomology, Agricultural University of Athens, Greece, 1 female paratype each at the British Museum, London, England and the National Museum, Washington, D.C.

RELATION TO HOST PLANT - *Calepitrimerus parnisiensis* n. sp. was found in association with erineum probably caused by *Aceria ilicis* (Canestrini).

ETYMOLOGY - The name of the species is derived from the name of the mountain where it was found.

*Calepitrimerus ceratoniae* n. sp. (Figs 9-16)

FEMALE (n = 9) - Body fusiform, very short, 129(119-141), width 50(45-53), light orange when live.

**Gnathosoma**: 22(20-23), downcurved. Coxal setae (ep) 3(3-4), dorsal genual setae (d) 8(5-7), subapical setae (v) 2, chelical styli 22(21-25). **Prodorsal shield**: 41(37-43), width 44(38-47), subrhomboid, with a prominent lobe 7(6-8) and with its posterior margin distinctly elevated as seen in lateral view. Shield densely covered by small circular decorations. Dorsal tubercules, near to posterior edge of prodorsal shield, scapular setae (sc) 6(6-7), 17(14-18) apart, directed centrad. **Legs**: With all usual segments and setae. Legs I 43(42-43), femora 12(11-12), femoral setae (bv) 12(11-12), genua 4(4-5), genual setae (lb) 5(4-5), tibiae 6(7-8), tarsis 6, inner fastigial setae (lb) 6(5-6), outer fastigial setae (lb) 22(18-21), ventromesal setae (u') 4(4-5), solenidia 6, knobbed, empodia 5(5-6), 5-rayed as in female. Legs II 44(42-43), femora 12(11-12), femoral setae (bv) 12(11-12), genua 4(4-5), genual setae (lb) 5(4-5), tibiae 6(7-8), tarsis 6, inner fastigial setae (lb) 6(5-6), outer fastigial setae (lb) 22(18-21), ventromesal setae (u') 4(4-5), solenidia 6, knobbed, empodia 5, 5-rayed as in leg I. **Coxae**: As in female. Coxal setae Ib 9(11), 14(12) apart, coxal setae Ia 15(13-15), 8 apart, coxal setae 2a 26(23-23), 22(23-28) apart. Coxisternal area with 6(5-7) microtuberculate annuli. **Genitalia**: 15, width 18(18-19). Coxal setae 3a 13(12-13), 14(12-15) apart. **Opisthosoma**: Central ridge 20(18-22) dorsal annuli long. Central and lateral ridges microtuberculate as in female. Setae c2 17(12-14), 45(42-47) apart, on annulus 1, setae d 52(38-39), 25(24) apart, on annulus 9(10-11), setae e 40(25-39), 11(11-12) apart, on annulus 22(24-24), setae f 13(13-14), 15(16-17) apart, on annulus 38(38-41). Total dorsal annuli 35(32-33), total ventral annuli 42(42-45), microtuberculate as in female. Setae h2 43(42-46), 9(7-8) apart, setae h1 1, 5 apart.

DIAGNOSIS - *Calepitrimerus parnisiensis* n. sp. is easily distinguished by the characteristic shield pattern, the membrane beneath the lobe, the anteriorly granulated genitalia along with the above described empodium.

TYPE MATERIAL - Holotype female, 6 female paratypes, allotype male and 3 male paratypes collected from *Quercus ilex* L. (Fagaceae) at Parnis Mountain (Greece), by N. G. Emmanouel, 8 November 1998. Holotype and paratypes are deposited in the Acari Collection, Department of Agricultural Zoology and Entomology, Agricultural University of Athens, Greece, 1 female paratype each at the British Museum, London, England and the National Museum, Washington, D.C.

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MALE (n = 4) - Slightly smaller than female, 117(117-138), width 43(44-46). **Gnathosoma**: 21(20-21). Coxal setae (ep) 3(3-4), dorsal genual setae (d) 6, subapical setae (v) 2, chelical styli 22. **Prodorsal...
Table 1. Character differences between *Calepitrimerus ceratoniae* n. sp. and *Calepitrimerus gweniae* Meyer.

<table>
<thead>
<tr>
<th>Calepitrimerus ceratoniae n. sp.*</th>
<th>Calepitrimerus gweniae Meyer**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Empodia 5-rayed</td>
<td>1. Empodia 4-rayed</td>
</tr>
<tr>
<td>2. Dorsal tubercles near shield margin</td>
<td>2. Dorsal tubercles near middle of shield</td>
</tr>
<tr>
<td>3. Median and admedian lines absent</td>
<td>3. Median and admedian lines present</td>
</tr>
<tr>
<td>4. Total dorsal annuli 37(36-39)</td>
<td>4. Total dorsal annuli 28</td>
</tr>
<tr>
<td>5. Central ridge 23(21-25) dorsal annuli long</td>
<td>5. Central ridge 13 dorsal annuli long</td>
</tr>
<tr>
<td>6. Dorsal shield elevated in lateral view</td>
<td>6. Not mentioned</td>
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</table>

* From 15 (10 females and 5 males) specimens.  ** From Meyer (1989).

**shield:** Similar to female, 36(37-39), width 40(36-44). Frontal lobe 6(6-9). Dorsal tubercles near rear margin of shield, scapular setae (sc) 5(6), 13(13-14) apart, directed centrad. **Legs:** With all usual segments and setae. Legs I 36(35-36), femora 7(6-7), femoral setae (bv) 8(8-9), genua 4, genual setae (l') 15(15-17), tibiae 6(6-7), tibial setae (l') 4, tarsi 5(4-5), inner fastigial setae (fb) 12(13-14), outer fastigial setae (ph) 17(16-17), ventromesal setae (u') 4, solenidia 6, knobbed, empodia 4(4-5), 5-rayed. Legs II 32(32-33), femora 6(6-7), femoral setae (bv) 7(6-7), genua 3(3-4), genual setae (l') 4(4-5), tibiae 6(5-6), tarsi 4(5), inner fastigial setae (fb) 4(3-4), outer fastigial setae (ph) 17(15-17), ventromesal setae (u') 3, solenidia 6, knobbed, empodia 4(4-5), 5-rayed. **Coxae:** As in female. Sternal line 4. Coxal setae 1b 5(6-8), 7(7-8) apart, coxal setae 1a 20(23-24), 5(5-6) apart, coxal setae 2a 34(25-37), 15(15-21) apart. Coxisternal area with 8(7-8) microtuberculate annuli. **Genitalia:** 12, width 14(13-15). Coxal setae 3a 22(22-23), 11(10-11) apart. **Opisthosoma:** Central ridge prominent from 4 to 22(18-24) dorsal annulus. Ridges microtuberculate, as in female. Setae c2 17(14-16), 35(34-35) apart, on annulus 3(2-3), setae d3 39(37-40), 21(21-22) apart, on annulus 11(11-14), setae e9(6-9), 10(9-12) apart, on annulus 29(24-29), setae f13(13-14), 11(11-13) apart, on annulus 40(38-47). Total dorsal annuli 38(33-38), total ventral annuli 45(43-52). Setae h2 34(32-36), 7(6-7) apart, setae h1 minute.

**DIAGNOSIS - Calepitrimerus ceratoniae** n. sp is close to *C. gweniae* Meyer (1989). Differences between the two species are given in Table I.

**TYPE MATERIAL -** Holotype female, 17 female paratypes, allotype male and 11 male paratypes, collected from *Ceratonia siliqua* L. (Fabaceae or Leguminosae) at Kandila, Etoloacarnania Prefecture (Greece), by Ioanna Litra, a student at the Agricultural University of Athens, on 16 August 1999 and 22 September 1999. Holotype and paratypes are deposited in the Acari Collection, Department of Agricultural Zoology and Entomology, Agricultural University of Athens, Greece. A female paratype is also deposited in the British Museum, London, England and the U.S. National Museum, Washington, D.C., USA.

**RELATION TO HOST PLANT -** Vagrants on the young shoots of the tree.

**ETYMOLOGY -** The name of the species is derived from the generic name of the host plant.

**ACKNOWLEDGEMENTS**

We wish to thank the State Scholarships Foundation that supported this study.

**REFERENCES**


