

ERIOPHYID STUDIES XXIII

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ERIOPHYID STUDIES XXIII

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The present installment has descriptions of four Eriophyid mites sent me for identification. The first is one causing severe bronzing and tip burning on Brazil cotton. The second new species is a citrus leaf mite in South Africa. The third new species spots banana fruit in Queensland. The last new species damages bitter almond in Israel.

Heterotergum Keifer, new genus

Body fusiform, larger anteriorly and tapering caudally. Rostrum small, chelicerae nearly straight. Shield triangular in dorsal view, anterior lobe over rostrum acuminate and short; dorsal tubercles large, on rear margin; dorsal setae pointing backward, long. Legs with all standard segments and setae. Abdomen evenly curved dorsally, the first 4 to 6 narrow microtuberculate rings behind shield completely encircling abdomen, followed by a series of broad tergites; these broad tergites becoming gradually reduced caudally. First 4 to 6 body rings and subsequent sternites completely microtuberculate; broad tergites with obscure elongate microtubercles. Female genitalia a moderate distance behind coxae; internal anterior apodeme of normal length.

Genotype: **Heterotergum gossypii** n. sp.

Heterotergum gossypii Keifer, new species

Plate 241

Female 150-215 μ long, 50 μ wide, 40 μ thick; color light yellow. Rostrum 22 μ long, projecting down. Shield triangular, anterior lobe short and acute; design obscure, laterally granular above coxae; dorsal tubercles 22 μ apart, on rear margin; dorsal setae 61 μ long, projecting backward. Forelegs 28 μ long, tibia 55 μ long, seta present; tarsus 5.5 μ long, claw 8 μ long, with small knob; featherclaw 5-rayed. Anterior coxae broadly contiguous; second setae well ahead of line through third setae and directly behind first setae. Abdomen with about 14 broad tergites bearing obscure elongate microtubercles; first tergite separated from shield by 4-6 narrow microtuberculate rings extending around abdomen from the respective tergites. The caudal 5-6 body rings similar dorsoventrally. Tergites 63-68 in number, completely microtuberculate. Lateral seta 7.5 μ long, on about sternite 5; first ventral seta 50 μ long, on about sternite 22; second ventral 65 μ long on sternite 38; third ventral 16 μ long, on sternite 5 from rear. Accessory seta present. Female genitalia 20 μ wide, 16 μ long, coverflap with obscure microtubercles basally and about 12 longitudinal furrows. Seta 13 μ long.

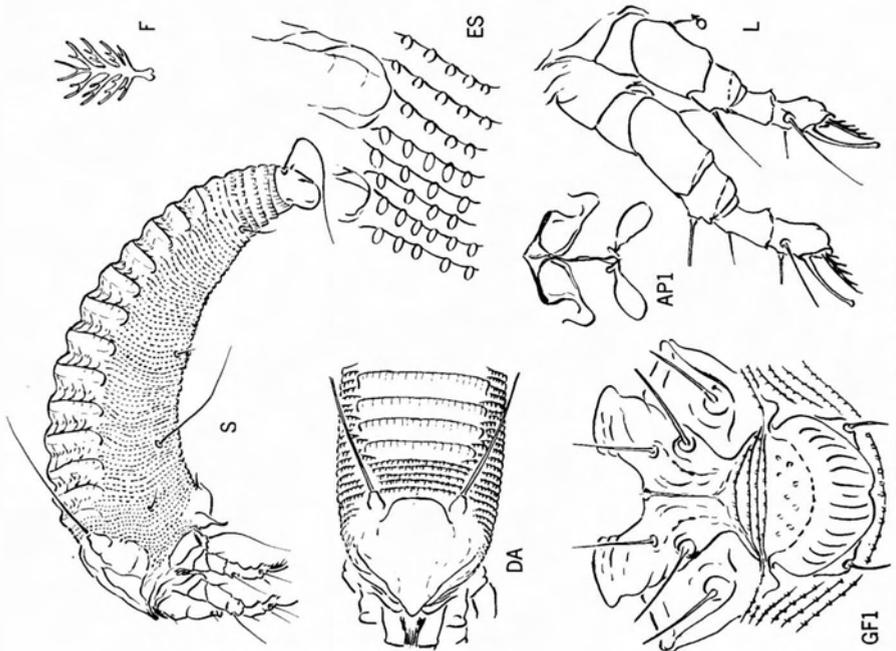
Male similar to female but a little smaller.

Type locality: Campo Fomento Federal, (R. G. do Norte), Brazil.
Collected: July 20, 1954 by A. S. Costa. **Host:** Cotton, *Gossypium hirsutum* L. **Relation to host:** The mites bronze the mature leaves and produce tip blighting on the young leaves. **Type material:** As well as the dry leaves with numerous mites there is a type slide and 5 paratype slides designated. The genus is distinguished by the 4-6 narrow body rings that completely encircle the abdomen just behind the shield. It is otherwise a member of the *Vasates-Anthocoptes* complex.

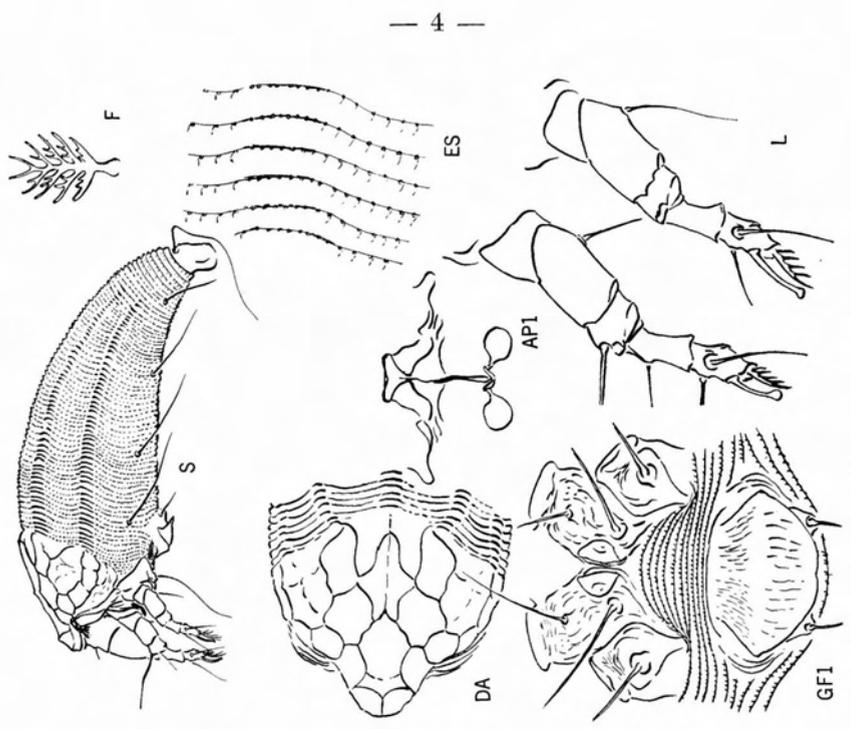
Calacarus citrifolii Keifer, new species

Plate 242

Female 185-200 μ long, 70 μ thick; body in life presumably purplish with white longitudinal wax bands. Rostrum 40 μ long, curved down. Shield 60 μ long, 65 μ wide, anterior lobe broad and rounded, dorsal setae missing. Shield design a network:



241—*Heterotergum gossypii* n. sp.



242—*Calacarus citrifolii* n. sp.

median line present to rear; admedians and submedians curved and interbranching; lateral design a line of cells. Forelegs 38μ long, tibia 10μ long, seta present; tarsus 7μ long, claw 6μ long, moderate knob. Featherclaw 5-rayed. Hindlegs 35μ long, tibia 7μ long, tarsus 7μ long, claw 7μ long. Anterior coxae contiguous centrally, the coxae bearing a design of lines. Sternites and tergites of abdomen nearly equal in number and microtuberculate; about 60 tergites and 65-70 sternites. Abdomen with 5 wax-bearing longitudinal ridges on dorsal half, gradually diminishing in distinctness caudally. Lateral seta 40μ long, on about sternite 11; first ventral 45μ long, on about sternite 27; second ventral 40μ long, on about sternite 46; third ventral about 25μ long, on sternite 8 from rear. Accessory seta absent. Female genitalia 32μ wide, 25μ long; coverflap with obscure fine longitudinal lines in 2 ranks. Genital seta 18μ long.

Type locality: Rustenburg, Union of South Africa. **Collected:** January 20, 1954 and submitted by Dr. H. K. Munro, Division of Entomology, U. of S. A. **Host:** *Citrus* sp. **Relation to host:** The mites inhabit the open leaf surfaces and function as rust mites. **Type material:** A type slide and 8 paratype slides are so designated. The relation this mite bears to other named species in the genus *Calacarus* is shown in the following key.

(*Calacarus* key)

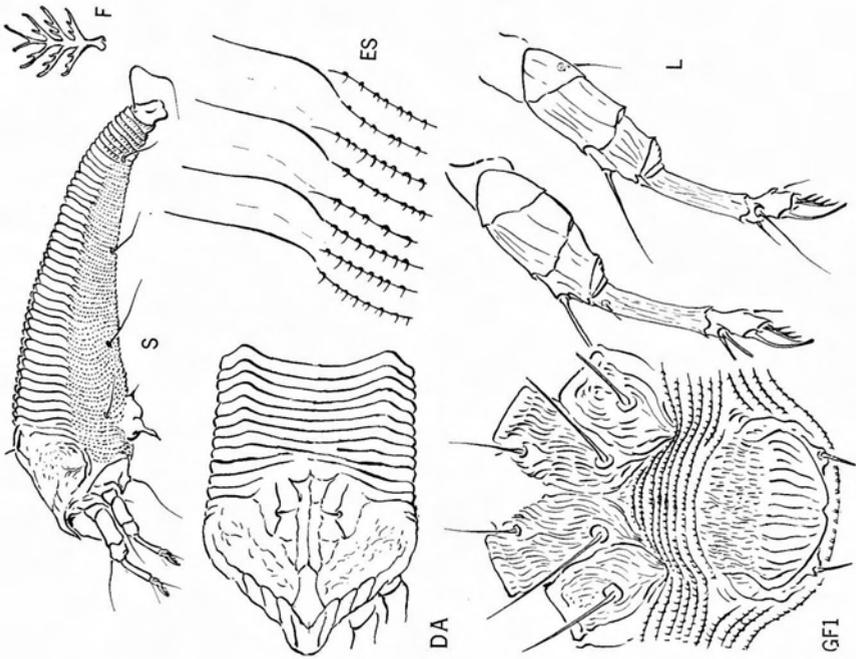
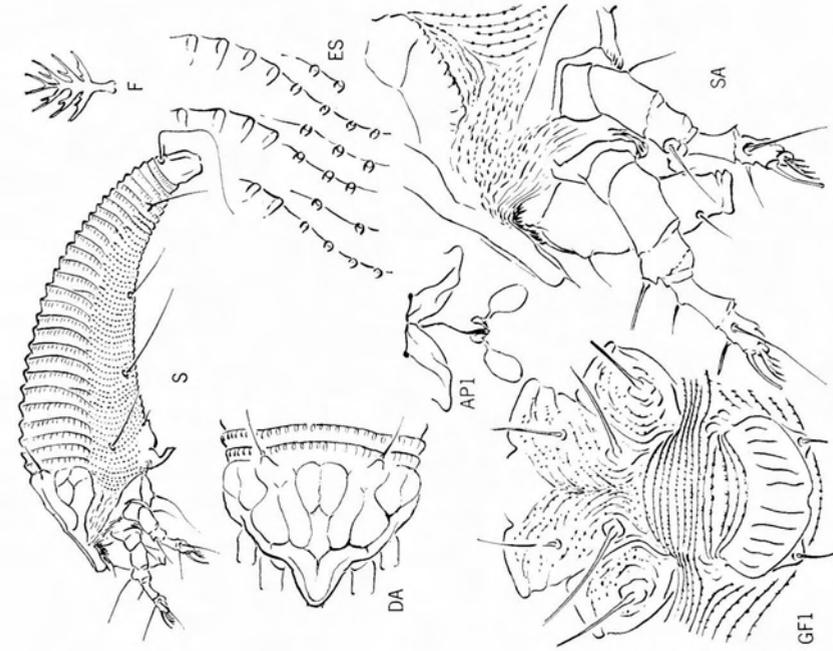
1. Three wax-bearing abdominal ridges; on oak in California ----- *pulviferus* K. 2
1. Five wax-bearing abdominal ridges ----- 2
2. Shield with simple central raised plate, lacking a network design; on oak in California ----- *tejonis* K. 3
2. Shield with an elaborate network design ----- 3
3. Median shield line present on rear half of shield; submedian line recurring centrally at rear; on *Citrus* in South Africa ----- *citrifolii* n. sp. 4
3. Median shield line obscure or absent; submedian line when present not recurring ----- 4
4. Submedian line present to rear but continuing laterally; lines edged with short vertical dashes; on *Guem* in northern Europe ----- *gei* Liro
4. Submedian line apparently absent; central design edged with short vertical dashes; on tea and camellia in Asia and North America ----- *carinatus* Green (*adornatus* K.)

Phyllocoptuta musae Keifer, new species

Plate 243

Female up to 230μ long, 60μ wide and 45μ thick; fusiform; in life presumably yellowish. Rostrum 25μ long, projecting down. Shield 47μ long, 60μ wide; generally triangular with rather acute front lobe and broad curved lateral lobes. Shield design a central network, with obscure granulations and roughenings beyond tubercles, and a row of lateral cells; median line present on rear half of shield; admedian and one submedian line present. Dorsal tubercles elongate, 15μ apart; dorsal setae 4.5μ long, set well ahead of rear margin and projecting up and inwardly. Forelegs 39μ long, tibia 13μ long, seta present, small, on inner side near base; tarsus 7μ long; claw 5μ long. Featherclaw 4-rayed. Hindlegs 35μ long, tibia 10.5μ long, tarsus 7.5μ long, claw 5.5μ long. Coxae strongly lined; anterior coxae contiguous. Abdomen with 36 tergites and 70 sternites, the sternites microtuberculate. Lateral seta 17μ long, on about sternite 8; first ventral seta 22μ long, on about sternite 22; second ventral 18μ long, on sternite 46; third ventral 20μ long, on sternite 5 from rear. Accessory seta present. Female genitalia 23μ wide, 19μ long; coverflap with numerous fine lines basally and 13-14 longitudinal furrows on rear half; seta 15μ long.

Type locality: Burleigh, Queensland. **Collected:** November 1954 by B. R. Champ and sent for identification by Dr. W. J. Hall of the Commonwealth Institute of Entomology, London. **Host:** banana, *Musa sapientum* K. **Relation to host:** The mites are said to cause fruit spotting. **Type material:** A type slide and six paratype slides so designated. This is the second species of *Phyllocoptuta*. It differs from the common citrus rust mite, *P. oleivorus* (Ashm.) in numerous details, but principally by the elongate tibiae. In *oleivorus* the tibiae and tarsi are about the same length, the tibiae being about 6μ long. The range of the genus *Phyllocoptuta* in its native habitat would now appear to be from southern Asia to Australia. The differences between *musae* and *oleivorus* indicate that there are a considerable number of the *Phyllocoptuta* species yet to be discovered.



244—*Vasates latiloba* n. sp.

243—*Phyllocapruta musae* n. sp.

Vasates latiloba Keifer, new species

Plate 244

Female 180-215 μ long, 65 μ thick; fusiform. Rostrum 19 μ long, projecting down. Shield 48 μ long, 60 μ wide; anterior lobe somewhat acuminate, rounded apically, two minute spines at its lower edge. Lateral shield lobes moderately prominent, with roughened edges; granulations and roughenings above coxae. Shield design of curved lines: median line present above anterior lobe and to rear; admedian line arising from median line at base of anterior lobe and extending backward in a sinuate manner, ending by curving back to median line; anteriorly these lines form a sub-marginal line that starts with the admedian line at the anterior lobe base and extends laterally to the lateral lobe area, giving rise to 2 or 3 posteriorly directed lines. Dorsal tubercles on rear margin, 37 μ apart; dorsal setae 15 μ long, projecting backward. Forelegs 37 μ long, tibia 8.5 μ long, with seta; tarsus 8 μ long, claw 7 μ long. Featherclaw 4-rayed. Hindlegs 34 μ long, tibia 8 μ long, tarsus 7 μ long, claw 7 μ long. Anterior coxae broadly contiguous the coxae bearing lines and some micro-tubercles. Abdomen with 33 tergites bearing elongate microtubercles; about 65 sternites also microtuberculate; each tergite transforms laterally to 2 and sometimes 3 sternites. Lateral seta 31 μ long, on about sternite 10; first ventral 40 μ long, on about sternite 24; second ventral 17 μ long, on about sternite 41; third ventral seta 19 μ long, on sternite 5 from rear. Accessory seta present. Female genitalia 25 μ wide, 16 μ long, coverflap with 10-12 longitudinal furrows; seta 14 μ long.

Type locality: Israel. **Collected:** April 28, 1955 by H. Bytinski-Salz of the Israel Department of Agriculture. **Host:** *Amygdalus* sp., bitter almond. **Relation to host:** The mites are leaf vagrants causing narrowing of the leaves on young trees grown for root stock. **Type material:** A type slide and six paratypes designated in the series. This mite is very similar to the peach silver mite, *cornutus* Banks, but the lateral lobes and clearer shield design distinguish it.

The type slide of *Phyllocoptruta musae* is being sent to Dr. W. J. Hall. The remaining types are in the collection of the Entomology Research Service, U. S. D. A.

Installment XXII of this series appeared in this *Bulletin*, 42:121, July-August-September, 1954.

Designations on the Plates

- API—Internal female genitalia
- DA—Dorsal view of anterior section
- ES—Side skin structure
- F—Featherclaw
- GFI—Female genitalia and coxae
- L—Left legs
- S—Side view of mite
- SA—Side view of anterior section

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