

TWO NEW WESTERN COCCIDAE.

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One day last November, when riding home from the College, I noticed, about a hundred yards from the road, a clump of Lycium-bush, turning yellow from the approach of winter. Although most of the wild shrubs of the neighborhood had yielded their peculiar species of scale-insects (Coccidae), I had never been able to find any on the Lycium. Just at this moment, however, I was so impressed with the feeling that there *ought* to be a species on Lycium, that I got down, tied my horse to a post, and went to examine the above-mentioned clump. As I had hoped, in the middle of the clump, swarming on the stems and twigs, was a very interesting new species, which I now describe.

LICHTENSIA LYCII, sp. nov.

♀ scales numerous on the twigs and stems, more or less gregarious.

♀ reddish-brown, transversely wrinkled; nearly covered by the white convex ovisac, which is not woolly but leathery in consistency, not ribbed, slightly shiny, appearing as if made up of small roundish plates.

♀ with ovisac 7 mm. long, $4\frac{1}{2}$ high, or in many individuals somewhat smaller.

Eggs pale orange. Larva brownish.

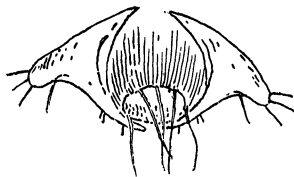
♂ scale about 2 mm. long, narrow, white, semitransparent, granulose, of the ordinary form seen in the Lecaniinae. When immature it is dark brown and subcarinate.

The above characters can all be seen with a hand-lens without preparation.

On boiling the insects in caustic potash the following additional points are discerned by the aid of a microscope.

♀ after being boiled colorless, flattened under a cover-glass it measures $4\frac{1}{2}$ mm. long, 4 mm. wide.

Antennae 8-jointed, 3 longest and about as long as 4 + 5. 5 a little longer than 4. 4 about as long as 8, or slightly longer. 8 as long as 2, or slightly longer. 6 a little longer than 7. Formula* 354 (821) 67. Joint 2 with a conspicuously long hair; joint 5 with a rather long hair. Legs well-developed and fairly large; tarsus, exclusive of claw, about as long as or slightly longer than third joint of antenna. Coxa with two hairs. Trochanter with two hairs, one much longer than the other. Femur very little longer than tibia, tibia considerably longer than tarsus. Femur with one, and tibia with two weak bristles on the inner side. Claw almost straight, fairly stout, the usual digitules well-developed,



slender though not filiform; digitules of claw extending considerably beyond its tip, but tarsal digitules extending beyond those of claw. All four digitules well-knobbed. Rostral loop very short. Margin with rather small, stout, blunt (almost truncate)

* The antennal formula is constructed by enumerating the joints in the order of their lengths, beginning with the longest, and bracketing together those of equal length.

spines. Anal plates appearing curved, sublunate, but on pressure flattening out to a more triangular form, with the outer sides meeting at less than a right angle. Anogenital ring with six hairs. The peculiar plates, with the anogenital ring between, are figured herewith, being difficult to describe in a satisfactory manner. The disposition of the seven bristles on each plate is to be noted; also the striae radiating from the ring.

Lichtensia viburni (Licht. MS.) Signoret, 1873, was until last year the only known species of its genus. It was first found at Montpellier, France, but was recorded from England by Mr. Douglas in 1887. I have received specimens from Mr. R. Newstead, which were found on ivy at Llandaff, Wales, by Mr. B. Tomlin. Just twenty years after the discovery of the first species, I found at Vera Cruz, Mexico, a most beautiful species with a yellow ovisac (*Lichtensia lutea* Ckll.), which at the time of its description (Ann. Mag. N. H., July 1893) was regarded as an aberrant Pulvinaria. Subsequent studies showed that it must be regarded as a *Lichtensia*, though widely departing from the type of that genus.

Quite lately I have received yet another species from Japan (coll. Takahashi, com. L. O. Howard) which will be elsewhere described as *Lichtensia dubia*.

The genus thus appears to consist of four species so far known, inhabiting widely distant localities. It is by no means certain, however, that we have a natural genus, consisting of species

derived from a common stock exhibiting the generic characters. The possibility cannot be forgotten, that what we call *Lichtensia* merely comprises several independent derivatives from the general Pulvinaria stock, in which case the peculiar distribution need not cause surprise.

L. lycii is from Las Cruces, N. M., 3,800 feet alt.; on a *Lycium* which Prof. E. O. Wootton informs me is almost certainly *L. Torreya*, Gray.

CEROCOCCUS EHRHORNII, sp. nov.

♀ bright crimson, pyriform. Antennae minute, hardly longer than broad, jointless, subtruncate, with about five stiff bristles at the end. The antennae are about twice as far from each other as from the edge of the body, and about as far from each other as from the mouth-parts. Mouth-parts brownish. Caudal portion brown, cylindrical, produced, divided a little before its middle into two conical processes,—the lobes,—each bearing a few inconspicuous short but stout spines. Anal ring between these processes, with four (two pairs) of stout spines. Derm with very small double pores.

The females, no bigger than ordinary females of *Diaspis*, are gregariously massed on the bark in a hard dirty-white secretion, the scales not being separable. On boiling in soda, the insects turn the liquid brown.

Hab. On live oak, Mountain View, California, 1895 (coll. Ehrhorn).

This singular insect differs from *C. quercus* Comstock, the only Cero-coccus hitherto known, by the shape of the ♀, the character of the anal ring (if Comstock's figure is correct), the shortness of the spines on caudal lobes, and the totally different external appearance.

