ERIOPHYID STUDIES B-5

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California Department of Agriculture

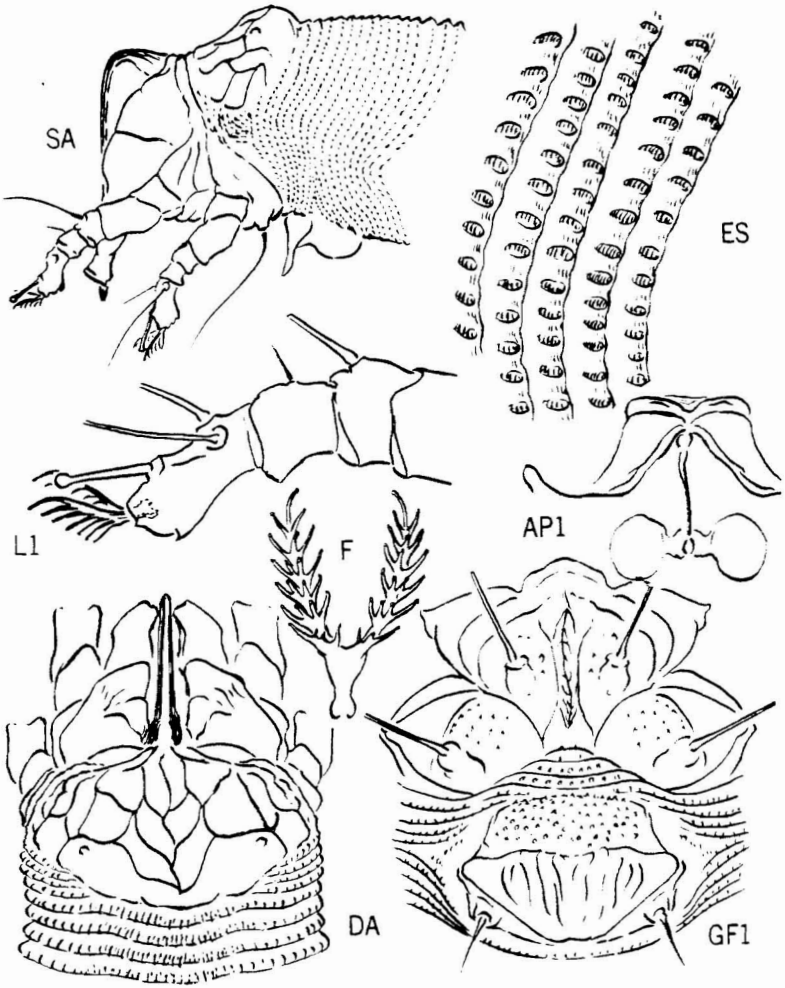

Plate 1 - Rhynacus kraussii, new species

ISSUED - Feb. 21, 1962

Rhynacus kraussii, new species

Plate 1

This new species is distinguished by having definite and fairly strong longitudinal ribs on the female genital coverflap. It is named for Dr. N. L. H. Krauss of the Hawaiian Board of Agriculture and Forestry who has sent me many collections of Eriophyids.

Female 190u-210u long, 50u-55u thick; elongate-fusiform; color apparently yellowish. Rostrum 54u long. Shield 28u long, 50u wide, dorsally arched; design an irregular network of sinuate lines: median line complete, sinuate; admedian lines diverging to rear, connected to median line by three diagonal lines forming three irregular cells on each side of median; submedian area with about three irregular cells formed of curved lines partly branching laterally from admedian; lateral area with 3 or 4 vertically elongate cells following consecutively, and with a sublateral granular area below. Dorsal tubercles present as small points within shield margin to rear of submedian area but bearing no setae, 30u apart. Forelegs 40u long; tibia 6.5u long, with seta 3.5u long at about 1/3; tarsus 11u long, the setae as strong as patellar; claw 7u long, straight, knobbed; featherclaw about 7-rayed (or 6?). Hindlegs 36u long, tibia 6.5u long, tarsus 10u long, claw 7u long. Coxae with some fine, pointed granules; anterior coxae partly fused with subrostral plate anteriorly, and separated by a ridge extending posteriorly from this plate; second setiferous tubercles well ahead of transverse line through third tubercles. Abdomen with about 75-80 rings, the microtubercles somewhat elongate, not pointed, hardly touching rear ring margins. First ventral seta 69u long, on about ring 27; second ventral seta 16u long, on ring 43; third ventral 34u long, on ring 11 from rear. Accessory seta absent. Female genitalia 26u wide, 18u long; anteriorly granulate, the coverflap with about 12 longitudinal ribs; seta 10u long.

Type locality: Cali, Colombia

Collected: Nov. 10, 1961 by N. L. H. Krauss

Host: Lantana camara L. (Verbenaceae) lantana

Relation to host: the mites appear to be undersuface vagrants on the leaves.

Type material: dry leaves bearing mites, a type slide, 4 paratype slides.

Cecidophyes pusilla, new species

Plate 2

Pusilla is similar to Cecidophyes lyrata K. in having a shield pattern consisting of lines of granules. But pusilla is only 3/4 as long as lyrata. The featherclaw on lyrata is 4-rayed; on pusilla it is 7-rayed.

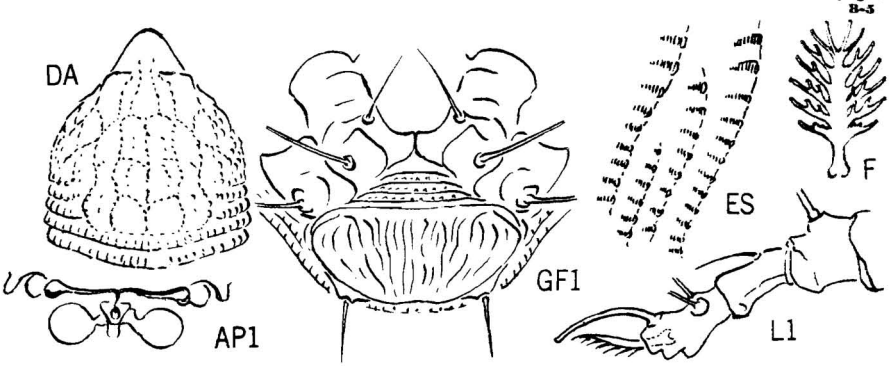

Plate 2 - Cecidophyes pusilla, new species

Female 135μ-155μ long, 35μ-40μ thick; body somewhat robust and wormlike; color light yellowish-white. Rostrum 29μ long. Shield 36μ long, 33μ wide; anterior lobe fairly broad over rostrum; design a network of granular lines: median line present on rear 2/3; admedian lines complete from anterior lobe base, sinuate, joined to median by three curved transverse lines, the admedians somewhat recurved posteriorly; first submedian line complete, sinuate, lying outside admedian; shield granular laterally. Forelegs 29μ long; tibia 6.5μ long, with seta 7μ long at 1/3; tarsus 8μ long; claw 8μ long, curved; featherclaw 7-rayed. Hindlegs 26μ long, tibia 5μ long, tarsus 6.5μ long, claw 6.5μ long. Coxae with raised outlined areas around second and third setiferous tubercles; anterior coxae narrowly joined by central projection; first setiferous coxal tubercles closer than second tubercles and a little ahead of anterior junction point of coxae; second tubercles well ahead of transverse line through third setiferous coxal tubercles. Abdomen with about 36 tergites and 30-33 sternites; microtubercles touching rear ring margins and more elongate dorsally. Lateral seta 12μ long, on about sternite 4; first ventral seta 42μ long, on about sternite 16; second ventral 9μ long, on about sternite 26; third ventral 17μ long, on sternite 5 or 6 from rear. No accessory seta. Female genitalia 21μ **wide**, 13μ long; coverflap with 18-20 longitudinal ribs unevenly broken into two ranks; seta 12μ long.

Type locality: College Park, Maryland

Collected: July 30, 1959 by the writer

Host: Quercus falcata Michx. (Fagaceae) Spanish oak

Relation to host: The mites are undersurface leaf vagrants, being found chiefly along the midrib. This mite occurs with a species of Phyllocoptes and of Rhyncaphytoptus described elsewhere in this paper.

Type material: dry leaves with mites, a type slide, 4 paratype slides. The three species of mites are somewhat mixed on these slides.

A mite which was collected at College Park about the same time as pusilla, but occurring commonly on leaves of willow oak, Quercus phellos L., appears to be structurally identical with Cecidophyes lyrata K., which lives on Quercus lyrata Walt.

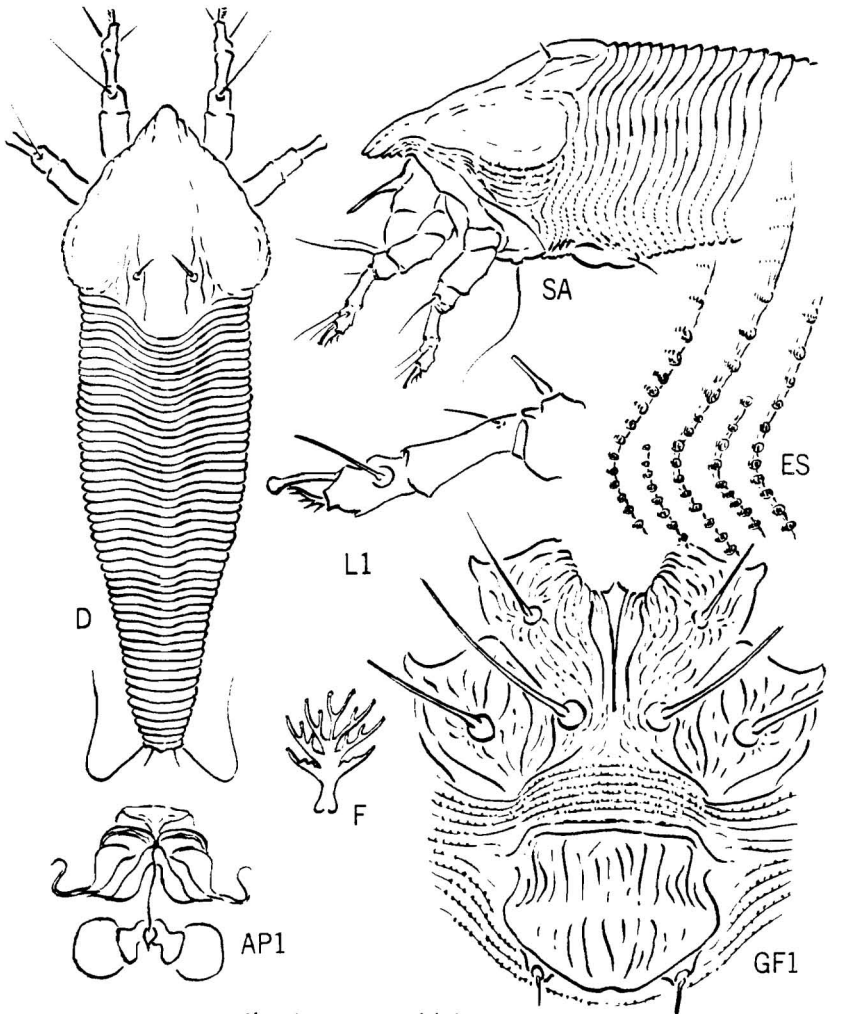

Plate 3 - Epitrimerus lobeliae, new species

Epitrimerus lobeliae, new species

Plate 3

The principle character distinguishing lobeliae is the pair of long antapical rostral setae. Additional features are the acuminate shield lobe over the rostrum with furrows on the underside, the large lateral shield lobes with granule lines below, the heavily ornamented coxae, and the 4-rayed featherclaw.

Female 185μ-205μ long, 53μ wide, 42μ thick; fusiform; color dull yellowish. Rostrum projecting down; antapical seta 20μ long. Shield 50μ long, 53μ wide; design absent; anterior lobe acute, furrowed below; lateral lobes large, rounded, with lines of granules below edge. Dorsal tubercles 21μ apart, axes longitudinal, associated with some longitudinal lines; dorsal setae 4μ long, projecting up. Forelegs 33μ long; tibia 7μ long, small seta from near base on anterior inner side; tarsus 6μ long; claw 6μ long, slightly curved, knobbed; featherclaw 4-rayed. Hindlegs 30μ long, tibia 6.5μ long, tarsus 5μ long, claw 7μ long. Coxae heavily ornamented with lines, lines of granules, and furrows; anterior coxae broadly connate; first setiferous coxal tubercles farther apart than second tubercles and a little behind anterior coxal junction; second setiferous coxal tubercles a little ahead of transverse line through third tuber les. Abdomen with about 50 tergites and 75-80 sternites; microtubercles present as beads along rear margins of sternites, becoming faint above sides on the tergites. Lateral seta 10μ long, on about sternite 10; first ventral seta 23μ long, on sternite 26; second ventral 9μ long, on about sternite 51; third ventral seta 11μ long, on sternite 6 from rear. Accessory seta minute. Female genitalia 20μ wide, 15μ long; coverflap with irregular basal longitudinal lines and about 10 weak longitudinal ribs; seta 9μ long.

Type locality: Blue Knob State Park, Bedford Co., Pennsylvania

Collected: July 18, 1959 by J. P. Keifer and the writer

Host: Lobelia cardinalis L. scarlet lobelia

Relation to host: the mites are leaf vagrants, principally on the lower surface.

Type material: dry leaves bearing mites, a type slide, 4 paratype slides.

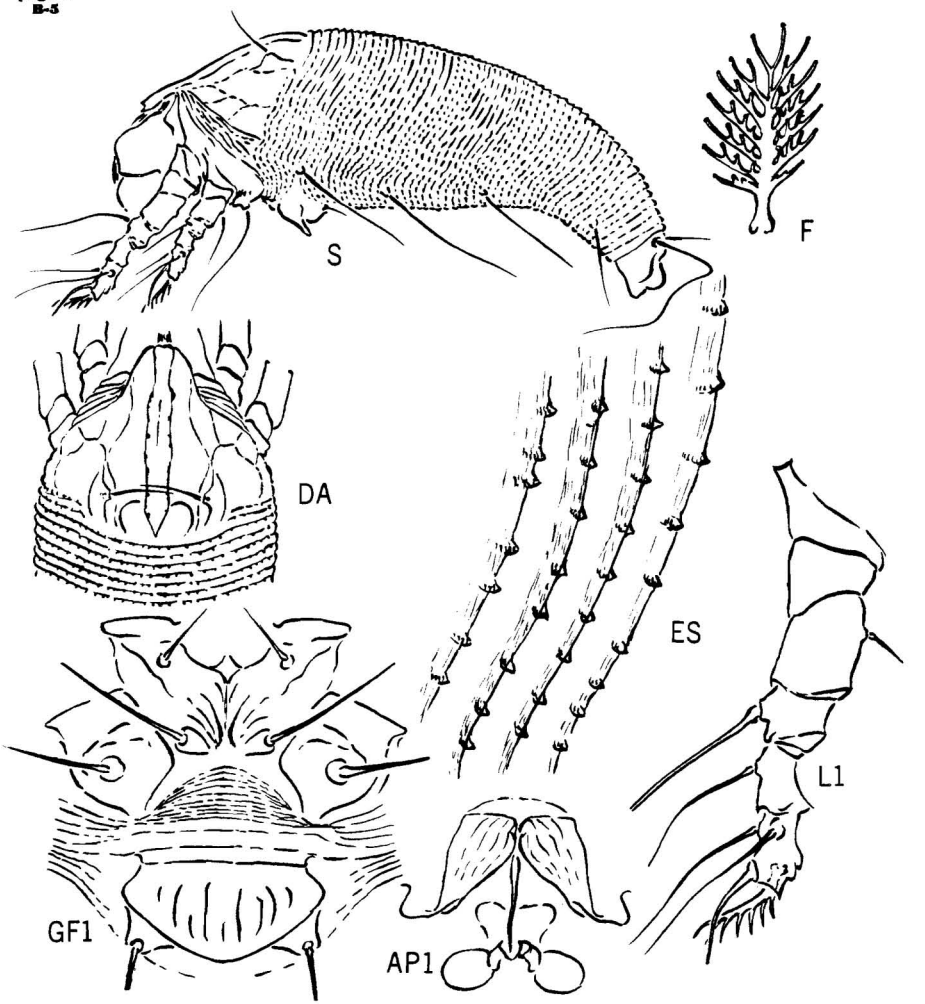

Plate 4 - Phyllocoptes potentillae, new species

Phyllocoptes potentillae, new species

Plate 4

The shield of potentillae is produced over the rostrum, but the abdomen has no dorsoventral differentiation in rings, as is the case with most Eriophyids having a produced shield. In this case the microtubercles are pointed and projecting from the rear ring margins. The 7-rayed featherclaw is distinctive.

Female 170μ-185μ long, 55μ thick; body rather robust; color dull yellowish-white. Rostrum large, 40μ long; antapical seta 9μ long. Shield 50μ long, 50μ wide: broad lobe over rostrum, with slight spical knotch visible from above and a furrow around edge visible from side; design with median line almost absent, admedian lines complete, subparallel, close, converging at rear margin, a curved line on outer side between admedian line and dorsal tubercles;a curved submedian line from sides of anterior lobe,ending at rear margin just inside dorsal tubercle; lateral shield edge with a design of about 3 cells; sublateral lines of granules. Dorsal tubercles 25μ apart, longitudinal axes somewhat converging to rear; dorsal setae 25μ long, projecting up, and centrad,set ahead of rear shield margin. Forelegs 37μ long; tibia 6.5μ long, seta 14μ long, from 1/3; tarsus 8.5μ long; claw 11μ long, slender, attenuate; featherclaw 7-rayed. Hindlegs 31μ long, tibia 4.5μ long, tarsus 7.5μ long, claw 10μ long. Coxae with some curved lines, anterior coxae broadly connate;first setiferous tubercles farther apart than second setiferous tubercles and ahead of anterior coxal junction;second setiferous tubercles a little ahead of transverse line through third tubercles. Abdomen with about 55 rings;microtubercles present as points projecting from rear ring margins. Lateral seta 53μ long, on about ring 6 behind shield; first ventral seta 60μ long, on about ring 18; second ventral 45μ long, on ring 35; third ventral 40μ long, on ring 5 from rear. Accessory seta 8μ long. Female genitalia 23μ wide, 8.5μ long; coverflap with about 10 weak longitudinal ribs; genital seta 40μ long.

Type locality: Firehole Lake, Yellowstone National Park, Wyoming

Collected: July 5, 1960 by the writer

Host: Potentilla fruticosa L., bush cinquefoil

Relation to host:the mites live among the hairs on the undersides of the leaves.

Type material: dry leaves with mites, a type slide, 2 paratype slides

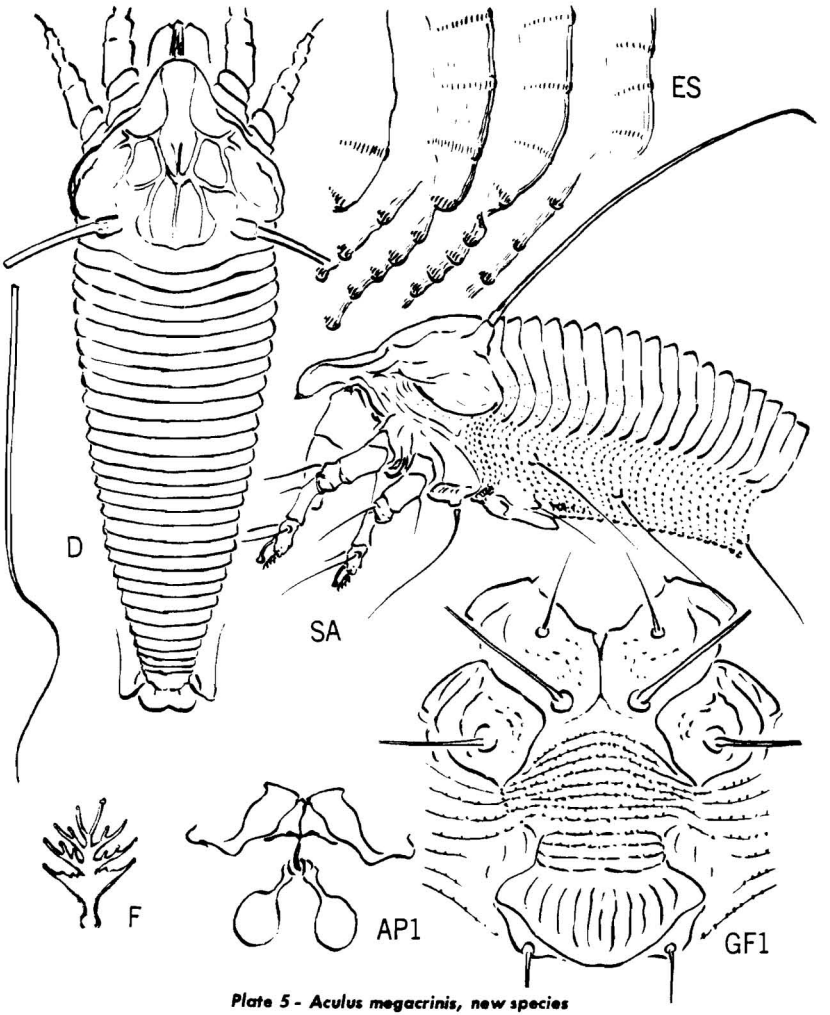

Plate 5 - Aculus megacrinis, new species

Aculus megacrinis, new species

Plate 5

Megacrinis is similar to Aculus mastigophorus (Nal.) of Europe by having long dorsal setae. The new species differs from mastigophorus by having 4-rayed featherclaws and longitudinal ribs on the female genital coverflap.

Female 150u-170u long, 53u wide, 45u thick; robust-spindleform; color light yellowish. Rostrum 27u long, projecting down; antapical seta 6.5u long. Shield 46u long, 53u wide; subtriangular in dorsal view; anterior lobe over rostrum broad,rounded anteriorly, with frontal points small. Shield design of broad lines in center of shield, the median line present on rear half, connected to admedians by cross line at 2/3; admedians complete, curving back from sides of anterior lobe as narrow lines, meeting a cross line from submedian line at 1/3 and becoming broad, running diagonally inward to cross line at 2/3 and recurved from there to rear margin. Submedian line in front of dorsal tubercle, extending from about 1/3 back to about 2/3. Lateral shield lobes prominent and rounded.Dorsal tubercles 33u apart, pointed diagonally laterally; dorsal setae 140u long, strongly diverging to sides and apically sinuate. Forelegs 36u long; tibia 10u long, with seta 3.5u long at 1/4; tarsus 7u long; claw 5.5u long, curved, knobbed; featherclaw 4-rayed. Hindlegs 32u long, tibia 7u long, tarsus 7u long, claw 6u long. Coxae with a few granulations and lines; anterior coxae moderately joined centrally, the sternal line forked to rear.First setiferous coxal tubercles slightly farther apart than second tubercles, about opposite anterior coxal junction; second coxal tubercles ahead of transverse line through third tubercles. Abdomen with about 28 tergites and about 70 sternites; sternites microtuberculate, the microtubercles slightly elongate and on rear ring margins; faint elongate microtubercles on lateral lobes of tergites. Lateral seta 16u long, on about sternite 8; first ventral seta 19u long, on about sternite 20; second ventral 21u long, on about sternite 38; third ventral 23u long, on aternite 4 from rear. Accessory seta 2.5u long. Female genitalia 23u wide, 16u long; coverflap with about 10 longitudinal ribs; genital seta 11u long.

Type locality: Skyland, Skyline Drive, Virginia

Collected: July 25, 1959 by J. F. Keifer and the writer

Host: Betula lenta L. (Betulaceae) black birch

Relation to host: the mites are sparse undersurface inhabiton the leaves.

Type material: dry leaves with mites, leaves in liquid with mites, a type slide, a paratype slide.

Megacrinis is similat

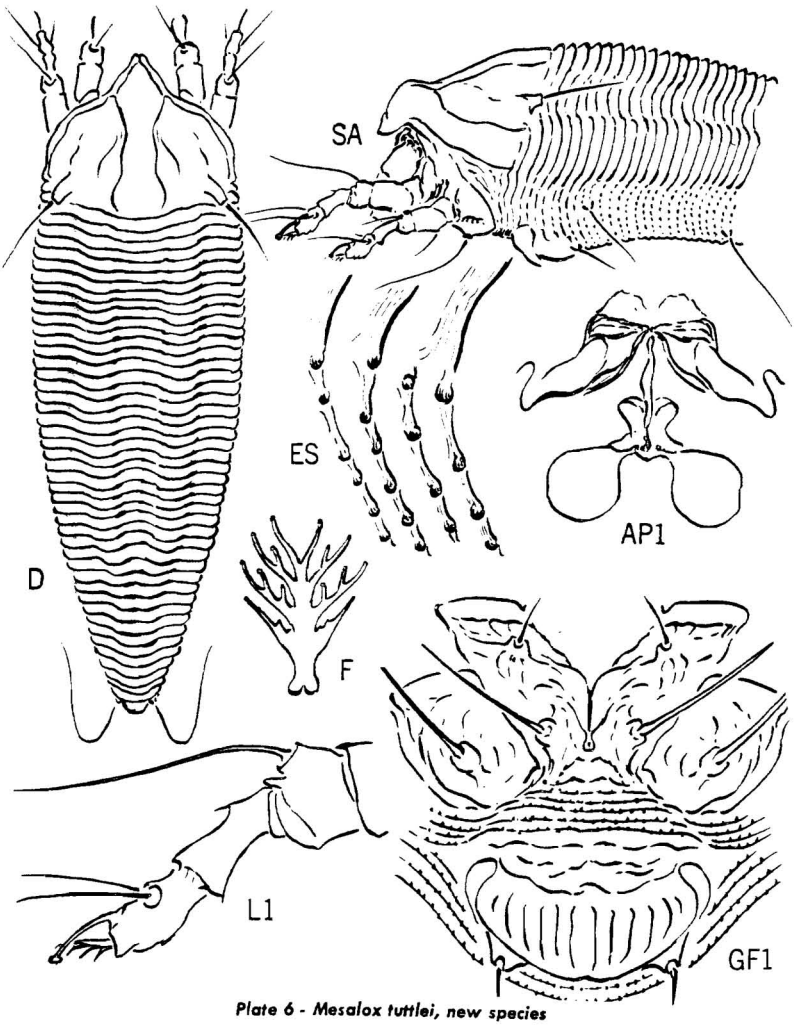

Plate 6 - Mesalox tuttlei, new species

Mesalox, new genus

This genus belongs to the Phyllocoptinae of the Eriophyidae. It has dorsal setae that diverge to the rear from the hind shield margin. The most distinct feature is the central dorsal longitudinal paired ridge system, with a furrow between the ridges, that ends with the uniting of these two ridges at the posterior 1/4. Mesalox combines meso and alox, which is middle plus furrow.

Body fusiform, somewhat flattened dorso-ventrally. Rostrum small, projecting down; oral stylet with shorter apical portion. All setae present on body and legs. Shield subtriangular with acute (in dorsal view) anterior lobe over rostrum and large, curving side lobes. Dorsal tubercles somewhat elongate, well separated, projecting over rear shield margin and directing dorsal setae outwardly to rear. Abdomen with rather narrow tergites, sternites more numerous. Four longitudinal dorsal ridges with furrows between, the central ridges uniting at rear 1/4, the laterals each as broad ridge above sternites. Female genitalia not appressed to coxae; anterior internal apodeme of moderate length.

Genotype - Mesalox tuttlei, new species

Mesalox tuttlei, new species

Plate 6

Female 180μ-190μ long, 50μ wide, 35μ-40μ thick; color dull yellowish. Rostrum 23μ long, projecting down; antapical seta 4.5μ long. Shield 46μ long, 44μ wide; median line absent; admedians complete, sinuate, starting from anterior lobe apex, paralleling lobe margin to lobe base, then extending across shield, subparallel to eachother and ending at rear margin; a few short dashes ahead of dorsal tubercles; lateral shield lobes prominently rounded, sides declivitous with an upper and lower line, the upper line forking from admedian at anterior lobe base. Dorsal tubercles 31μ apart; dorsal setae 14μ long. Forelegs 31μ long; tibia 7μ long, a very short seta at 1/3; tarsus 6.5μ long; claw 6μ long, slender, knobbed; featherclaw 4-rayed. Hindlegs 19μ long, tibia 6.5μ long, tarsus 6.5μ long, claw 5μ long. Coxae ornamented with curved lines and dashes; anterior coxae connate for moderate length; first setiferous tubercles ahead of anterior coxal junction, farther apart than second tubercles; second tubercles but little ahead of transverse line through third tubercles. Abdomen with about 47 tergites and 65-70 sternites; microtubercles on sternites as beads on rear margins, suppressed or absent on tergites; central middorsal furrow ending about tergite 35. Lateral seta 15μ long, on about sternite 10; first ventral seta 50μ long, on about sternite 26; second ventral 12μ long, on about sternite 43; third ventral seta 15μ long, on sternite 5 from rear. Accessory seta absent. Female genitalia 18μ long, 12μ wide; coverflap with about 12 longitudinal ribs; seta 8.5μ long.

Type locality - Bay City, Michigan

Collected - August 5, 1961 by D. M. Tuttle

Host - Parthenocissus quinquefolia (L.) (Vitaceae) Virginia creeper

Relation to host - the mites are undersurface leaf vagrants

Type material - a vial with mites in fluid, a type slide, 3 paratype slides.

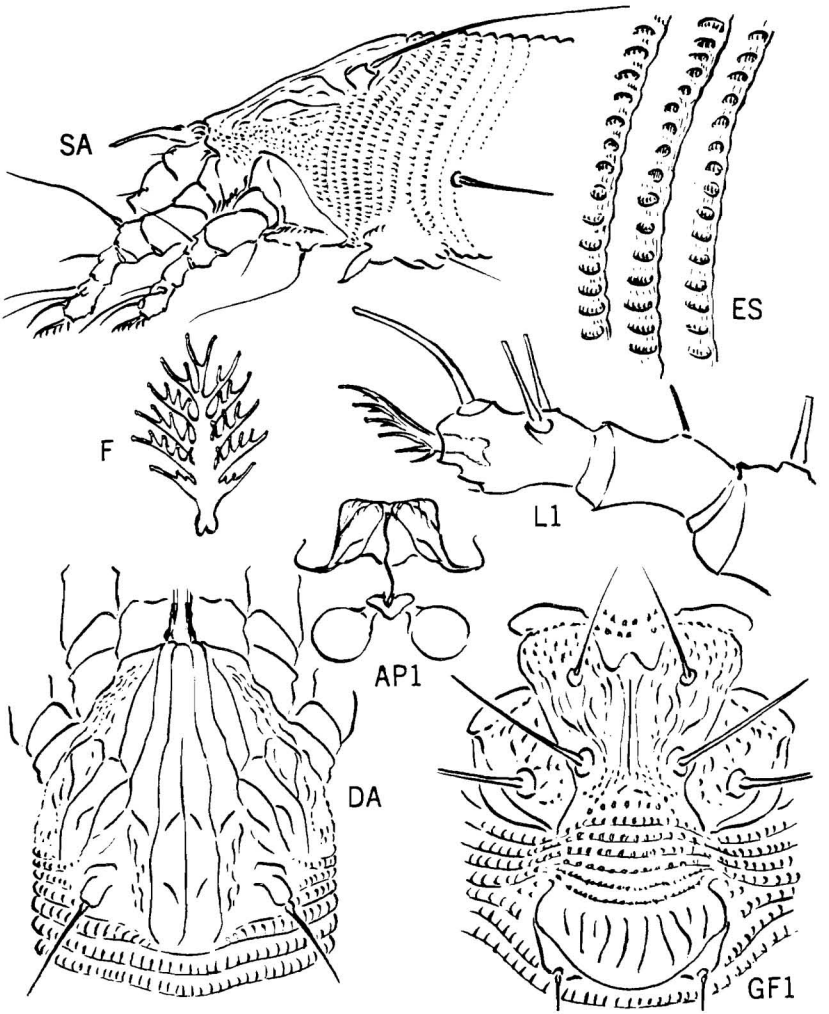

Plate 7 - Aceria muhlenbergiae, new species

Aceria muhlenbergiae, new species

Plate 7

This species has a 6-rayed featherclaw. It is distinguished from neocynodonis (also with a 6-rayed featherclaw) by the pair of diagonal dashes between the median and admedian lines, by the solid lines paralleling the junction of the anterior coxae, and by the longer abdominal setae.

Female 240μ-265μ long, 35μ-40μ thick, wormlike; color light yellowish-white. Rostrum 17μ long; antapical seta 4μ long. Shield 32μ long, 33μ wide; median line extending from anterior 1/3 to rear margin; admedian lines complete, rather close, subparallel, wider when enclosing median, with a pair of short diagonal dashes on rear 1/2 between them and median; submedian line from rostrum base, subparallel to admedian, forking at about 2/3 in front of dorsal tubercle and followed on inner side with a diagonal line at 2/3 to admedian and some short dashes on inner side of tubercle; second submedian line from outer side of first near anterior end, ending in forked line just before 1/2; shield laterally with upper curved lines and lines of granules below. Dorsal tubercles 20μ apart; dorsal setae 50μ long, diverging. Forelegs 32μ long; tibia 8μ long, seta 8μ long at 1/3; tarsus 8μ long; claw 8.5μ long, curved, tapering; featherclaw 6-rayed. Hindlegs 29μ long, tibia 6μ long, tarsus 6.5μ long, claw 9μ long. Coxae well ornamented with lines and granules; anterior coxae broadly connate, the subparallel lines on each side of junction entire, not a line of granules; first setiferous tubercles opposite anterior junction point, a little farther apart than second tubercles; second setiferous coxal tubercles a little ahead of transverse line through third tubercles. Abdomen with 70-75 rings, completely microtuberculate, the microtubercles not pointed, ahead of rear ring margins and tending to be more elongate dorsally and ventrally. Lateral seta 30μ long, on about ring 8; first ventral seta 53μ long, on ring 22; second ventral seta 14 long, on ring 39; third ventral 20μ long, on ring 5 from rear. Accessory seta about 4μ long. Female genitalia 23μ wide, 14μ long; coverflap rather shallow-bowl shaped, with about 10 longitudinal ribs; seta 11μ long.

Type locality: Ames, Iowa, in a greenhouse

Collected: June 19, 1961 by R. Pohl and submitted by Prof. E. A. Hicks of Iowa State University

Host: Muhlenbergia frondosa (Poir.) (Graminae-Agrostideae) wirestem muhly

Relation to host: the mites live in the curled leaves

Type material: dry grass with mites, a type slide, two paratype slides

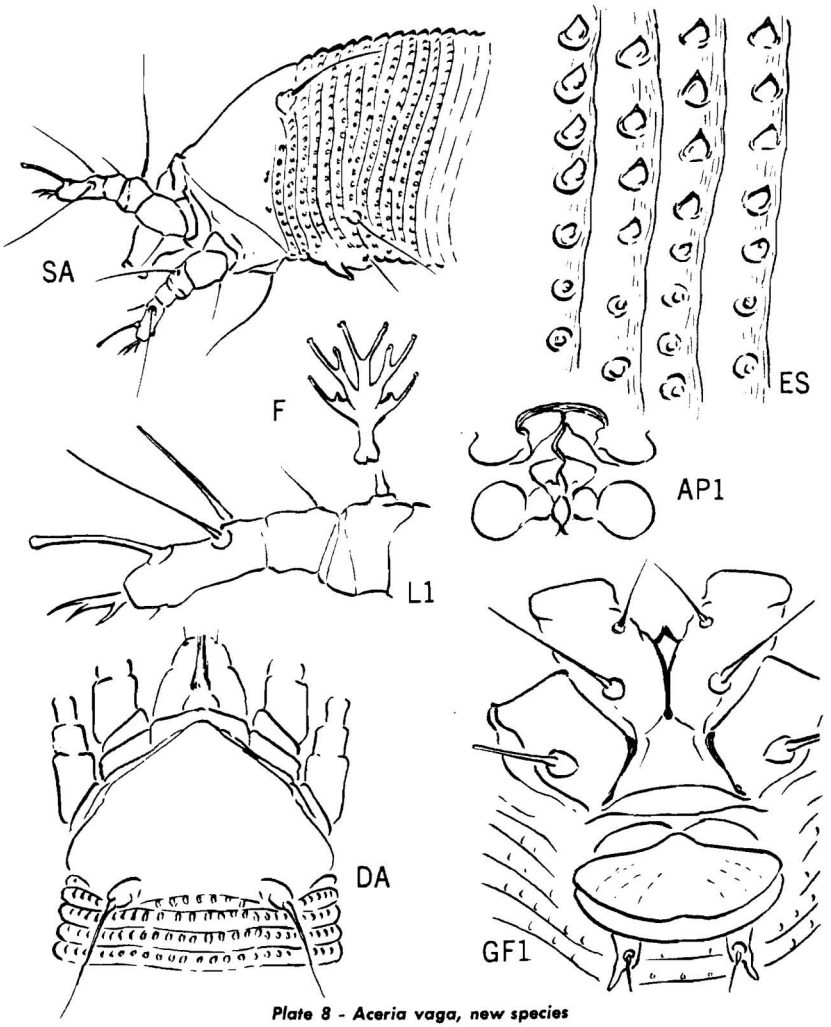

Plate 8 - Aceria vaga, new species

Aceria vaga, new species

Plate 8

Vaga is a member of the oak-walnut group of mites which have a characteristic 3-rayed featherclaw. It is characterized by a smooth shield, elongate tarsus, elongate genital tubercles, and pointed microtubercles. The habitat of vaga is unusual for this type of mite, being in the open on the undersides of the leaves. Other members of this group are either bud or gall mites, feeding and breeding under cover.

Female 200u-252u long, 40u-55u thick; elongate, wormlike, dull light yellowish in color. Rostrum 16u long, curved down. Shield 31u long, 33u wide; no design present; dorsal tubercles 23u apart; dorsal setae 23u long, projecting caudad and a little outward. Forelegs 29u long; tibia 4.5u long, with seta 3u long, at 1/4; tarsus 8.5u long; claw 8.5u long, slightly knobbed; featherclaw 3-rayed. Hindlegs 26u long, tibia 4u long, tarsus 8u long, claw 8u long. Anterior coxae moderately connate, heavy junction line; first setiferous tubercles ahead of anterior coxal junction, slightly nearer to eachother than second setiferous tubercles; second setiferous tubercles well ahead of transverse line through third setiferous tubercles. Abdomen with 55-60 rings, entirely microtuberculate, the microtubercles ahead of ring margins and pointed. Lateral seta 10u long, on ring 4 behind shield; first ventral seta 20u long, on about ring 16; second ventral seta 8.5u long, on about ring 31; third ventral seta 11u long, on ring 4 from rear. Accessory seta 8.5u long. Female genitalia 18u wide, 12u long; coverflap lacking ribs; seta 10u long, set on elongate, pointed tubercles.

Type locality: Campinas, Brazil

Collected: November 26, 1959, by Dr. A. S. Costa, of the Citrus Experiment Station

Host: Carya illinoensis (Wang.) pecan

Relation to host: the mites live along the veins on the undersides of the leaves, causing discolored spots.

Type material: dry leaves from which the mites were taken, and one type slide and eight paratype slides,

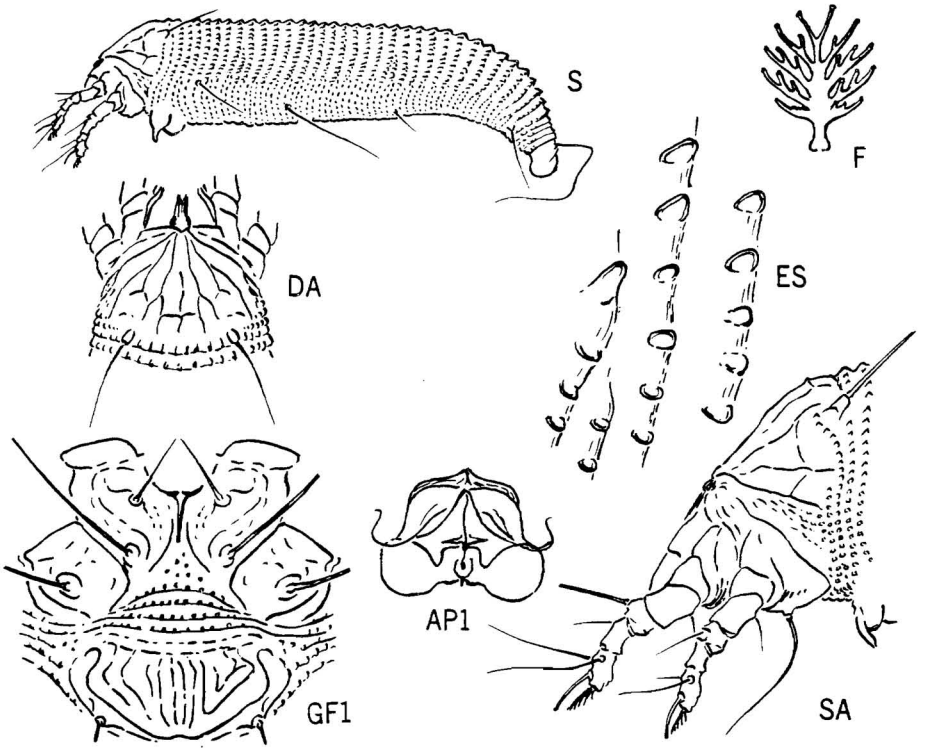

Plate 9 - Paraphytoptus pannolus, new species

Paraphytoptus pannolus, new species

Plate 9

This species is characterized by abdominal differentiation into tergites and sternites commencing shortly behind the shield. The feather-claw is 5-rayed and the female genital coverflap is ornamented with irregular ribbing. Pannolus is similar to brickelliae K. by having nearly all of the abdomen divided into tergites and sternites. On pannolus however, the microtubercles are rounded apically, whereas those on brickelliae are pointed or produced, especially ventrally.

Female 190μ-210μ long, 40μ-45μ thick; body elongate-wormlike; color light yellowish. Rostrum 21μ long. Shield 26μ long, 36μ wide; design principally of longitudinal lines; median line on rear 1/2; admedians complete, close at chelicera base and diverging to rear, sinuate and slightly recurved at margin, connected to median by cross line at rear 1/5; submedian from rostrum base, ending in fork in front of dorsal tubercle, the inner branch meeting a fork from admedian at about rear 1/5; two longitudinal lateral lines connected to eachother and submedian by curved vertical line at rear 1/4; granular area below lower lateral line. Dorsal tubercles 26μ apart; dorsal setae 22μ long and diverging to rear. Forelegs 30μ long; tibia 6.5μ long, with 6μ seta at about 1/3; tarsus 6.5μ long; claw 8.5μ long, with slight terminal knob; feather-claw 5-rayed. Hindlegs 25μ long, tibia 5μ long, tarsus 6.5μ long, claw 6.5μ long. Coxae somewhat ornamented with curved lines and granules; anterior coxae connate, the junction line short; first setiferous coxal tubercles about as far apart as second, approximately opposite anterior coxal junction point; second tubercles a little ahead of transverse line through third setiferous coxal tubercles. Abdomen with about 36 tergites and 65-70 sternites, the rings just behind the shield about equal dorsoventrally; abdomen completely microtuberculate, the microtubercles not pointed, rounded, touching rear ring margins, more elongate dorsally. Lateral seta 14μ long, on about sternite 9; first ventral seta 35μ long, on about sternite 25; second 7μ long, on about sternite 42; third 24μ long, on sternite 4 from rear. Accessory seta 2.5μ long. Female genitalia 22μ wide, 16μ long; coverflap with irregular ribbing, mostly longitudinal; seta 16μ long.

Type locality: Charlottesville, Virginia

Collected: July 26, 1959 by J. P. Keifer and the writer

Host: Ambrosa trifida L. (Compositae-Heliantheae) giant ragweed

Relation to host: the mites are undersurface leaf vagrants

Type material: mites with leaves in liquid, mites on dry leaves, a type slide, 4 paratype slides.

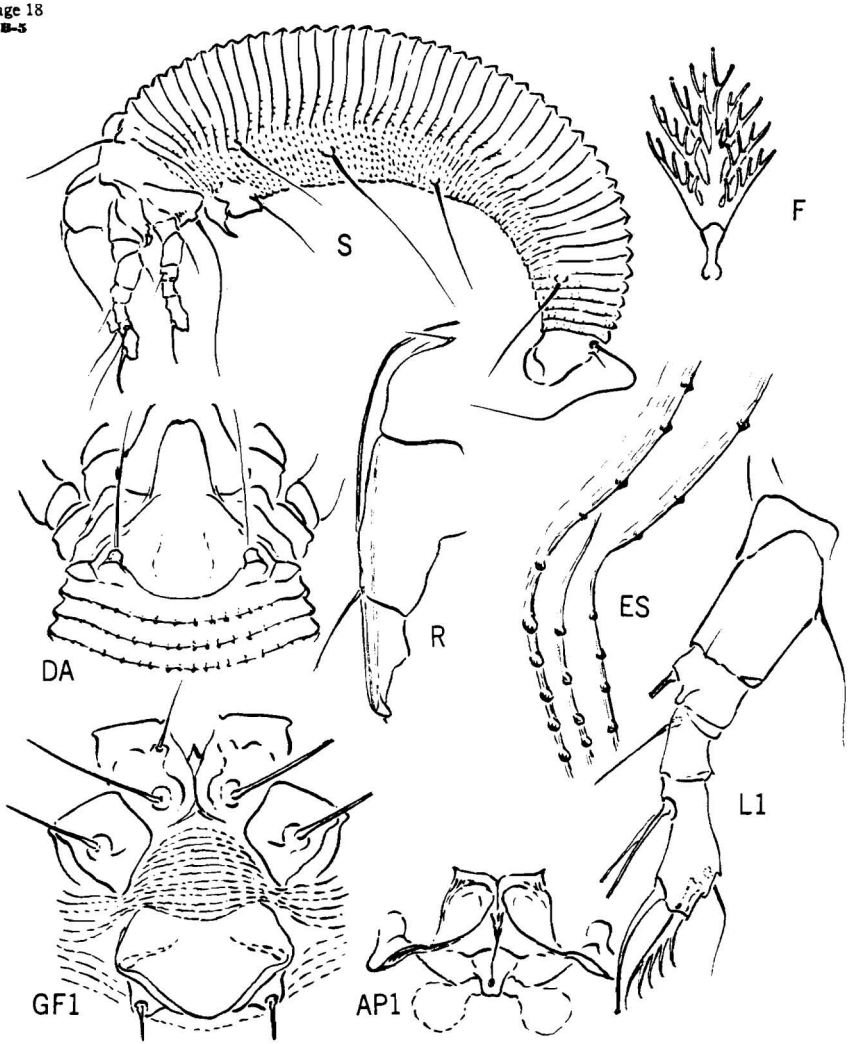

Plate 10 - Rhyncaphytoptus potentillae, new species

Rhyncaphytoptus potentillae, new species

Plate 10

This Rhyncaphytoptus is characterized by the shield which has no design but has a prominent lobe over the rostrum, by the strongly tapering rostrum, and by the 5-rayed featherclaw.

Female 190u-230u long, 60u thick; body elongate-cylindrical with strongly differentiated tergites; color dull yellowish-white. Rostrum 57u long, tapering to small apex; terminal sensillum not distinguishable. Shield 36u long, 50u wide, prominent lobe over rostrum base; shield without design of lines; dorsal tubercles 30u apart, just ahead of rear margin; dorsal setae 35u long. Forelegs 41u long; tibia 8u long, with seta 12u long from near base; tarsus 13u long; claw 12.5u long, tapering, with small knob; featherclaw 5-rayed. Hindlegs 39u long, tibia 4u long, tarsus 13u long, claw 13u long. Coxae with very little ornamentation; anterior coxae moderately connate centrally; first setiferous tubercles ahead of second tubercles and a little ahead of anterior coxal junction; second tubercles well ahead of transverse line through third tubercles. Abdomen with about 34 tergites and 65-70 sternites. Microtubercles present on sternites as beads on rear margin, on tergites as points on rear margin, not prominent above. Lateral seta 36u long, on about sternite 12; first ventral seta 85u long, on about sternite 26; second ventral 50u long, on sternite 42; third ventral 34u long, on sternite 5 from rear. Accessory seta 7u long. Female genitalia 30u wide, 17u long; coverflap without ribs; seta 32u long.

Type locality: Mammoth Hot Springs, Yellowstone Park, Wyoming

Collected: July 4, 1960, by the writer

Host: Potentilla fruticosa L., bush cinquefoil

Relation to host: the mites live on the undersides of the leaves among the hairs.

Type material: dry leaves bearing mites, a type slide, 7 paratype slides.

Designations on the plates

AP1 - internal female genitalia
D - dorsal view of mite
DA - dorsal view of anterior section
ES - lateral surface structures
F - featherclaw
GF1 - female genitalia and coxae
L1 - anterior leg
R - rostrum
S - side view of mite
SA - side view of anterior part

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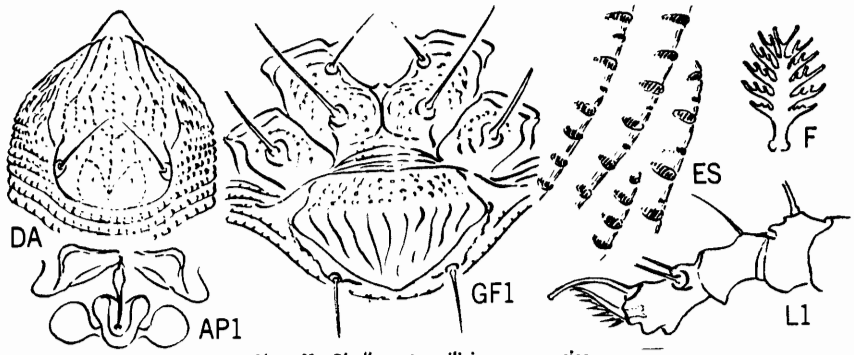

Plate 11 - Phyllocoptes silicis, new species

Phyllocoptes silicis, new species

Plate 11

The combination of 6-rayed featherclaw with non-pointed microtubercles, central shield design of granular lines, and appressed female genitalia, distinguish this species.

Female 140μ-165μ long, 25μ-40μ thick, fusiform; color light yellowish white. Rostrum 21μ long, projecting diagonally down; antapical seta minute. Shield 33μ long, 30μ wide; anterior lobe over rostrum of moderate length and acute; design of lines of granules, with median line nearly complete from base of anterior lobe; admedian lines complete, sinuate, recurving at rear and joined to median by diagonal lines just behind middle and near rear; submedian lines from anterior shield edge, ending in front of tubercles; a strong curved line from rear shield margin recurving around dorsal tubercle and ending in front of it; shield granular at side, the lateral lobes not prominent. Dorsal tubercles 20μ apart, directing the dorsal setae anterocentrally; dorsal setae 13μ long. Forelegs 26μ long; tibia 5μ long, with seta at 1/3; tarsus 6.5μ long; claw 6.5μ long, curved; featherclaw 6-rayed. Hindlegs 24μ long; tibia 4.5μ long, tarsus 6.5μ long, claw 7μ long. Coxae granular; anterior coxae narrowly connate centrally; first setiferous tubercles a little farther apart than second tubercles and ahead of anterior coxal junction; second setiferous tubercles ahead of transverse line through third tubercles. Abdomen with about 47 tergites and about 55 sternites, quite similar dorsoventrally; microtubercles irregular in size, most elongate, nonpointed, touching rear ring margins, and with both tergites and sternites equally microtuberculate. Lateral seta 13μ long, on about sternite 5; first ventral seta 36μ long, on about sternite 18; second ventral seta 6.5μ long, on sternite 32; third ventral seta 12μ long, on sternite 4 from rear. Accessory seta absent. Female genitalia rather closely appressed to coxae, 20μ wide, 11μ long; coverflap with about 10 longitudinal ribs; seta 16μ long.

Type locality: College Park, Maryland

Collected: July 30, 1959 by the writer

Host: Quercus falcata Michx. (Fagaceae) Spanish oak

Relation to host: the mites are undersurface leaf vagrants, occurring mostly along the midrib.

Type material: dry leaves with mites, a type slide, 2 paratype slides. It has not been possible to separate this tiny mite from two other species described in this paper before placing the mites on slides.