ERIOPHYID STUDIES B-6

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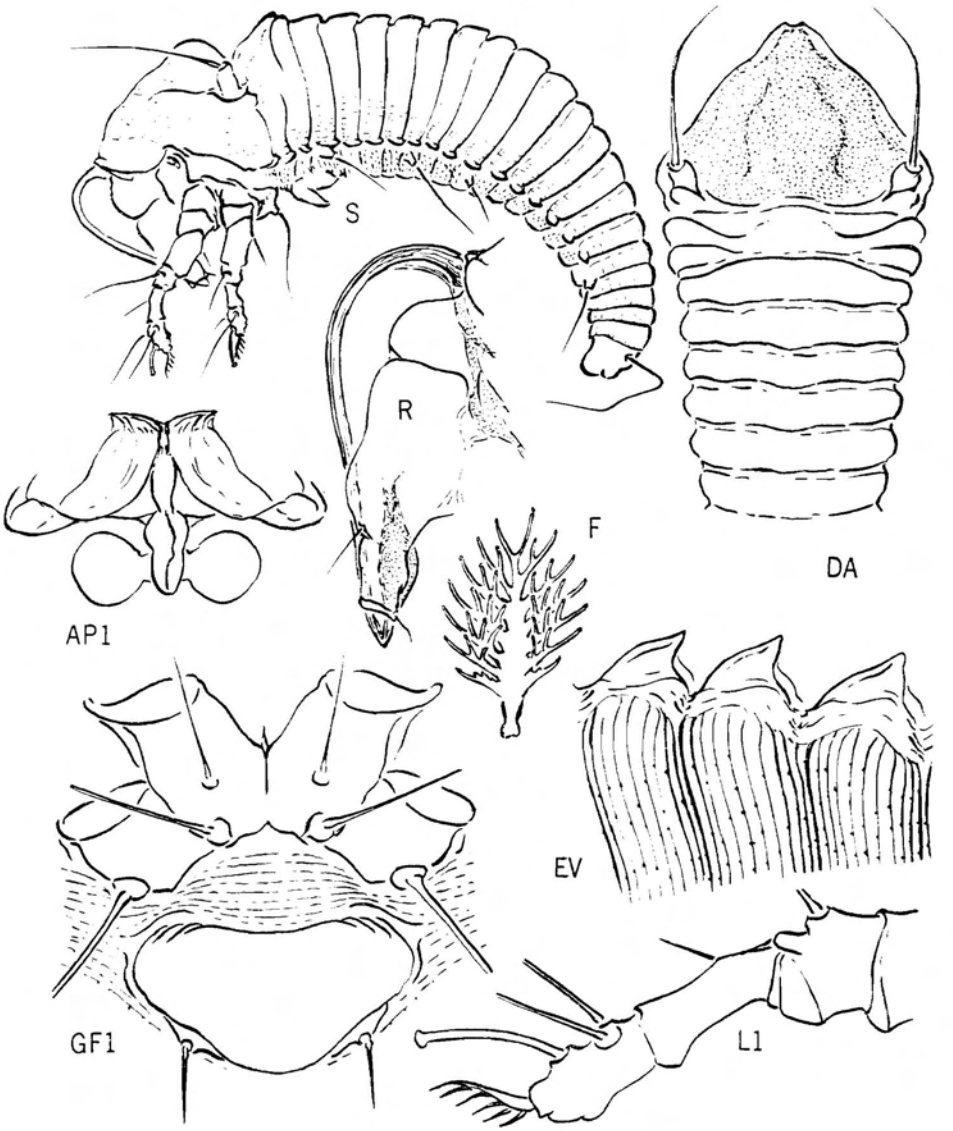

Plate 1 - Peralox insolita, new species

ISSUED - Mar. 7, 1962

Peralox, new genus

Peralox belongs to the Rhyncaphytoptidae and is close to Rhyncaphytoptus. It differs principally in that the tergites end in a short spine on the lower sides of the body. Peralox also has a deep transverse groove behind the cephalothoracic shield, and has an apically enlarged cheliceral guide. Rhyncaphytoptus ficifoliae, genotype, also has somewhat of a groove across the body behind the shield, but it is not as deep and the cheliceral guide is not apically enlarged. A more similar elm infesting species, in Europe, namely Rhyncaphytoptus ulmivora Farkas (1960, Acta Zool. Sci. Hung. 6:336), has shield characters similar to the genotype of Peralox, but the tergites do not end in a lateral spine. The position of the cheliceral guide on mounted specimens would seem to indicate that it is withdrawn upward when feeding, rather than folded back. Peralox is a combination of pera, meaning across, and alox, meaning furrow.

Body fusiform, somewhat elongate, curved. Cephalothoracic shield subtriangular, strongly gibbous at center rear; rear of shield declivitous and forming the front of a deep transverse furrow across mite; dorsal tubercles set just within rear margin, cylindrical, projecting up and directing dorsal setae up and ahead. Rostrum and chelicerae large, strong; cheliceral guide heavy, expanded and enlarged on rear before apex; apical portion of oral stylet longer than base plus pharyngeal pump. Legs and coxae with all usual setae. Abdomen with all usual setae; tergites moderately broad, the first two forming a raised transverse ridge on rear side of furrow between abdomen and shield; tergites flattened across back for a distance behind ridge, extending down low on body sides, ending in a short spine except posterior to third ventral seta, enveloping most of abdomen. Sternites fine, short, forming transverse low ridges corresponding to tergites. Female genitalia moderately close to coxae.

Genotype - Peralox insolita, new species

Peralox insolita, new species

Plate 1

Female 216μ-240μ long, 60μ-65μ wide, 55μ-60μ thick; color light brownish. Rostrum 53μ long, moderately broad apically; antapical seta 8μ long; apical sensillum terminal. Shield 54μ long, 64μ wide; evenly acuminate to projection over rostrum with a slight apical knotch; no design of lines present, the dorsal tubercles set at rear of shallow longitudianl depression; shield surface with fine irroration of clear punctation except for anterior margin. Dorsal tubercles 56μ apart, on rear margin; dorsal setae 43μ long, projecting up and ahead. Forelegs 46μ long; tibia 13μ long, with seta 5μ long at just before 1/2; tarsus 9.5μ long; claw 11μ long, knobbed; featherclaw 7-rayed. Hindlegs 42μ long, tibia 7μ long, tarsus 8μ long, claw 11μ long. Coxae lacking ornamentation, the anterior coxae moderately connate with sternal thickening present only in anterior half; first setiferous coxal tubercles close to and directly ahead of second tubercles, well behind anterior coxal junction; second setiferous tubercles ahead of transverse line through third tubercles. Abdomen with about 21 tergites, these tergites crossed, especially laterally, by fine broken lines. Sternites very narrow and fine to about 8th rear ring, the narrow sternites bearing minute and irregularly spaced microtubercles on margins. About 85-90 narrow sternites ahead of wider rear rings. Lateral seta 36μ long, on about sternite 11; first ventral seta 50μ long, on about sternite 38; second ventral 20μ long, on about sternite 61; third ventral 26μ long, on ring 5 from rear. Accessory seta 4μ long. Female genitalia 36μ wide, 23μ long; female coverflap without ribs or markings; seta 8μ long.

Male structurally the same as female except for genitalia; 165μ-200μ long.

Type locality: Culpepper district, Virginia

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

Host: Ulmus americanus L. (Ulmaceae) elm

Relation to host: the mites are undersurface leaf vagrants

Type material: dry mites on dry leaves
a type slide
6 paratype slides

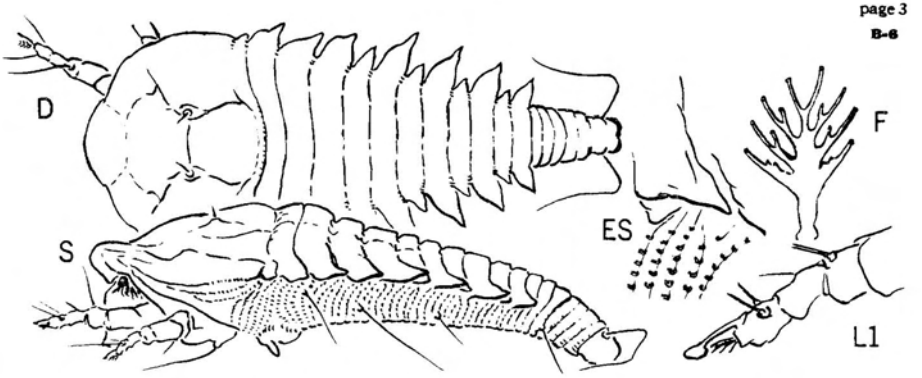

Plate 2 - Oxypleurites uranomus, new species

Oxypleurites uranomus, new species

Plate 2

The specific name in this case is an adaptation of words meaning sky and way. This Oxypleurites is defined by the broad rounded shield with dorsal setae set well ahead of the rear shield margin, the irregular series of lateral points on most of the tergites, and the partial dorsal fusion of the caudal rings.

Female 140u-150u long, 70u wide, 43u thick; fusiform; color light yellowish white. Rostrum 19u long, projecting diagonally down; antapical seta 3u long. Shield 45-50u long, 58-60u wide; broad and semicircularly rounded anteriorly, the projection over the rostrum broad and blunt. Shield design obscure: a faint line from sides of anterior lobe running diagonally inward to about 1/4 and connecting across center of shield to opposite line; from this junction receiving a lateral line and curving back just inside dorsal tubercles and from there curving back to rear margin; a cross line between tubercles. Sides of shield granular on edge and a row or two of granules below. Dorsal tubercles 16u apart, well ahead of rear margin; dorsal setae 3u long, projecting up. Forelegs 27u long; tibia 4.5u long, with seta 3u long at 1/2; tarsus 6u long; claw 4.5u long with oblique knob; featherclaw 4-rayed. Hindlegs 23u long, tibia 4u long, tarsus 5u long, claw 4.5u long. Anterior coxae broadly connate; first setiferous coxal tubercles slightly farther apart than second and behind anterior coxal junction; second tubercles somewhat ahead of transverse line through third tubercles. Abdomen broad, tapering; first two tergites somewhat raised above subsequent level. A short lateral point at rear margin of shield followed by points from sides of about 11 tergites: the first three points equal, the fourth, sixth, eighth and tenth shorter, the fifth, seventh, ninth, and eleventh longer; rings behind third ventral seta partially fused dorsally. About 14 tergites and 45 sternites anterior to third ventral seta. Sternites microtuberculate, the microtubercles bead-like on margins, elongate toward rear. Lateral seta 16u long, on about sternite 6 behind shield; first ventral seta 25u long, on about sternite 19; second ventral 10u long, on about sternite 33; third ventral 15u long, on ring 5 from rear. Accessory seta 4u long. Female genitalia 23u wide, 16u long; coverflap with about 8-10 longitudinal ribs; seta 7u long.

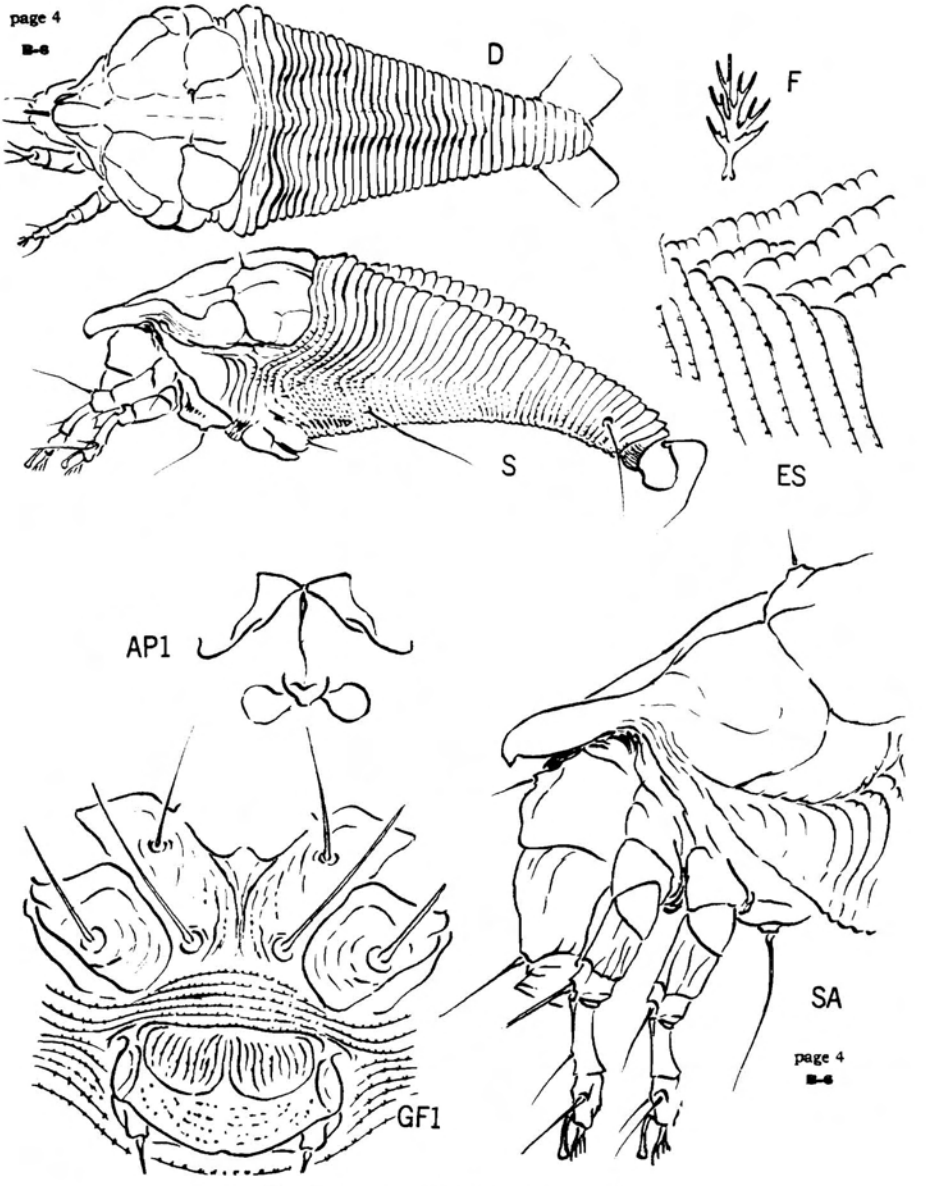

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Plate 3 - Acamina coconuciferae, new species

(uranomus cont.)

Type locality: Skyland, Skyline Drive, Virginia

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

Host: Betula lenta L. (Betulaceae) black birch

Relation to host: the mites are leaf vagrants

Type material: dry leaves with dry mites
mites with leaves in liquid
a type slide
3 paratype slides

Acamina coconuciferae, new species

Plate 3

Coconuciferae, with its simple featherclaw, lacks femoral setae and the second ventral abdominal seta. In these respects it fits with the genotype of the genus to which it is here assigned, Acamina nolinae K. But on coconuciferae the lateral abdominal seta is missing, while the first ventral is present. Nolinae has the lateral but lacks the first ventral. Coconuciferae in back structure resembles Acaricalus in some respects, but that genus has femoral setae and a divided featherclaw.

Female 160u-170u long, 65u wide, 55u thick; body generally fusiform with a lateral indentation behind shield; color light yellowish white. Rostrum 36u long, projecting down; antapical seta 14u long. Shield 65u long, 66u wide, subtriangular;anterior lobe projecting well over rostrum, moderately acuminate; median line faint; admedian lines from sides of anterior lobe, somewhat sinuate, extending back subparallel to eachother to their ending between dorsal tubercles,these lines running along each side of a central shield ridge; a lateral line extending from base of anterior lobe toward lateral lobe; lateral shield lobes boradly rounded, the lateral shield edge with some curved microtuberculate lines below; rear sides of shield constricted. Dorsal tubercles 13u apart, on anterocentrad edge of suboval outlined area that extends outward and back.Dorsal setae 4u long, projecting up. Forelegs 40u long; femaoral seta missing; tibia 11u long,with 7 seta at 3/4; tarsus 6.5u long; claw 5.5u long, with apical bulbous knob; featherclaw 4-rayed. Hindlegs lacking femoral seta,36u long, tibia 7.5u long, tarsus 6.5u long, claw 4.5u long. Coxae with some curved partly granular lines; anterior coxae moderately broadly connate; first setiferous coxal tubercles farther apart than second tubercles and ahead of anterior coxal junction; second tubercles on line through third tubercles. Abdomen with about 34 tergites and about 60 sternites. Dorsum of abdomen with a transverse ridge just behind shield, projecting laterally as far as shield; a central abdominal ridge running back to about tergite 21, the lateral ridges fading to rear beyond central ridge. Sternites completely microtuberculate the microtubercles as fine beads on margins; microtubercles suppressed dorsally; last abdominal ring strongly lined ventrally. Lateral seta missing; first ventral seta 26u long, on about sternite 16; second ventral seta missing; third ventral seta 12u long, on ring 6 from rear. Accessory seta absent. Female genitalia 26u wide, 17u long; coverflap with basal enclosed design of longitudinal ribs with some granules, apically sparsely granulate; seta 13u long.

Male slightly smaller than female.

Type locality: Coral Gables, Florida

Collected: July 19, 1955 by Donald De Leon

Host: Cocos nucifera L. (Palmaceae) coconut

Relation to host: the mites are leaf vagrants

Type material: mites in liquid
a type slide
5 paratype slides

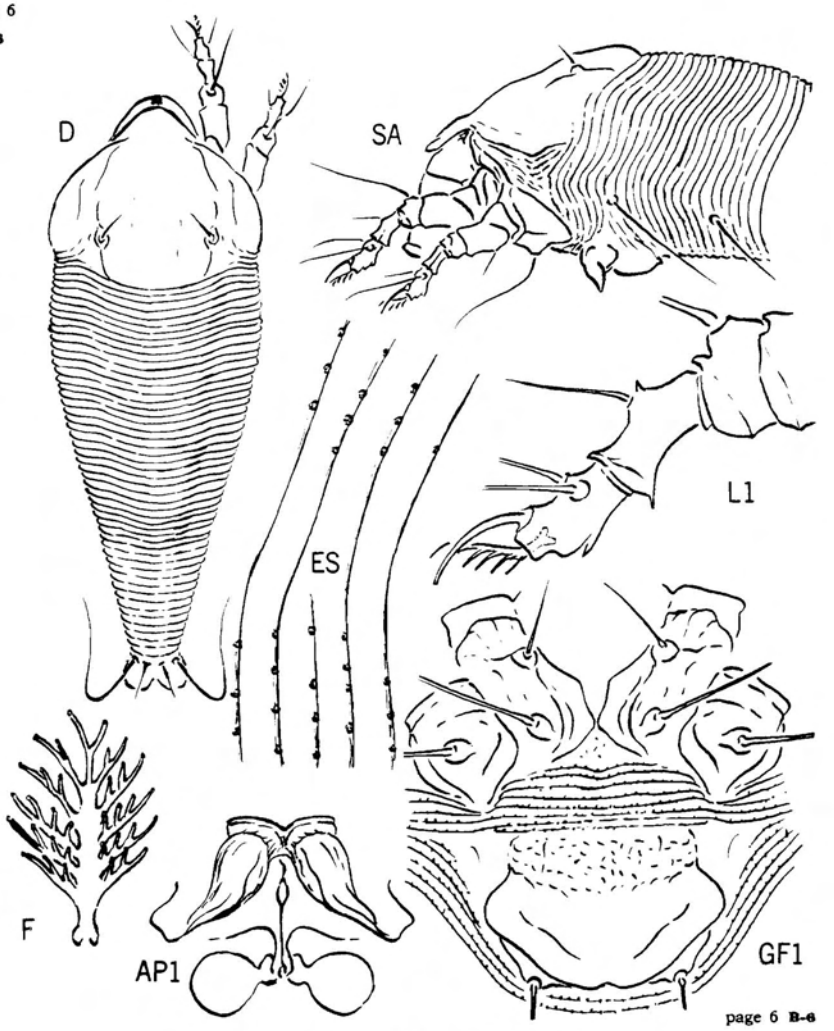


Plate 4 - Epitrimerus pungiscus, new species

Epitrimerus pungiscus, new species

Plate 4

The longitudinal middorsal ridge, which is one of the diagnostic features of Epitrimerus is exceedingly indistinct on pungiscus. The mite could be put into Phyllocoptes almost as readily as into Epitrimerus. However, the new species does seem to be nearer other conifer infesting species that have more pronounced definitive structures and have been referred to Epitrimerus. These are cupressi K., cupressifoliae K., libocedri K., and pseudotsugae K. Of these, libocedri seems the closest and pungiscus differs in having the female coverflap flecked basally whereas libocedri possesses basal concentric rings.

Female 150μ-190μ long, 58μ wide, 50μ thick; robust-fusiform; color light yellowish-white. Rostrum 38μ long, curved down; antapical seta 12μ long. Shield 62μ long, 58μ wide; anterior lobe over rostrum broad in dorsal view and blunt-pointed, shallow in side view; shield design absent, longitudinal lines immediately before and after dorsal tubercles, otherwise only a few contour lines; lateral shield lobes broadly and evenly rounded with longitudinal curved lines bel lateral edge. Dorsal tubercles well ahead of rear shield margin, 23μ apart; dorsal setae 10μ long, projecting up and anterocentrad. Forelegs 38μ long; tibia 9μ long, with 9μ seta at about 1/2; tarsus 9μ long; claw 9μ long, curved down, tapering; featherclaw 6-rayed. Hindlegs 36μ long, tibia 7μ long, tarsus 8.5μ long, claw 8μ long. Coxae ornamented with some curved lines; forecoxae very narrowly touching by centrad lobes; first setiferous coxal tubercles well ahead of second tubercles, a little farther apart and ahead of anterior proximal coxal angles; second tubercles but little ahead of transverse line through third setiferous coxal tubercles. Abdomen with narrow rings, but little differentiated dorsoventrally into tergites and sternites; a faint subdorsal longitudinal furrow extending caudad from behind dorsal tubercles and fading to rear; a faint lateral furrow extending back from lateral lobes of shield. Abdominal microtubercles present as fine beads on ring margins, well spaced, heavier ventrally and subdorsally. Tergites about 60 in number and 75-80 sternites. Lateral abdominal seta 38μ long, on about sternite 8; first ventral seta 54μ long, on sternite 26; second ventral 21μ long, on sternite 50; third ventral 21μ long, on sternite 5 from rear. Accessory seta 5μ long. Female genitalia 27μ wide, 18μ long; coverflap with broad band of basal flecks and an inwardly subapical diagonal line on each side; seta 22μ long.

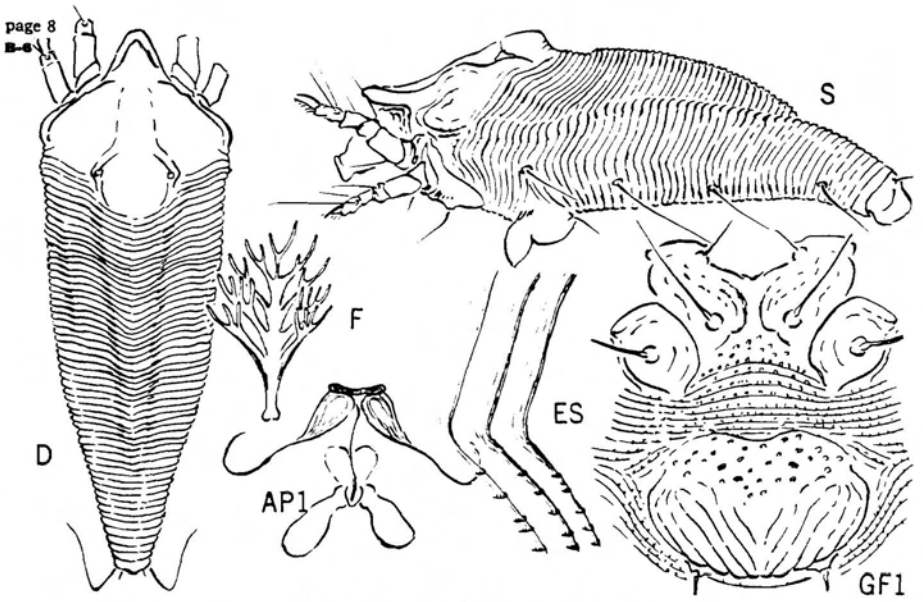
Type locality: Flagstaff, Arizona

Collected: Sept. 5, 1961 by D. M. Tuttle of the University of Arizona

Host: Picea pungens Engelm. (Pinaceae) blue spruce

Relation to host: the mites are needle vagrants

Type material: a vial of mites in liquid; a type slide; 5 paratype slides.



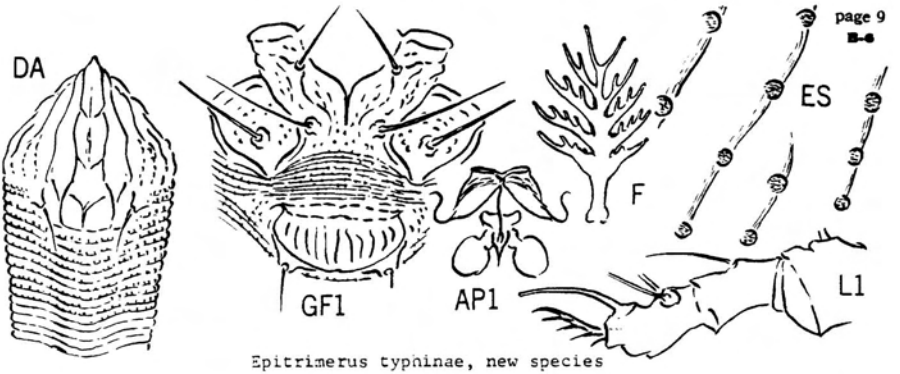
Epitrimerus phoeniceae, new species

Plate 5

The distinctive features of this mite are the position of the first coxal setiferous tubercles at the extreme anterior end of the coxae, the granular basal area on the female genital coverflap, and the diagonal furrows on this coverflap.

Female 160µ-170µ long, 55µ wide, 50µ thick; color dull light yellowish-white. Rostrum 33µ long, projecting diagonally down. Shield 50µ long, 53µ wide, subtriangular, with the central area drawn back along dorsum for a short distance, and the anterior lobe acuminate and narrowly blunt over rostrum. Design obsolete, a narrow raised central section present, reaching keel-like apex just ahead of rear shield margin. Small lateral shield lobes. Dorsal tubercles well ahead of rear shield margin, flanked laterally by partial rings, 23µ apart; dorsal setae 5µ long, projecting up and centrad. Forelegs 29µ long; tibia 6.5µ long, with seta 4.5µ long; tarsus 6.5µ long; claw 6.5µ long, curved down; featherclaw 5-rayed. Hindlegs 27µ long, tibia 4.5µ long, tarsus 6µ long, claw 6.5µ long. Coxae with some curved lines and granulations; Anterior coxae not definitely contiguous; first setiferous coxal tubercles at front end of coxae, a little further apart than second tubercles; second tubercles somewhat ahead of transverse line through third coxal tubercles. Abdomen with about 65 tergites and sternites, the microtubercles confined to the sternites, fine, on rear ring margin. Abdomen with a strong central longitudinal ridge, fading to rear; a short somewhat diagonally outward ridge from just lateral to the dorsal tubercles; lateral ridge running caudad from lateral shield lobes, somewhat sinuate, fading to rear. Lateral seta 32µ long, on about sternite 9; first ventral seta 42µ long, on sternite 24; second ventral seta 25µ long, on sternite 40; third ventral seta 20µ long, on sternite 5 from rear. Accessory seta 4.5µ long. Female genitalia 34µ wide, 23µ long; coverflap with granular basal area, the furrows diagonal from each side toward center; about 12 diagonal furrows; seta 12.5µ long.

Type locality: Palm Beach, Commune de Staouli, Algiers. Collected: July 24, 1959 by Madame C. Athias of the Ecole Nationale d'Agriculture. Host: Juniperus phoenicea L. (Cupressaceae) juniper. Relation to host: the mites are vagrants on the twig tips. Type material: as well as the dry plant parts from which the mites were taken, there is a type slide and four paratype slides.



Epitrimerus typhinae, new species

Plate 7

The more typical species of Epitrimerus have the dorsal tubercles set well ahead of the rear shield margin the tubercle axes longitudinal with the mite body. On typhina these tubercles are touching the rear shield margin but the axes of these tubercles are principally longitudinal although converging anteriorly. This tubercle position causes the dorsal setae to project up and strongly converge to the rear. In this respect typhinae resembles sierribis K. and pteleae K., but the anterior lobe on typhinae is more acuminate and the microtuberculation is different.

Female 170μ-135μ long, 43μ thick; fusiform; color light yellowish-white. Rostrum 32μ long, projecting down; antapical seta 4.5μ long. Shield 46μ long, 44μ wide, subtriangular; acuminate over rostrum anteriorly; median line indistinct; admedians complete, subparallel, curving out and recurving at rear, with three cross lines forming V-like marks with apices to rear at about 1/3, 2/3, and ahead of rear margin; first submedian line from sides of anterior shield acumination, gradually diverging and ending just ahead of dorsal tubercles with a diagonal line toward admedian line near tubercles; some sublateral lines farther out, partly granular; longitudinal curved lines of granulations on lower side of lateral shield declivity. Dorsal tubercles 23μ apart, near rear shield margin, the axes converging diagonally in front; dorsal setae 13μ long, directed up, to rear, and centrad. Forelegs 33μ long; tibia 6.5μ long, with 6μ seta at about 1/2; tarsus 6.5μ long; claw 7μ long, tapering; featherclaw 5-rayed. Hindlegs 30μ long, tibia 6μ long, tarsus 7μ long, claw 8.5μ long. Coxae ornamented with curved lines and some granulations; anterior coxae moderately connate centrally; first setiferous coxal tubercles well ahead of second tubercles, farther apart, somewhat ahead of anterior coxal junction; second tubercles not far ahead of transverse line through third setiferous coxal tubercles. Abdomen with little difference between tergites and sternites, about 55 tergites and 65-70 sternites; completely microtuberculate, the microtubercles bead-like, fairly wide-spaced, on rear ring margins, more pointed to rear. Lateral seta 45μ long, on about sternite 10; first ventral seta 60μ long, on sternite 25; second ventral 33μ long, on about sternite 44; third ventral 26μ long, on sternite 7 from rear. Accessory seta 4.5μ long. Female genitalia 18μ wide, 14μ long; coverflap with about 10 longitudinal ribs; seta 13μ long.

Type locality: Blue Knob State Park, Bedford County, Pennsylvania

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

Host: Rhus typhina L. (Anacardiaceae) staghorn sumac

Relation to host: the mites are vagrants on the undersides of the leaves among the hairs

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

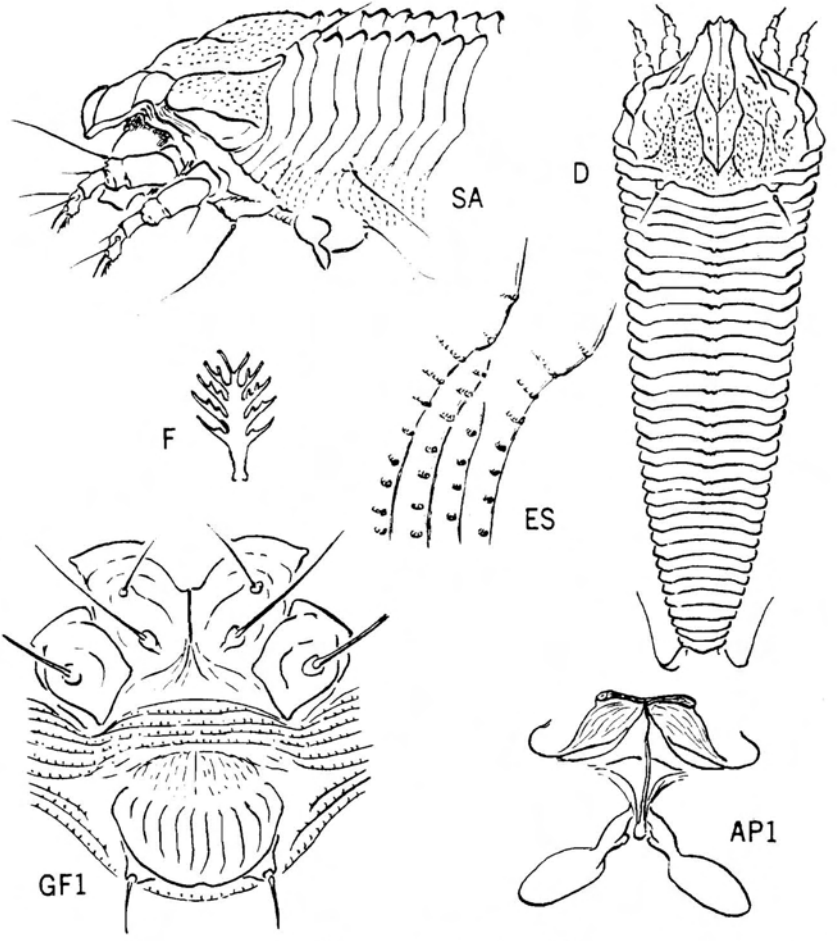


Plate 7 - Abacarus afer, new species

Abacarus afer, new species

Plate 7

Two species have been previously referred to Abacarus. These are the genotype, eucalyptus with a 6-rayed featherclaw; and hystrix with an 8-rayed featherclaw. The new species has a 5-rayed featherclaw, and is otherwise distinguished by the granulations on the shield and the large anterior lobe. The dorsal tubercles on the new species arise from what appears to be the first tergite.

Female 190μ-205μ long, 55μ wide, 50μ thick, elongate-fusiform, probably yellowish in color. Rostrum 26μ long with long subapical seta. Shield 55μ long, 55μ wide, subtriangular. Anterior lobe projecting well ahead of rostrum, with three verticle ridges over front. Median line from median frontal ridge, ending at confluence of lines from admedians just ahead of rear margin. Admedian lines complete, from lateral frontal ridges, somewhat sinuate, joined to median line by diagonally caudad lines in center of shield and just ahead of rear margin;admedian lines diverging at rear. Submedian lines obscure.Central part of shield generally granulate. Lateral shield lines forming cells above coxae; some lateral granulations. Dorsal tubercles apparently arising from rear margin of first tergite, 43μ apart; dorsal setae 8.5μ long, diverging to rear.Forelegs 34μ long; tibia 6.5μ long, with small seta from 1/2; tarsus 6.5μ long; claw 6.5μ long, with slight knob; featherclaw 5-rayed. Hindlegs 32μ long, tibia 6.5μ long, tarsus 6.5μ long, claw 6.5μ long. Coxae with few lines; anterior coxae broadly joined, a definite sternal line between; first setiferous coxal tubercles set farther apart than second, about opposite anterior coxal junction; second tubercles somewhat ahead of transverse line through third tubercles. abdomen with about 32 tergites and 60-65 sternites. Central abdominal ridge ending just before 3/4 in shallow longitudinal trough. Subdorsal ridges from dorsal tubercles, fading caudally. A lateral ridge from lower lateral shield line. Microtubercles on sternites small,mostly not reaching the rear margins. Lateral seta 10μ long, on about sternite 7; first ventral seta 40μ long, on about sternite 22; second ventral 16μ long, on about sternite 36; third ventral 22μ long, on sternite 5 from rear. Accessory seta absent. Female genitalia 23μ wide, 15μ long; coverflap with basal area with fine longitudianl lines, the principal longitudinal ribs about 10 in number; seta 12μ long.

Type locality: Kavumu, Provence of Kivu, the Congo. Collected: May 1959 by M. Jevremovic, of the Office of Agricultural Products
Host: Coffea arabica L. (Rubiaceae) coffee. Relation to host: the mites are rust mites living on the undersides of the leaves.
Type material: mites in liquid; a type slide; four paratype slides

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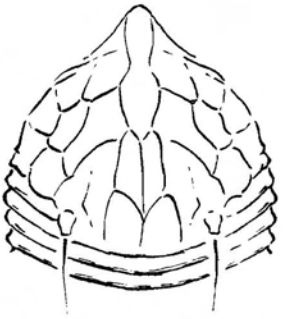
Aculus pelekassi K. was named from northwestern Greece. It was originally sent me by Dr. G. D. Pelekassis who found it damaging orange and mandarin at Prevenza, Sept. 12, 1958. See Occ. Papers, Cal. Bur. Ent. No.1, p6, May 8, 1959. Samples received since then are as follows:

1. Petchboon, Thailand, June 29, 1959, collected on mandarin by Dr. C. A. Fleschner.
2. Okitsu, Shimizu City, Schizuoka Prefecture, Japan, collected on orange Oct. 24, 1961 by S. Akudai and sent me by Dr. Shozo Ehara.
3. Catanzaro, Calabria, Italy, collected on mandarin Dec. 16, 1961 by Prof. Giorgio Costantino.
4. Lecce, Acireale,Sicily, collected on mandarin Jan. 3, by Dr. Enrico Martini.

The shield pattern on this mite was not sufficiently delineated in the original drawing and is reproduced here in a clearer form. In addition the genital seta is not 25μ long as first stated, but over 40μ long. This is a rather good diagnostic character.



Shield - Aculus pelekassi

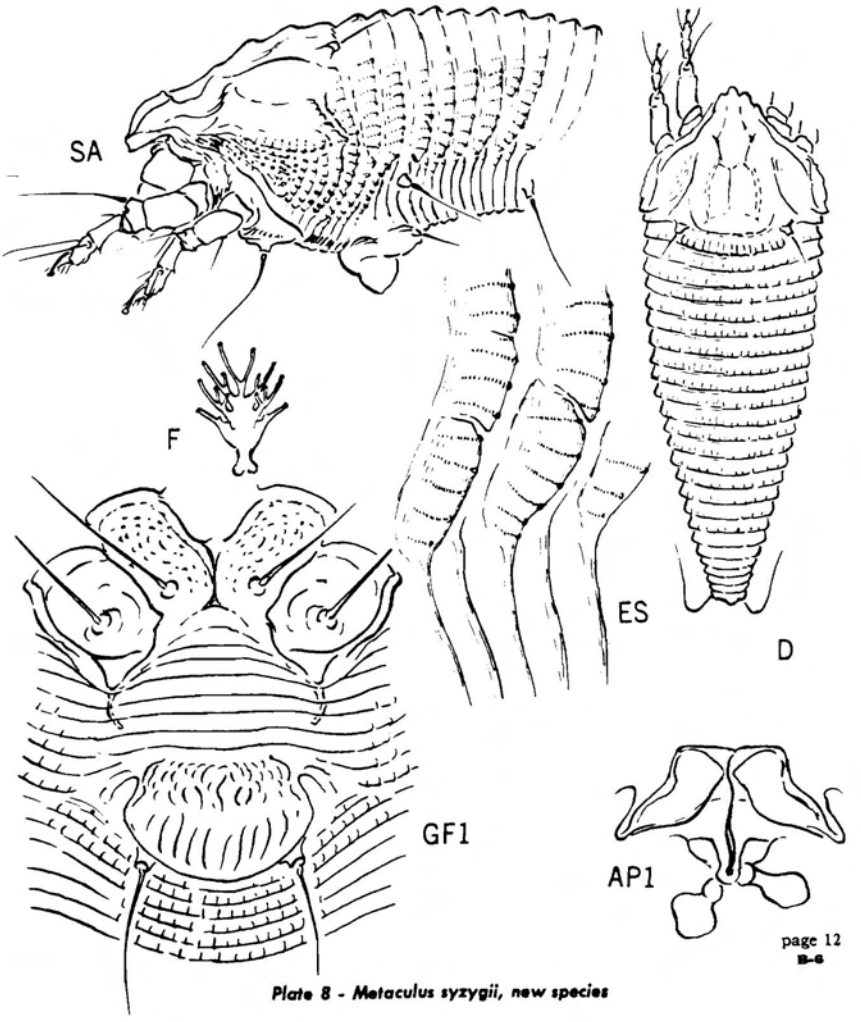


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Plate 8 - Metaculus syzygii, new species

Metaculus, new genus

The lack of first setiferous tubercles and setae on the forecoxae is the principle difference between this genus and Aculus. The genotype of Aculus has a pair of small spines projecting from the anterior shield lobe, a structure not found on the genotype of Metaculus.

Genotype - Metaculus syzygii, new species

Metaculus syzygii, new species

Plate 8

Female 170μ-190μ long,60μ-70μ wide,50μ thick; fusiform; light yellow. Rostrum 28μ long, projecting diagonally down; antapical seta 11μ long. Shield 46μ long, 60μ wide, subtriangular; moderate anterior lobe over rostrum, thick dorsoventrally, with two vertical indentations in front; shield design rather obscure: median line present on rear 1/2, ending before margin; admedian lines complete, sinuate, wider opposite median line and joined to it front and rear by cross lines; admedians diverging at extreme rear. A submedian line just beyond dorsal tubercle. Side of shield with an upper longitudinal line and a band of granules above coxae. Dorsal tubercles on rear margin 33μ apart; dorsal setae 6μ long, projecting backward and diverging. Forelegs 31μ long; tibia 10μ long, with seta 5μ long from 1/4; tarsus 6.5μ long; claw 6.5μ long, curved, knobbed;featherclaw 4-rayed. Hindlegs 29μ long, tibia 8.5μ long, tarsus 6μ long, claw 4.5μ long. Coxae with some granulations and lines; anterior coxae rather narrowly joined centrally; second setiferous coxal tubercles ahead of transverse line through third tubercles. Abdomen with about 22-25 tergites and 40-45 sternites. Tergites generally set with fine elongate microtubercles, ending on rear margin. Most sternites lacking microtubercles except anteriorly. Lateral seta 17μ long, on about sternite 6; first ventral seta 40μ long, on sternite 14; second ventral 7μ long, on sternite 25; third ventral 15μ long, on sternite 5 from rear. Accessory seta very minute. Female genitalia 21μ wide, 15μ long;coverflap with basal area covered by numerous short curved dashes, the longitudinal ribs short and about 10 in number; seta 15μ long.

Type locality: Route Bakavu-Usumbra, Kivu, the Congo

Collected: September 1959 by J. Schoenmaeckers of the Kivu Office of Agricultural Products

Host: Syzygium cordatum (Myrtaceae)

Relation to host: the mites are rust mites on the undersides of the leaves

Type material: specimens in liquid
a type slide
6 paratype slides

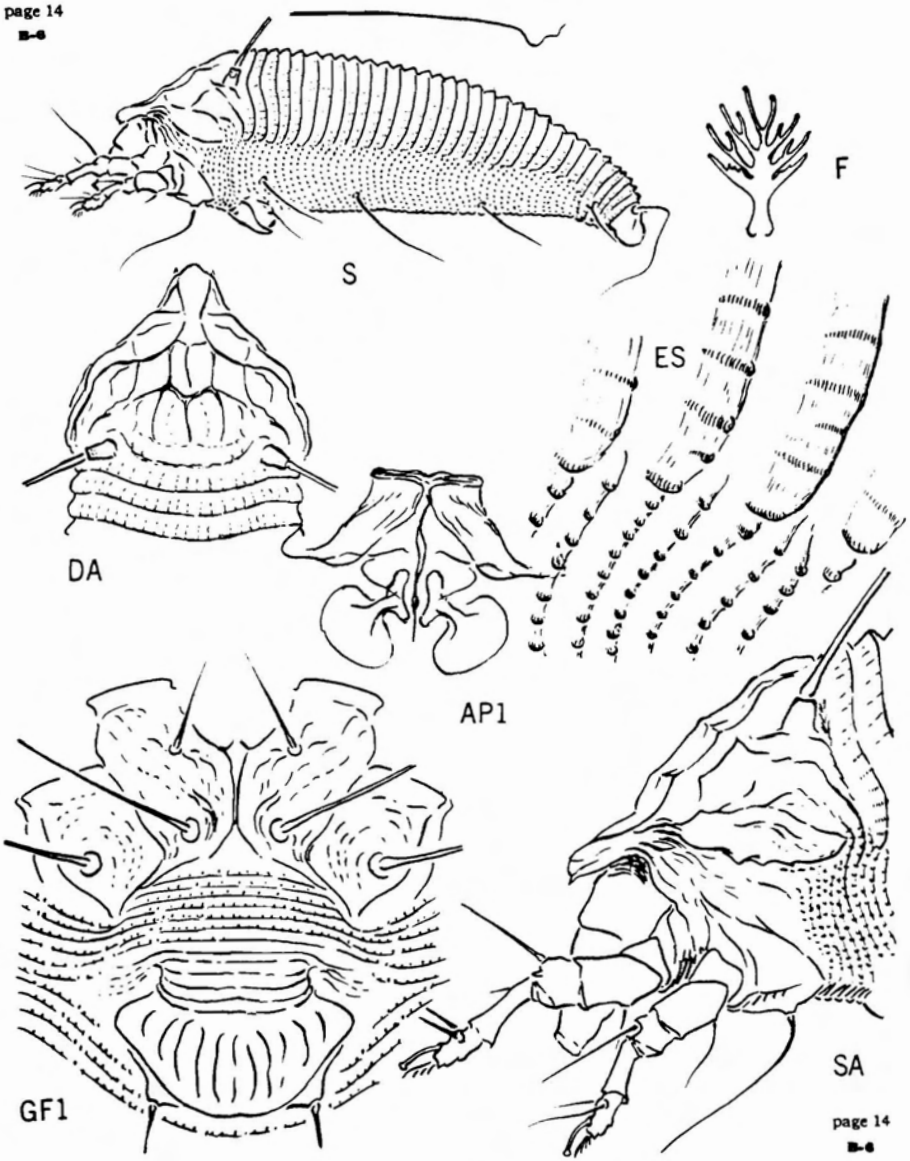

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Plate 9 - Aculus smilacis, new species

Aculus smilacis, new species

Plate 9

Smilacis is a member of the long dorsal seta bearing Aculus spp.,with 4-rayed featherclaws. It is close to liquidambaris K. but differs by having a more pronounced shield pattern and smaller knobs on the claws.

Female 190μ-220μ long, 72μ wide, 60μ thick; robust-fusiform; color light yellowish-white. Rostrum 33μ long; antapical seta 10μ long. Shield 53μ long, 63μ wide, subtriangular; anterior lobe somewhat produced over rostrum and bearing two small points; design a network: median line present on rear 1/2 and connected to admedians by crosslines at 1/2 and 3/4; admedians complete, sinuate, converging from anterior sides to anterior lobe, diverging at about 1/3 to just before center and forking into lateral line, converging slightly to 3/4 and connecting to cross line, and converging to rear; submedian line diverging from 1/2 lateral line and running out past dorsal tubercles;lateral lobes of shield broadly rounded with diagonal line across to rear angle and vertical rows of granulations below edge. Dorsal tubercles 43μ apart; dorsal setae 115μ long, projecting up and diverging, apically curled. Forelegs 40μ long; tibia 13μ long, slender, with 4μ seta at about 1/4;tarsus 7.5μ long; claw 6.5μ long, with rather small knob;featherclaw 4-rayed. Hindlegs 38μ long, tibia 10μ long, tarsus 7.5μ long, claw 6μ long.Coxae ornamented with curved lines, anterior coxae broadly connate;first setiferous tubercles well ahead of second tubercles, and slightly farther apart, opposite anterior coxal junction; second tubercles a little ahead of transverse line through third setiferous coxal tubercles. Abdomen with 35-40 tergites and about 65 sternites; tergites with faint elongate microtubercles; sternites with more bead-like microtubercles touching rear ring margins. Lateral seta 30μ long, on about sternite 8; first ventral seta 50μ long, on about sternite 25; second ventral 27μ long, on sternite 45; third ventral 26μ long, on sternite 5 from rear. Accessory seta minute. Female genitalia 27μ wide, 20μ long; coverflap with 10-12 longitudinal ribs; seta 16μ long.

Male 180μ-210μ long.

Type locality: College Park, Maryland

Collected: July 17, 1959 by J. P. Keifer and the writer

Host: Smilax rotundifolia L. (Liliaceae) greenbriar

Relation to host: the mites are undersurface leaf vagrants

Type material: mites with leaves in liquid, a type slide, 5 paratype slides

As well as the above locality this mite was collected from this same host near Catalpa, Virginia, July 26, 1959.

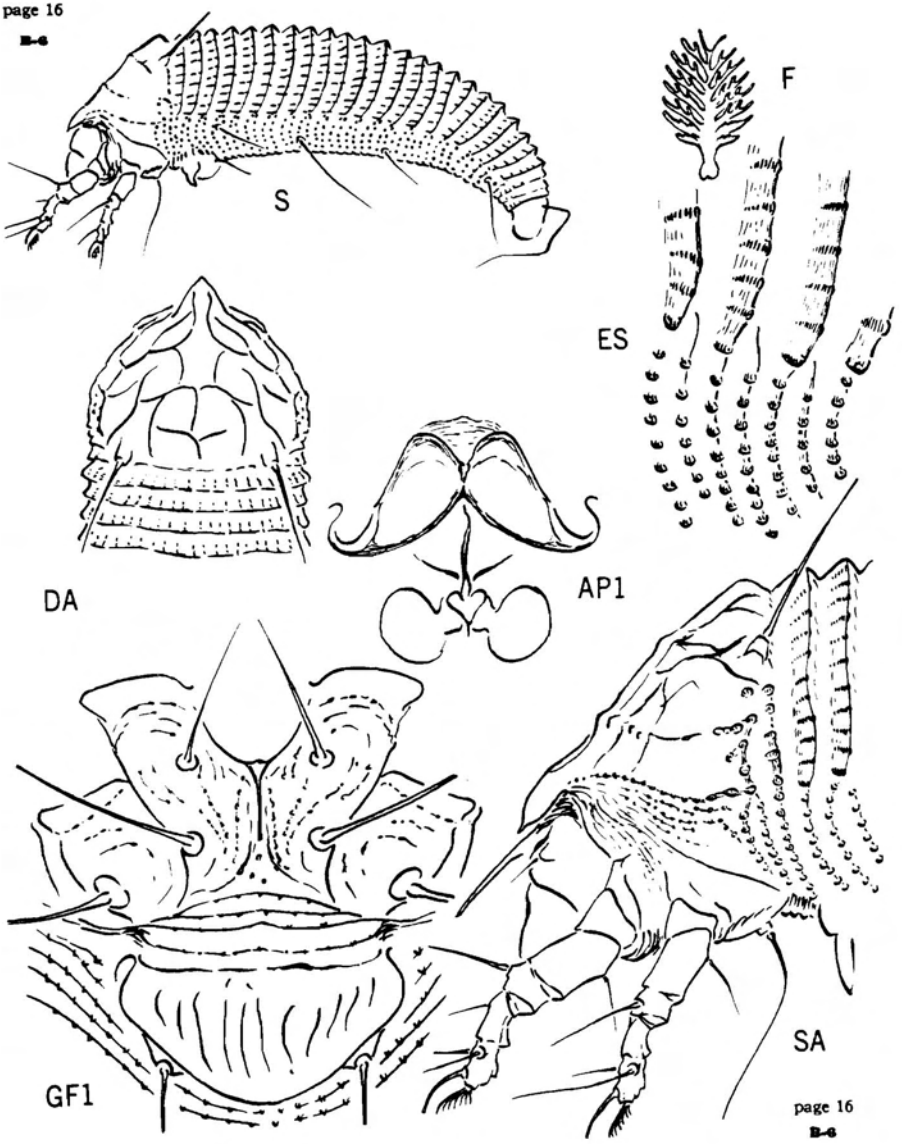


Plate 10 - Aculus tephrosiae, new species

Aculus tephrosiae, new species

Plate 10

Tephrosiae is similar to prosopis K. by having a pointed anterior shield lobe and an 8-rayed featherclaw. It differs by not having pointed microtubercles on the tergites and by having a different shield pattern.

Female 130u-140u long, 40u wide, 35u thick; fusiform; color light yellowish-white. Rostrum 20u long, projecting diagonally down; antapical seta 2.5u long. Shield 40u long, 33u wide; anterior shield lobe acuminate over rostrum pointed; admedian lines complete from sides of anterior point, sinuate, with a lateral branch at 1/3, a cross line through center at just before 2/3 which extends laterally as a branch to submedian, and the admedians recurving in a wide sweep around rear center of shield; this rear center of shield enclosing the rear part of median line which branches laterally toward rear. Submedian line principally distinguishable on rear half of shield, running to near rear margin diagonally past dorsal tubercles. Lateral shield line from base of anterior lobe, branching in both directions in two or more places. Lateral edge of shield granular and lines of granules below edge. Dorsal tubercles 21u apart; dorsal setae 13u long, diverging. Forelegs 25u long; tibia 5u long, with seta 4u long at about 1/3; tarsus 5u long; claw 6.5u long, curved down, tapering; featherclaw 8-rayed. Hindlegs 23u long, tibia 4.5u long, tarsus 4.5u long, claw 6.5u long. Coxae ornamented with lines of granules; anterior coxae broadly connate; first setiferous coxal tubercles ahead of second and opposite anterior junction of coxae; second tubercles somewhat ahead of transverse line through third tubercles. Abdomen with about 27 tergites and 45-50 sternites; completely microtuberculate, the microtubercles elongate dorsally and not pointed form tergite edges; on sternites set bead-like on sternite margins. Lateral seta 12u long, on about sternite 6; first ventral seta 24u long, on sternite 17; second ventral 4.5u long, on sternite 26; third ventral 12u long, on sternite 5 from rear. Accessory seta absent. Female genitalia 18u wide, 13u long; coverflap with 10-12 longitudinal ribs; seta 7u long.

Male 130u long.

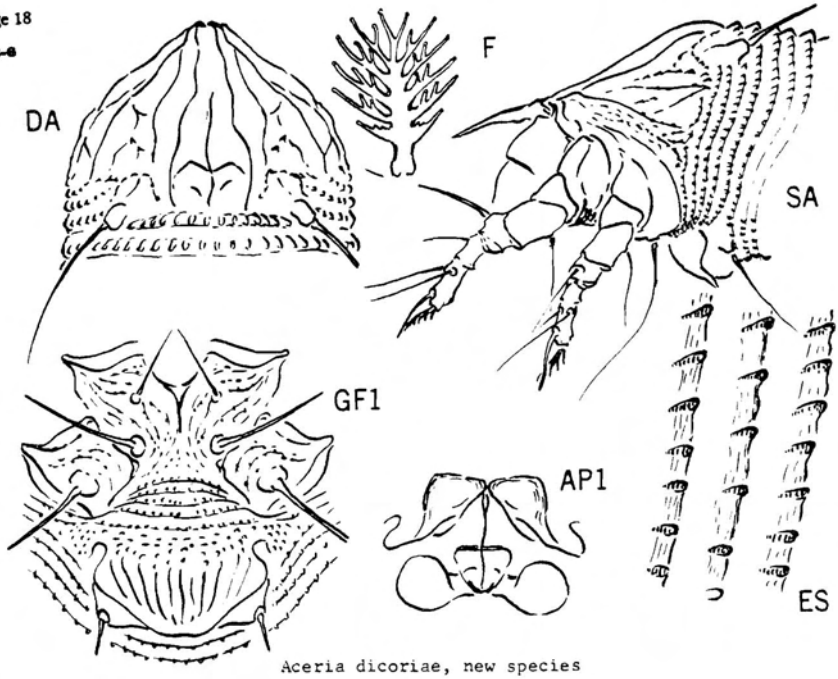
Type locality: Cacapon State Park, Morgan County, West Virginia

Collected: July 5, 1959 by John P. Keifer

Host: Tephrosia virginiana (L.) (Leguminosae) goat's rue

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

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



Aceria dicoriae, new species

Plate 11

Dicoriae,with its 6-rayed featherclaw, is distinguished by the median shield line on the rear 2/3, the half ring of granules across in front of the dorsal tubercles, the rather long claws, and the microtubercles as blunt points on the rear ring margins.

Female 170µ-205µ long, 40µ thick; wormlike, light yellowish in color. Rostrum 20µ long, curved down; antapical seta 5µ long. Shield 30µ long, 35µ wide, subsemicircular in anterior outline,the center produced forward slightly. Shield design of lines: median line on rear 2/3, meeting angulated cross line at 3/4; submedian lines omplete, sinuate, gradually diverging, then recurving at rear. First submedian line forked from lateral line behind front, subparallel to admedian line, ending ahead of dorsal tubercles. A curved line of granules in front of dorsal tubercles. Lateral line from near center front, running back to partial rings below dorsal tubercles, with some short lines and granules above it, three partial microtuberculate rings behind it, and lines of granules below lateral line. Dorsal tubercles 22µ apart; dorsal setae 18µ long, diverging to rear. Forelegs 31µ long; tibia 6.5µ long, with 6.5µ seta at 1/3; tarsus 9µ long; claw 9.5µ long, tapering; featherclaw 6-rayed. Hindlegs 28µ long, tibia 5µ long, tarsus 7µ long, claw 9.5µ long. Coxae lined with granules; first setiferous coxal tubercles ahead of second tubercles and about opposite anterior coxal junction. Second tubercles well ahead of transverse line through third coxal tubercles. Abdomen with about 65 rings, completely microtuberculate, the microtubercles somewhat elongate and projecting as blunt points beyond ring margins. Lateral seta 36µ long, on about ring 7 behind shield; first ventral seta 58µ long, on about ring 20; second ventral 12µ long, on ring 36; third ventral 23µ long,on ring 6 from rear.Accessory seta 2.5µ long. Female genitalia 21µ wide, 14µ long; coverflap with 10-12 longitudinal ribs; seta 20µ.

Type locality: Yuma, Arizona Collected: Oct. 17, 1960 by D. M. Tuttle
Host: Dicoria canescens T.&G. (Comp citae)
Relation to host: the mites are in the terminals and flowers
Type material: dry plant material with mites; a type slide; 4 paratype slides

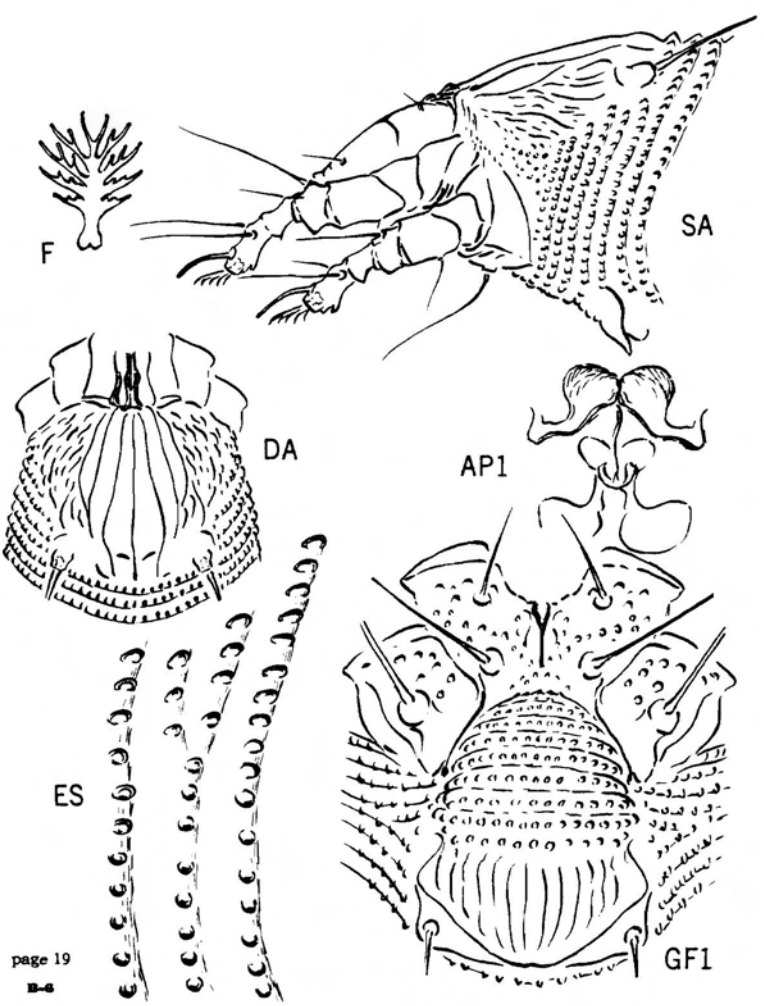


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Plate 12 - Aceria chrysactiniae, new species

Aceria chrysactiniae, new species

Plate 12

The shield pattern on chrysactiniae is similar to abilis K. but this latter species has pointed microtubercles, whereas the microtubercles on chrysactiniae are rounded apically.

Female 155μ-170μ long, 40μ thick; wormlike; color a light yellowish-white. Rostrum 21μ long, projecting forward and down; antapical seta 6μ long. Shield 24μ long, 32μ wide, curved in anterior outline; median line complete, straight, a short transverse mark on each side of median just ahead of rear margin; admedian lines complete, gradually diverging from chelicera base to rear 1/4, then recurving somewhat to rear margin, with a short transverse mark lateral to each rear end; first submedian line from chelicera base, subparallel to admedian to just beyond 1/2 where it recurves part way to admedian; second submedian line from near start of first, subparallel to first and recurving to first at about 1/2. Sides of shield beyond submedians entirely set with granules and short more or less longitudinal dashes; partial microtuberculate rings below dorsal tubercles. Dorsal tubercles 20μ apart; dorsal setae 42μ long, diverging. Forelegs 27μ long; tibia 6μ long, with 7μ seta at 1/3; tarsus 6.5μ long; claw 7μ long, curved; featherclaw 5-rayed. Hindlegs 25μ long, tibia 4.5μ long, tarsus 6.5μ long, claw 8.5μ long. Coxae ornamented with rows of rather large granules; anterior coxae broadly connate; first setiferous tubercles slightly farther apart than second tubercles and even with anterior coxal junction; second setiferous tubercles well ahead of transverse line through third tubercles. Abdomen with 65-70 rings, completely microtuberculate, the microtubercles not pointed, somewhat elongate above and touching ring margins, below more bead-like and ahead of margins. Lateral seta 31μ long, on about ring 9; first ventral seta 53μ long, on about ring 21; second ventral 16μ long, on ring 36; third ventral 21μ long, on ring 8 from rear. Accessory seta 6μ long. Female genitalia 21μ wide, 13μ long; coverflap with 12-14 strong longitudinal ribs; seta 13μ long, set on broad tubercles.

Type locality: The Basin, Big Bend National Park, Texas

Collected: October 31, 1960 by the writer

Host: Chrysactinia mexicana (Compositae) damianita

Relation to host: the mites occur around buds

Type material: dry plant parts with dry mites
a type slide
6 paratype slides

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Symbols on plates -

AP1 - interior female genitalia
D - dorsal view of mite
DA - dorsal view of anterior section
ES - lateral surface structure
EV - ventral view of surface
F - featherclaw (empodium)
GF1 - female genitalia and coxae
L1 - anterior leg
R - rostrum
S - side view of mite
SA - side view of anterior section

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