SPATHULATE HEAD SETAE ON THE LARVA OF CHAMYRIS CERINTHA TREITS.

BY HARRISON G. DYAR, WASHINGTON, D. C.

I had occasion to notice spathulate head setae in the case of *Cicinnus melsheimeri* (Journ. N. Y. ent. soc., iv, 92). A second instance is found in *Chamyris cerintha*, though here it is the first epicraneal seta that has become flattened instead of the fourth, and the structure disappears at the last moult. A condensed description of the last stage of the larva has been given by Mr. Coquillett (Papilio i, 56); but he does not refer to the spathulate hairs of the early stages. I assume the number of stages for convenience in indicating them; I do not know that seven is the true number.

Stage IV. Slender, anal feet divergent: head strongly bilobed, the lobes angular, the apex black with a line passing down both front and back lateral angles; green; seta i short, spathulate; width 1.2 mm. Body with joint 12 slightly enlarged; setae single, stiff, coarse, black; i, ii, iii, v, pointing sharply forward, iv and vi backward, all normal, seta iv behind the middle of the spiracle; leg shields small with few setae. Green; tubercle i on joints 5 to 7 enlarged and black; an obscure white lateral line above wart iii;

anal feet and a subventral dash on joint 12, crimson. The two anterior pair of abdominal feet are slightly weaker than the others.

Stage V. The same; a broken reddish line runs along warts i and ii, which are nearly in line; white lateral line distinct.

Stage VI. The same; the white lateral line is sharply edged; head green, the black lines fainter than before, seta i still spathulate.

Stage VII. Head more rounded, seta i no longer spathulate, very short; the lobes are low, not angular. Body slender, dorsum between the distinct white lateral lines filled in with dark vinous purplish, the subventral regions green. Setae coarse, long and black; tubercle ii on joint 12, and i on 13 large, high and conical, the others normal.

The line on the head is abbreviated, partly or wholly brown; width 2.5 mm. Abdominal feet essentially equal.

Food plants. Wild cherry and plum.

Larvae solitary, very active and quickly spring off of the plant when disturbed, like some Deltoids.

AN APPARENTLY NEW LECANIUM FOUND ON WHITE CEDAR.

BY T. D. A. COCKERELL AND G. B. KING.

This article is written by Mr. Cockerell, but is partly based on Mr. King's notes and observations.

When Mr. King sent me a small almost globose Lecanium found on White Cedar, I could hardly believe it could be anything

but a form of *L. fletcheri*, especially since he had found some veritable *fletcheri* in Massachusetts on arbor-vitae. A close examination of the Cedar scale, however, reveals differences which must surely be specific, so the insect is described herewith.

Lecanium pallidior, Ckll. & King, n. sp.

♀ *Scale*. 3 mm. long, 2 broad, $1\frac{1}{2}$ to 2 high, very convex, very shiny, wrinkled; light yellowish-brown or ochreous, paler at the sides than dorsally. This is a very much paler scale than *fletcheri*, and when boiled in caustic potash it becomes very pale and transparent, while *fletcheri* remains dark brown.

Antennae. Six-segmented, the segments measuring as follows in μ (1.) 34-51. (2.) 28-31. (3.) 42-45. (4.) 34. (5.) 23-31. (6.) 34-42. Mr. King reports a 7-segmented antenna, with the last three segments measuring respectively 12, 16 and 38 μ . This agrees well enough with *fletcheri*, which I find always to have 7 segments, the last three 14-20, 14-17 and 39-42 μ . There is also this in common with *fletcheri*, that the second segment is shorter than the first or third.

Legs. The different legs are similar in type, but the tibiae and tarsi are variable. Four legs measured gave as follows — (μ)

	(1.)	(2.)	(3.)	(4.)
Coxa.	87.	85.	87.	85.
Femur + trochanter.	116.	116.	116.	118.
Tibia.	110.	76.	82.	68.
Tarsus + claw.	65.	76.	90.	79.

The first is an anterior leg. These dimensions are very different from those of *L. fletcheri*, as will be seen by comparing the statistics given below.

Lecanium fletcheri, Ckll.

<i>Antennae</i> . (μ)	Segments.	1.	2.	3.	4.	5.	6.	7.
Mass. spn.		36.	34.	45.	42.	20.	17.	42.
Canadian spn.		42.	31.	48.	37.	14.	14.	39.

<i>Legs</i> . (μ)	Coxa.	Femur + troch.	Tibia.	Tarsus + claw.
Mass. spn.	113.	127.	87.	85.
Canadian; front leg.	56.	107.	90.	85.
" middle leg.	121.	144.	96.	93.
" hind leg.	130.	141.	93.	90.
" hind leg.	121.	130.	93.	96.

The front legs of *fletcheri* appear thus to differ appreciably from the other four as regards the coxa and femur. Both coxa and femur of the middle and hind legs are noticeably longer than in *pallidior*.

Lecanium pallidior was found by Mr. King at Methuen, Mass., Nov. 15, 1898, on small twigs of *Chamaecyparis thyoides* (L.). The leaves and small limbs were thickly covered at that date with young larvae. The species belongs, of course, to *Eulecanium*.

TWO NEW COCCIDS FROM BERMUDA.

IN January of this year, the writer in his search for coccids infesting green-house plants, observed a potted plant in one of the conservatories visited, trimmed quite close to its roots, and the remaining stumps well covered with a small clear white scale. The plant in question was recognized at once to be *Cycas revoluta*. Upon enquiry it was learned that this plant was imported from Bermuda last year. Some of the old stems with the coccids were taken for study. One of the species proved to be *Aspidiotus hederæ* Vallot, a very common species through the United States, and the other coccid was

new to the writer, who sent a mount and some of the scales to Prof. Cockerell for determination. He identifies it as *Aulacaspis elegans* Leon. Described as *Howardia elegans*, and only known hitherto from *Portici Italy*, on *Cycas revoluta*. The ♂ and ♀ scale are unknown. The species differs from typical *Aulacaspis* by lacking the circumgenital glands. The occurrence of this species is of much interest and the coccids of Bermuda are almost unknown. There are only two other species known to the writer recorded from those islands, *Mytilaspi citricola* Pack. on orange and lime trees, and *Chionaspis citri* Comst. on orange.

Geo. B. King.
Lawrence, Mass., Feb. 27, 1899.