

ERIOPHYID STUDIES B-10

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California Department of Agriculture

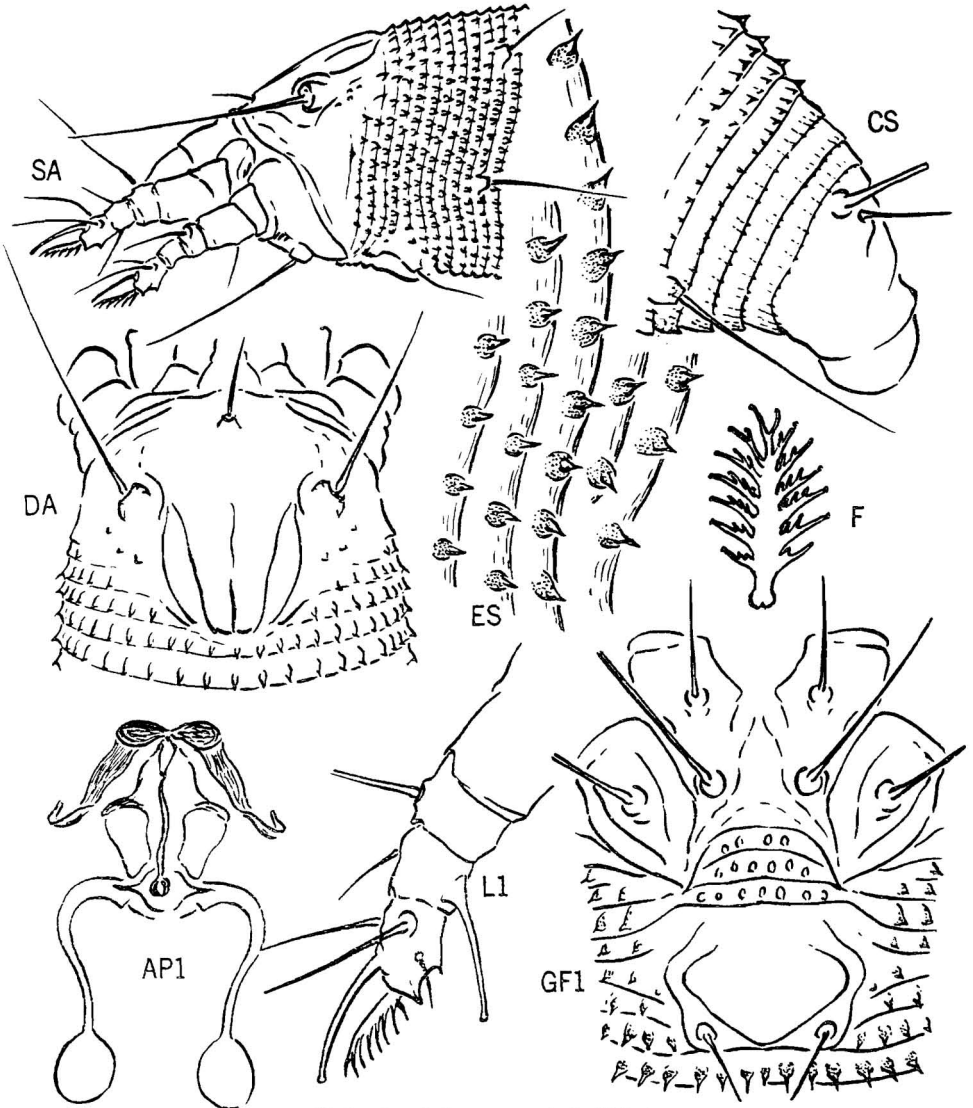


Plate 1 - *Trisetacus pini* (Nal.)

Trisetacus pini (Nalepa)

Plate 1

Nalepa: Ab. Wiss. math-nat., Wien, Vol. 96, p.133, 1887, as Phytoptus

Type host: Pinus sylvestris L.

Relation to host: the mites deform the twigs by forming galls

Keifer: Bul. Cal. Dept. Agr. 42:32, 1952, as the genotype of Trisetacus

With the receipt of a gall formed by this mite, from syvestris, collected by Dr. H. Franke-Grossmann, near Luneberg, Follingbostel, Germany, March 3, 1963, it became possible for me to properly assess the structures of pini. The mite proves to be not at all what I had visualized, and indicates that mites formerly dubbed pini here in California are not that species. So far no twig galls have been found on pines in California, or for that matter in North America. Perhaps a thorough investigation would disclose no such pine injury occurs on this continent. With the exception of a mite from fir in eastern Canada, that is most doubtfully pini, no mite with the pini structures has been received from North America.

Pini is characterized by strongly spinulate microtubercles on the body rings, by a rather prominent median anterior shield seta, by a median shield line weak anteriorly but strong at rear, and by a 7-rayed feather-claw.

Grossmanni, on spruce, also has microtubercles similar to pini, but the featherclaws are more delicate, are 8-rayed, and the median shield line consists only of a short, strong dash at the rear.

Note that all of these mites with a single median anterior shield seta also have the very distinctive long-stalked spermathecae. The combination of these two characters indicates definite relationship. Species with these unusual features are now listed in Trisetacus, in Nalepella, and in Setoptus. Perhaps Roivainen's subfamily Nalepellinae should receive all of them.

It is becoming increasingly difficult to separate Setoptus from Nalepella. These genera were erected in the Bul. Cal. Dept. Agr. vol.33, 1944. Setoptus is established on page 19, Nalepella on page 21.

Trisetacus ehmanni, new species

Plate 2

This is the yellow pine mite common in California, and elsewhere in North America. It differs from pinu by having a fairly complete median shield line, by having elliptical microtubercles not at all spinulate, and by having a rather minute median anterior shield seta.

The species is dedicated to Carl F. Ehmann. He has been dead for more than fifteen years, but prior to his passing he had worked for the California Department of Agriculture Bureau of Nursery Service. During the time he was in the Department he extensively translated Nalepa's works for me and this is a belated acknowledgement of my debt to him.

Female 215_u-300_u long, 40_u-50_u thick; elongate wormlike in shape; color light yellowish-white. Rostrum 26_u long, curving down; antapical seta 6_u-10_u long. Shield 33_u long, 40_u-43_u wide; median line distinct from anterior median seta to within rear shield margin, stronger at rear; admedian lines complete, diverging backward from each side of anterior seta to area between dorsal tubercles, at this point meeting an inwardly diagonal line from in front of dorsal tubercles and proceeding caudad to shield margin, meeting a V-shaped central cross line; first submedian line curving out from between dorsal tubercles and recurving to rear shield margin just outside end of median line; a slight second submedian line just outside rear half of first. Shield with lateral granules and with some granules in two lines behind dorsal tubercles. Anterior median shield seta 6_u to 10_u long; dorsal tubercles 25_u apart, about at 1/2 point on shield; dorsal setae 36_u long, diverging anteriorly. Foreleg 27_u long; tibia 4.5_u long, the seta 4.5_u long, from 1/2 and the lateral spur 7_u-8_u long; tarsus 5.5_u-6_u long; claw 10.5_u long, tapering, slight knob; featherclaw 7-rayed. Hindlegs 23_u-24_u long, tibia 3_u-4_u long, tarsus 5_u-5.5_u long, claw 10_u-11_u long. Coxae with little ornamentation; anterior coxae well separated by a low indistinct ridge; first setiferous coxal tubercles farther apart than second and behind a line across anterior coxal approximation; second and third setiferous coxal tubercles in a transverse line. Abdomen with 65-75 rings, completely microtuberculate the microtubercles elliptical in outline and rounded outwardly; microtubercles ahead of ring margins. Abdominal rings at rear with beadlike microtubercles on ring margins and each preceded by a longitudinal line. Subdorsal abdominal seta on ring 7 to 10 behind shield, 6.5_u long; lateral seta 21_u-23_u long, on ring 8 to 10; first ventral seta 14_u-15_u long, on ring 18 to 21; second ventral seta 12_u-14_u long, on ring 31 to 37; third ventral seta on ring 5 from rear, 8_u to 9_u long. Accessory seta about 9_u long. Female genitalia 23_u wide, 17_u long; coverflap obtusely angled, the edges nearly straight, ribs lacking; lateral anterior angles of internal apodeme with at most but a slight projection; genital seta 13_u long.

Type locality: Northeast of Smith Flat, Placerville, Cal.

Collected: July 22, 1963 by the writer.

Type host: Pinus ponderosa Dougl., yellow pine

Relation to host: the mites live in the sheaths at the bases of the needles. No damage was noted on the host trees.

Type material: a type slide
five paratype slides
dry needles with mites

This mite is widespread, but no attempt will be made here to cover its distribution. In addition to the above host the following species of pines harbor these mites in California: Pinus torreyana Parry, Torrey pine; Pinus jeffreyi Grev. Jeffrey pine; Pinus radiata D. Don., Monterey pine; Pinus attenuata Lem., knobcone pine; Pinus sabiniana Dougl., digger pine. This host list will probably be considerably expanded.

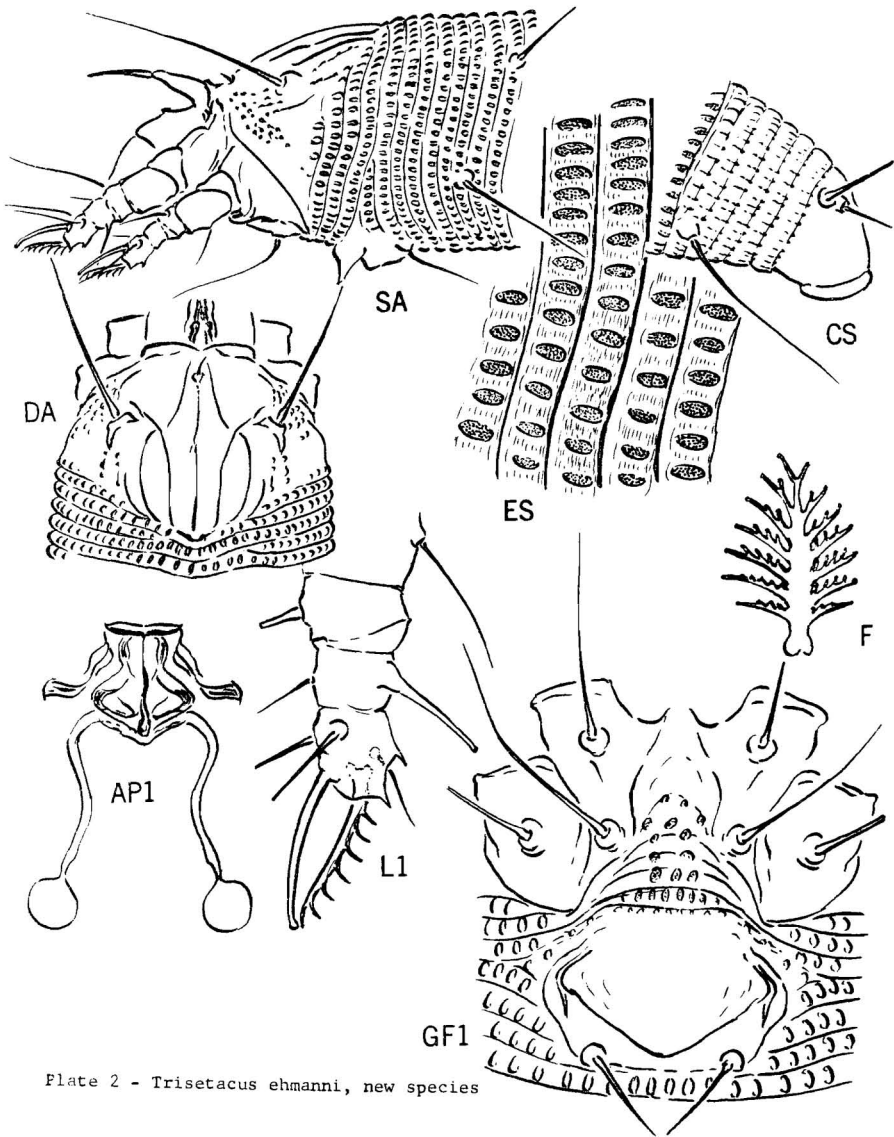


Plate 2 - *Trisetacus ehmanni*, new species

Trisetacus alborum, new species

Plate 3

This Trisetacus inhabitant of white pine needle sheaths differs from the yellow pine type, ehmanni, by having a median shield line present only as a short heavy line at rear shield margin, by a slightly longer median anterior shield seta on the average, by more elongate and narrower microtubercles, and by the absence of microtubercles on the dorsum of the last three or four abdominal rings. The needle sheaths on white pines frequently shatter early in the season reducing the living space of sheath mites. The host trees of the type series of mites described here held their sheaths better than the average white pine examined by the writer.

Female 310_u-410_u long, 60_u thick; elongate wormlike; color light yellowish white. Rostrum 30_u long, curved down. Shield 37_u long, 55_u wide; median line present as a short heavy dash at rear shield margin; admedian lines running diagonally inward past dorsal tubercles, then proceeding in weak curves to rear margin on each side of median dash; first submedian line from inner side of dorsal tubercles, running back and gently curving toward rear end of admedian; second submedian just outside of first, projecting back to rear shield margin and recurving to rear end of first submedian. Shield with about two partial rings laterally at rear margin. Anterior median seta 10_u long; dorsal tubercles at about 1/2 on shield, 32_u apart; dorsal setae 50_u long, diverging anteriorly. Forelegs 30_u long; tibia 4.5_u long, the seta 4.5_u long at 1/2, the lateral spur 8_u long; tarsus 6_u long; claw 11_u long, tapering, slightly knobbed; feather-claw 7-rayed. Hindlegs 26_u long, tibia 4_u long, tarsus 5.5_u long, claw 10.5_u long. Coxae without ornamentation; anterior coxae well separated; first setiferous coxal tubercles farther apart than second and a little ahead of anterior coxal approximation; second and third setiferous coxal tubercles in a transverse line. Abdomen with 65-70 rings, completely microtuberculate except for dorsum of last 3 or 4 rings; microtubercles elongate-elliptical, ahead of ring margins, rounded outwardly. Subdorsal abdominal seta 10_u long, on about ring 7 behind shield; lateral seta 33_u long, on about ring 6; first ventral seta 33_u long, on about ring 17; second ventral 20_u long, on about ring 34; third ventral 30_u long, on ring 4 from rear. Accessory seta 10_u long. Female genitalia 23_u wide, 11_u long; coverflap smooth, broadly obtuse on rear margin the sides of rear margin gently convex in outline; genital seta 16_u long. Internal genital apodeme with sharp projections at anterior lateral angles.

Type locality: Sulfur Works Camp Ground, Lassen National Park, Cal.

Collected: August 17, 1952 by the writer

Host: Pinus monticola Dougl. western white pine

Relation to host: the mites live in the needle sheaths

Type material: a type slide

five paratype slides

dry needles with mites from which the slides were made

Alborum is undoubtedly widespread but no attempt will be made here to speculate on its range. It has not been found on sugar pine as the needle sheaths on that white pine shatter very early and discourage the development of any such mite.

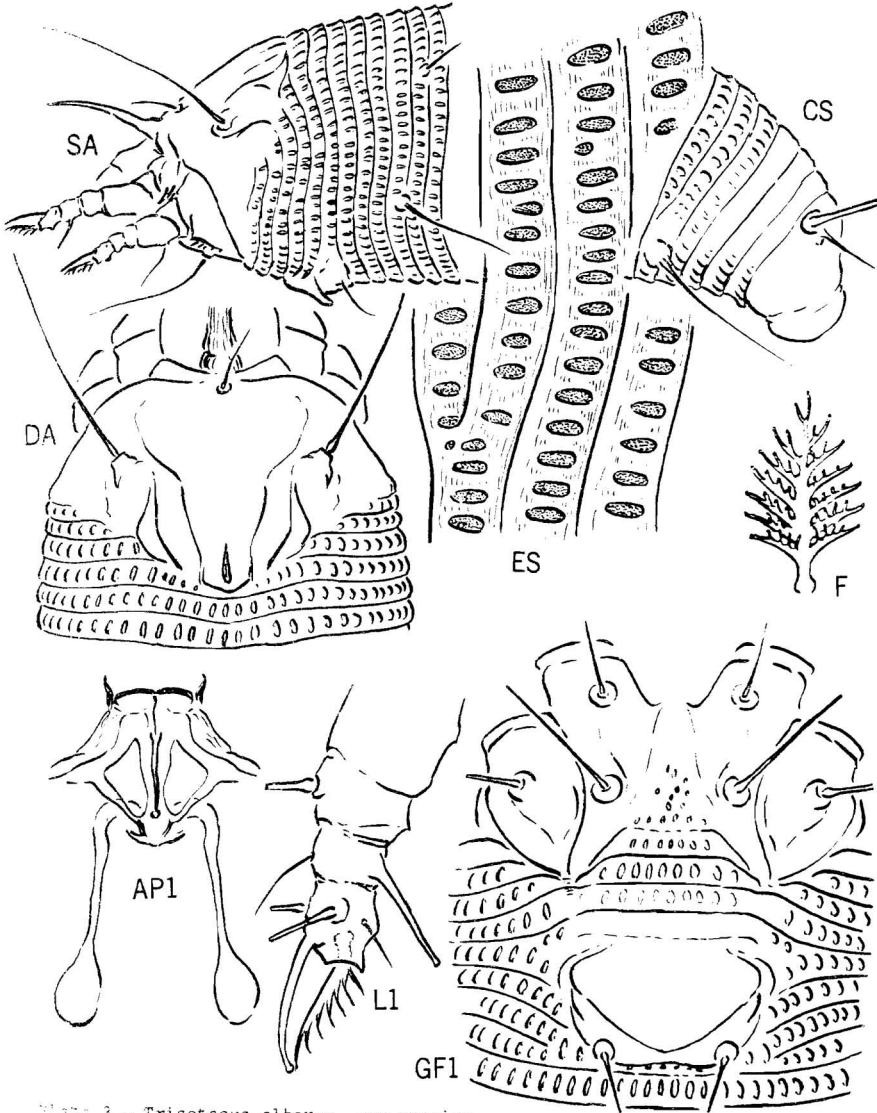


Plate 3 - *Trisetacus alborum*, new species

Aceria dorestei, new species

Plate 4

Dorestei is characterized by a smooth shield with a short line at the rear central margin, by the elongate hind claw, and by microtubercles that are shorter below but become more elongate above and slightly acuminate. I am pleased to name this mite for the collector who has sent me a number of Eriophyids.

Female 135 μ -175 μ long, 30 μ thick, wormlike in shape, color light yellowish-white. Rostrum 15 μ long, gently curved down; antapical seta 4.5 μ long. Shield 21 μ long, 24 μ wide; entirely smooth but for a short line at center rear and an ocellus-like lobe laterally. Dorsal tubercles 13 μ apart; dorsal setae 15 μ long, diverging to rear. Forelegs 25 μ long; tibia 5.5 μ long, with 4 μ set. from 1/4; tarsus 6 μ long; claw 6.5 μ long; featherclaw 4-rayed. Hindlegs 21 μ long, tibia 5 μ long, tarsus 5.5 μ long, claw 10.5 μ long, slender, tapering. Coxae ornamented with granules, those on anterior coxae mostly elongate; anterior coxae broadly connate; first coxal setae short, arising from tubercles about as far from each other as second tubercles and opposite anterior coxal approximation; second coxal tubercles well ahead of transverse line through third coxal tubercles. Abdomen with 65 to 70 rings, entirely microtuberculate except for last few rings where these microtubercles are weaker above; microtubercles rounder below and well ahead of ring margin, more elongate laterally and above, approaching ring margins and tending to be acuminate dorsally. Lateral seta 12 μ long, on about ring 7; first ventral seta 37 μ long, on about ring 20; second seta 6 μ long, on about ring 36; third ventral seta 10.5 μ long, on ring 5 from rear. Accessory seta 6 μ long. Female genitalia 13 μ wide, 9 μ long; coverflap with 8 to 10 longitudinal ridges; seta 5 μ long. Microtubercles directly to rear of genitalia pointed.

Type locality: Maracay, Aragua, Venezuela

Collected: April 23, 1962 by Ernesto Doreste

Type host: Bravasia integerrima (Spreng.) (Acanthaceae, Acanthioidea contortae.) Common name naranjillo.

Relation to host: the mites form irregular and disfiguring leaf pustules.

Type material: a type slide
 nine paratype slides
 dry leaves with pustules and mites from which the slide specimens were taken.

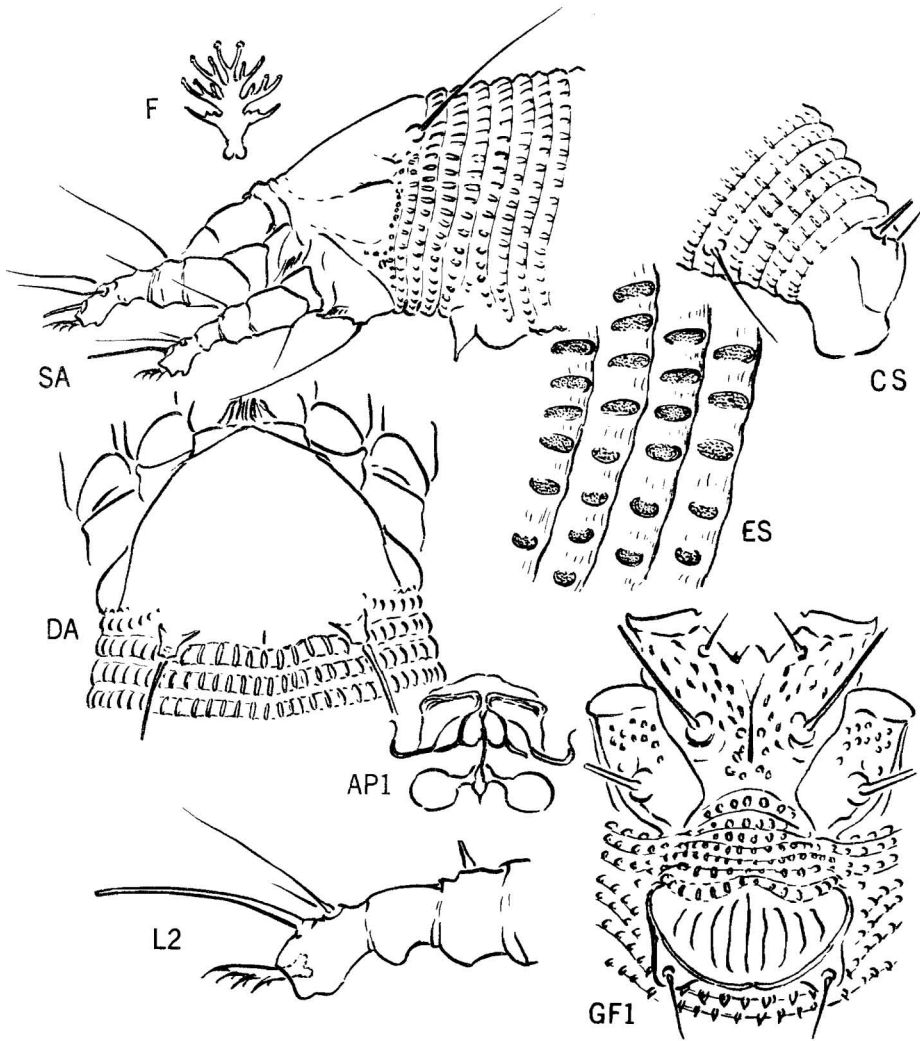


Plate 4 - *Aceria dorestei*, new species

Aceria goldsmidii, new species

Plate 5

The chief features distinguishing this mite are the median and admedian shield lines, broken at about the rear fourth, and the elongate ridges on the coxae. This mite is named for its collector, J. M. Goldsmid, who has sent me a number of mites including two more described in this paper.

Female 150 μ -195 μ long, 35 μ -40 μ thick; wormlike in shape; color a light yellowish-white. Rostrum 20 μ long, projecting forward and down; antapical seta 3 μ long. Shield 21 μ long, 30 μ wide; shield design somewhat irregular; median line present on rear half of shield, broken at about 3/4 and ending at rear margin; admedian lines close, curving outward around median, broken at 3/4, the anterior end of rear section starting farther laterally than previous part and describing an arc concave laterally; ending at rear margin. First submedian lines roughly paralleling admedians but ending at about 3/4 along with second and third submedians ahead of dorsal tubercles. Shield with a band of granules laterally. Dorsal tubercles 16 μ apart; dorsal setae 24 μ long, diverging to rear. Forelegs 23- long; tibia 4.5 μ long, the 4.5 μ seta from 1/2; tarsus 5 μ long; claw 6.5 μ long; featherclaw 5-rayed. Hindlegs 22 μ long, tibia 4.5 μ long, tarsus 5 μ long, claw 8.5 μ long. Coxae ornamented with elongate ridges; anterior coxae broadly connate centrally, a parallel line on each side of junction; first coxal setiferous tubercles farther apart than second and behind anterior approximation of coxae; second setiferous tubercles somewhat ahead of transverse line through third tubercles. Abdomen with 55 to 65 rings, entirely microtuberculate except for suppressed microtubercles on caudal dorsum. Microtubercles oval and ahead of ring margin. Lateral seta 18 μ long, on about ring 6; first ventral seta 29 μ long, on about ring 18; second seta 5.5 μ long, on about ring 30; third ventral seta 12 μ long, on ring 5 from rear. Accessory seta 3 μ long. Female genitalia 17 μ wide, 9 μ long; coverflap with about 12 furrows; seta 11 μ long.

Type locality: Salisbury district, Southern Rhodesia

Collected: December 6, 1962 by J. M. Goldsmid

Type host: Brachystegia spiciformis Benth., the Msasa tree
(Leguminosae, Caesalpinioideae, Amherstiae)

Relation to host: the mites form brown erineum pockets on the undersides of the leaves.

Type material: a type slide
seven paratype slides
dry leaves with erineum pockets

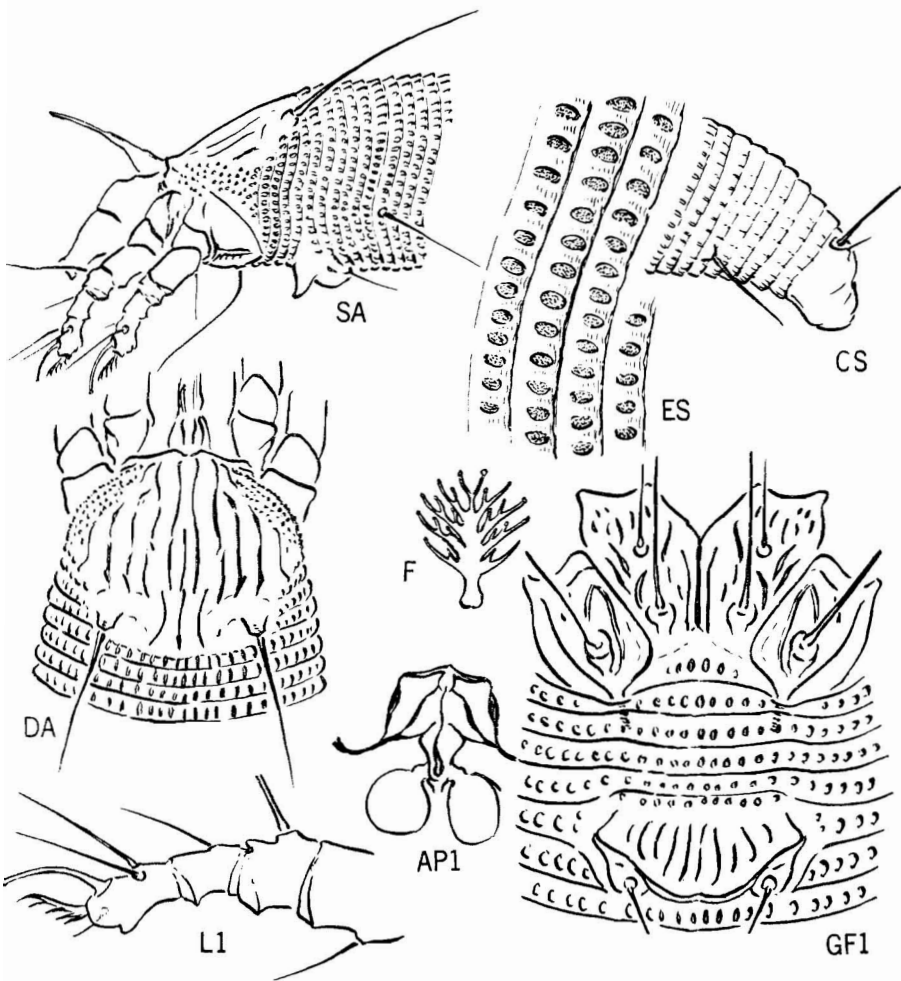


Plate 5 - *Aceria goldsmidii*, new species

Aculus wistarifoliae, new species

Plate 6

This species, by lacking points on the microtubercles is generally similar to *ambrosiae* (K.), but it differs from that species by the thicker shield lobe over the rostrum, with a furrow across the apex, and by having faintly elongate microtubercles on the tergites at least laterally.

Female 155_μ-180_μ long, 50_μ wide, 45_μ thick; fusiform; color probably yellowish-white. Rostrum 26_μ long, projecting down; antapical seta 6_μ long. Shield 45_μ long, 46_μ wide; somewhat acuminate lobe overhanging rostrum, with a furrow across its apex just under the edge. Shield design very faint centrally; laterally with curved lines forming 4 or 5 cells. Dorsal tubercles 26_μ apart; dorsal setae 20_μ long, diverging to rear. Forelegs 33_μ long; tibia 9.5_μ long, with 5_μ seta from 1/3; tarsus 6.5_μ long; claw 6.5_μ long, apically enlarged slightly; featherclaw 5-rayed. Hindlegs 32_μ long, tibia 9.5_μ long, tarsus 6.5_μ long, claw 7_μ long. Coxae with faint curved lines; anterior coxae moderately connate centrally; first setiferous coxal tubercles slightly farther apart than second and opposite coxal anterior approximation; second tubercles somewhat ahead of transverse line through third tubercles. Abdomen with about 28 tergites and 50-55 sternites; elongate but faint microtubercles dorsally; sternites with small bead-like microtubercles usually slightly ahead of ring margin. Lateral seta 22_μ long, on about sternite 7; first ventral seta 40_μ long, on about sternite 18; second ventral 18_μ long, on about sternite 31; third ventral 20_μ long, on sternite 4 from rear. Accessory seta 3_μ long. Female genitalia 20_μ wide, 13_μ long; coverflap with 11-12 longitudinal ribs; seta 36_μ long.

Male 144_μ long.

Type locality: Gainesville, Florida

Collected: October 23, 1962, by H. A. Denmark

Host: *Wistaria*

Relation to host: the mites are leaf vagrants producing rusting

Type material: a type slide
two paratype slides
mites in sugar-water-alcohol solution

Note on the life history of the privet rust mite, *Aculus ligustri* (K.): This mite becomes active in the spring shortly after beginning of leaf development. It causes noticeable rusting and some leaf curling within the month of its appearance. Later, in mid June and in July, no living mites may be found on leaves. Investigation of privet shrubs during July discloses numerous aestivating females under old bud scales at the base of the current season's growth. These dormant females show no structural modifications from active spring forms.

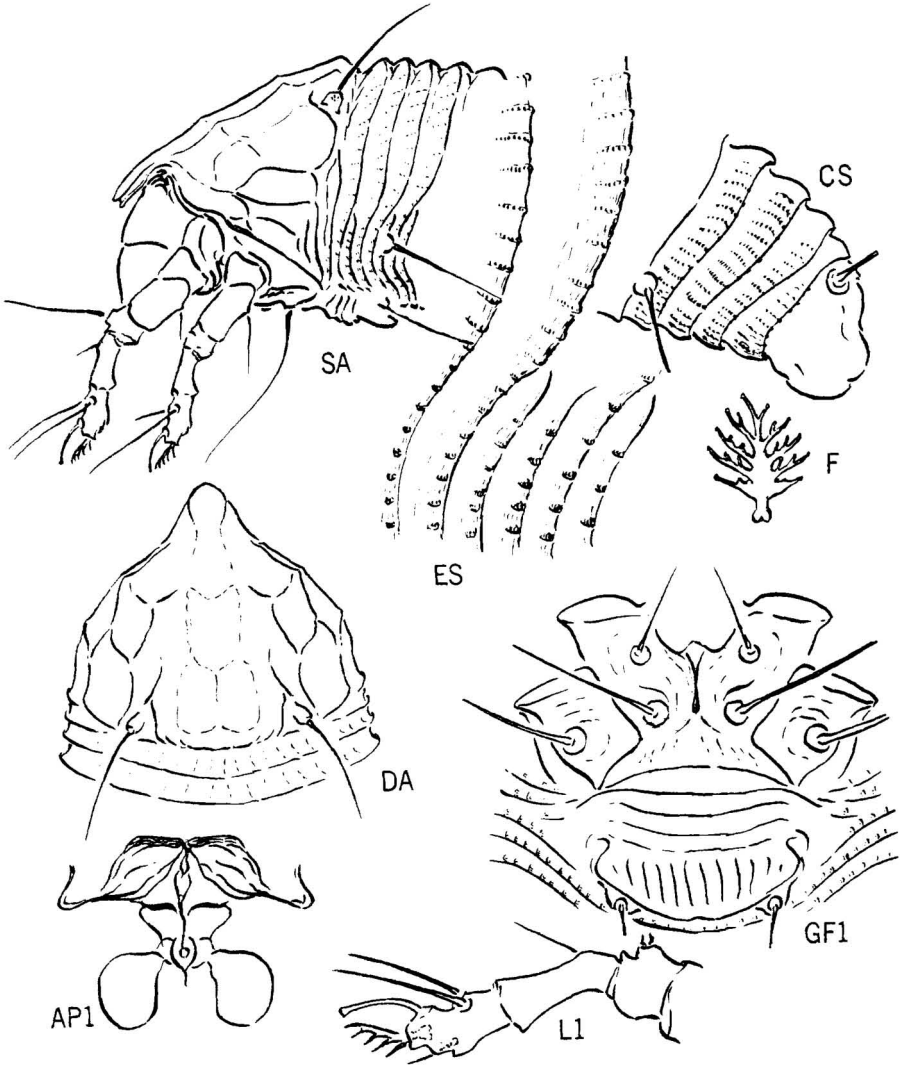


Plate 6 - *Aculus wistarifoliae*, new species

Criotacus, new genus

The genotype of this genus might go into Aculus except that the dorsal setae are slanted up and forward in distinction to the backward direction of these setae on typical Aculus species; and the abdominal rings are broad and complete entities, not breaking into two or more ventral rings laterally. Otherwise the characters are essentially those of Aculus. The name is a combination of kriptos, "meaning made of rings," and acus as a contraction of Acarus.

Genotype: Criotacus brachystegiae, new species

Criotacus brachystegiae, new species

Plate 7

Female 135_u-145_u long, 35_u-40_u thick; body elongate and cylindrical in cross section, tapering; color light yellowish-white. Rostrum 23_u long, projecting down; antapical seta 4.5_u long. Shield 32_u long, 33_u wide; the anterior lobe over rostrum moderately acute; shield design obsolete, there being a slight furrow from near sides of base of anterior lobe, diverging back to dorsal tubercles. Dorsal tubercles 21_u apart, essentially on rear margin but inclined forward; dorsal setae 23_u long, diverging forward and up. Forelegs 29_u long; tibia 6.5_u long, seta 4.5_u long from 1/4; tarsus 7_u long; claw 8_u long; featherclaw 5-rayed. Hindlegs 27_u long, tibia 5_u long, tarsus 6.5_u long, claw 7.5_u long. Coxae smooth, the anterior coxae broadly connate centrally; first setiferous coxal tubercles farther apart than second and opposite anterior approximation of coxae; second tubercles but little ahead of transverse line through third setiferous coxal tubercles. Abdominal rings broad, about 27 to 30 in number, almost no doubling laterally; microtubercles reduced to small points along rear ring margin, a lateral prominent point on part of rings. Lateral seta 8.5_u long, on ring 4; first ventral seta 32_u long, on ring 9; second ventral 14_u long, on ring 16; second ventral 14_u long, on ring 5 from rear. Accessory seta absent. Female genitalia 16_u wide, 10_u long; coverflap smooth; genital seta 14_u long.

Type locality: Salisbury district, Southern Rhodesia

Collected: December 6, 1962 by J. M. Goldsmid

Type host: Brachystegia spiciformis Benth. (Leguminosae) Msasa tree

Relation to host: the mites are guests in the brown erineum patches formed by Aceria goldsmidii on the undersides of the leaves

Type material: a type slide
five paratype slides
dry leaves with brown erineum patches

Note: it has not been possible to separate all of the specimens of the genotype from the gall former, so specimens of both occur on part of the slides.

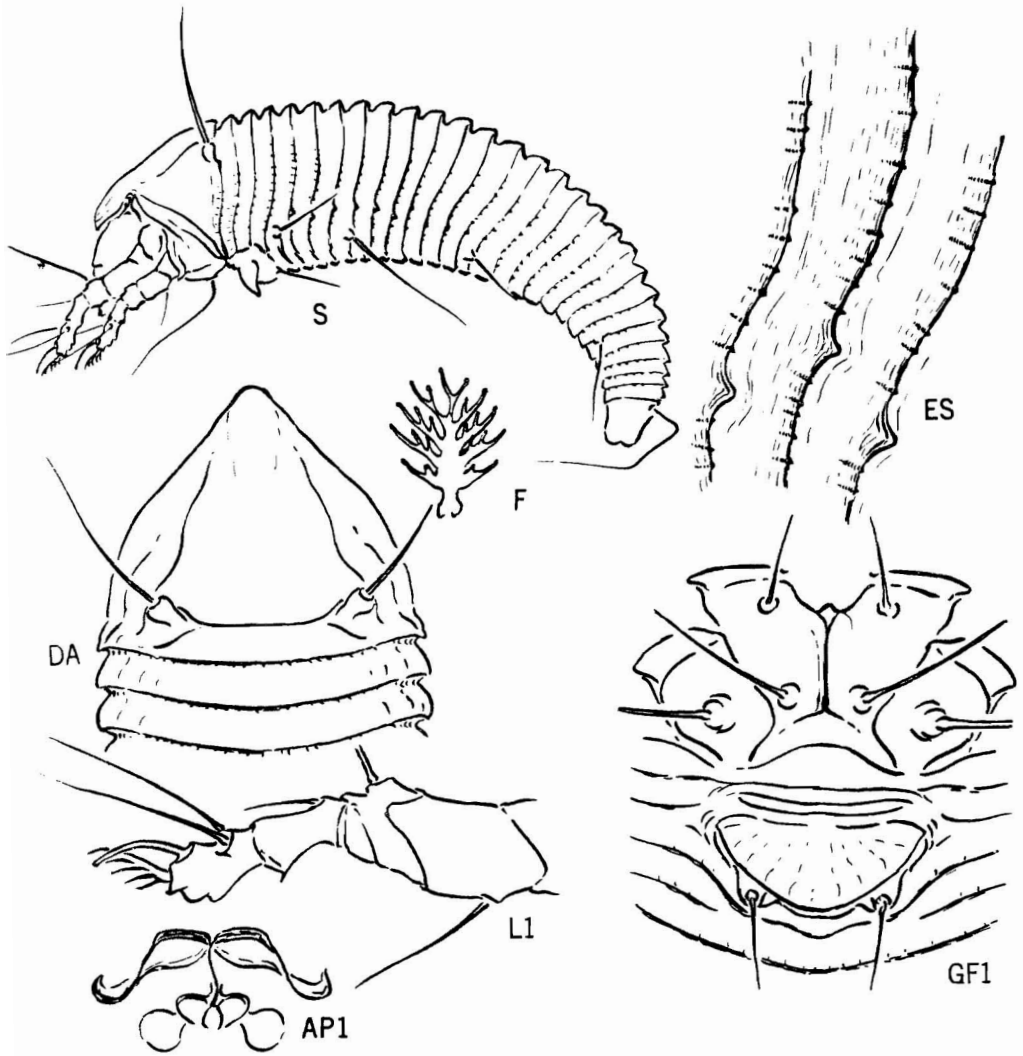


Plate 7 - *Criotacus brachystegiae*, new species

Tegolophus pfaffiae, new species

Plate 8

Pfaffiae is distinguished by the elongate dorsal microtubercles and the downcurved anterior lobe. This lobe has transverse lines on the underside.

Female 216_μ-235_μ long, 60_μ thick; fusiform; color light yellowish-white. Rostrum 26_μ long, projecting down; antapical seta 10_μ long. Shield 46_μ long, 56_μ wide; anterior lobe acuminate in dorsal view, downcurved in front of rostrum, the underside with transverse lines. Shield design obsolete, slight granulations above lateral margin, the margin granulate, and with rows of granulations below. Dorsal tubercles 34_μ apart; dorsal setae 13_μ long, strongly diverging. Forelegs 35_μ long; tibia 8.5_μ long, with 5_μ seta at 1/4; tarsus 7_μ long; claw 8_μ long, slightly knobbed; featherclaw 5-rayed. Hindlegs 33_μ long, tibia 6.5_μ long, tarsus 6.5_μ long, claw 8_μ long. Coxae ornamented with faint lines forming lobe-like patterns within apex of forecoxae; anterior coxae strongly diverging, moderately connate centrally; first setiferous coxal tubercles slightly farther apart than second and slightly ahead of anterior coxal approximation; second tubercles somewhat ahead of transverse line drawn through third setiferous coxal tubercles. Abdomen with about 27 tergites and 76 sternites, completely microtuberculate, those above elongate, those below beadlike, and all touching or projecting over ring margins. Lateral seta 13_μ long, on about sternite 9; first ventral seta 60_μ long, on about sternite 29; second ventral 20_μ long, on about sternite 51; third ventral 26_μ long, on sternite 6 from rear. Accessory seta 3.5_μ long. Female genitalia 23_μ wide, 16_μ long; coverflap with 13-14 longitudinal ribs; seta 14_μ long.

Type locality: Boquira, Campinas, Brazil

Collected: August 27, 1961 by Dr. A. S. Costa

Host: Pfaffia stenophylla (Amarantaceae)

Relation to host: the mites are undersurface vagrants in the leaf hairs

Type material: a type slide
8 paratype slides
dry leaves with mites from which the slides were made

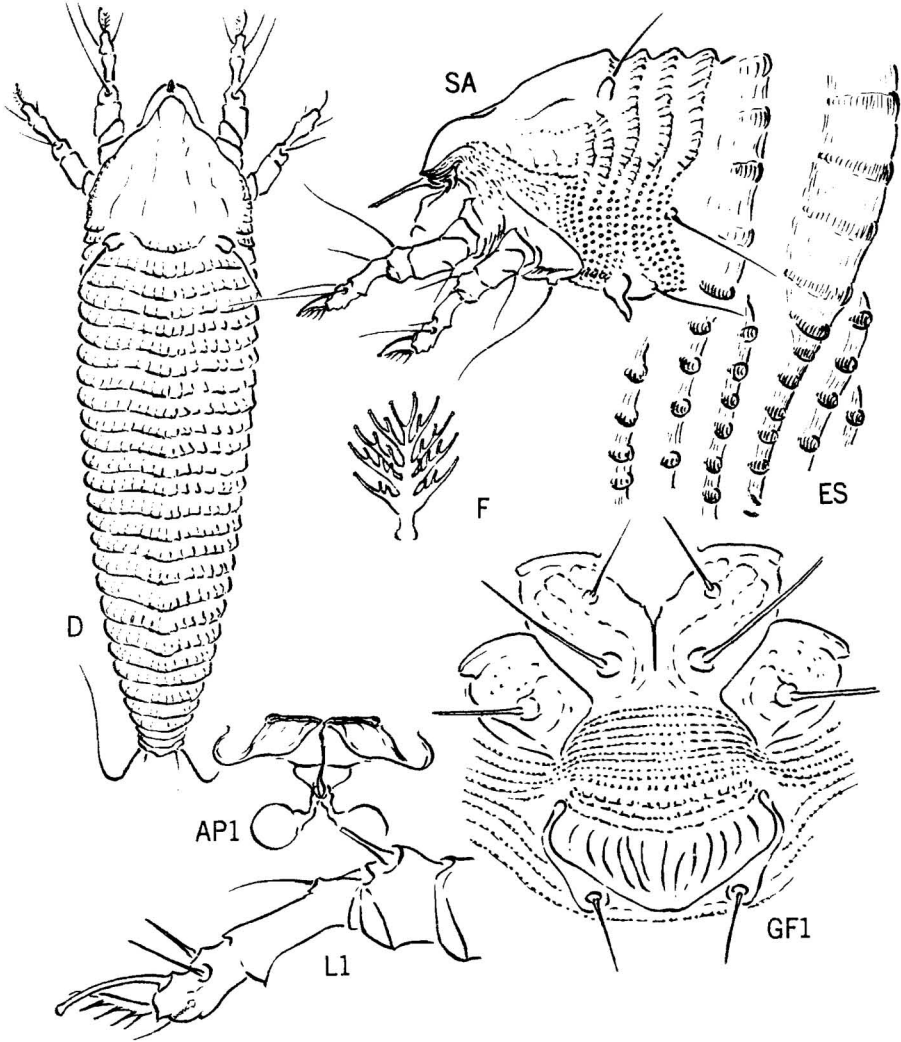


Plate 8 - *Tegolophus pfaiffiae*, new species

Tetra rhodesiae, new species

Plate 9

The direction of the dorsal setae is not typical for the genus as exemplified by previous species put into it. Otherwise, *rhodesiae* is not incompatible with species heretofore assigned. An additional characteristic of this new species is the short middorsal ridge at the anterior end of the abdomen.

Female 140_μ-155_μ long, 45_μ wide, 40_μ thick; fusiform; color probably light yellowish-white. Rostrum 23_μ long, directed down; antapical rostral seta 3.5_μ long. Shield 42_μ long, 40_μ wide; anterior lobe somewhat produced, bluntly rounded, directed down in front of rostrum, acuminate centrally to rear where it overhangs one or two tergites. Shield design faint or obsolete; admedian lines slightly indicated at sides of anterior lobe; slight furrows running back toward dorsal tubercles. Dorsal tubercles 21_μ apart, on rear margin but projecting up; dorsal setae 20_μ long, projecting up, outwardly and a little forward. Forelegs 25_μ long; tibia 5_μ long, with 5_μ seta from 1/2; tarsus 5_μ long; claw 5.5_μ long; featherclaw 5-rayed. Hind-legs 19_μ long, tibia 4_μ long, tarsus 4.5_μ long, claw 6_μ long. Coxae unornamented; anterior coxae strongly diverging, connate centrally for moderate distance. First setiferous coxal tubercles slightly farther apart than second and a little ahead of anterior coxal approximation; second tubercles well ahead of transverse line drawn through third setiferous coxal tubercles. Abdomen with about 27 tergites and about 50 sternites; micro-tubercles present only on sternites, slightly elongate and projecting over rear margin, apically rounded. Abdomen dorsally with broad longitudinal furrow, ending just past third ventral seta area, the anterior part of this trough with a short central ridge extending back about 10 tergites. Last section of abdomen abruptly directed down. Lateral seta 12_μ long, on about sternite 6; first ventral seta 50_μ long, on about sternite 17; second ventral 8.5_μ long, on about sternite 29; third ventral 13_μ long, on ring 5 from rear. Accessory seta 2.5_μ long. Female genitalia 20_μ wide, 15_μ long; coverflap with 10-12 longitudinal ribs; seta 31_μ long.

Male 132_μ long.

Type locality: Umatili district, Southern Rhodesia

Collected: December 1962, by J. M. Goldsmid

Host: Brachystegis spiciformis Benth. (Leguminosae) the Msasa tree

Relation to host: the mites inhabit the flower heads

Type material: a type slide
seven paratype slides
dry material with mites

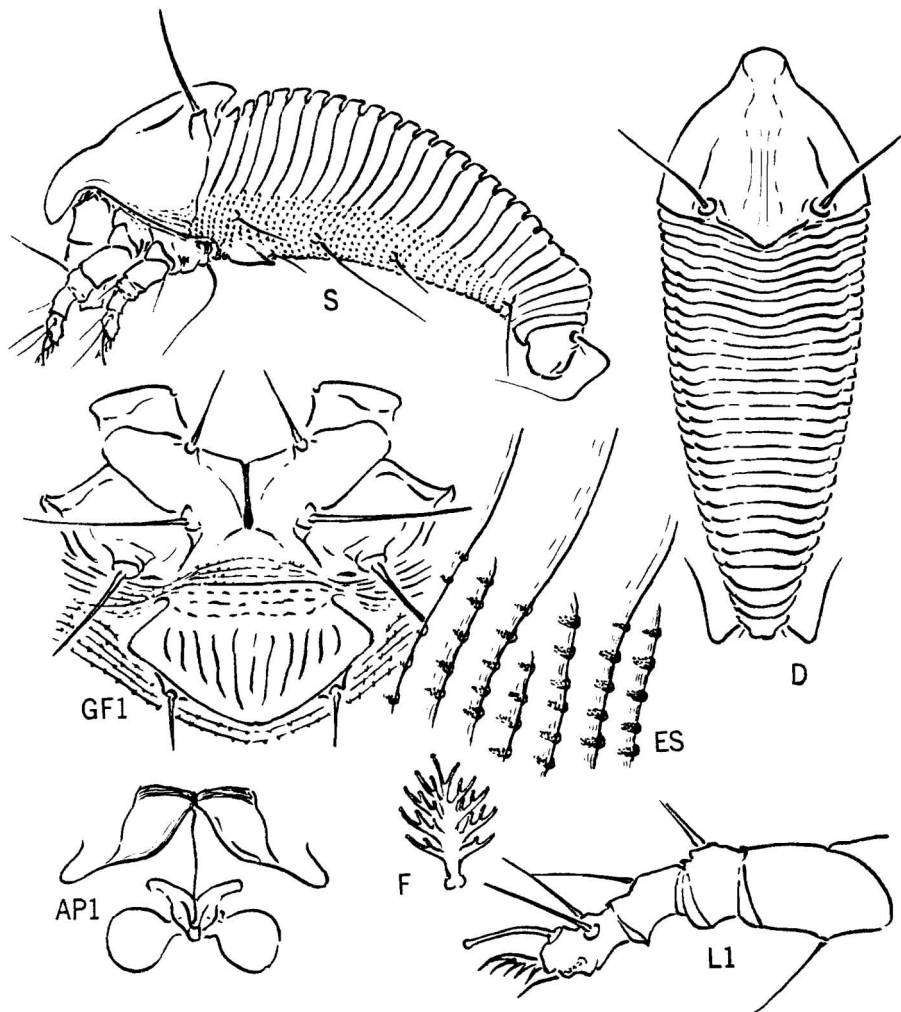


Plate 9 - *Tetra rhodesiae*, new species

Rhynacus tampae, new species

Plate 10

A fairly strong series of longitudinal ribs on the genital coverflap is one of the more definitive characters of *tampae*. This structure is also shared by *krausii* (see B-5). From *krausii* the new species differs by more granulations on the forecoxae, by lacking a foretibial seta, and by a less complete median line on the shield.

Female 170_μ-215_μ long, 85_μ thick; robust-fusiform; color probably light yellowish-white. Rostrum 53_μ long, projecting diagonally down; subapical sensillum very short. Shield 33_μ long, 65_μ wide, a very slight lobe over rostrum base. Shield design an involved network; median line present on anterior half and just before rear margin, breaking from 1/2 to 3/4; ad-median lines complete, strongly sinuate, meeting cross lines at just before 1/2 and just ahead of rear margin; submedian area inside marginal cells crossed by about two faint lines; with cells described by curved lines both along lateral shield margin and rear margin. Dorsal tubercles apparently not indicated and dorsal setae missing. Forelegs 36_μ long; tibia 6_μ long, lacking seta; tarsus 10_μ long; claw 6.5_μ long, straight, strongly knobbed; featherclaw with about 9 rays on a side. Hindlegs 31_μ long, tibia 4.5_μ long, tarsus 8.5_μ long, claw 6.5_μ long. Anterior coxae well separated by a prominent ridge, these coxae well granulated anteriorly; second setiferous coxal tubercles well ahead of transverse line through third tubercles. Abdomen with about 53 tergites and 75-80 sternites, completely microtuberculate, these structures small and beadlike, resting on margin above, and a little elongate, below ahead of margin. Lateral seta missing; first ventral seta 80_μ long, on about sternite 27; second ventral 35_μ long, on about sternite 44; third ventral seta 35_μ long, on sternite 11 from rear. Accessory seta absent. Female genitalia 26_μ wide, 25_μ long; coverflap with about 8 rather short longitudinal ribs and basal design of granulations and short lines; seta 9_μ long.

Type locality: Tampa, Florida

Collected: February 20, 1936 by C. E. Bingaman

Host: Rhododendron

Relation to host: the mites are leaf vagrants

Type material: type slide
three paratype slides
mites in sugar-water-alcohol solution

Symbols on plates

AP1 - interior female genitalia
CS - side view of cauda
D - dorsal view of mite
DA - anterior dorsum of mite
ES - side skin structures
F - featherclaw (empodium)
GF1 - coxae and female genitalia
L1 - foreleg
L2 - second leg
S - side view of mite
SA - side view of anterior
section of mite

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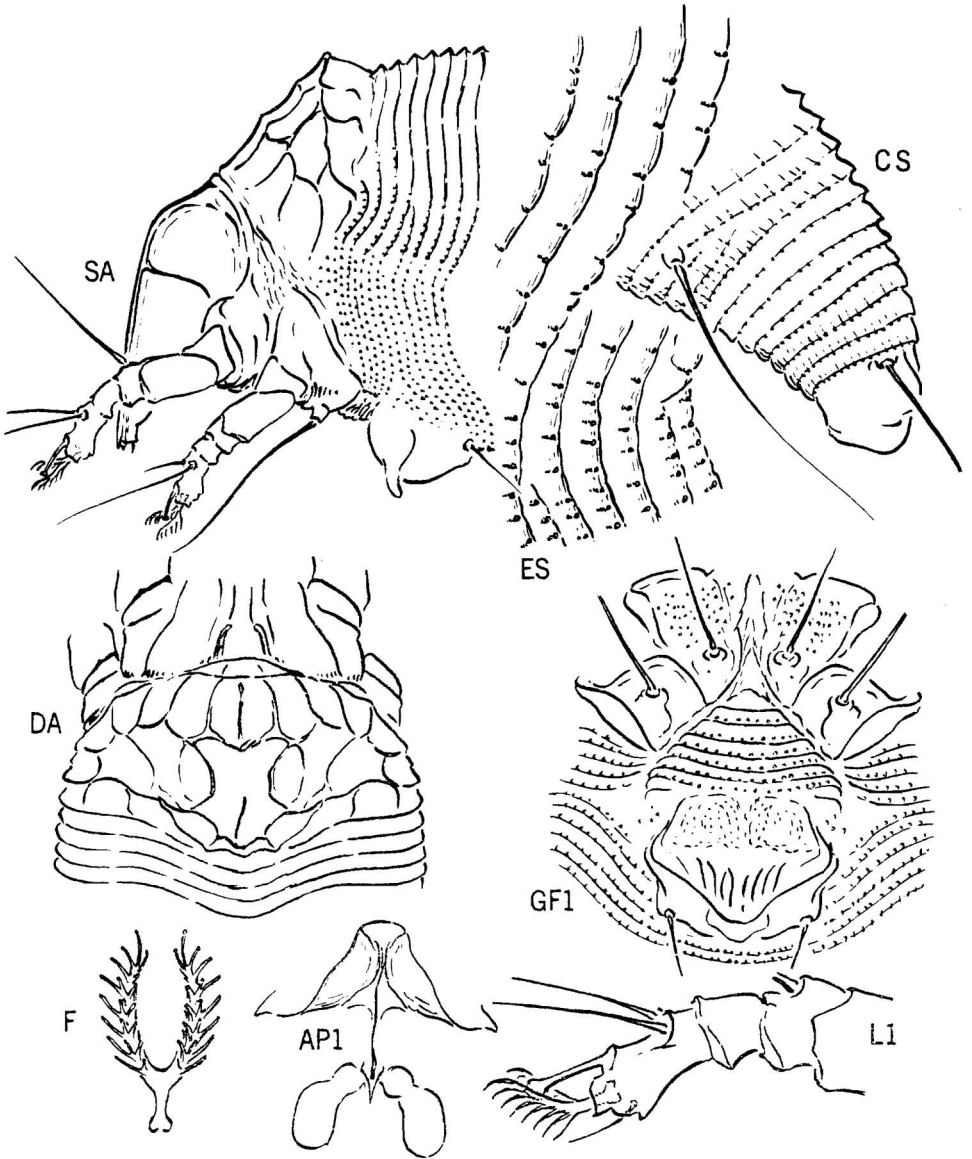


Plate 10 - *Rhynacus tampae*, new species