ERIOPHYID STUDIES B-12

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California Department of Agriculture

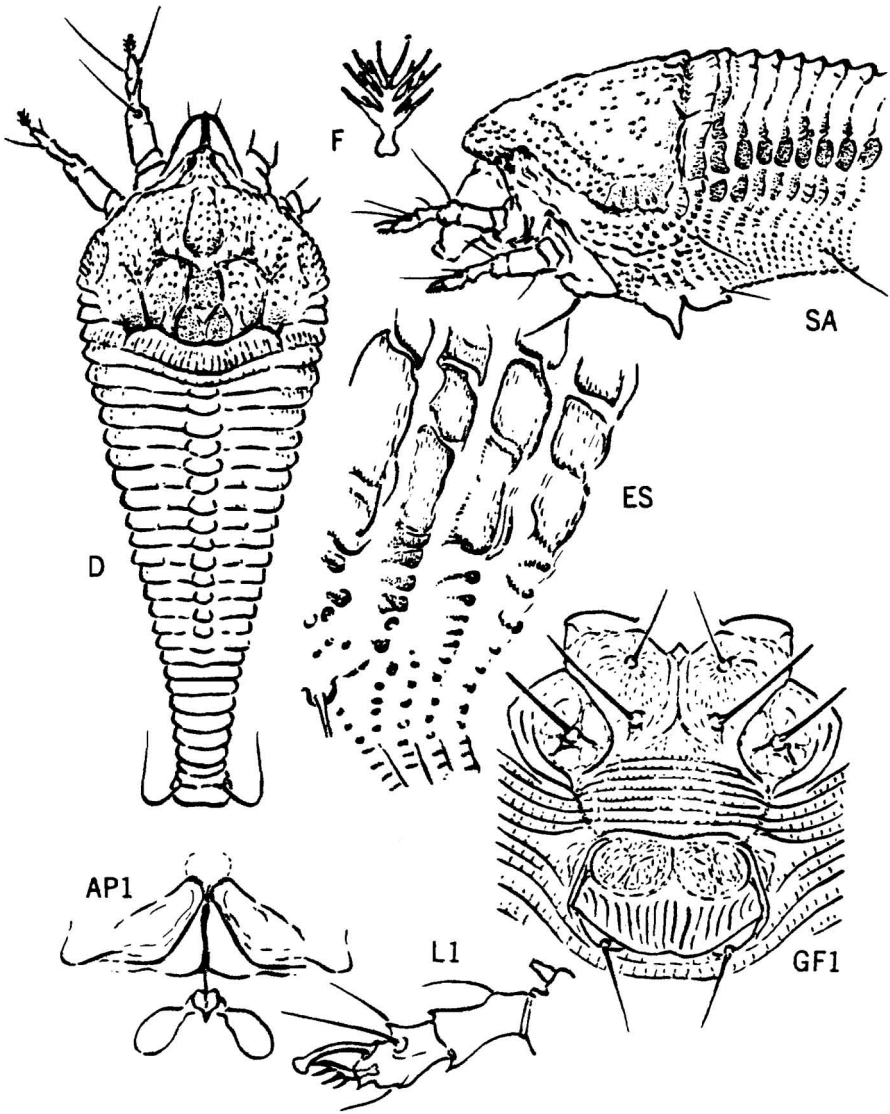

Plate 1 - Tegolophus australis, new species

ISSUED - June 11, 1964

Tegolophus australis, new species

Plate 1

This is the seventh species I am referring to Tegolophus. All are characterized by the central longitudinal abdominal risge, fading to rear, and the dorsal tubercles on the rear shield margin directing the dorsal setae posteriorly and usually divergingly. But this assemblage is taking on a rather bizarre aspect, causing one to speculate whether these mites achieved their dorsal characters through true relationship, or arrived at their present forms by independent routes. (We can speculate in the same manner about a considerable number of rust mite types referred to other genera.) At any rate, australis has the shortest dorsal setae of any of these seven species, as well as the roughest shield surface.

Female 180μ-190μ long, 75μ wide, 55μ thick; form robust-fusiform, widest anteriorly; color perhaps brownish. Rostrum 27μ long, projecting diagonally down; antapical rostral seta 5μ long. Shield 65μ-70μ wide, 58μ long; anterior lobe rather blunt and declivitous in side view. Shield surface rough due to numerous small pits, showing as lighter spots and obscuring the design; median line absent; admedians present as slight ridges with light borders, extending back from base of anterior lobe, slightly diverging, broken at shield middle, then extending back, subparallel, to rear 1/5 where they diverge slightly and curve back to rear margin; at 1/2 meeting lateral lines from side, and at rear 1/5 joined to inner curved lines that meet just before rear margin. Submedian lines faintly indicated by weakly angular line running from lateral of admedians at 1/3 to near dorsal tubercles and meeting rear margin just inside dorsal tubercles. Shield with faint longitudinal line of granulations above lateral margin, the margin irregular and broken. Dorsal tubercles 42μ apart; dorsal setae 5μ long. Forelegs 32μ long; tibia 8μ long, with 4μ seta at 2/5; tarsus 7μ long; claw 6μ long, stout, curved, strongly knobbed. Featherclaw 4-rayed. Hindlegs 30μ long, tibia 6μ long, tarsus 6μ long, claw 5μ long. Coxae broad, with design of faint lines; anterior coxae broadly touching centrally, the junction line faint; first setiferous coxal tubercles slightly farther apart than second and a little behind anterior coxal approximation; third coxal tubercles behind a line drawn across second tubercles. Abdomen with about 22 rather irregular tergites to the ring bearing third seta; about 50 to 55 sternites. First tergite rather broad and rough; second tergite narrow dorsally; central ridge beginning at third tergite and fading on 16th tergite; lateral ridge from just below dorsal tubercles, fading to rear; lateral edge of tergites irregular for some distance back. Sternites just below tergites with coarse rows of microtubercles; below that the microtubercles finer, a little elongate. Lateral seta 8μ long, on about sternite 5; first ventral seta 55μ long, on about sternite 16; second ventral 4μ long, on about sternite 29; third ventral 14μ long, on about ring 5 from rear. Accessory seta missing. Female genitalia 26μ wide, 18μ long; coverflap basally with paired designs of fine lines in subcircles; about 18 longitudinal ribs on apical part of coverflap; internal apodeme acuminate anteriorly; seta 8μ long.

Type locality: Somersby, New South Wales

Collected: August 29, 1963 by P. C. Hely and sent me by Donald Macfarlane of the Commonwealth Institute of Entomology

Host: Citrus sinensis Osb. (Rutaceae) orange

Relation to host: the mites are rust mites, being known as "brown rust mite."

Type material : a type slide the property of P. C. Hely
two paratype slides, one sent to the C. I. E.

Aceria pallida, new species

Plate 2

The prototype of mites on the Solanaceous plants of the genus Lycium is eucricotes (Nalepa), treated by him in Das Tierreich, 1898, p.34. The host he gives is Lycium europaeum L. I have seen no mite from Europe, or from this host, but specimnes are on hand from Lycium chinense Mill. that seem to conform to certain critical characters of eucricotes. These characters are a 5-rayed featherclaw and unmarked female genital coverflap. Unfortunately Nalepa did not disclose the nature of the microtubercles in his descriptions, but the specimens on hand have somewhat projecting microtubercles that are rounded apically or slightly acuminate. The new species here proposed has distinctly spinulate microtubercles, has usually a 6-rayed featherclaw (some have 5 rays on part of the legs), and forms leaf galls on a southwestern species of Lycium.

Female 200μ-240μ long, 60μ thick; elongate, wormlike; color light yellowish-white. Rostrum 24μ long, projecting diagonally down; antapical rostral seta 10μ long. Shield 28μ long, 40μ wide; subtriangular in shape, rather acuminate anteriorly; design almost absent, with remnants of admedians present near rear shield margin as short curved lines converging posteriorly, and surrounded outwardly by some granules. Sides of shield with partial rings below dorsal tubercles, but lacking longitudinal streak of granules. Dorsal tubercles 37μ apart; dorsal setae 37μ long, diverging somewhat to rear. Forelegs 32μ long; tibia 7μ long, with 10μ seta from 1/3; tarsus 6μ long; claw 10μ long, tapering, curved; featherclaw susally 6-rayed, on part of legs 5-rayed, compact, broad. Hindlegs 30μ long, tibia 6μ long, tarsus 6μ long, claw 11μ long. Coxae nongranular, anterior coxae broadly touching centrally, with moderately strong sternal line; first setiferous coxal tubercles ahead of second and opposite anterior coxal approximation; line across third setiferous coxal tubercles well behind second tubercles. Abdominal rings about 60-65 in number, completely microtuberculate, the microtubercles projected into short spinules; microtubercles diminishing in size after third central seta, especially dorsally. Lateral seta 36μ long, on about ring 10 behind shield; first ventral seta 46μ long, on about ring 21; second ventral 38μ long, on about ring 38; third ventral 27μ long, on ring 5 from rear. Accessory seta 6.5μ long. Female genitalia 18μ long, 10μ wide; coverflap smooth except for basal transverse curved lines; seta 20μ long.

Type locality: 7 miles east of Tombstone, Arizona

Collected: September 25, 1963, by J. Kaiser, and transmitted under USDA number 63-24314.

Host: Lycium pallidum Miers (Solanaceae) a kind of box thorn

Relation to host: the mites form leaf blisters

Type material: a type slide which is the property of the US Dept. of Agr. seven paratype slides

As well as this series, one slide is on hand of mites from this same host, taken by T. C. Fuller near Lathrop Wells, Nye County, Nevada, on May 10, 1962. This mite leans more to the 5-rayed featherclaw condition, but the rear spinules are about as strong as those anteriorly, not being reduced dorsally to the rear.

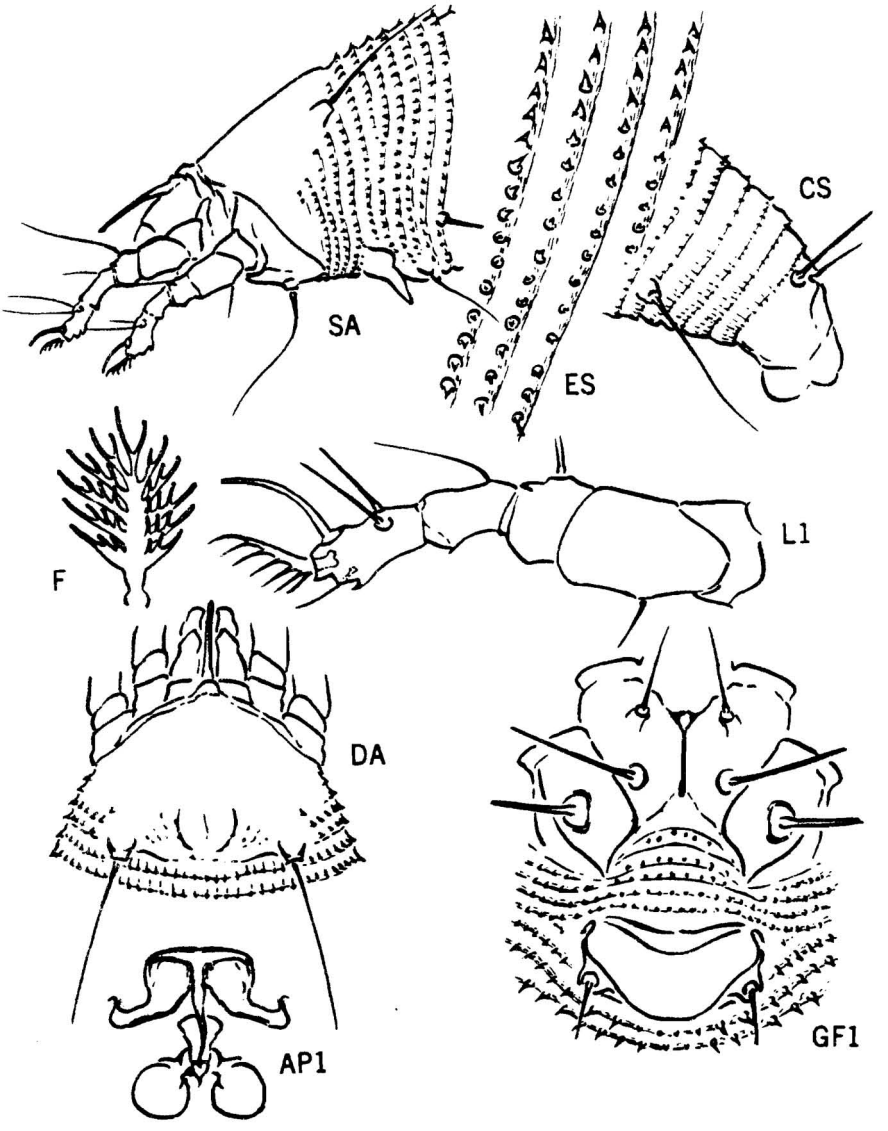

Plate 2 - Aceria pallida, new species

Aceria pisoniae, new species

Plate 3

While there is nothing in particular about this species of Aceria that keeps it out of the usual nondescript type common to the genus, I am unable to associate it with anything for which I have adequate information. The 4-rayed featherclaw, plus shield design markings that are plain only on the rear areas, are the principal distinguishing features.

Female 140μ150μ long, 35μ-40μ thick; body wormlike; color light yellowish-white. Rostrum 17μ long, curved down; antapical rostral seta 3μ long. Shield 21μ long, 28μ wide. Shield design mostly obscure, the admedian lines faint except on rear 1/4 where they are in the form of a pair of opposing convex lines, with a faint median line from a fork extending back from anterior end of the curved admedians. First submedian lines on rear 1/4 of shield, running obliquely toward dorsal tubercles and forking in front of them; these lines partly granular. Shield above coxae with microtuberculate partial rings and a band of granules extending forward. Dorsal tubercles 17μ apart; dorsal setae 16μ long, strongly divergent to rear. Forelegs about 23μ long; tibia 6μ long, with 4μ seta at 1/3; tarsus 6μ long;claw 6μ long; featherclaw 4-rayed. Hindlegs about 20μ long, tibia 4μ long, tarsus 6μ long,claw 7μ long. Anterior coxae with curved lines of granules,fewer on rear coxae. Moderately strong sternal line between fore coxae. First setiferous coxal tubercles farther apart than second and opposite anterior coxal approximation. Second coxal tubercles well ahead of line across third tubercles. Abdomen with about 54 rings (plus or minus); microtubercles round or elliptical, not produced in any way, fading on dorsum beginning at 10th or 12th ring from rear.Lateral seta 16μ long, on about ring 8;first ventral seta 26μ long,on about ring 18; second ventral seta about 9μ long, on ring 29;third ventral seta 15μ long,on ring 6 from rear.Accessory seta 4-5μ long. Female genitalia about 20μ wide, 11μ long; coverflap with about 14-16 longitudinal ribs, the lateral ones somewhat diverging, and basally the coverflap with three granular bands; seta 7μ long, the tubercles apparently constricted from sides.

Type locality: Moluleia, Oahu, Hawaii

Collected: August 25, 1963 by E. T. Ozaki, and sent me by W. H. Anderson under USDA number 63-20204

Host: Pisonia sp. (Nyctaginaceae)

Relation to host:the mites form rather prominent wart-galls on the leaves

Type material: -a type slide, the property of the USDA
-four paratype slides
-dry leaves bearing galls from which the slides were made

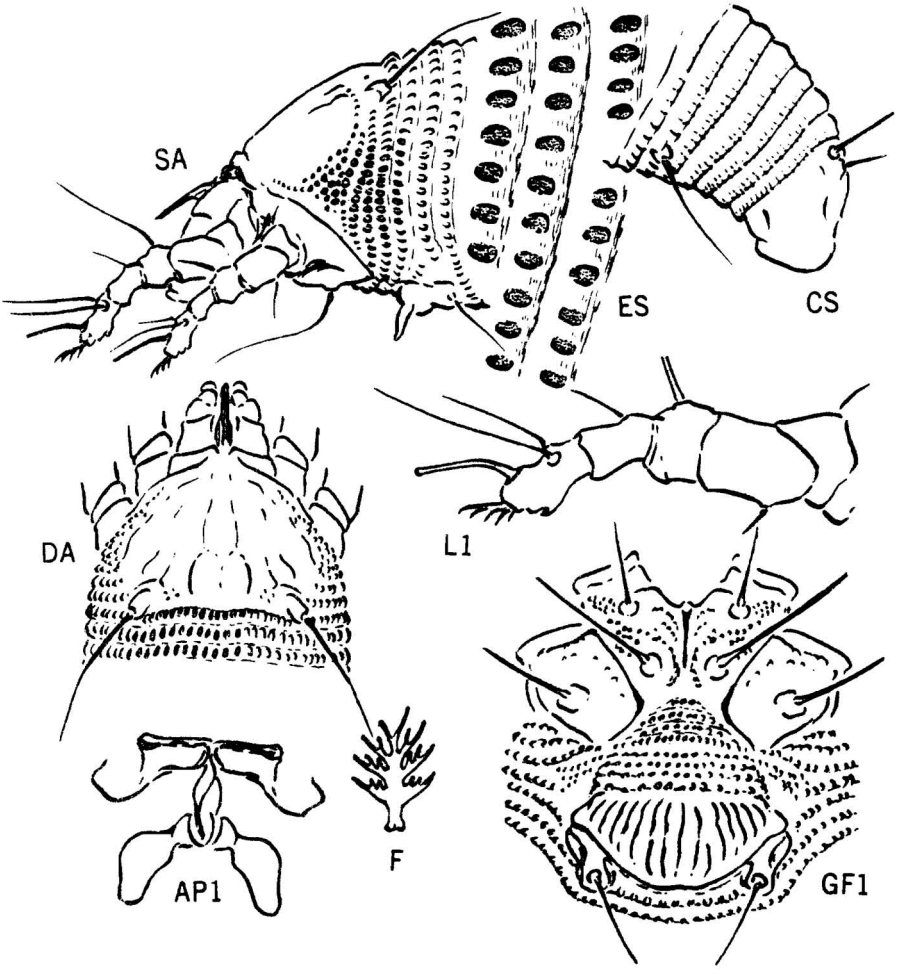

Plate 3 - Aceria pisoniae, new species

Eriophyes parabuxi, new species

Plate 4

The only way in which this species comes to me is via the Identification Service of the USDA, and the mites are intercepted on boxwood from England at Seattle, Wash. A survey of the Eriophyid species already known on Buxus discloses the following: Eriophyes canestrinii (Nal.),which forms galls of a sort in the flower clusters,has a 6-rayed featherclaw and a rather broad shield which has no lines; Eriophyes buxi (Can.), with a 4-rayed featherclaw, is depicted as having very clear shield lines; Aceria unguiculatus (Can.) is outside this comparison. The new species has a 7-rayed featherclaw, longitudinal shield lines just inside the dorsal tubercles, and a narrower shield.

Female 180μ-235μ long, 38μ-45μ thick; wormlike; color light yellowish-white. Rostrum 42μ long, somewhat curved down; antapical rostral seta 4μ long. Shield 26μ-34μ long, 23μ-31μ wide, somewhat acuminate anteriorly; design absent except for a pair of lines, the admedians, sinuate and subparallel,on rear 1/3 of shield just inside the dorsal tubercles. Laterally the shield with a granular line above rear coxae and a granular band above forecoxae; partial rings on rear sides of shield, the two posterior ones extending up behind dorsal tubercles. Dorsal tubercles 16μ-18μ apart; dorsal setae 25μ-30μ long, gently diverging anteriorly. Forelegs 26μ long; tibia 5μ long, with 6μ seta at about 1/3; tarsus 5μ long; claw 5.5μ long, downcurved, slightly knobbed; featherclaw 7-rayed, rather narrow, the terminal pair of rays on a somewhat elongate stalk. Hindlegs 23μ long, tibia 4μ long, tarsus 5μ long, claw 7μ long. Coxae granulate; anterior coxae rather elongate; first setiferous coxal tubercles slightly farther apart than second tubercles and behind anterior coxal approximation; second tubercles well ahead of line across third setiferous coxal tubercles. Abdomen with about 65-70 rings, the rings completely microtuberculate, the microtubercles somewhat elongate and touching rear ring margins. Lateral seta 24μ long, on about ring 7; first ventral seta 41μ long, on about ring 20; second ventral seta 14μ long, on about ring 35; third ventral 11μ long, on ring 5 from rear. Accessory seta 2μ long. Female genitalia 16μ wide, 11μ long, well removed from coxae; 11-12 longitudinal ribs; seta 6μ long.

Type locality: Evidently some place in England, the mites intercepted at Seattle, Washington

Collected: August 27, 1962, and sent under U. S. Dept. Agr. #62-27870

Host: Buxus sp. (Buxaceae) boxwood

Relation to host: the mites were said to be from the leaves, probably causing deformation

Type material: a type slide bearing #62-27870, property of USDA
a paratype slide with same number
two paratype slides bearing #62-27869, dated Oct. 8, 1962
Two paratype slides bearing #63-23245, dated Oct. 3, 1963

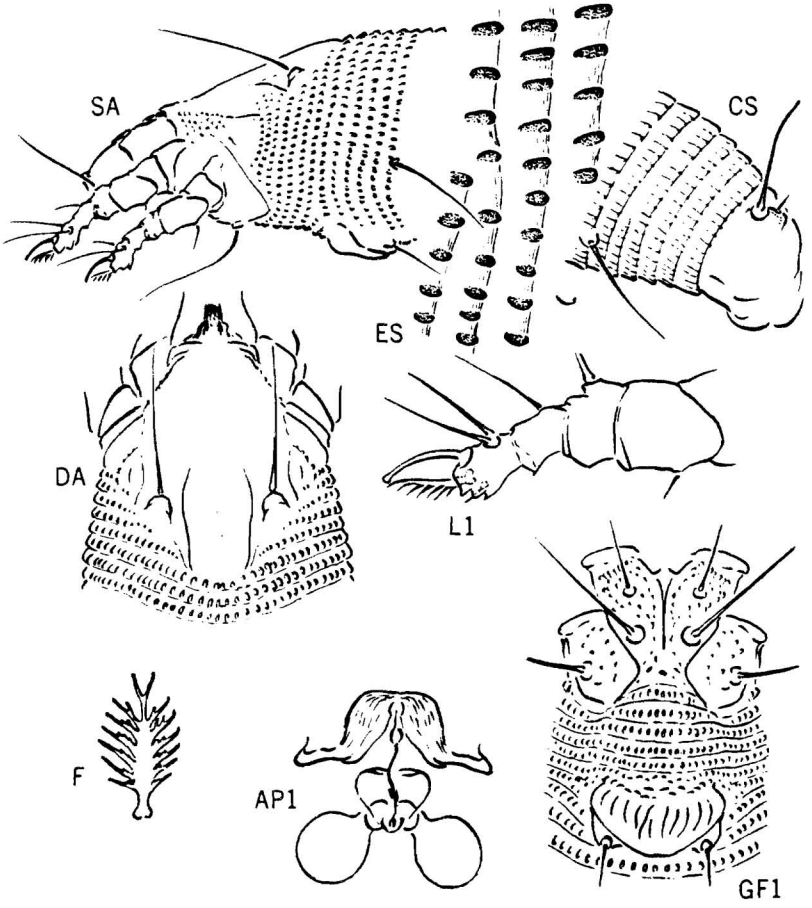

Plate 4 - Eriophyes parabuxi, new species

Eriophyes gardeniella, new species

Plate 5

Placing this mite in Eriophyes is not altogether correct as it has genitalia resembling Cecidophyes. Usually the Cecidophyes type of genitalia is accompanied by the absence of dorsal setae, but there are exceptions. However, this is the first time that this genital structure: shortened anterior apodeme plus appressed genitalia, has appeared combined with dorsal setae that project centrad.

Female 130μ-160μ long, 35μ-40μ thick; body wormlike;color light yellowish-white. Rostrum 19μ long, somewhat curved down anteriorly; antapical rostral seta very minute. Shield about 27μ long and 35μ wide; median line discernable ahead of rear margin; admedian lines apparently complete but faint anteriorly, curving out and recurving to rear margin on rear 1/4 and joined to median by diagonal lines at rear 1/4;additional shield lines obscure, the shield sides with low lobes, and three partial rings lateral to dorsal tubercles. Dorsal tubercles about 19μ apart, a little ahead of rear margin; dorsal setae about 19μ long, or more, projecting centrad mainly. Forelegs rather stout, 25μ-27μ long; tibia about 5μ long, with 3μ seta at about 1/3; tarsus 6μ long; claw short, about 4μ long, but little curved; featherclaw small, 5-rayed. Hindlegs 21μ-23μ long, tibia 4μ long, tarsus 6μ long, claw 5-6μ long. Coxae somewhat spread apart but anterior coxae moderately connate centrally, the usual raised areas around tubercles that accompany spread coxae being weak or absent; first setiferous coxal tubercles closer together than second and ahead of anterior coxal approximation; second tubercles well ahead of line across third tubercles. Abdomen with about 52 to 56 rings, completely microtuberculate except fading dorsally past third ventral seta; microtubercles rather knob-like, touching ring margins and somewhat elongate dorsally. Lateral seta 21μ long, on about ring 6 behind shield; first ventral seta 43μ long, on about ring 18; second ventral 6μ long, on about ring 30; third ventral 14μ long, on ring 5 from rear. Accessory seta absent. Female genitalia somewhat appressed to coxae, 26μ wide, 12μ long; coverflap with about 10 longitudinal ribs, uneven, faint on anterior half; internal genital apodeme projecting directly up from base, not anteriorly; seta 6μ long.

Male 135μ-140μ long, 35μ-38μ thick.

Type locality: Mexico City

Intercepted at: San Diego, Cal., May 12, 1964, by L. B. Widman and sent me by R. M. Ireland

Host: Gardenia jasminoides Ellis (Rubiaceae)

Relation to host:the mites were taken from petiole bases below the flowers

Type material: a type slide
eight paratype slides

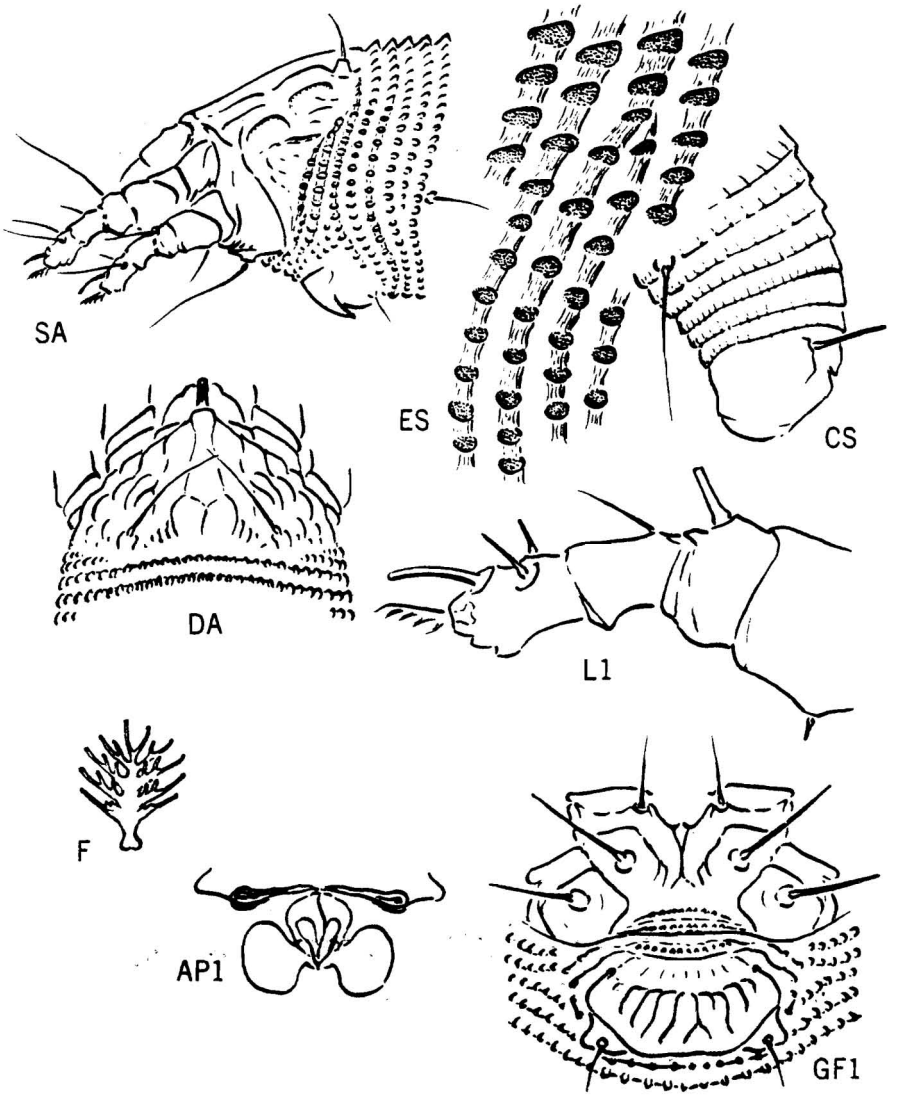

Plate 5 - Eriophyes gardeniella, new species

Aculus knowltoni, new species

Plate 6

This mite is comparable to populivagrans K., since both are found on cottonwoods (Populus),and both ahve 4-rayed featherclaws. The new species differs from populivagrans by having a stronger shield design and by having rounded shield sides. On populivagrans the lateral shield lobes are somewhat produced. I have found populivagrans in the Sacramento area as a leaf vagrant and not associated with the large catkin galls which Aceria neoessigi produces.While I am not able to state that the new species is a leaf vagrant,it has come to me as an inquilin in these large catkin galls, from the Ogden area of Utah. Both the gall former and this new species are present in uncounted numbers in the fragments of of one of these galls, now dry, as collected by G. F. Knowlton.

Female 160μ-220μ long, 60μ-65μ wide, 50μ-55μ thick; fusiform; color probably light yellowish-white. Rostrum 39μ long, projecting down; antapical rostral seta 8μ long. Shield 45μ-50μ long, 55μ-60μ wide. Anterior shield lobe well produced, acuminate, apically pointed. Central shield design rather plain, and partially of thick lines;median line fine, present on rear 2/3, ending in a dart-shaped mark near rear margin; admedians complete, faint on anterior lobe, thicker on shield disc, sinuate, with a fine cross line at about 1/4, meeting a short cross line from submedian at just before 1/2, a central cross line at about 2/3, from which curving out and back to rear margin, the latter part a dotted line; first submedian line from anterior lobe base, subparallel to admedian to cross line at just before 1/2, curving laterally at this point and then running back to cross line at about rear 1/4, and then curving out and back, ending before dorsal tubercle; second submedian running back from outer base of anterior lobe to partial ring below dorsal tubercle,faint. Lateral shield lobes not produced, the shield rounded on sides; a line and granular area above coxae.Dorsal tubercles 34μ apart;dorsal setae 20μ-27μ long, diverging to rear.Forelegs 41μ long; tibia 11μ long, with seta 7μ long at about 1/5; tarsus 10μ long; claw 6.5μ long, curved down, knobbed. Featherclaw 4-rayed. Hindleg 37μ long, tibia 9μ long, tarsus 9μ long,claw 7.5μ long. Coxae with heavy granular lines, two prominent ones curving around inner side of second tubercles; sternal line heavy. First setiferous coxal tubercles a little farther apart than second and slightly behind anterior coxal approximation; a line across third setiferous coxal tubercles passing just behind second tubercles. Abdomen with about 33 tergites to ring with third ventral seta, these tergites with rough posterior edges and with elongate microtubercles; sternites about 60 to 65 in number, the microtubercles beadlike on ring margins although a little produced anteriorly.Lateral seta 32μ long,from sternite 7; first ventral seta 87μ long, from sternite 22; second ventral 33μ long, from about sternite 42; third ventral 30μ long, from ring 6 ahead of rear. Accessory seta 5μ long. Female genitalia 23μ wide, 17μ long; coverflap with about 10 rather weak longitudinal ribs and basally with a pair of granular cross lines; seta 28μ long.

Type locality: west of Ogden, Utah

Collected: July 3, 1963, by George F. Knowlton for whom I am pleased to name the species.

Host: Populus sp. (Salicaceae) a cottonwood

Relation to host: the mites appear in preparations made from dry portions of catkin galls, these galls the work of Aceria neoessigi K.

Type material: a type slide
six paratype slides
dry portions of galls bearing numerous mites

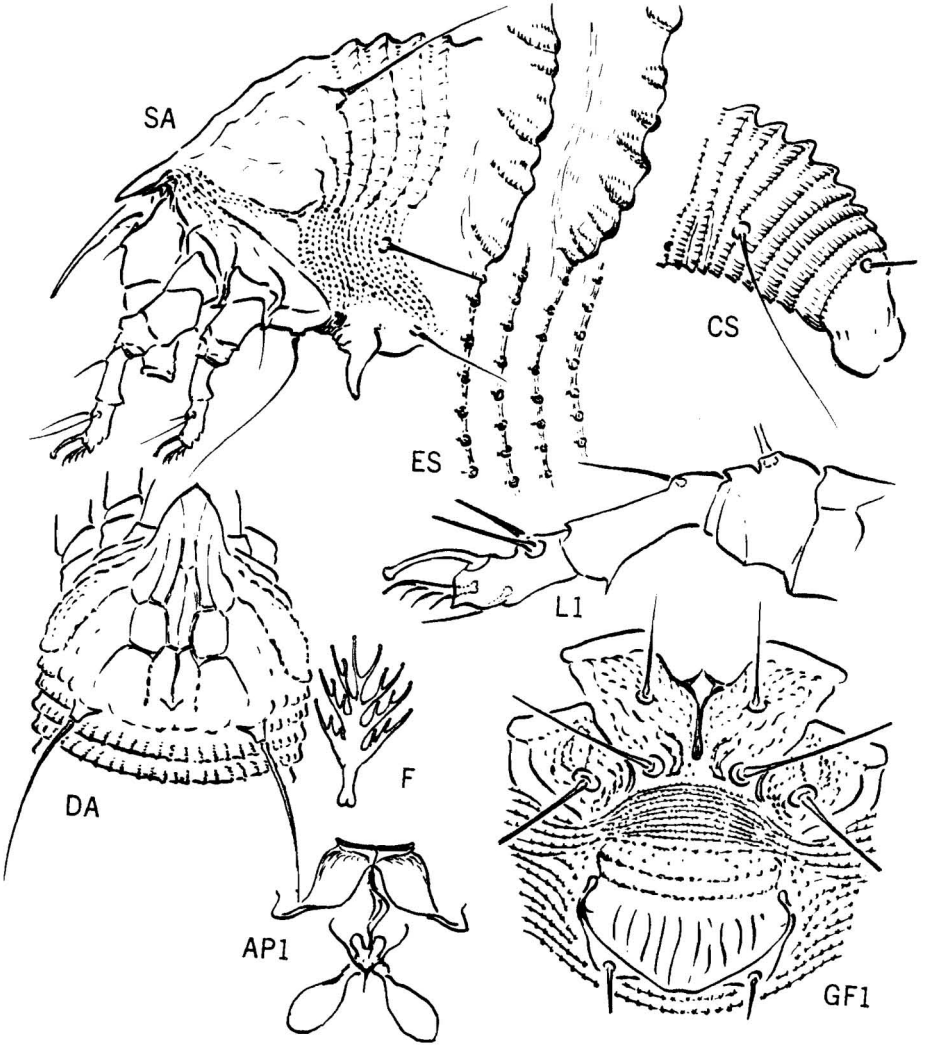

Plate 6 - Aculus knowltoni, new species

Aculus broussaisiae, new species

Plate 7

The only other species referable to this genus with a shield that is studded with large granules is magnolivora, but magnolivora has a 6-rayed featherclaw and a much more definite lateral break between the tergites and sternites.

Female 148μ-170μ long, about 56μ thick;fusiform; color apparently light yellowish-white. Rostrum 18μ long, projecting diagonally down; antapical rostral seta 5μ long. Shield 31μ long,40μ wide; anterior lobe short, broad and blunt; shield design obsolete the space taken by numerous prominent granulations. Dorsal tubercles 24μ apart; dorsal setae 15μ long, diverging to rear. Forelegs 28μ long; tibia 6μ long, lacking seta; tarsus 6μ long; claw 6μ long, knobbed; featherclaw 4-rayed. Hindlegs 26μ long, tibia 5μ long, tarsus 6μ long, claw 6μ long. Coxae without definite markings; anterior coxae moderately connate centrally and with a short rather strong sternal line; first setiferous coxal tubercles a little farther apart than second and a little ahead of anterior coxal approximation;second tubercles well ahead of line across third tubercles. Abdomen with about 27-30 tergites and 48-50 sternites, completely microtuberculate, the microtubercles round or elliptical, larger and fainter dorsally and fading to rear of abdomen dorsally; microtubercles ventrally tending to be narrower and near genitalia somewhat pointed. Lateral seta 16μ long, on about sternite 6; first ventral seta 27μ long, on about sternite 17;second ventral 15μ long, on sternite 25;third ventral 11μ long, on ring 5 from rear. Accessory seta 3μ long. Female genitalia 19μ wide, 13μ long; coverflap with about six weak longitudinal ribs; seta 10μ long.

Type locality: Paukea, Waianao Mts., Oahu

Collected: July 14, 1963 by E. T. Ozaki and received by me under US Dept. of Agriculture #63-17256

Host: Broussaisia sp. (Saxifragaceae - Hydrangeoideae)

Relation to host: the mites form leaf galls

Type material: a type slide, the property of the US Dept. of Agriculture
six paratype slides
dry leaves from which the slides were made

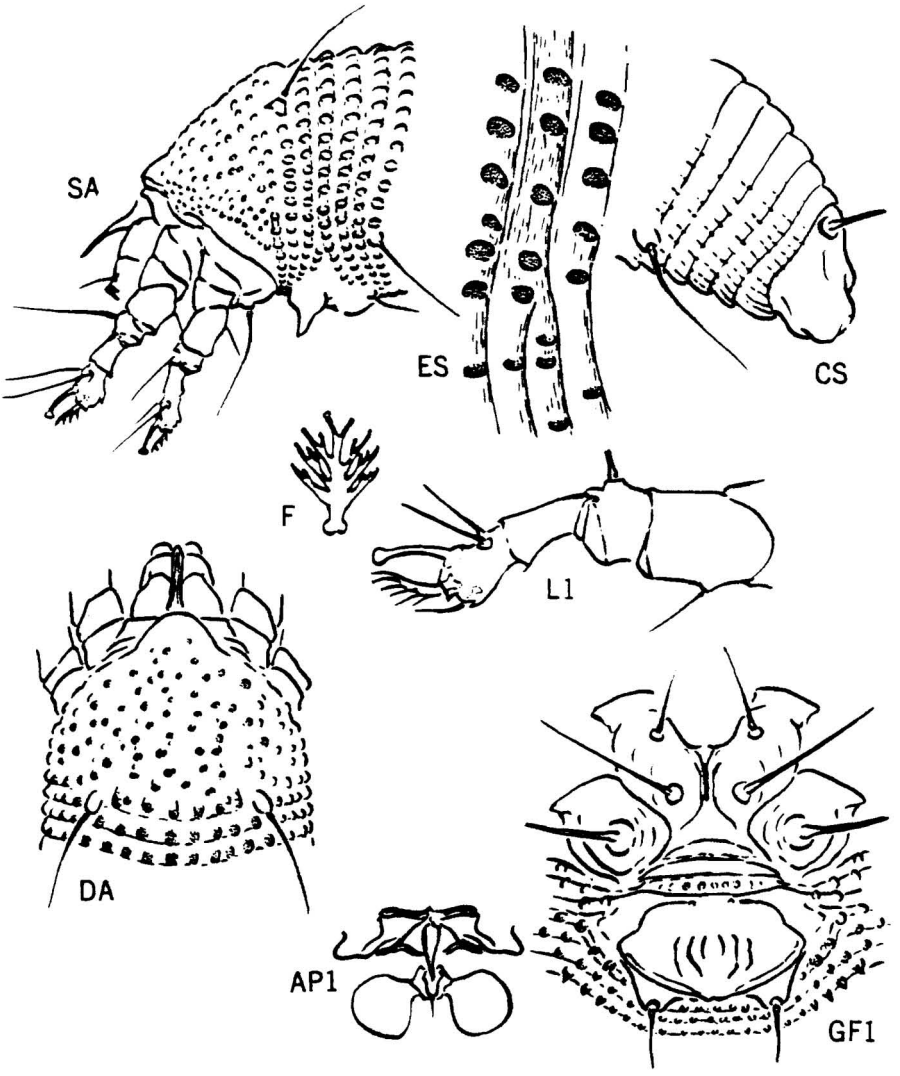

Plate 7 - Aculus broussaisiae, new species

Aculus desmodii, new species

Plate 8

From other Aculus sp. with 6-rayed featherclaws this leaf vagrant on tick-trefoil is distinguished by the numerous sharp-pointed microtubercles on the sides of the tergites.

Female 170μ-180μ long, about 53μ thick; fusiform; color light yellowish-white. Rostrum 20μ long, projecting down. Shield 38μ long, 49μ wide; anterior lobe over rostrum rather short and acute. Shield design faint centrally: median line discernable only on rear 1/4, forking anteriorly to join with admedians; admedian lines apparently complete, running from sides of anterior lobe where they are approximate, to 1/3, and joining a lateral line at this point after flaring out, then converging somewhat to 2/3 and joining forks of median, then diverging to meet submedian lines just inside dorsal tubercles; submedian lines starting ahead of dorsal tubercles running back toward, and angling inward past, these tubercles to a round large granulation on rear margin, and thence along margin to join median line at center where there is another granulation. Two lateral lines above coxae, the upper running from admedians at 1/3, outwardly, and curving back to rear margin, somewhat granular; the lower line from sides of anterior lobe to rear margin above rear coxa, also somewhat granular. Dorsal tubercles 21μ apart; dorsal setae 14μ long, diverging to rear. Forelegs 30μ long; tibia 6μ long, with 3.5μ seta at 1/3; tarsus 6μ long; claw 7μ long, tapering, somewhat curved; featherclaw 6-rayed. Hindlegs 29μ long, tibia 6μ long, tarsus 6μ long, claw 9μ long. Coxae ornamented with granulations and lines of granulations; anterior coxae flaring apart but moderately connate centrally; first setiferous coxal tubercles farther apart than second and slightly ahead of anterior coxal approximation; second coxal tubercles well ahead of line across third tubercles. Abdomen with about 23 tergites to ring bearing third ventral seta; about 55 sternites. Microtubercles on tergites close-set, projecting over margins as short points, less prominent dorsally, fading above to rear. Microtubercles on sternites more bead-like, mostly lying ahead of rear margin. Lateral seta 8μ long, on about sternite 7; first ventral seta 24μ long, on about sternite 20; second ventral 16μ long, on about sternite 34; third ventral 16μ long, on ring 4 from rear. Accessory seta 3.5μ long. Female genitalia 20μ wide, 12μ long; coverflap narrow from front to rear, with about 10 short irregular ribs, basally with two prominent bands of granules; seta 22μ long.

Type locality: Springfield, Virginia

Collected: September 17, 1963, by J. P. Keifer and the writer

Host: Desmodium laevigatum (Nutt.)(Leguminosae-Papilionatae) tick-trefoil

Relation to host: the mites are undersurface leaf vagrants

Type material: a type slide
four paratype slides
mites with plant parts in liquid

A very similar mite was found on Desmodium ciliare (Muhl.) which has less prominent microtubercles on the tergites and 5 to 6-rayed featherclaws.

Catarhinus axonopi Boczek, in Virginia: a Rhyncaphytoptid mite occurs commonly on the undersides of the leaves of various species of Panicum (panic grass) in the Springfield area. (These grasses have a considerable variety of leaf sizes, depending on the species.) J. P. Keifer and I made a number of collections of this mite in September 1963, for example, from Panicum microcarpon Muhl., Sept. 9. Another collection, from a large-leaf Panicum, on Sept. 11. The mite has a light covering of flour-like wax. I have been unable to separate this mite from axonopi. Boczek's article on this mite appeared in the Jr. Kans. Ent. Soc. 33:11,1960. The type locality for axonopi is Hillsborough River State Park, Florida, and the host there is Axonopus affinis Ch.

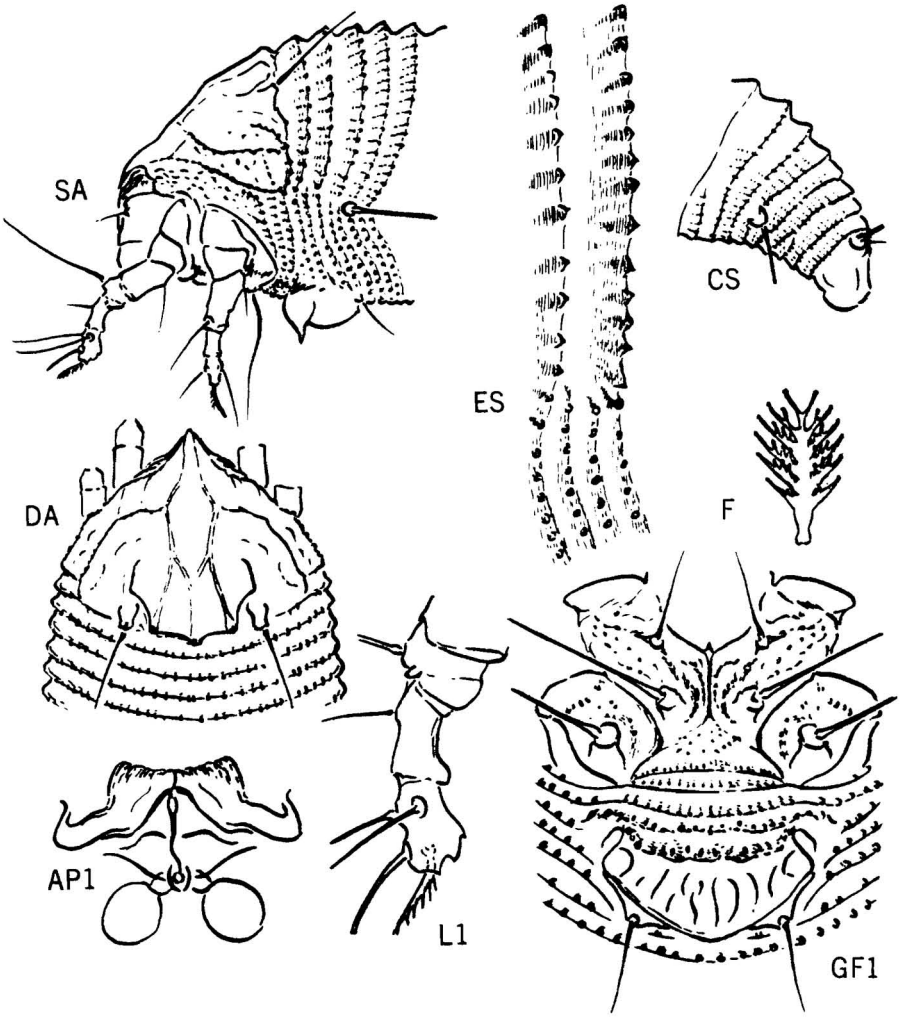

Plate 8 - Aculus desmodii, new species

Aculus lespedezae, new species

Plate 9

This species is characterized, in part, by its 6-rayed featherclaw and rather prominent rounded microtubercles. The only other legume feeder with 6-rayed featherclaws is Aculus scotti, and that species, unlike the new one, has a very strong shield pattern. Other North American legume feeders have 8-rayed featherclaws.

Female 120μ-140μ long, about 38μ thick; fusiform; light yellowish-white in color. Rostrum 21μ long, projecting diagonally down; antapical rostral seta 4μ long. Shield 33μ long, 33μ wide; anterior lobe small, rather acute; shield design obsolete except for diagonally inward lines in front of dorsal tubercles; sides of shield with some lines of granulations, these granulations large below dorsal tubercles. Dorsal tubercles 21μ apart; dorsal setae 17μ long, strongly diverging to rear. Forelegs 29μ-30μ long; tibia 6.5μ long, with 2.5μ seta at 1/4; tarsus 6μ long; claw 6.5μ long, curved down and tapering somewhat; featherclaw 6-rayed. Hindlegs 25μ-26μ long, tibia 4.5μ long, tarsus 6μ long, claw 6.5μ long. Coxae with some lines of moderately large granules; anterior coxae broadly connate centrally; first setiferous coxal tubercles a little farther apart than second and slightly behind anterior coxal approximation; second coxal tubercles a little ahead of line across third tubercles. Abdomen with about 30 tergites to third ventral seta ring, and about 45 sternites; abdomen completely microtuberculate excepr for suppression of these microtubercles toward dorsal rear; microtubercles approximately round, touching rear ring margins, larger and perhaps slightly fainter dorsally. Lateral seta 26μ long, on about sternite 7; first ventral seta 40μ long, on about sternite 17; second ventral 9μ long, on sternite 26; third ventral 18μ long, on sternite 5 from rear. Accessory seta 2.5μ long. Female genitalia 21μ wide, 13μ long, coverflap with about 10 longitudinal ribs; seta 14μ long.

Type locality: Springfield, Virginia

Collected: September 17, 1963, by J. P. Keifer and the writer

Host: Lespedeza virginica L. (Leguminosae-Papilionatae) bush clover

Relation to host: the mites are found on leaves and in flower heads

Type material: a type slide
four paratype slides
mites with plant parts in liquid
mites on dry plant specimens

Designations on plates -

AP1 - Internal female genital structures
CS - Caudal section of mite, side view
D - Dorsal view of mite
DA - Dorsal view of anterior section of mite
DSA - Side view of anterior section of deutogyne
ES - Side skin structures
F - Featherclaw of primary female
FD - Featherclaw of deutogyne
GF1 - Female genitalia and coxae, from below
L1 - First left leg
L2 - Second left leg
S - Side view of mite
SA - Side view of anterior section of mite

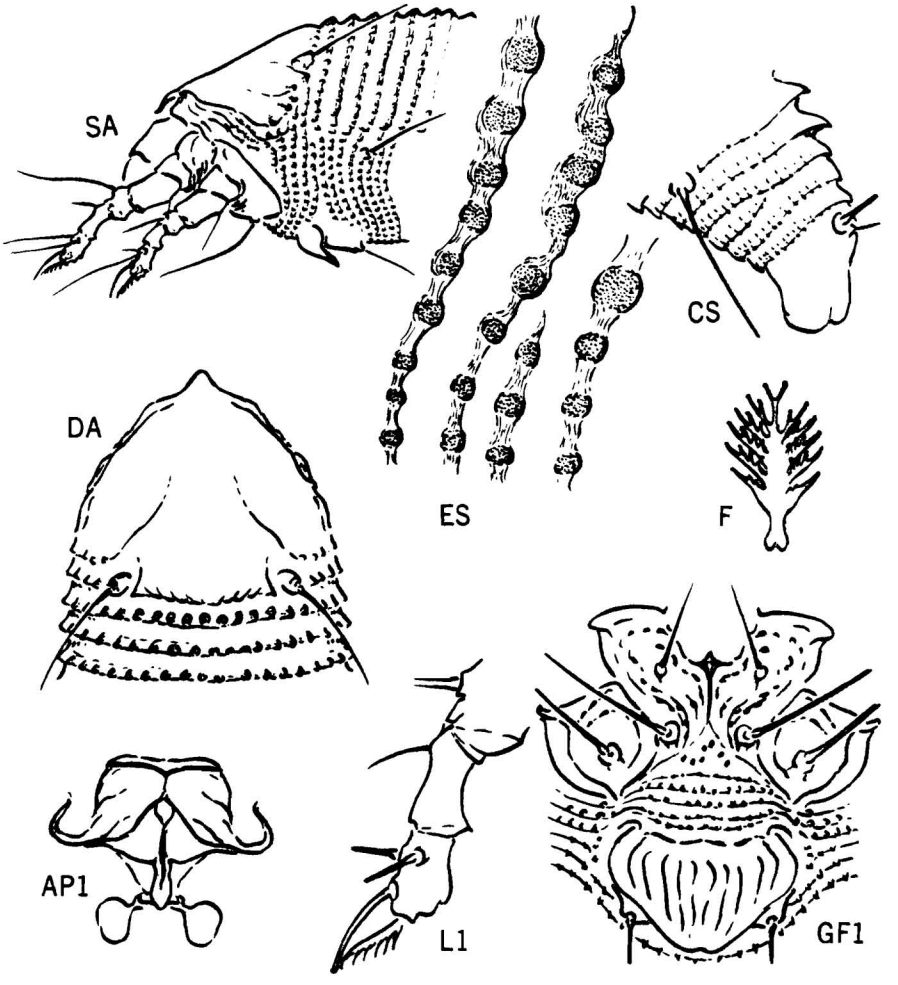

Plate 9 - Aculus lespedezae, new species

Trisetacus floridanus, new species

Plate 10

Trisetacus ehmanni is closest to this new species but it has a 7-rayed featherclaw and the admedian lines join the submedian lines in the center. On floridanus the admedian and submedian lines remain separate. Also floridanus has an 8-rayed featherclaw.

Length of female 280μ-375μ; thickness 50μ-55μ;shape elongate-wormlike; color light yellowish-white.Rostrum 30μ long,curved down; antapical seta 10μ long.Shield about 45μ long,35μ wide.Median line of shield design apparent on rear 1/2;admedian lines complete,forming an elongate elliptical figure,widest at about 2/3,running together at rear shield margin. First submedian lines complete,curving out and back from within front margin to dorsal tubercles,then describing a suppressed S past inner side of dorsal tubercles to rear shield margin.Second submedian lines represented by a short dash behind dorsal tubercles.Sides of shield between dorsal tubercles and coxae with a band of granules.Anterior shield seta about 9μlong; dorsal tubercles 18μ apart; dorsal setae 55μ long,strongly diverging antiorly.Forelegs about 31μ long; tibia 4μ long,with 5μ seta in middle; tarsus 7μ long; claw 10μ long, gently curved down, with small knob. Featherclaw 8-rayed.Hindlegs about 28μ long, tibia 4μ long,tarsus 5μ long, claw 10μ long. Coxae without patterns of lines or granules; no sternal line; first setiferous coxal tubercles slightly farther apart than second and slightly ahead of closest coxal approximation; second tubercles on or slightly behind line across third tubercles. Abdomen with about 65 to 70 rings, completely microtuberculate, the microtubercles elongate-elliptical but not produced in any way; on rings to rear of third ventral seta the microtubercles are fine beads on ring margins with lines anterior to them; these rear microtubercles surround each ring. Subdorsal abdominal seta about 6μ long, on rings 6 to 9; lateral seta 40μ long, on about ring 7 behind shield;first ventral seta 20μ long, on about ring 18; second ventral 16μ long, on about ring 35; third ventral 30μ long, ring 4 to 5 from rear. Accessory seta 9μ long. Female genitalia 23μ wide, 19μ long; coverflap lacking markings; seta 12μ long.

Type locality: Gainsville, Florida

Collected: January 12, 1964 by L. C. Kuiter and sent me by H. A. Denmark

Host: Pinus sp.

Relation to host: the mites presumable live in the needle sheaths

Type material: a type slide, sent to H. A. Denmark
four paratype slides

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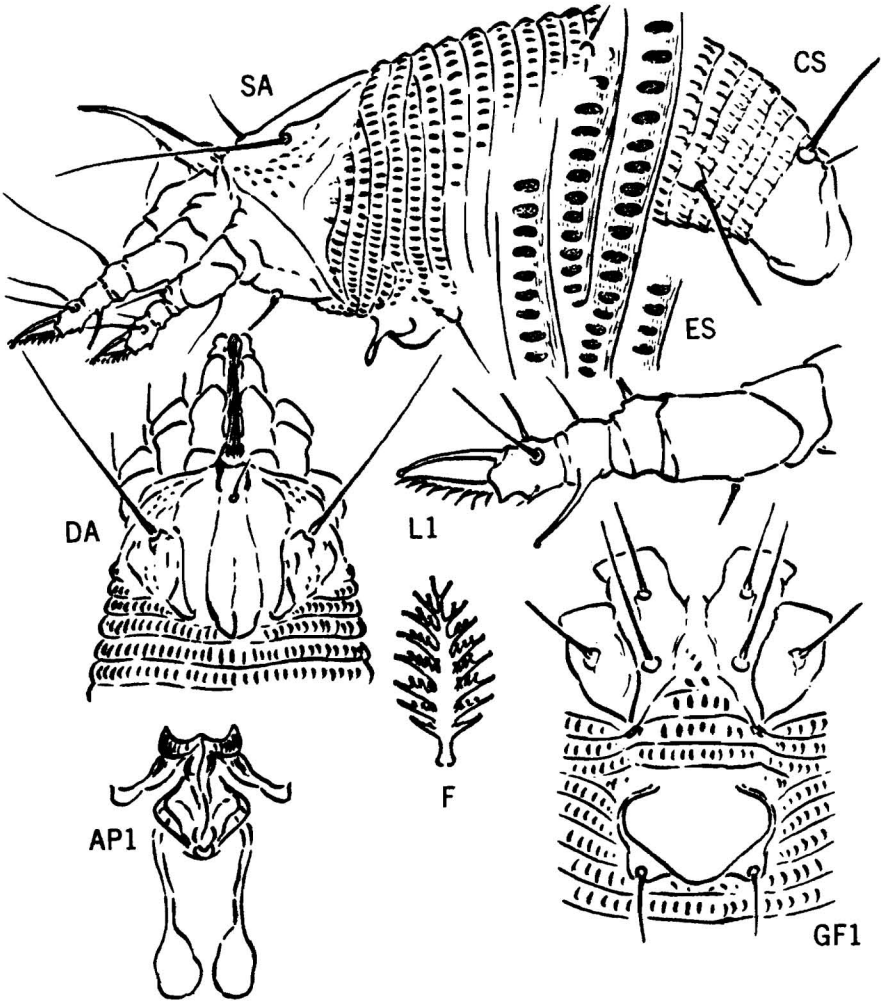

Plate 10 - Trisetacus floridanus, new species