

normal. Feet normal for Geometridae. Color greenish brown, with faint, narrow dorsal and lateral brown lines, the latter expanding into spots at the projections; venter darkly shaded. Setae both on head and body short with swollen tips. Later the larva appears rather uniformly dark brown. The projections appear the whole length of the abdomen, but are largest centrally.

Stage II. Roughened; head round, a slight point at apex; width about .4 mm. Tubercles all rather large, especially on the cervical shield and joint 13; setae iv and v of joints 5 to 9 borne on prominent projections. Skin finely spinulose granular. Color yellowish brown, the projections darker, reddish; tubercles pale; all grizzled by the pale granules. Setae pale, short, pointed.

Stage III. More roughened; subventral processes forked (iv and v), sharp; also smaller lateral points anteriorly and posteriorly; a pair of prominent points on joint 2 and on joint 13 before the triangular anal plate. Head rounded, slightly bilobed; width about .6 mm. Color yellowish brown, densely covered with pale yellow granules, slightly mottled with dark red brown, especially in patches below the processes. Tubercles conic, high; setae short, stiff, white. No well defined markings.

Stage IV. Essentially the same. Head about .8 mm. Lateral projections of joints 5 to 9 flattened, furcate, the anterior limb longest, bearing tubercle v, excavate before, sloping behind; the spiracle borne on the dorsal aspect of the projection; tubercles iv and v conic, pale. Other points on joints 2 to 4 and 12 as before, scarcely any on joints 10 and 11. Color rusty brown dorsally, grayish ventrally, the ventral aspect of the

projections and a series of intersegmental dorsal marks dark brown; narrow, obscure dorsal and subdorsal lines, the latter distinct on joints 10 to 12. Skin densely pale granular.

Stage V. Head bilobed, roughened; width about 1.2 mm. Dead leaf brown, brighter dorsally posteriorly. Three dark brown, triangular marks on joints 5 to 7 anteriorly. Lateral processes obliquely streaked with brown and pale below, especially on joints 5 and 6, furcate as before. Tubercles, high; ii of joint 12 very high; many slightly produced tubercles on the thorax; setae small. Markings faint, but a pale dorsal line and a subdorsal and medio-ventral can be traced. Skin rough as before.

Stage VI. Head bilobed, the lobes slightly pointed, roughened granular, rusty brown; width 1.6 mm. Body granular, the tubercles prominent, single, normal. Lateral processes on joints 5 and 9 small, those of 6 to 8 large, furcate, bearing tubercles iv and v; four cones on the cervical shield; a subdorsal elevation with three cones on joints 3 and 4; a slight subventral prominence on joints 10 to 12; tubercles ii on joint 12 form long cones. All roughened granular; color dead leaf brown, a little variegated, being slightly grayish dorsally on joints 6 to 8 faintly brown lined longitudinally and with dark brown dots on joints 6 to 9 anteriorly and a bent white lateral line on joints 10 to 12. Spiracles dark ringed. The appearance is as in the previous stages. This stage lasted 30 days.

Food plant. Oak. The larvae are sluggish, solitary, and rest on the brown leaf where they have fed, their ragged appearance harmonizing with the mutilated and partly withered leaf.

SOME SYNONYMY.

APIDAE.

(1.) *Melanostelis rubi* (Ckll.) = *Stelis rubi*, Ckll., Entom., July 1898, p. 167. n. syn. *Mel-*

anostelis betheli Ashm., Psyche, Nov. 1898, p. 283.

COCCIDAE.

(2.) *Pulvinaria pyriformis* Ckll., Jn.

Trinidad Field Nat. Club, 1894, p. 309. n. syn. *Pulvinaria newsteadi* Leonardi, Riv. Pat. Veget., 1898, p. 7 of separate.

(3.) *Aspidiotus trilobitiformis* Green, Ind. Mus. notes, 1896, p. 3 of separate. n. syn. *Aspidiotus darwytii* [daruyi=misprint] d'Emmerz de Charmoy, Revue Agricole, July 30, 1898, p. 2 of separate.

Segregates from Perdita.

I hardly know what to say about Mr. Ashmead's three new genera, established in Psyche, pp. 284-285, at the expense of *Perdita*. The palpal characters used to separate *Cockerellia* from *Perdita* are of no account, because Mr. Ashmead has overlooked the fact that Smith's type of *Perdita* had lost both pairs of palpi, the palpi in the figures being put in in dotted lines, purely from the imagination! It is quite certain, I think, that no *Perdita* ever had such labial palpi as Smith figures. Again, Mr. Ashmead says for *Cockerellia* "abdomen always banded or maculated," which is not usually the case in the males of the species he indicates as the type! The group of *Perdita albipennis* is a fairly compact section or perhaps subgenus, to which the name *Cockerellia* will apply, but I am reluctant to treat it as a genus.

Now as to *Philoxanthus*, the yellow color can hardly be generic, as yellow species occur in at least two distinct groups of *Perdita*. The claws are practically the same as in the group of *P. albipennis (hyalina)*, being in both cases simple.

Nomadopsis is equally doubtful. There are species showing all sorts of gradations in the length of the marginal cell; "maxillary palpi," in the description, should apparently be labial palpi.

A really good subgenus of *Perdita* for which I will propose the name *PERDITELLA*, contains *P. laneae* (type of subgenus), *marcialis* and *larrearum*. It has the stigma large; the marginal cell greatly reduced, with the substigmatal portion much the longest;

and the second submarginal very small and triangular.

I do not say that *Perdita* should not be divided into two or more genera; probably it will ultimately have to be split into half-a-dozen, but it will be necessary to proceed with caution.

T. D. A. Cockerell.

Mesilla Park, N. M.,

Nov. 5, 1898.

CHINA ASTERS INFESTED BY A COCCID.

Ripersia lasii Ckll. was discovered June, 1896, in various ant nests in Massachusetts. Since then much time has been spent in search for its food plant, and without success until now, Oct. 11th, when it was found feeding at the roots of china asters, attended by *Lasius americanus* Em. Nearly all of the plants in the bed were found to have a herd of these coccids attached to their roots, and in every instance the ant was present with them. I have thought all along that the *Ripersis* sp. found in ant nests would turn out to be subterranean. There was also found on some of the roots of *Asters* three species of *Aphids* usually found in ant nests in this locality. *Aphis maidi-radici*, *Schizoncra corni*, and a *Pemphigus* sp. Several other plants were examined, but no coccids found to infest them. For the literature treating upon the genus *Ripersia* found in ant nests in Massachusetts see Canadian Entomologist, 1896, p. 222, same publication 1897, p. 92. Science Gossip, vol. 3, Feb., 1897, p. 240, and Entomological News, 1897, pp. 125-129.

Geo. B. King.

Lawrence, Mass., Oct. 12, 1898.

CHANGE OF ADDRESS. Baron Osten Sacken requests us to announce that his residence has been changed to 8 Bunsen Strasse, Heidelberg, Germany.



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