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## ERIOPHYID STUDIES XV\*

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Insect Taxonomy

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The present installment is primarily for the purpose of recording a name for the *Camellia* Budmite and for the *Baccharis* leaf gallmite. These names are for use in the report of the Maritime Port Survey which has been conducted in California during the past two years by the Federal Bureau of Entomology and Plant Quarantine.

*Aceria camelliae* Keifer, new species

Plate 194

Female 180-200 $\mu$  long, 35-40 $\mu$  thick, white, wormlike. Rostrum 23 $\mu$  long, curved down, apical seta short. Shield 29 $\mu$  long, 30 $\mu$  wide, central longitudinal lines present, the rest obscured by granulations; shield granular laterally. Dorsal tubercles 20 $\mu$  apart, near hind margin; dorsal setae 35 $\mu$  long, projecting backward. Forelegs 26 $\mu$  long, tibia 5 $\mu$  long and lacking the usual seta; tarsus 6 $\mu$  long; claw 6.5 $\mu$  long, curved and with small knob; featherclaw 6-rayed. Hindlegs 26 $\mu$  long, tibia 4 $\mu$  long, tarsus 6.5 $\mu$  long, claw 8.5 $\mu$  long. Coxae not particularly spread apart though the genitalia are situated closer than usual. Abdomen with 55-60 rings, completely microtuberculate, some ventrad reduction in ring number; abdominal microtubercles not pointed. Lateral seta 17 $\mu$  long, on about ring 5; first ventral 50 $\mu$  long, on about ring 11; second ventral 8.5 $\mu$  long, on about ring 24; third ventral 18 $\mu$  long, on about ring 7 from rear; accessory seta absent. Female genitalia somewhat appressed to the coxae, the apodeme shortened accordingly in ventral view; 19 $\mu$  wide, 9 $\mu$  long, coverflap with a double rank of about 10 furrows each; seta 3 $\mu$  long.

Male not studied.

Type locality: Santa Maria, Calif. Collected: March 8, 1945, by M. R. Bell of the State Nursery Service. Host: *Camellia japonica* L. Relation to host: The mites live in flower buds under the scales, causing browning of the flower parts and buds. Type slide: so designated with the above data. Paratype slides: Six in number, with the above data. While the above description has utilized the best collection of material on this species to come to hand, the other collections which have been received from time to time are as follows: 1940—in *Camellia* buds at Santa Paula, collected Nov. 12, by E. L. Smith and Romain Young. 1941—in *Camellia* buds at Santa Ana, collected October 20, by W. W. Cadwallader. 1944—damaging *Camellia* flowers in San Diego, collected January 20, by S. V. Weimer and G. F. Prole of the Federal Survey. The generic placement of this mite is only tentative. The genital structures ally this species to *Eriophyes vitis* Pgst., and to the species in the genus *Cecidophyes*. The dorsal setae arise from tubercles inclining caudad as in typical *Aceria* but these tubercles are not precisely on the rear margin, being a little ahead. *Aceria camelliae* bears somewhat the same relation to the other species of *Aceria* with which the writer is familiar, as *Eriophyes vitis* bears to the other species with setae directed ahead.

\* Eriophyid Studies XIV appeared in the Bulletin California Department of Agriculture Vol. XXXIII, No. 1, p. 18, 1944.

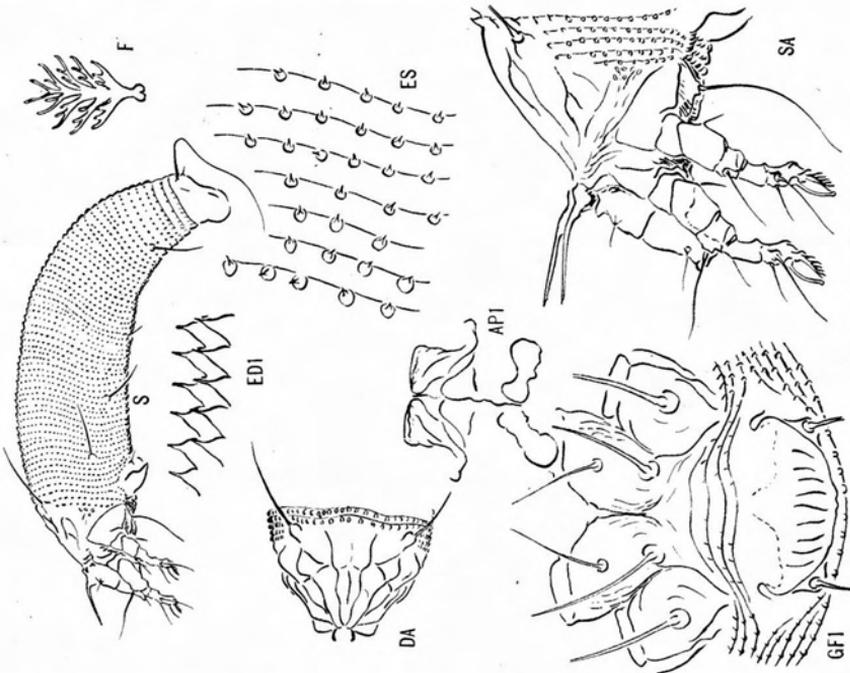


Plate 195—*Aceria baccharices* n. sp.

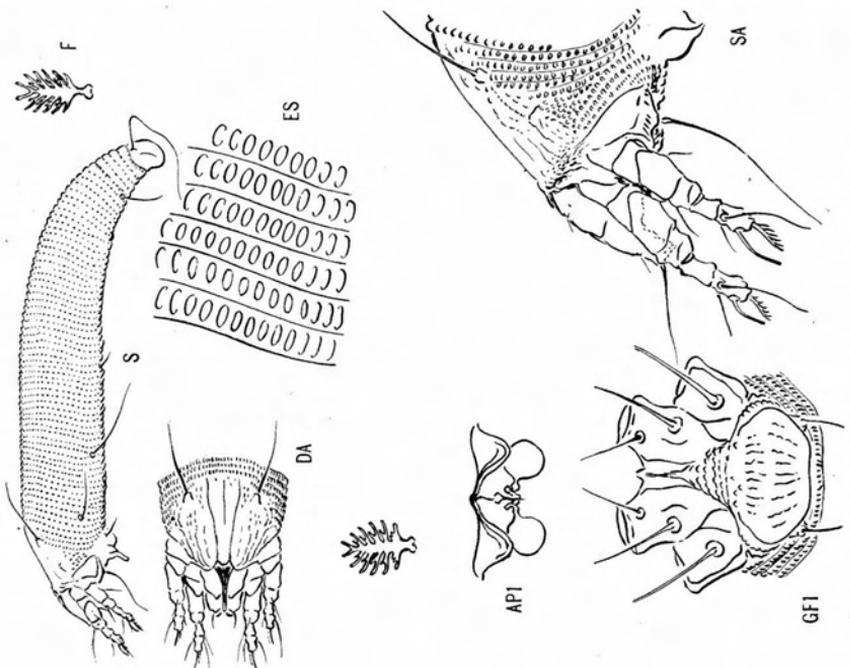


Plate 194—*Aceria carnelliae* n. sp.

*Aceria baccharices* Keifer, new species

## Plate 195

Female 160-170 $\mu$  long, 50-55 $\mu$  thick, orange or reddish orange in color, short, thick, spindleform. Rostrum 30 $\mu$  long, curved down, apical seta short. Shield 31 $\mu$  long, 43 $\mu$  wide, design with a broken central line, the adcentral lines curved, lateral lines curved, few lateral granulations; dorsal tubercles 32 $\mu$  apart, on real margin; dorsal setae 38 $\mu$  long, projecting backwards. Forelegs 32 $\mu$  long, tibia 7 $\mu$  long, tarsus 8 $\mu$  long; claw 8 $\mu$  long, curved, with small knob; featherclaw 5-rayed. Hindlegs 28 $\mu$  long, tibia 6 $\mu$  long, tarsus 8 $\mu$  long, claw 8.5 $\mu$  long. Forecoxae connate. Abdomen with 50-60 rings, completely microtuberculate, the microtubercles each produced into a spine; terminal section bearing the posterior setae humped. Lateral seta 30 $\mu$  long, on about ring 6; first ventral 20 $\mu$  long, on about ring 16; second ventral 7 $\mu$  long, on about ring 28; third ventral 35 $\mu$  long, on about ring 7 from rear; accessory seta present. Female genitalia 24 $\mu$  wide, 14 $\mu$  long, coverflap with 8-10 furrows; seta 15 $\mu$  long.

Male not studied.

Type locality: Chico district, 5-mile dam, Butte County, California. Collected: November 23, 1944, by R. G. White of the Taxonomy Office. Host: *Baccharia viminea* DC, mule fat, an Asteraceous Composite. Relation to host: The mites form irregular bead galls on the leaves and these galls are usually very numerous where found. Type slide: so designated, with the above data. Paratype slides: Four in number as above. Four paratype slides of mites taken from leaf galls on same host at Winters, California, July 4, 1944, by the writer. This is another of the mites with pointed tubercles, associated with composites. The chunky body, humped termen, and few lateral shield granulations, are distinctive. The specific name is *Baccharis* plus a contraction of *cecidium*. This mite also forms leaf galls on *Baccharis glutinosa* Pers. throughout the range of that shrub in Southern California. G. F. Prole of the Federal Survey collected galls on leaves of this host on February 7, 1945 in North Hollywood.

After three seasons' observations on the spring activities of the peach silver mite, *Vasates cornutus* (Banks) (*Phyllocoptes*), at the University of California fruit tree breeding ground, Wolfskill Ranch, Winters district, it seems fairly certain that peach seedlings lacking basal leaf glands are much more vulnerable to the spring activities of this Eriophyid than are the peach individuals possessing these glands. In plots where no mite control has been applied, the longitudinally curled condition of the mite-damaged leaves of the glandless peach seedlings is conspicuously different from the much more normal appearance of the expanded leaves

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**EXPLANATION OF PLATE DESIGNATIONS**

- AP1 Internal female genitalia  
 DA Dorsal view of anterior section  
 ED1 Lateral view of dorsal surface structure  
 ES Side skin structure  
 F Feather claw  
 GF1 Female genitalia and coxae  
 S Lateral view of mite  
 SA Lateral view of anterior section of mite

on glanded seedlings. This difference is apparent at a considerable distance. When mite control has been applied after the first few leaves are out in the spring, the point at which mite damage ceased is sharply marked. The reason which we can propose for this resistance of gland-bearing trees is the viscid gland secretion which protects the very small leaves as they unfold from the bud. Glandless seedlings have much dryer young leaves.

As well as longitudinal leaf-curling, the mites also cause fine pin-points of yellowish leaf irroration during this early season feeding.

Silver leaf of peaches, which is the usual injury attributed to *cornutus*, is another matter, resulting from prolonged feeding by the mite, as its population increases during May, June and July.

Dr. L. M. Smith and Dr. Claron O. Hesse of the University of California at Davis participated in these observations.

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