

TWO NEW SPECIES OF LECANIUM FROM CANADA.

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

Lecanium (Eulecanium) caryarum, n sp.—♀. Scale (after producing young) somewhat variable in form, from long. 6, lat. $3\frac{1}{2}$, alt. $2\frac{2}{3}$ mm., to long. $5\frac{1}{2}$, lat. $4\frac{1}{3}$, alt. $3\frac{1}{4}$ mm., the more swollen individuals probably affected by parasites; outline in transverse section nearly hemispherical, in longitudinal section more or less low-pyramidal, with the posterior slope considerably the shortest, the apex of the pyramid marked by a more or less prominent boss, sometimes inclined to be double. Colour of scale dark chestnut; sides pitted and plicate to a variable degree.

Antennæ rather unusually long and slender, about $348\ \mu\mu$ long; formula 37 (12) 465; 3 is about $83\ \mu\mu$ long, 7 about $50\ \mu\mu$; 1 with two short bristles, 2 with two long bristles near the end, 4 with a very long bristle, 5 and 6 each with a rather short bristle, 7 with two whorls of rather short bristles.

Tarsus about $\frac{2}{3}$ length of tibia; tibia $116\ \mu\mu$ long, tarsus (without claw) about $74\ \mu\mu$. Digitules long; thorax of claw extending far beyond its tip, one a little shorter and stouter than the other. Length of anal plates about $150\ \mu\mu$. Width of mouth-parts about $166\ \mu\mu$.

Hab.—Very abundant on twigs and branches of a magnificent tree of *Carya alba*, on the grounds of Mr. C. Thonger, at Niagara, Ontario, June 17th, 1898 (J. Fletcher).

There is an unfortunate confusion about Fitch's *L. caryæ*. The original description, published in 1856, is as follows: "Large, very convex, oval, black fading to chestnut brown, in May dusted over with a white powder." Long. 0.40, lat. 0.25 inch. This agrees tolerably well in some respects with a species found by Mr. King, which will be described in a future paper.

Signoret, however, describes a quite different *L. caryæ*, based on specimens sent to him as that species by Fitch. This is only 6 mm. long, and has 6-jointed antennæ. It is closely allied in all respects to the European *L. corni*. What I take to be this species was found by Mr. G. B. King, at Methuen, Mass., on *Gleditschia*. This *Gleditschia* insect, however, agrees even better with Signoret's account of *L. cynosbati*, Fitch, and my present opinion is that *cynosbati*, Fitch, and *caryæ*, Sign. (not Fitch, 1856), are one species.

L. caryæ, var. *canadense*, Ckll, must stand as *L. canadense*. *L. caryarum*, above described, is well distinguished from all these species, especially by its antennæ.

Lecanium (Eulecanium) macluratum, n sp.—♀. Scale long. $4\frac{1}{2}$, lat. 3, alt. 3 mm., very dark chestnut brown, shiny, smooth dorsally, pitted round the margin; in transverse section narrower than a half circle, in longitudinal section with the outline of a half circle, except that the margin is produced caudally.

Antennæ shorter than in *caryarum*, about as long as in *cynosbati*, 7-jointed, formula 3 (17) 25 (46). Sometimes the antennæ seem only 6-jointed, with a formula 3162 (45). In the normal (7-jointed) antennæ, 3 is about 62 $\mu\mu$ long, while 4 is less than half that length; 1 is about 42 $\mu\mu$ long, 7 the same.

Tibia 113 to 121 $\mu\mu$ long, tarsus (without claw) 85 to 90 $\mu\mu$, claw 23 $\mu\mu$. Claw digitules rather slender, extending considerably beyond its tip. Skin reticulated as usual in the subgenus.

Hab.—On twigs of osage orange, Niagara, Ontario, June 17, 1898 (J. Fletcher).

This scale has some considerable resemblance to *L. corylifex*, Fitch, which Mr. G. B. King has lately found at Lawrence, Methuen and Andover, Mass., on *Corylus americana*.

I will take this opportunity to record that I have just received *L. quercitronis*, Fitch, from two new localities, on new food-plants, viz., (1) on elm, DuBois, Ill. (Chas. C. Adams), (2) on *Castanea pumila*, on the road to and near the Yosemite Valley, Mariposa Co., Calif. (Alex. Craw).

TÆNIOCAMPA ALIA, Gn., AT QUEBEC.

BY REV. THOMAS W. FYLES.

Fifty-nine eggs of this species were found on a twig of *Amelanchier Canadensis*, at the "Gomin," June 1st, 1897. They were laid in four rows—each row was about three-fourths of an inch long.

Egg.—Small, dull pink in colour, striated. The ridges branch into pairs a short distance from the apex, and number altogether about 33. Each ridge is regularly indented, so as somewhat to resemble a cord. Hatched in the afternoon of June 5th.

Young larva.—A half-looper. Length one-tenth of an inch. Colour greenish-yellow. Set thickly with brown warts, and sparsely with bristles.