

ERIOPHYID STUDIES B-9

by H. H. KEIFER

Bureau of Entomology
California Department of Agriculture

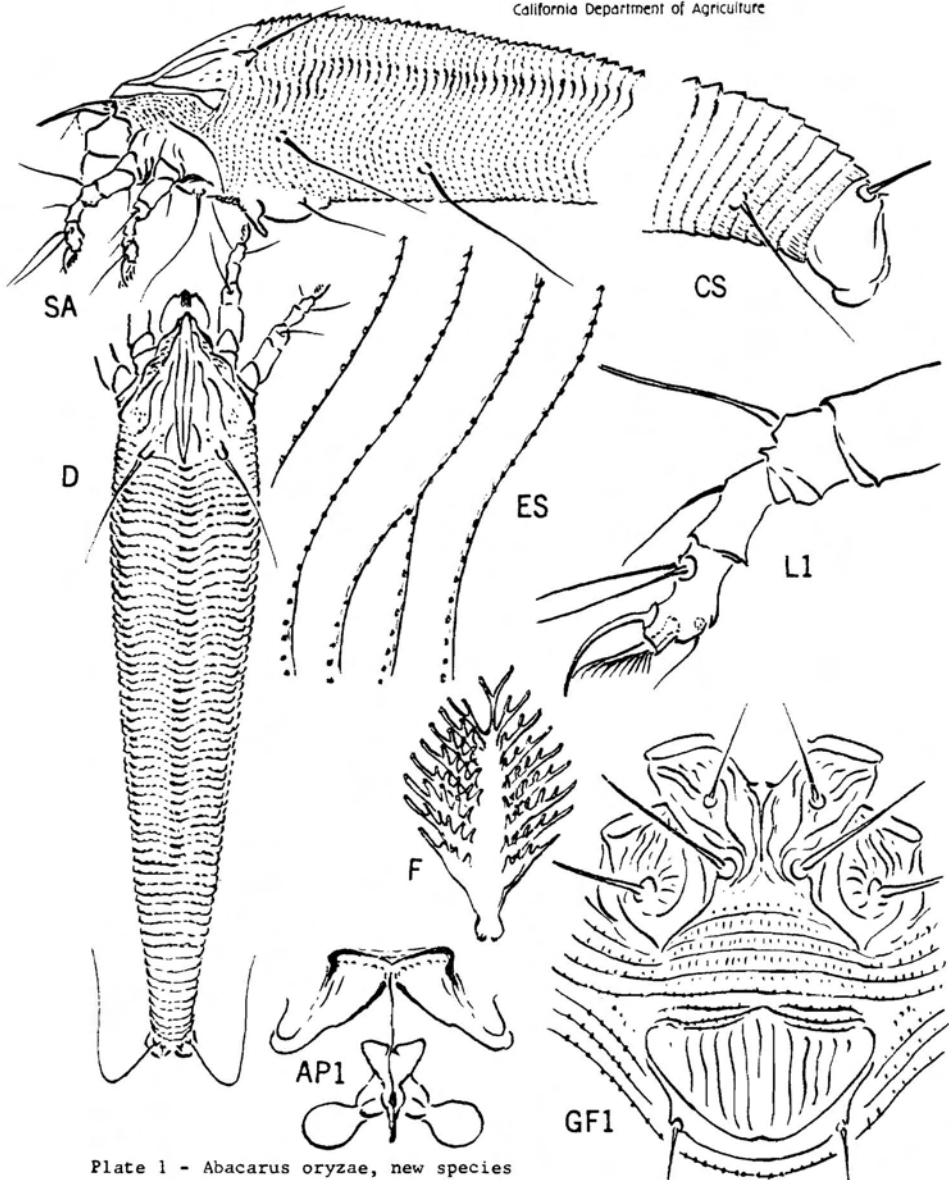


Plate 1 - *Abacarus oryzae*, new species

ISSUED - Feb. 20, 1963

Abacarus oryzae, new species

Plate 1

Oryzae differs from hystrix Nal., a very similar species, by having a 9-rayed featherclaw, which is one more ray than that possessed by hystrix. The median shield line on oryzae is stronger and oryzae has a double lateral shield line. Both hystrix and oryzae have lines of wax along the dorsal abdominal ridges.

Female 200 μ -230 μ long, 40 μ -45 μ wide, 35 μ -40 μ thick; elongate-fusiform; color light yellowish-white, with wax lines along dorsal abdominal ridges. Rostrum 25 μ long, projecting down; antapical seta 6.5 μ long. Shield 46 μ long, 38 μ wide, elongate-triangular in dorsal view with a short rather a cute anterior lobe over rostrum base. Median shield line strong, running from about anterior 1/5 back to just ahead of rear shield margin; admedian lines complete, close to and subparallel to median line, starting on sides of anterior lobe, diverging slightly to middle of shield, and converging to a point at center of shield behind rear end of median line; an out-curved line from admedian line at about 4/5, curving back to rear shield margin half way between dorsal tubercle and center. First submedian line from side of admedian near front, curving back toward and ending anterior to dorsal tubercle, or broken where lateral line continues along side; second submedian line branching from first and curving laterally to dorsal tubercle. Shield lateral margin with two subparallel lines and rows of granulations below. Dorsal tubercles 23 μ apart; dorsal setae 24 μ long, diverging strongly to rear. Forelegs 33 μ long; tibia 6.5 μ long, seta 10 μ long, from about 1/2; tarsus 8.5 μ long; claw 8.5 μ long, curved down, tapering; featherclaw 9-rayed. Hindleg 30 μ long, tibia 6 μ long, tarsus 8.5 μ long, claw 9 μ long. Anterior coxae moderately connate centrally, ornamented with curved lines; first setiferous coxal tubercles farther apart than second, slightly behind line of anterior approximation of coxae; second setiferous coxal tubercles a little ahead of transverse line through third tubercles. Abdomen elongate and tapering; with about 60 tergites and about 65 sternites; microtubercles small and bead-like, laterally and dorsally resting along ring margins, tending to run ahead of rings ventrally when specimen extended; microtubercles elongate caudally. Central dorsal ridge running back 43-45 tergites, ending in the fading dorsal trough; lateral ridges running from just below dorsal tubercle and fading just ahead of area above third ventral seta. Lateral abdominal seta 40 μ long, on about sternite 8; first ventral seta 70 μ long, on about sternite 21; second ventral seta 42 μ long, on about sternite 38; third ventral seta 23 μ long, on ring 5 from rear. Accessory seta minute. Female genitalia 21 μ long, 16 μ wide; moderately bowl-shaped, the coverflap with about 12-14 long longitudinal ribs; seta 22 μ long.

Type locality: Manila district, Philippine Islands

Collected: January 8, 1963, by C. Calica, and sent me by Miss Clare R. Baltazar of the Department of Agriculture and Natural Resources
Host: Oryza sativa L. (Gramineae - Oryzeae) rice

Relation to host: the mites are evidently rust mites and are said to have come from plants affected with dwarf disease called "tungro".

Type material: a type slide
seven paratype slides

Heterotergum olneyae, new species

Plate 2

This is the fourth species assigned to the genus. It is distinguished by the 8-rayed featherclaw, by the first coxal setiferous tubercles being anterior to the forecoxal approximation, and by the most distinct admedian shield lines of any of the species.

Female 140 μ -150 μ long, 35 μ wide, 40 μ thick; fusiform; color light yellowish-white. Rostrum 27 μ long, projecting down; antapical seta 7 μ long. Shield 35 μ long, 33 μ wide; subtriangular in dorsal view; anterior lobe over rostrum of moderate length, moderately acuminate; median line not distinguishable; admedian lines faintly discernable, curving back from sides of anterior lobe, curving out to 1/3 and continuing laterally a short distance, main line of admedians continuing back to just past 1/2 where they curve out and recurve to the rear between the dorsal tubercles and form the central rear of shield; an outwardly diagonal line in front of dorsal tubercles. Lateral shield lobes granular; two partial rings below dorsal tubercles. Dorsal tubercles 23 μ apart; dorsal setae 11 μ long, diverging. Forelegs 25 μ long; tibia 4.5 μ long, the seta 5.5 μ long at 1/2; tarsus 6 μ long; claw 7 μ long, curved down, tapering; featherclaw 8-rayed. Hindlegs 23 μ long, tibia 4.5 μ long, tarsus 5.5 μ long, claw 7 μ long. Coxae with some lines and granulations; anterior coxae diverging, the central connation short; first setiferous coxal tubercles farther apart than second and ahead of anterior coxal approximation; second setiferous tubercles well ahead of transverse line through third setiferous coxal tubercles. Abdomen with about 4 narrow rings across back just behind shield, followed by about 8 broad tergites, and these followed by about 5 caudal rings. Broad tergites with faint elongate microtubercles, especially at sides, and flattened across back or slightly concave middorsally. About 50 sternites with elliptical microtubercles reaching rear ring margins. Lateral seta 14 μ long, on about sternite 5; first ventral seta 30 μ long, on about sternite 16; second ventral 6.5 μ long, on about sternite 29; third ventral seta 16 μ long, on ring 5 from rear. Accessory seta very small. Female genitalia 18 μ wide, 10 μ long; coverflap with about 14 longitudinal ribs; seta 23 μ long

Type locality: Organ Pipe Cactus National Monument, Pima County, Arizona

Collected: December 5, 1962 by the writer

Host: Olneya tesota Gray (Leguminosae) tesota or desert ironwood

Relation to host: the mites live in the tomentum on the green stems and on the undersides of the leaves

Type material: a type slide
three paratype slides
mites in liquid with parts of their host

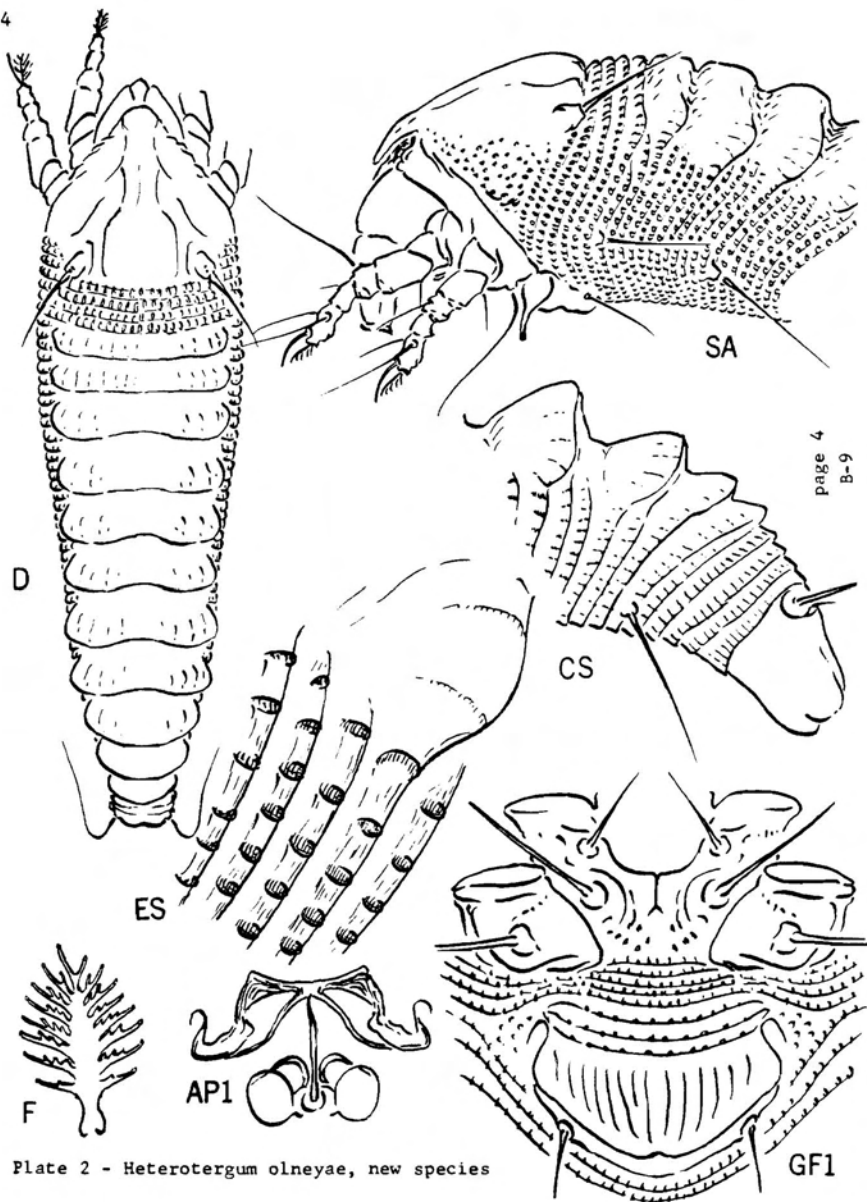


Plate 2 - *Heterotergum olneyae*, new species

Tetra magnolifoliae, new species

Plate 3

Two North American species previously assigned to this genus have, in common with magnolifoliae, a 6-rayed featherclaw. These are liriiodendronis and cercocarpi, named after their respective hostplants. From the former magnolifoliae differs by having a more produced first tergite and by having definite ribs on the female genital coverflap. From cercocarpi the new species differs by having unpointed microtubercles, and by details on the coxae and genitalia.

Female 145 μ -170 μ long, 45 μ wide, 35 μ thick; flattened-fusiform; color light yellowish-white. Rostrum 30 μ long, apically large, directed down. Shield 43 μ long, 39 μ wide, elongate-triangular with a moderately large and acute anterior lobe which is rounded in front; rear margin of shield convex between dorsal tubercles. No markings on shield, some partial rings and rows of granulations laterally. Dorsal tubercles 35 μ apart; dorsal setae 7 μ long, strongly diverging. Forelegs 31 μ long; tibia 6.5 μ long, with seta 7 μ long from 1/2; tarsus 6 μ long; claw 6.5 μ long, tapering, with a slight knob; featherclaw 6-rayed. Hindleg 26 μ long, tibia 5.5 μ long, tarsus 5.5 μ long, claw 6 μ long. Coxae with curved lines of granules; first setiferous coxal tubercles farther apart than second tubercles and ahead of a transverse line through anterior coxal approximation; second tubercles ahead of transverse line through third tubercles. Abdomen with about 15 broad tergites to third ventral seta ring, followed by about 4 narrow rings; first tergite produced a little dorsally, convex; broad dorsal trough beginning on second tergite and fading to rear, the tergal edges uneven; faint elongate lines on tergites. About 55 sternites set with rounded microtubercles on margins, 3 or 4 sternites below each tergite. Lateral seta 19 μ long, on about sternite 7; first ventral seta 36 μ long, on about sternite 18; second ventral 17 μ long, on sternite 33; third ventral 20 μ long, on sternite 5 from rear. Accessory seta 2.5 μ long. Female genitalia 18 μ wide, 12 μ long; coverflap with 10-12 longitudinal ribs; seta 16 μ long.

Type locality: Greenbelt, Maryland

Collected: August 1, 1959, by John P. Keifer and the writer

Host: Magnolia virginiana L. (Magnoliaceae) sweetbay magnolia

Relation to host: the mites are undersurface vagrants among the hairs

Type material: a type slide

seven paratype slides

dry leaves from which the mites on the slides were taken

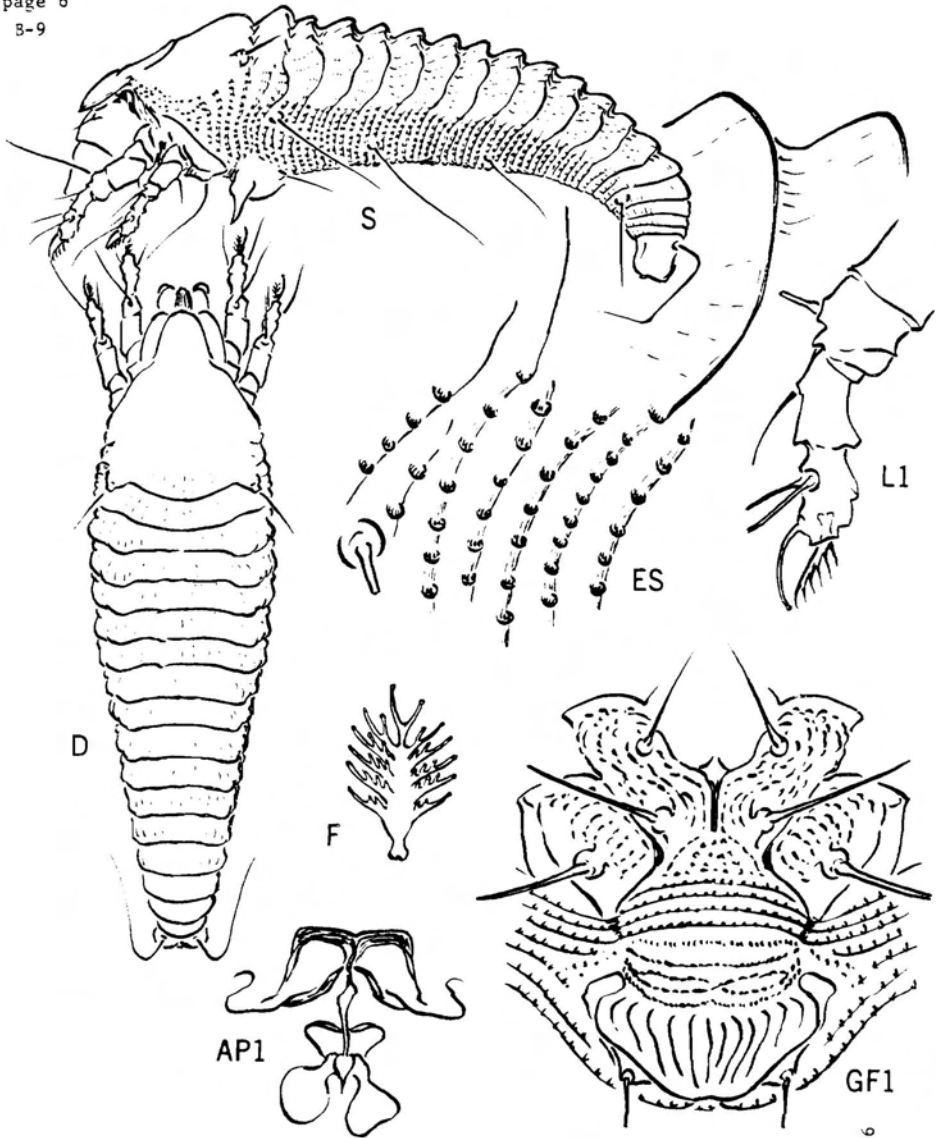


Plate 3 - *Tetra magnolifoliae*, new species

Notostrix, new genus

This new genus is similar to Phyllocopruta in having a long, broad, dorsal longitudinal trough, and by having the dorsal tubercles set ahead of the rear shield margin. It differs by having the dorsal setae directed to the rear, and by having the sternites extend far up onto the sides of the body. The produced position of the genitalia is also a separating character, as is the absence of the patellar seta on the hindleg. The name means back furrow.

Genotype - *Notostrix attenuata*, new species

Notostrix attenuata, new species

Plate 4

Female 250 μ -290 μ long, 40 μ wide, 35 μ -40 μ thick; slender and elongate, the rear tapering; color light yellowish-white. Rostrum 26 μ long, directed down; antapical seta 4.5 μ long; oral stylet short. Shield 63 μ long, 43 μ wide; elongate-triangular, the anterior lobe acute and attenuate over rostrum. Shield design faint centrally, median line not definitely indicated; admedian lines faintly present on anterior 1/3; lateral lines from sides of anterior lobe, extending along upper margin of shield side, somewhat sinuate, slightly branched centrally and recurving behind dorsal tubercles at rear shield margin; some lines of granules above rear coxae. Dorsal tubercles 22 μ apart, well ahead of rear shield margin; dorsal setae 21 μ long, directed caudad, usually diverging. Foreleg 29 μ long; tibia 5.5 μ long, with 4 μ seta at 1/2; tarsus 6.5 μ long; claw 6.5 μ long, curved down; featherclaw 7-rayed. Hindleg 26 μ long, patellar seta absent; tibia 4.5 μ long, tarsus 6.5 μ long, claw 8.5 μ long. Coxae somewhat elongate, the anterior coxae ornamented with curved lines and connate to each other; first setiferous coxal tubercles ahead of second and opposite anterior coxal approximation; second setiferous coxal tubercles far ahead of transverse line through third tubercles. Abdomen with about 43 tergites from rear shield margin to line above third ventral seta, moderately narrow, lacking microtubercles, the broad dorsal trough extending across abdomen and from rear shield margin to half way between third ventral seta line and cauda; a ridge along each side of trough. Abdominal sternites about 90 in number, extending high up on sides of abdomen; microtubercles beadlike and small, on rear ring margins, fading on caudal rings. Lateral seta 16 μ long, on about sternite 7; first ventral seta 36 μ long, on about sternite 21; second ventral 34 μ long, on about sternite 44; third ventral high on side, 30 μ long, on ring 16 from rear. Accessory seta absent. Female genitalia produced ventrally; 21 μ wide, 19 μ long; coverflap and area just anterior to it with a pattern of curved lines and ribs, about 16 longitudinal ribs on cover; genital apodeme of long type; seta 11 μ long.

Type locality: Guinobatan, Albay province, Philippines

Collected: August 10, 1962 by C. A. Calica, and sent me by Miss Clare R. Baltazar of the Department of Agriculture

Host: Cocos nucifera L. (Palmaceae) coconut palm

Relation to host: the mites were collected on mature leaves which were on trees suffering from cadang-cadang

Type material: a type slide
four paratype slides

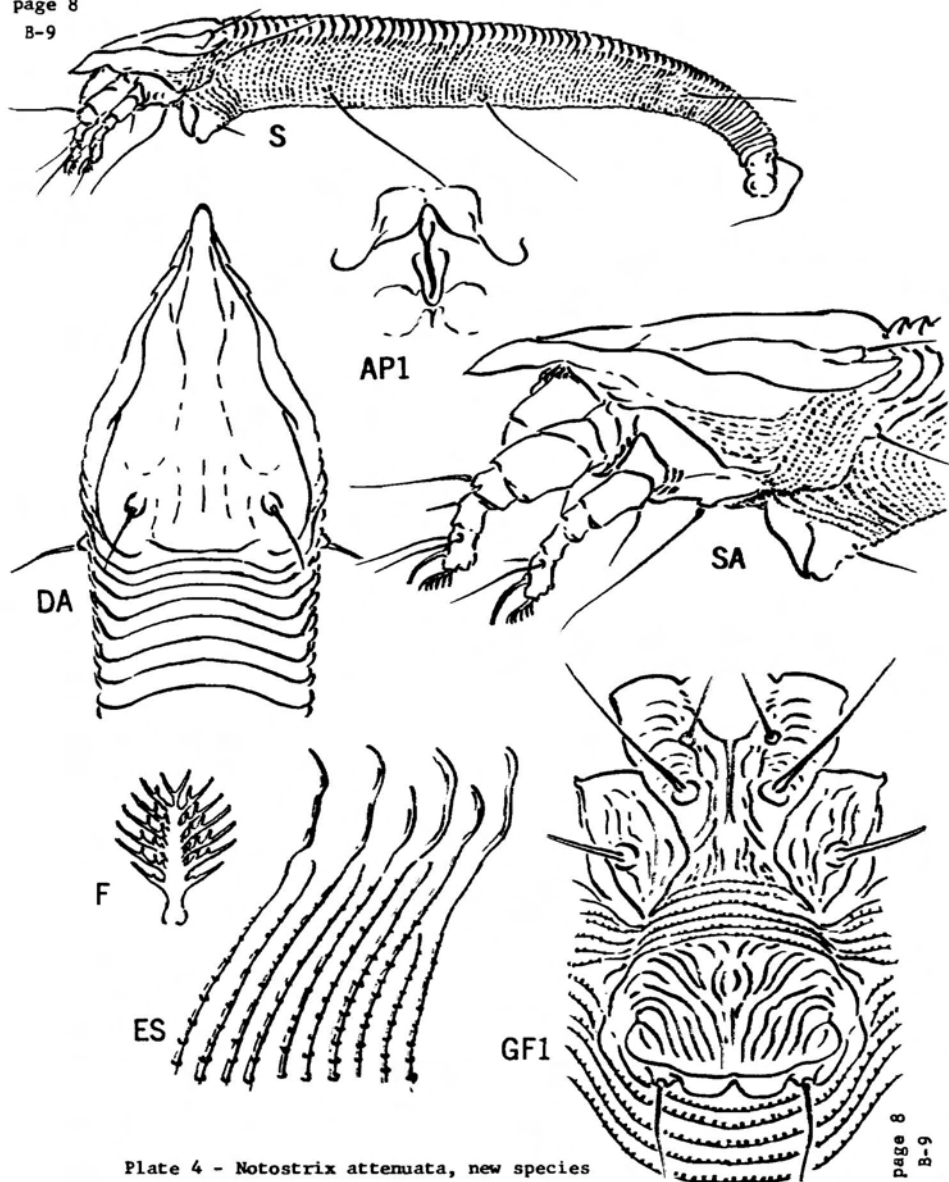


Plate 4 - *Notostrix attenuata*, new species

Epitrimerus granulatus, new species

Plate 5

Granulatus appeared in the preparations made of paraviburni from the undersurface erineum on Viburnum dentatum. It is characterized by the granules along the admedian lines in the shield pattern, and by the discontinuous microtuberculation on the dorsum. Liro and Roivainen list Epitrimerus intermedius Nal. as occurring on European Viburnum. Nalepa had originally named this mite as a variety of E. trilobus on Elderberry. The new species differs from the trilobus complex by having one more ray on the featherclaw, as well as in details of the shield pattern, and in not having rough edges on the summit of the dorsal ridges.

Female 120 μ -135 μ long, 45 μ wide, 35 μ -40 μ thick, robust-fusiform; color probably light yellish-white. Rostrum 18 μ long, projecting down; antapical seta 4.5 μ long. Shield 40 μ long, 43 μ wide; design principally a series of granular lines; median line absent; admedians complete from prominent moderately acute anterior lobe, curving outward to about 1/4, recurving gently to 1/2 with a suggestion of a cross line, thence curving gently out and back to 3/4 where they fork and run to rear shield margin between dorsal tubercles; submedians beginning about anterior 1/5 on shield, sinuate, running back and curving around and touching dorsal tubercles; lateral lines of granules on shield. Dorsal tubercles 21 μ apart, the axes longitudinal; dorsal setae 9 μ long, curving up and centrad. Forelegs 29 μ long; tibia 6.5 μ long, seta 4 μ long, from 1/3; tarsus 6.5 μ long; claw 6 μ long, knobbed; featherclaw 5-rayed. Hindlegs 25 μ long, tibia 4.5 μ long, tarsus 6.5 μ long, claw 7 μ long. Coxae rather short; first setiferous coxal tubercles farther apart than second tubercles, ahead of anterior approximation of coxae; second tubercles on small lobe, well ahead of transverse line through third setiferous coxal tubercles. Abdomen with microtubercles on ring margins, generally distributed but apparently absent from dorsal longitudinal troughs and on dorsum of most of rear; about 40 tergites and 55-60 sternites, there being not much differentiation. Lateral seta 16 μ long, on about sternite 7; first ventral seta 30 μ long, on about sternite 2; second ventral 10 μ long, on about sternite 3; third ventral seta 17 μ long, on sternite 5 from rear. Accessory seta minute. Female genitalia 21 μ wide, 12 μ long; coverflap with about 10 longitudinal ribs, running somewhat diagonally inward from each side; seta 11 μ long.

Type locality: Port Bay, Wayne County, New York

Collected: August 4, 1962, by G. R. Nielsen, of Cornell University

Host: Viburnum dentatum L. (Caprifoliaceae) southern arrowwood

Relation to host: the mites are associated with undersurface leaf erineum

Type material: a type slide

three paratype slides

dry leaves with erineum, all bearing the above data

page 9

B-9

Note: Eriophyes paraviburni, which forms the erineum from which granulatus was taken, is treated on page 17 in this installment.

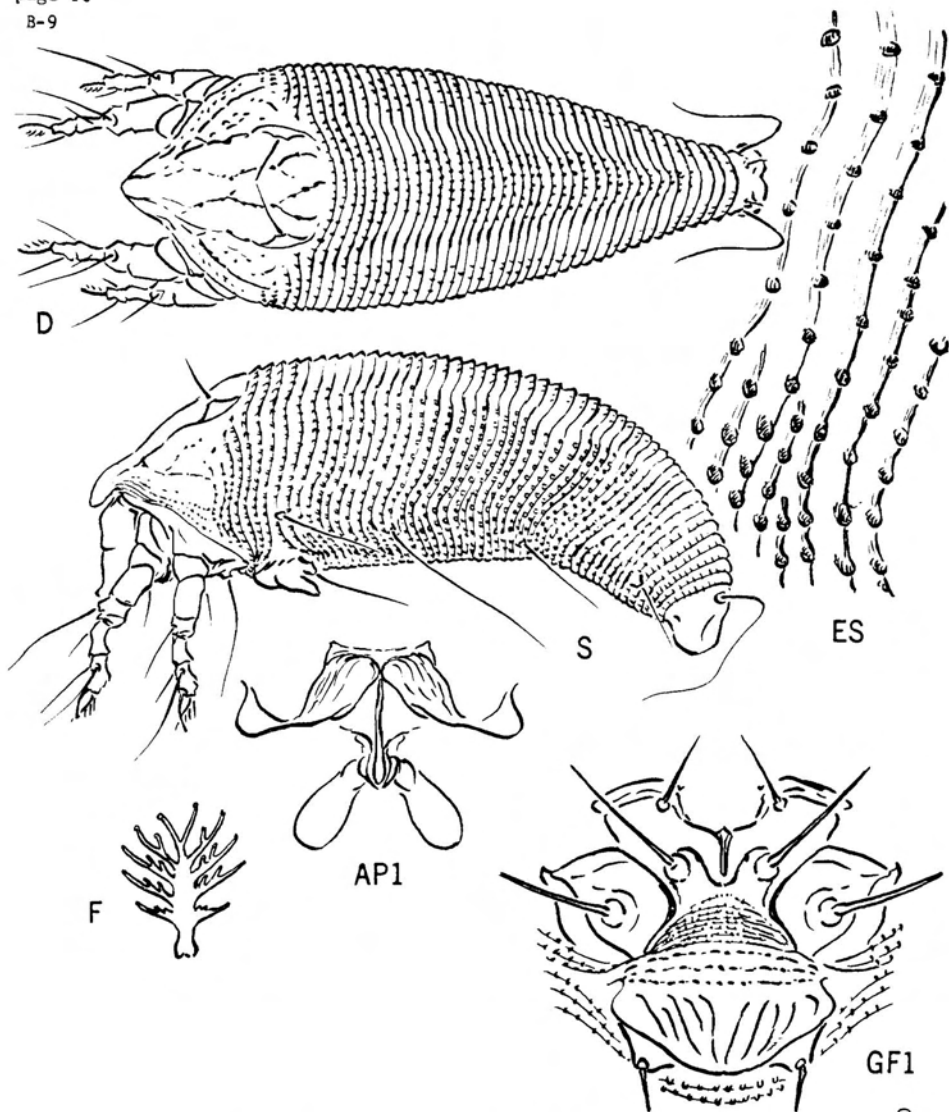


Plate 5 - *Epitrimerus granulatus*, new species

Calacarus brionesae, new species

Plate 6

Brionesae is similar to the purple tea mite, Calacarus carinatus (Green) (adornatus K.), but differs in lacking a connection across between the admedian lines just ahead of the rear margin of the shield.

Female 175 μ -185 μ long, 50 μ thick; robust, somewhat fusiform; color purple, apparently with dorsal and lateral white wax stripes. Rostrum 33 μ long, projecting down; antapical seta 10 μ long. Shield broad, subtriangular, the anterior lobe broad and short; design a network of lines; median line present only on anterior lobe; admedian lines strongly sinuate, curving inward from sides of anterior lobe, with a cross line to median at base of anterior lobe, running back to about 1/3 and meeting a line from lateral cells at this point; converging to about 1/2 with a faint central cross line at this point, then bordering the central rear shield area by sweeping out and recurving in a wide sweep to rear margin and thence recurving laterally and forward for short distance; the admedian lines bordered by lateral "teeth" on rear 1/2; submedian lines faint. Shield laterally with characteristic row of cells above coxae, and lines of granules below cells. Dorsal tubercles present as small protuberances ahead of rear shield margin; dorsal setae absent. Forelegs 31 μ long; tibia 8.5 μ long, with 7 μ long seta at 1/2; tarsus 7 μ long; claw 7 μ long, with strong knob; featherclaw 4-rayed. Hindleg 27 μ long; hindpatellar seta absent; tibia 6.5 μ long, tarsus 6.5 μ long, claw 6.5 μ long. Anterior coxae broadly connate centrally, ornamented with curved lines; first setiferous coxal tubercles farther apart than second and opposite anterior coxal approximation; second setiferous tubercles ahead of transverse line through third coxal tubercles. Abdomen with a few less tergites than sternites, about 75-80 sternites; dorsum of abdomen with five longitudinal ridges, fading to rear and bearing rough apices where wax is secreted. Microtubercles small, beadlike, on ring margins, restricted to sternites. Lateral seta 25 μ long, on about sternite 7; first ventral seta 75 μ long, on about sternite 24; second ventral 33 μ long, on about sternite 48; third ventral 29 μ long, on sternite 8 from rear. Accessory seta absent. Female genitalia 29 μ wide, 23 μ long; coverflap with short faint ribs on rear margin and with basal area with short dashes and granulations; seta 18 μ long.

Type locality: Guinobatan, Albay Province, Philippines

Collected: April 18, 1962, by Magdalena L. Briones of the Guinobatan Experiment Station

Host: Carica papaya L. (Caricaceae) papaya

Relation to host: the mites are leaf edge rollers, causing white spots along the rolls

Type material: a type slide
9 paratype slides
dry leaves with mites from which the specimens were taken

This species is named for its collector, Magdalena L. Briones, who has sent me several Eriophyid mites.

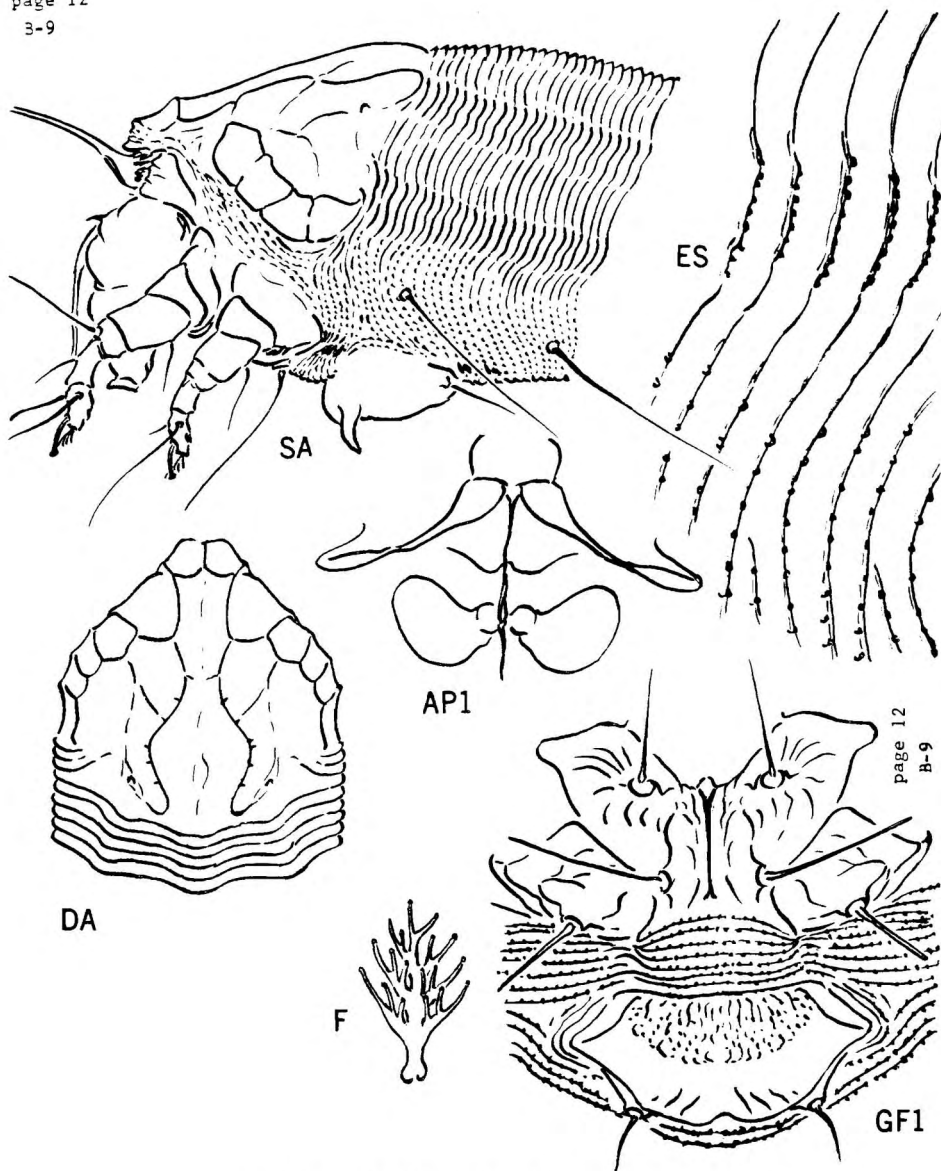


Plate 6 - *Calacarus brionesae*, new species

Aceria gilloglii, new species

Plate 7

Double rows of microtubercles on most of the rings characterize this mite and separate it from any other so far described. The host of the mite is dwarf ornamental bamboo for which there is a confusing series of technical names. The name Sasa pygmaea E. S. Camus seems easiest to use, but Pleioblastus viridi-striatus (Andre) occurs in some texts. I am pleased to name this Eriophyid for L. R. Gillogly, of the California Nursery Service, who has been active in discovering the range of the species in southern California. The mite presumably originated in the native home of its host, which is stated to be Japan.

Female 155 μ -165 μ long, 35 μ wide, 25 μ thick; wormlike in shape; color light yellowish-white. Rostrum 16 μ long, curving down; antapical seta 5 μ long. Shield 25 μ long, 30 μ wide; subsemicircular in anterior outline. Shield design of lines of granules: median line on rear 1/3; admedian lines complete, sinuate and subparallel to each other anteriorly, on each side of median line farther apart, curving, broken anteriorly from fore oart of line. Submedian line curving back from front of shield, forking in front of dorsal tubercle, the inner fork curving back toward tubercle, the outer arm extending laterally to lateral line. A diagonal dash in front of dorsal tubercle. Laterally the shield with an upper line, and arms down defining some lateral cells with a lower longitudinal lateral line; granulations below lower lateral line. Dorsal tubercles 18 μ apart; dorsal setae 29 μ long, diverging to rear. Forelegs 21 μ long; tibia 4.5 μ long, with 7 μ seta from 1/2; tarsus 4.5 μ long; claw 6.5 μ long, attenuate, downcurved; featherclaw 5-rayed. Hindleg 19 μ long, tibia 4 μ long, tarsus 4.5 μ long, claw 7 μ long. Coxae somewhat elongate, heavily set with lines of granules; first setiferous coxal tubercles farther apart than second tubercles and behind anterior coxal approximation; second tubercles a little ahead of transverse line through third setiferous coxal tubercles. Abdomen with about 60 rings; microtubercles somewhat elongate ventrally, just behind shield, and behind third ventral seta ring; laterally and dorsally the rings set with double rows of microtubercles alternately resting on each margin and extending across ring a distance. Lateral seta 14 μ long, on ring 8; first ventral seta 51 μ long, on about ring 20; second ventral seta 4.5 μ long, on about ring 33; third ventral seta stiff, 11 μ long, on ring 4 from rear. Accessory seta minute. Female genitalia 16 μ wide, 10 μ long; coverflap with 8-10 uneven longitudinal ribs; seta 12 μ long.

Type locality: Los Angeles, California

Collected: November 5, 1962, by L. R. Gillogly, and by H. Griffiths of the Los Angeles Agricultural Commissioner's office

Host: Sasa pygmaea E. G. Camus (Graminae) dwarf ornamental bamboo

Relation to host: the mites live in the petiole bases and if numerous enough cause a slight witch's broom

Type material: a type slide
two paratype slides
mites in liquid and on dry plant parts

As well as the above locality, Gillogly has found the species in the following California localities: on Sasa at San Fernando, Nov. 28, 1962; on Sasa at San Dimas, Nov. 26, 1962, collected by Gillogly and H. Griffiths; on dwarf variegated bamboo at Santa Barbara, Nov. 28, 1962, collected by Gillogly and M. Suskin of the Santa Barbara County Agricultural Commissioner's office; on Sasa at Ventura, Nov. 29, 1962, collected by Gillogly and V. Holmer of the Ventura County Agricultural Commissioner's office

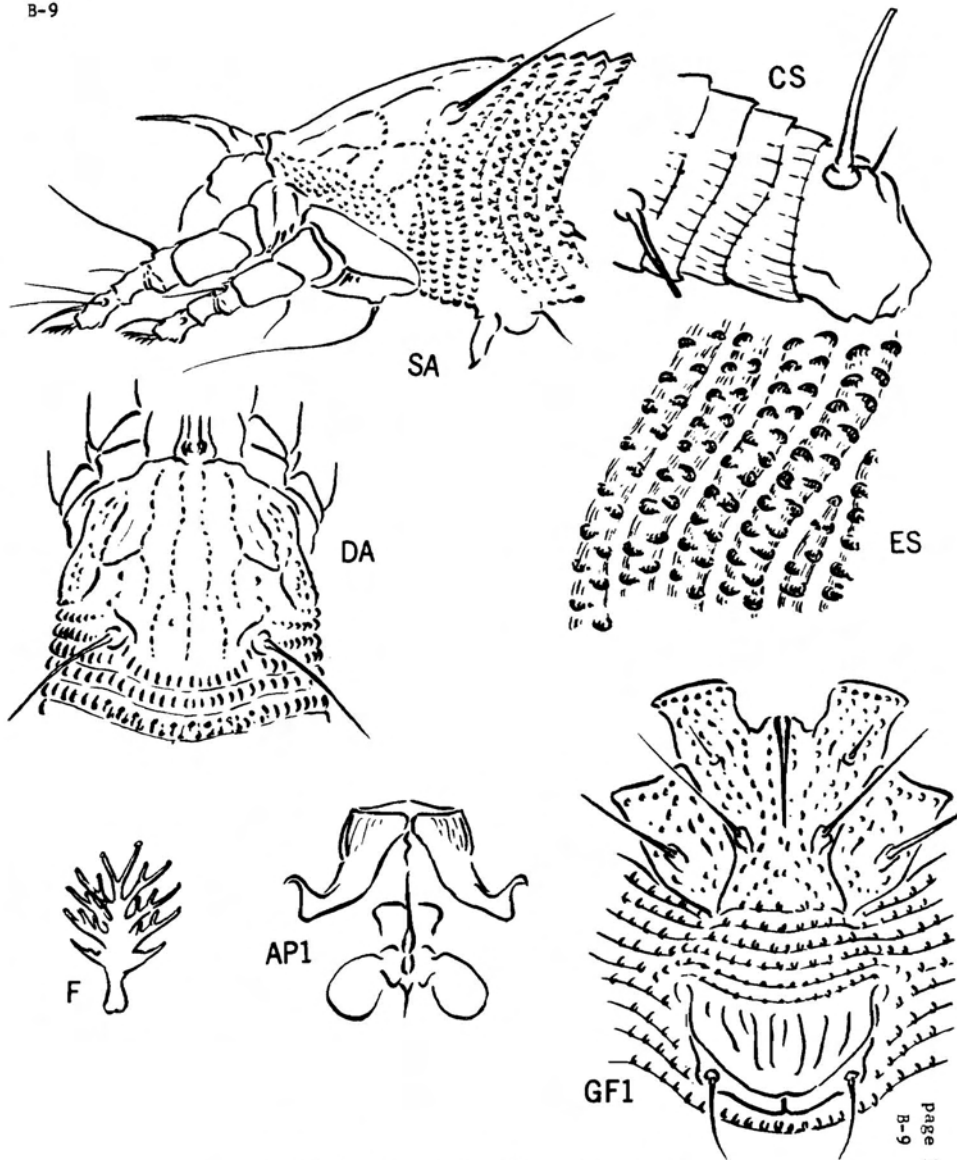


Plate 7 - *Aceria gillogly*, new species

Aceria iridis, new species

Plate 8

Iridis is atypical for the genus by having the central strip of the shield extended caudad some distance past the dorsal tubercles. Iridis is otherwise characterized by its 7-rayed featherclaw.

Female 240_μ-250_μ long, 40_μ thick, wormlike, long; color very light cream white. Rostrum 27_μ long, curved down; antapical seta absent. Shield 50_μ long, about 40_μ wide; central section extending caudad well past the dorsal tubercles; median line complete though faint anteriorly, with a cross line just behind dorsal tubercles; admedian lines complete, sinuate, subparallel to median; first submedian lines from chelicera base, gradually diverging to area ahead of dorsal tubercles and there meeting sinuate cross line which curves back centrad to admedian; shield laterally with somewhat produced convexity ahead of lateral partial rings. Dorsal tubercles 24_μ apart, touching partial rings coming up from sides; dorsal setae 36_μ long diverging to rear. Forelegs 30_μ long; tibia 5_μ long, with 4.5_μ seta from about 1/2; tarsus 6.5_μ long; claw 9_μ long, nearly straight; featherclaw 7-rayed. Hindlegs 29_μ long, tibia 4.5_μ long, tarsus 6.5_μ long, claw 8.5_μ long. Anterior coxae somewhat elongate, not touching, with few markings; first setiferous coxal tubercles at about 1/2, a little farther apart than second tubercles; second setiferous coxal tubercles a little ahead of transverse line across third tubercles. Abdomen with 75-80 rings, completely microtuberculate, the microtubercles resting on rear ring margins, rounded or slightly pointed dorsally; dorsally, fewer microtubercles on rings beyond seta V3. Lateral seta 48_μ long, on ring 7; first ventral seta 58_μ long, on ring 21; second ventral 12_μ long, on ring 41; third ventral 16_μ long, on ring 7 from rear. Accessory seta 4.5_μ long. Female genitalia 23_μ wide, 17_μ long; coverflap with about 10 longitudinal ribs; seta 23_μ long.

Type locality: Five miles east of Chiloquin, Klamath County, Oregon

Collected: August 6, 1962, by the writer

Host: Iris missouriensis Nuttall (Iridaceae) wild iris

Relation to host: the mites live under cover at the leaf bases on the beginning of red tissue.

Type material: a type slide
4 paratype slides

mites in liquid and on dry plant material

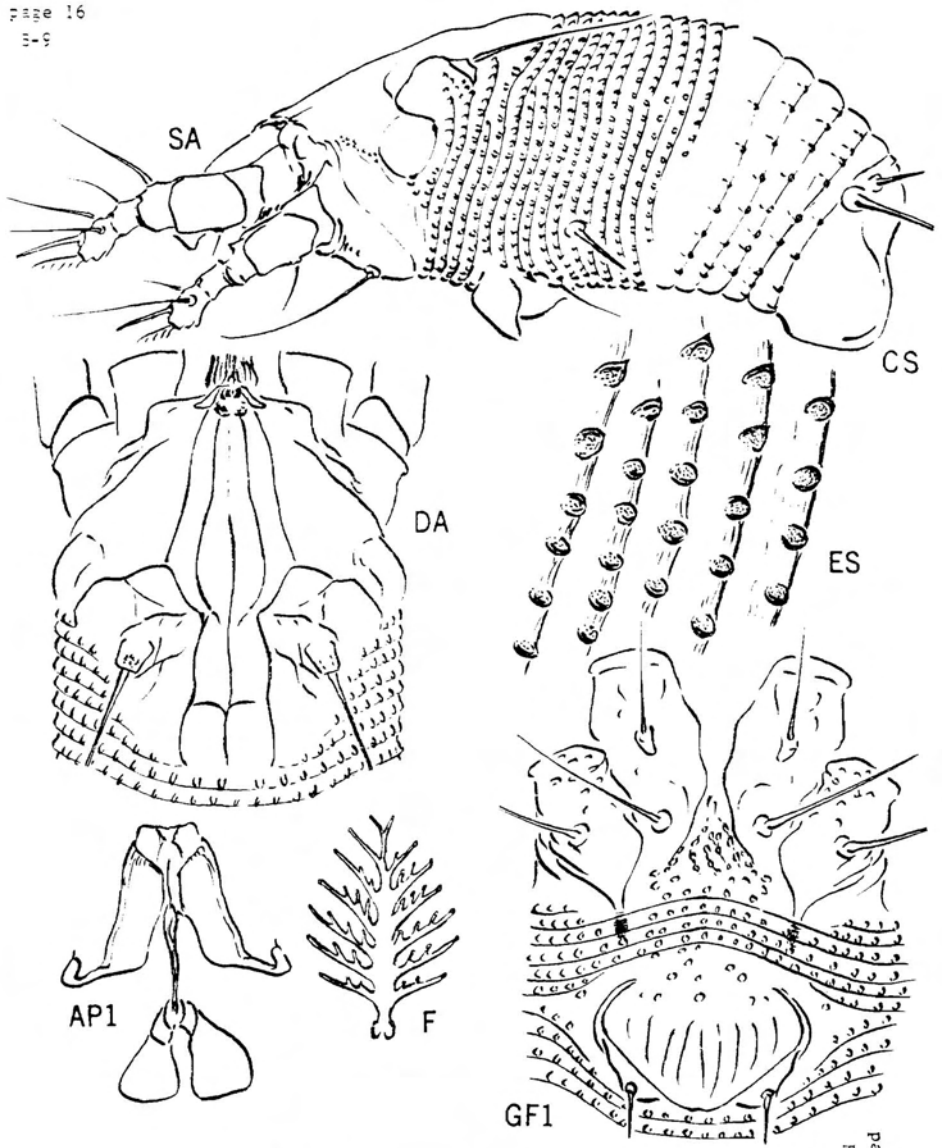


Plate 8 - *Aceria iridis*, new species

Eriophyes paraviburni, new name

Plate 9

Reference: F. A. Stebbins, Bul. #2, Springfield Mus. Nat. Hist., p. 48, 1910. This mite named as Eriophyes viburni n. sp.

The name viburni was preoccupied by Eriophyes viburni (Nal.) 1898. Examination of Nalepa's figures indicate that the mite depicted here has a different type of shield pattern from Nalepa's European species. The mite on Viburnum dentatum in Eastern North America has granulations on the shield lines not indicated for the European species.

Female 130 μ -140 μ long, 35 μ -45 μ thick; wormlike in shape; color light yellowish-white. Rostrum 20 μ long, curved down; antapical seta 4.5 μ long. Shield 27 μ long, 33 μ wide; design of lines with granulations: median line present on rear 1/2; admedian lines complete, straight, gradually diverging to rear; first submedian lines complete, straight, diverging and ending at dorsal tubercles. Shield laterally with lines and granules. Dorsal tubercles with axis longitudinal, 16.5 μ apart; dorsal setae 11 μ long, projecting up and centrad. Forelegs 27 μ long; tibia 5.5 μ long, seta 4.5 μ long, from 1/3; tarsus 6.5 μ long; claw 6.5 μ long, knobbed; featherclaw with 5 rays. Hindlegs 23 μ long, tibia 4.5 μ long, tarsus 6 μ long, claw 8.5 μ long. Coxae with some granules, principally in curved lines around second tubercles; first setiferous coxal tubercles a little farther apart than second tubercles and ahead of anterior coxal approximation; second tubercles ahead of transverse line through third tubercles. Abdomen with about 65 rings, completely microtuberculate except for fewer microtubercles on dorsal rear; microtubercles on rear ring margins. Lateral seta 26 μ long, on about ring 8; first ventral seta 40 μ long, on about ring 22; second ventral 8.5 μ long, on about ring 41; third ventral 23 μ long, on about ring 5 from rear. Accessory seta 5.5 μ long. Female genitalia 18 μ wide, 12 μ long; coverflap with about 8 longitudinal ribs; seta 12.5 μ long.

Type locality: Port Bay, Wayne County, New York

Collected: August 4, 1962, by G. R. Nielsen, of Cornell University

Host: Viburnum dentatum L. (Caprifoliaceae) arrowwood

Relation to host: the mites form undersurface masses of white erineum in shallow leaf pockets.

Type material: a type slide

4 paratype slides

dry leaves from which the mites were taken

Note: part of the specimens on the slides proved to be a species of Epitrimerus which is described in another part of this article.

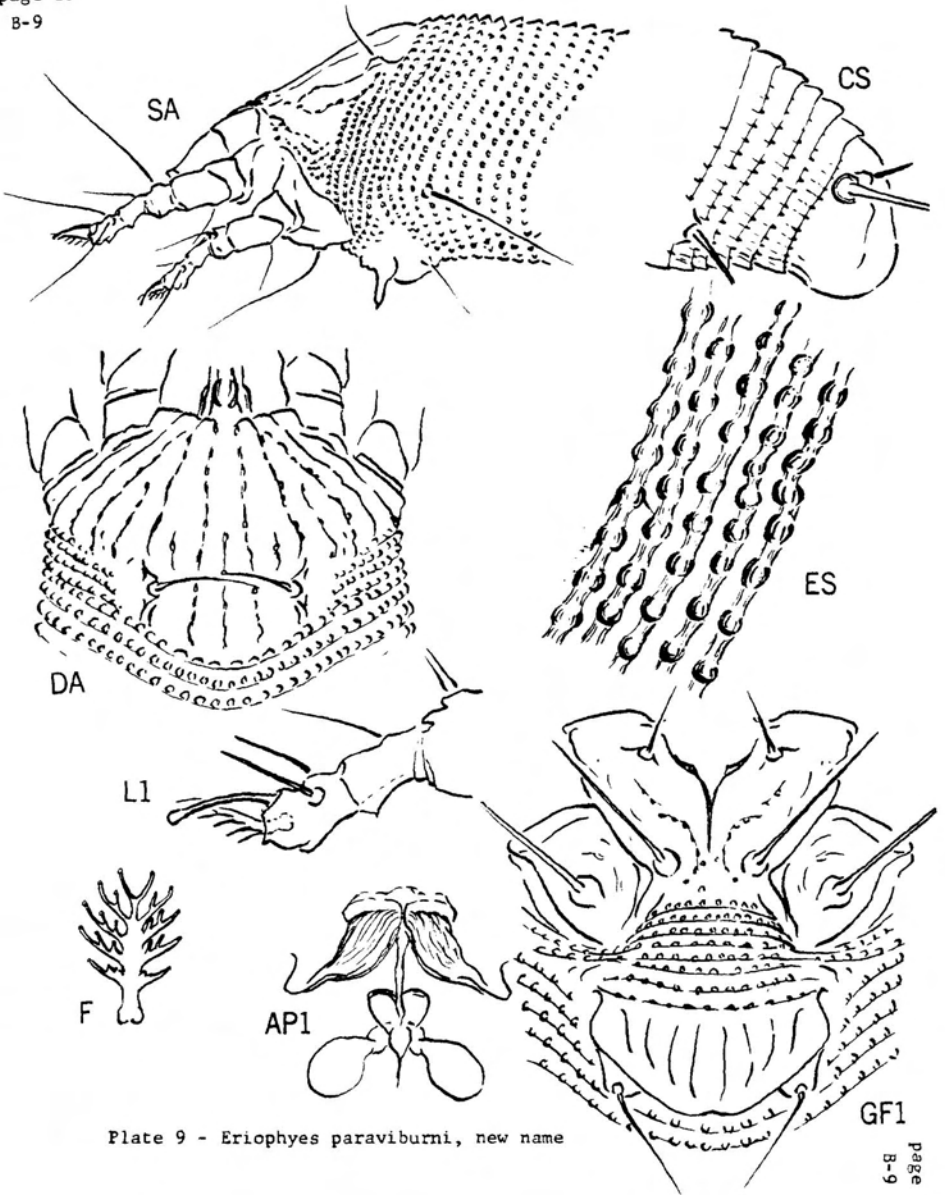


Plate 9 - *Eriophyes paraviburni*, new name

Phytoptus leucothonis, new species

Plate 10

Leucothonis is similar to corniseminis K., but differs mainly in having one less ray on the featherclaw (empodium).

Female 175 μ -190 μ long, 45 μ -50 μ thick; wormlike in shape; color light yellowish-white. Rostrum 30 μ long, projecting down; antapical seta 6.5 μ long. Shield 30 μ long, 45 μ wide; subsemicircular in anterior outline. Shield design absent, with only suggestions of lines front and rear. Antero-lateral setae 11 μ long, projecting forward and diverging; dorsal tubercles 23 μ apart; dorsal setae 10.5 μ long, projecting up and converging. Forelegs 31 μ long; tibia 6.5 μ long, with seta 6.5 μ long at 1/3, and with 8 μ lateral spur; tarsus 6.5 μ long; claw 8 μ long, downcurved, with terminal knob; featherclaw 4-rayed. Hindleg 29 μ long, tibia 6.5 μ long, tarsus 6.5 μ long, claw 7 μ long. Anterior coxae connate centrally, with some diagonal lines; first setiferous coxal tubercles ahead of second tubercles, a little behind anterior coxal approximation; second tubercles a little ahead of transverse line through third setiferous coxal tubercles. Abdomen with 60-65 rings, completely microtuberculate the microtubercles as beads along ring margins, these microtubercles fading, but present 5 or 6 rings ahead of third ventral seta ring. Sibdorsal abdominal seta on ring 10 or 11, 38 μ long; lateral seta 27 μ long, on about ring 10; first ventral seta 23 μ long, on ring 22; second ventral 10 μ long, on ring 37; third ventral seta 22 μ long, on ring 5 from rear. Accessory seta 4.5 μ long. Female genitalia 25 μ wide, 16 μ long; coverflap with only faint basal lines; seta 8.5 μ long

Type locality: Mutton Canyon (east of Georgetown), El Dorado County, Cal.

Collected: Sept. 10, 1961 by Iris Savage, State Bureau of Entomology

Host: Leucothoe davisiae Torr. (Ericaceae) Sierra-laurel

Relation to host: the mites were found under the buttons of the berries

Type material: a type slide

seven paratype slides

dry flower heads with mites

page 19

B-9

Symbols on plates

- AF: - 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)
 CF: - coxae and female genitalia
 LI - foreleg
 S - side view of mite
 SA - side view of anterior section of mite

The 'B' series of Eriophyid Studies are issued as special publications of the State Bureau of Entomology, California Department of Agriculture. Copies are obtainable by writing to the Bureau, 1220 'N' St., Sacramento 14, California.

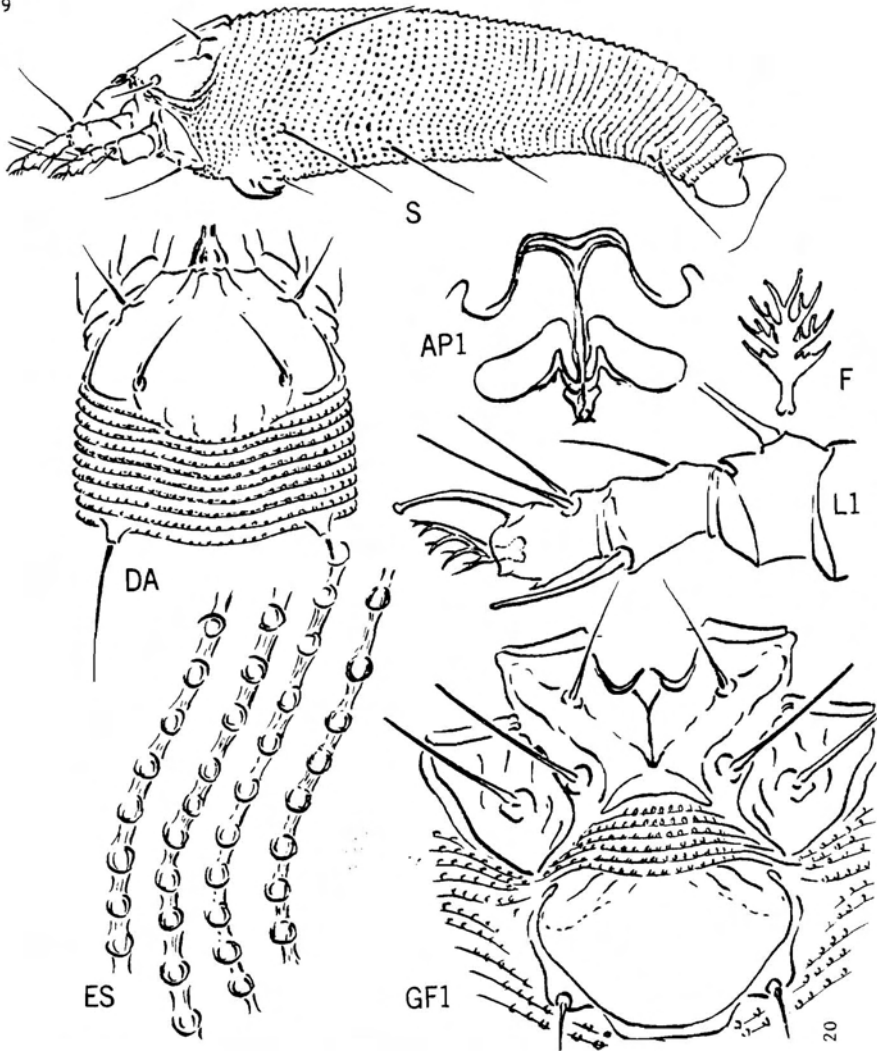


Plate 10 - *Phytoptus leucothonis*, new species