

## NEW COCCIDÆ.

BY EDW. M. EHRHORN, MOUNTAIN VIEW, CAL.

*Eriococcus adenostoma*, n. sp.

♀ enclosed in an oval (at one end more or less pointed) sac about 3 mm. long and  $1\frac{1}{2}$  mm. broad, woolly, snow-white, of uniform texture.

♀ oval, about half again as long as broad, dark purple, turning bright crimson when placed in K. H. O. Body about  $1\frac{1}{2}$  mm. long. Antennæ light brown, 7-jointed, formula: approximately (347) (12) 56, joint 3 equal 5 + 6. Most of the joints with hairs; joint 7 with several comparatively long hairs.

Legs light brown, large and stout. Each joint with one or more bristles. Femur quite swollen. Tarsus a trifle longer than tibia. Claw stout and curved. Both tarsus and claw with long filiform digitules.

Posterior tubercles short and rounded, with one very long, stout bristle and two shorter ones on their outer margin. Anal ring large, with eight long bristles. Derm colourless, with quantities of small spines and rounded glands distributed all over the dorsum.

Sac of ♂ smaller and narrower than that of the ♀, colour more creamy.

Hab.—On *Adenostoma fasciculatum*, in the mountains, near Mountain View, Cal.

*Lecanium pubescens*, n. sp.

♀ scale about 4 mm. long,  $2\frac{1}{2}$  broad, and 2 mm. high, moderately soft, before gestation covered with very soft hair. Colour blackish-brown, more on the black, with a yellow longitudinal band on the dorsum. Dorsum pitted and margin slightly wrinkled. Some specimens show a lighter colour. When removed from twig the insect leaves a small amount of white powder.

Derm by transmitted light colourless, except margin, which is light brown, with numerous small round gland pores. Margin with a double row of minute simple spines, lateral incisions with one moderately stout spine and two short ones. Anal plates large, outer corner forming a right angle, with several hairs at tip and a long, stout hair on each plate. Anogenital ring with six long, stout hairs. Legs slender. Tibia and tarsus about equal. Femur a little longer than tibia. Coxa, trochanter and femur each with a hair. Claw curved, with slender

knobbed digitules. Tarsal digitules with very fine, long, knobbed hairs. Antennæ 7-jointed, formula : 43 (12) 7 (56). Joint 4 very little longer than 3. Joint, 1, 2, 4, 6 each with a hair; joint 7 with several hairs.

♂ scale glassy white with median ridge, about  $1\frac{1}{2}$  mm. long.

♂ body dark red-brown, legs and antennæ light brown. Wings extend  $\frac{1}{3}$  beyond body, colour iridescent. Thorax with two elevated ridges much darker than body. Antennæ very hairy.

Hab.—On *Quercus* sp., in the mountains, near Mountain View, Cal.

*Lecanium Crawii*, n. sp.

♀ scales not crowding each other; hemispherical, about 3 mm. long, 2 mm. broad and  $1\frac{1}{2}$  mm. high, oval, shiny, brown, getting darker with age. Margin generally lighter than dorsum.

♀ before gestation light brown, shiny. Derm, by transmitted light, brown, with numerous oval gland orifices. Marginal hairs very short and slender. Lateral incisions each with three stout but not long spines. Antennæ 7-jointed, 3 longest, twice as long as 4. Joints 5 and 6 very short. Joints 1 and 2 about equal. Formula : 347 (12) 56. Anal plates broad but not very large. Anogenital ring with six moderately slender hairs. Legs quite stout. Coxa and femur with stout hair. Femur very little longer than tibia. Tibia and tarsus about equally long. Claw stout and curved. Tarsal digitules moderately stout, knobbed hairs. Digitules of claw not stout, a little longer than claw, more or less club-shaped.

Larva light yellow, with distinct ridge on dorsum dividing scale lengthwise. Oval, about twice as long as broad. Rostral loop extending to third pair of legs.

Hab.—On *Acer macrophyllum*, in the mountains, near Mountain View, Cal.

*Comys fusca* was reared from this species.

*Lecanium ventrale*, n. sp.

♀ scale about  $4\frac{1}{2}$  mm. long, 3 mm. broad, 1 mm. high. Oval when seen from above. Soft texture, very much like *L. hesperidum*; light brown, not very convex, and a dark brown border near margin. Dorsum pitted and margin moderately wrinkled, an indistinct mesial ridge.

♀ colour greenish-yellow, with a brown longitudinal line on the dorsum, also two brown lines forming a double cross with the dorsal line, more or less wrinkled and pitted. Ventral view shows the abdomen

a dark purple-brown with very distinct segmentation. Viviparous.

After boiling in soda, derm colourless. Margin with small curved spines. Lateral incisions with long, stout, curved spine and two shorter ones. Anal plates large, with blunt tips, bearing several hairs and notched on outer margin, together forming a square. Each plate has a distinct brown projection into the body. Anogenital ring with six hairs, which are very long, extending  $\frac{2}{3}$  over the plates. Legs stout, coxa and femur each with a stout hair. Femur  $\frac{1}{3}$  longer than tibia. Tarsal digitules long, knobbed hairs, digitules of claw broad and thick. Claw stout and curved. Antennæ 7-jointed, formula: 34721 (56). Joints 1 and 2 with two hairs each. Joints 4, 5, 6 and 7 with several hairs. Joint 3 very little longer than 4. Joints 5 and 6 equal. Larva lemon-yellow, very flat, shiny, oval, about twice as long as broad.

Hab.—On *tuberous plant* in Japanese Nursery, at San José, Cal.

*Encyrtus flavus* and *Coccophagus lecanii* were reared from this species.

#### SUPPLEMENTARY NOTE, AND NOTICE OF A NEW ERIOCOCCUS.

BY T. D. A. COCKERELL, N. M. AGR. EXP. STA.

Mr. Ehrhorn has been so kind as to send me examples of all his new species above described, and I have also been allowed to examine his type slides. The following remarks are offered as a result of the examination of this material. The measurements of antennæ and legs given are all in thousandths of a millimetre:

*Eriococcus adenostomæ*, Ehrh.—This is a distinct little species, with a pure white sac.

The following measurements will help to separate several of our species of *Eriococcus*:

Antennæ of adult female: Segments—	1	2	3	4	5	6	7	Formula.
<i>E. adenostomæ</i> , Ehrh.....	?	25.	33.	25.	16.	16.	31.	37(24)(56).
<i>E. neglectus</i> , Ckll.....	?	16.	33.	11.	14.	25.	..	36254.
<i>E. quercus</i> , Comst .....	?	47.	53.	50.	22.	25.	42.	342765.
<i>E. Tinsleyi</i> , Ckll., n. sp. (a)....	?	31.	45.	45.	25.	19.	25.	(34)2(57)6.
" " " (b)....	?	28.	101.	16.	14.	28.	..	3(26)45.

Of course there is considerable variation, and these figures merely represent average specimens selected. The first segment is more or less ringlike, and its length could not be well measured.