Two New Species of the Genus *Aceria* (Acarina: Eriophyidae) from Taiwan

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Abstract

The present paper gives the description and illustration of two new species of the genus *Aceria* from Taiwan. They are *Aceria gallae* sp. nov. and *Aceria pobuzii* sp. nov. Both of them infest *Cordia dichotoma* Forst., causing galls on leaves, fruits, shoots and tender stems.

Key words: Acarina, Eriophyidae, *Cordia dichotoma*, gall, Taiwan.

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Introduction

In the course of survey and study of eriophyid mites, two new species, *Aceria galleae* sp. nov. and *Aceria pobuzii* sp. nov., from "Sebastan Plum Cordia"—*Cordia dichotoma* Forst. were collected. They have been described and illustrated in detail.

The type materials are deposited in the collections of the Research Institute of Entomology, National Chung Hsing University, Taichung 40277, Taiwan, R. O. C.

The abbreviation of names of setae used in figures are those of Huang. (2)

*Aceria galleae* sp. nov.

(Fig. 1.)

Female. Body wormlike, light white in color. Rostrum projecting downward. Shield a little subtriangular anteriorly; ratio of width/length 1.7; median line faintly existing on rear two thirds with two thin darts on the posterior end and the middle respectively; a pair of distinct admedian lines running posteriorly and arched outwardly, but never meet together at the rear, a pair of long-legged Y-shape line present thin between the median and admedian lines; submedian lines standing obviously thick; dorsal tubercles 9.4-9.9 μ apart, on rear margin, dorsal setae 17.9-19.8 μ long, diverging to backward. Abdomen with microtubercles, consisting of 66-70 tergites and 63-67 sternites; breadth of tergite 1.9 μ, sternite 2.2 μ. Relative lengths of segments of fore-leg: claw ≥ tarsus > featherclaw ≥ tibia; hind-leg, claw > tarsus > tibia; anterior coxae significantly independent; claw without knob; featherclaw 4-rayed; Genitalia 16.9-17.9 μ wide, 10.4-11.2 μ long; genital coverflap with 12-13 longitudinal ridges. Intervals acs-acs, tS2-tS2 & tS2-tS3 are about in the same distance one another; ds-ds just as long as vs1-vs3; gs-gs and vs1-vs1 are two times as long as ts1-ts1 and gs-ls individually. Length gs is the same as vs2, acs is only a little shorter than ts1; vs1 about three times the size of ts2. Relative lengths of setae: cs > vs1 > ts1 ≥ ds ≥ vs3 ≥ ls ≥ ts2 > ts1 ≥ acs ≥ vs2 ≥ gs. Setae gs on 3-4 sternites, ls on 7-8, vs1 on 18-21, vs2 on 35-37, vs3 on 57-61. Ratio of length/interval between bases of pair ts1=1, ts2=2.1, ts3=1.3, ds=1.3, ls=0.4, vs1=1.3, vs2=0.3, vs3=1.2, acs=0.9, cs=8.3, gs=0.5. Average measurements in micra (n=5): body length 189.5, thickness 43.2, width 45.7; shield length 20.8, width 35.2; lengths: fore-leg, tibia 5.1, tarsus 6.3, claw 6.4, featherclaw 5.4; hind-leg, tibia 3.5, tarsus 5.8, claw 7.6; setae ts1=6.9, ts2=15.8, ts3=23.1, ds=18.8, ls=16.8, vs1=46.9, vs2=6.5, vs3=17.4, acs=6.6, cs=84.3, gs=65; intervals of setae, ds-ds 14.3, ts1-ts1 6.6, ts2-ts2 7.6, ts3-ts3 17.6, gs-gs 12.9, ls-ls 44.4, vs1-vs1 36.1, vs2-vs2 21.1, vs3-vs3 14.3, cs-cs 10.2, acs-acs 7.2, ts1-ts2 4.5, ts2-ts3 6.9, ts3-gs 20.6, gs-ls 18.2, ls-vs3 34.7, vs1-vs2 38.5, vs2-vs3 64.5, cs-acs 2.

Male. Not available to the writer.

Host. *Cordia dichotoma* Forst. (Boraginaceae), "Sebastan Plum Cordia".
Fig. 1. *Aceria gallei* sp. nov., ♀.

A. dorsum; B. venter; C. shield; D. side skin structure (right);
E. genitalia; F. right anterior leg; G. right posterior leg; H. featherclaw.


Paratype. Many ♀♀, with collection data same as the holotype.

Remarks. The galls were made on either sides of infested leaves. The conical or cylindrical galls with coloration of no variation (at first), dark gray, light brown and to dark brown finally, are present on the upper side of leaves. Mostly the conical galls with pointed head are produced on the under-side of leaves and colored in light green, light brown, brown and lastly to dark brown. Though the galls may stand alone separately or by the lump, they are certainly in connection with veins.

The similar features on subtriangular front outline of shield, somewhat likeness on disk networks, abdominal granulations and 4-rayed featherclaws make the designated species closer to *Aceria prostantherae* Keifer (135), but two darts of median line and long-legged Y-shaped lines on the shield, and no microtubercles and distinct boundary on anterior coxae make the two species separable.

The specific name "gallei" is induced from "gall".
Aceria pobuzii sp. nov.

(Fig. 2.)

Female. Body wormlike, light white to light yellow colored. Rostrum curved diagonally down. Shield subtriangular in outline; ratio of width/length 1.6; design of clear lines; median line thick but present on rear less than two thirds of length, following by independent terminal dash, having a connection with admedian lines by branches sprouting at the top and the middle; admedian lines complete and thick, arching four times outwardly; first pair of submedian lines existing on anterior one third, arching externally and bending to connect the ends of top branches to make a pear-shaped figure; several incomplete lateral lines standing on each sides; the curved cross lines combining with longitudinal lines, forming a series of cells ornamented with dashes except 7 central cells and the spaces in front of dorsal tubercles; dorsal tubercles 20.3-22.8 μ apart, on rear margin; dorsal setae 19.8-21.8 μ long, diverging to rear. Abdomen with microtubercles, consisting of 50-53 tergites and 67-68 stern-
ites; breadth of tergite 2.8 μ, sternite 2.5 μ. Relative lengths of segments of fore-leg: claw > featherclaw ≥ tibia ≥ tarsus; hind-leg, claw > tarsus > tibia; the base of anterior coxae ornamented with granules; claw somewhat tapering; featherclaw 6-rayed; Genitalia 22.3-22.8 μ wide, 12.6-13.4 μ long; genital coverflap with many irregular ridges. Intervals "cs-cs & ts1-ts1", "ts3-ts3 & vs2-vs2", "ls-ls & vs2-vs3" and "gs-ls & ls-vs1", are nearly in the same distance respectively; ls-ls & vs1-vs2 are about twice as far as vs1-vs2 & ts2-ts2 individually. Lengths ts2 and ts3 are about the same as ls and vs3 separately. Relative lengths of setae: vs1 > cs > ts3 ≥ vs3 > ds ≥ ts2 ≥ ls > vs2 > gs > ts1. Setae gs on 3-4 sternites, ls on 10-11, vs1 on 20-21, vs2 on 32-35, vs3 on 60-62. Ratio of length/interval between bases of pair ts=0.5, ts2=1.2, ts3=1, ds=0.8, ls =0.3, vs1=1.4, vs2=0.4, vs3=1.3, cs=5.3, gs=0.4. Average measurements in micra (n=5): body length l81.9, thickness 58.4, width 62; shield length 32.6, width 51.5; lengths: fore-leg, tibia 4.4, tarsus 5.6, claw 7.3; setae ts1 4.8, ts2 17.3, ts3 25.4, ds 20.7, ls 17.2, vs1 64.7, vs2 10, vs3 24.5, cs 47.3, gs 6.2; intervals of setae ds-ds 25, ts1-ts1 9.9, ts2-ts2 14.8, ts3-ts3 26.5, gs-gs 15.4, ls-ls 60.3, vs1-vs1 44.8, vs2-vs2 27.9, vs3-vs3 19.2 cs-cs 9, ts1-ts2 5.4, ts2-ts3 8.1, ts3-gs 17.3, gs-ls 27.3, ls-vs1 28.3, vs1-vs2 30.3, vs2-vs3 59.5.

Male. Not available to the writer.

Host. Cordia dichotoma Forst. (Boraginaceae), "Sebastian Plum Cordia".


Paratype. Many ♀♀, with collection data same as the holotype.

Remark. The symptom of hosts infested by this mite is the same as that of Aceria gallae. The shield design is somewhat similar to Aceria calilupini Keifer, but it may be separable diagnostically from the latter by the ornament of dashes on shield, fewer granules on anterior coxae, so many irregular ridges on genital coverflap and 6-rayed featherclaw of the designated species. In opposition, Aceria calilupini possesses a shield with granules, coxae with short lines and dashes, a genital coverflap with 12-14 regular longitudinal furrows, and the featherclaw 7-rayed.

The specific name "pobuzi" is Latinized from the Chinese name of Cordia dichotoma - "pobuzi" (破布子).

References

Two New-Record Species of Eriophyid Mites from Taiwan (Acarina: Eriophyidae)


台灣產Aceria屬 (蟎蜱類：節蜱科) 之二新種

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摘要

本文係就外部形態特徵描述臺灣產Aceria 屬之二新種：
(1) 破布子蟎蜱Aceria pobuzii sp. nov.
(2) 破布子二矢蟎蜱Aceria gallae sp. nov.

二者均寄生為害於破布子（Cordia dichotoma Forst.），在其葉、果實、嫩枝條上產生蟎瘤，使之變形、萎縮，影響發育生長，降低果實之質與量。

中文名稱在破布子蟎蜱係源自其種小名之 "popuzi"—破布子；破布子二矢蟎蜱則取自其硬皮板（shield）、中線（median line）上之雙矢特徵。

關鍵詞：蟎蜱類，節蜱科，破布子，蟎瘤，台灣。

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