general color is very uniform, the warts yellow but small and inconspicuous. Some of the whitish lines of the ground color are broken into ring-spots and streaks; about six remain on each side nearly continuous; the body is therefore dull dark purple, mottled with the narrow pale lines and rings and the small yellow tubercles. Hair very inconspicuous, fine, short, about one from each wart; secondary hair very fine, pilose. Spins an imperfect cocoon between leaves, the moth emerging the following season. The larvae have the habits of *I. apicalis* (van) living in houses formed of leaves spun together.

**BIBLIOGRAPHICAL NOTES.—VII.**

**BY SAMUEL HENSHAW.**

**MINOR ENTOMOLOGICAL PUBLICATIONS.—**

**GARDEN AND FOREST.** Vol. 5 (1892) contains the following notes and articles:—

Jack, J. G. The perforation of flowers [by bees]. p. 29-30, fig. 7.

S. The gypsy moth and its extermination. p. 81-82.

Smith, J. B. Insects in the soil of greenhouses. p. 117.

Nutter, F. H. Help against the gypsy moth. p. 119.


Hoskins, T. H. Insecticides and fungicides in the orchard. p. 261.

L [odeman], E. G. The pear Psylla. p. 285.


Smith, J. B. The oak pruners [Elaphidion sp.]. p. 557-558, fig. 94-95.

Editor. Co-operation against insect invasions. p. 601-602.


Vol. 6 (1893) contains the following:—


Anon. [Notice of Smith’s Cranberry insects]. p. 84.

R[obbins,] M. C. War upon caterpillars. p. 318-319.


Editor. Legislation against plant diseases and injurious insects. p. 401-402.


Smith, J. B. Is the woodpecker useful? [as a destroyer of insect larvae]. p. 483-484.

Vol. 7 (1894) contains the following:—

Jack, J. G. The plum Curculio as an apple pest. p. 44-45.

Smith, J. B. The plum Curculio on apple. p. 104.

Anon. Review of Sempers’s Injurious insects and the use of insecticides. p. 149.

Orpet, E. O. The onion maggot. p. 187-188.


Beach, S. A. A scale insect [Lecanium cerasifex] on plums. p. 284, fig. 47.


Smith, J. B. The San José scale. p. 344, fig. 55.

Hopkins, A. D. The relations of insects and birds to present forest conditions. p. 348.

Smith, J. B. The flat-head pear borer [Agrilus sinuatus]. p. 373-374, fig. 60.

C., S. and Editor. Insects injurious to plants. p. 448.

Sirrine, F. A. The pernicious scale on Long Island. p. 449.

Vol. 8. (1895) contains the following: —

Anon. [Notice of Smith's San Jose scale]. p. 60.

[Slingerland, M. V.]. Insects injurious to fruits. p. 79.

Wright, W. C. The gypsy moth in Massachusetts. p. 108.

[Hubbard, H. G]. Effects of cold weather on insects in Florida]. p. 140.

Goff, E. S. The kerosene attachment for spraying pumps. p. 143, fig. 21-22.

Weed, H. E. Kerosene attachment for knapsack spray pumps. p. 186-187, fig. 29.


Cockerell, T. D. A. New facts about scale insects. i. p. 244.

Anon. [Notice of Slingerland's Cigar-case bearer]. p. 270.


Lowe, V. H. The white-marked tussock moth, Orgyia leucostigma, in western New York. p. 314-315, fig. 43.

Jack, J. G. Another herbarium pest (Ephesia interpunctella). p. 323-324, fig. 45.


Smith, J. B. Why certain hickories died [Ravages of borers]. p. 352-253, fig. 49.


Anon. [Raupenleim]. p. 470.

Cockerell, T. D. A. Scale insects liable to be introduced into the United States. p. 513.

Anon. [The cabbage maggot, Anthomyia brassicae.] p. 520.

PROCEEDINGS OF THE CLUB.

14 February, 1896. The 190th meeting was held at 156 Brattle St., Mr. S. H. Scudder in the chair.

Prof. C. M. Weed read his presidential address for 1895 on the Hibernation of Aphides.

In continuation of his remarks at the last meeting, Mr. A. G. Meyer said the cells from the scales of Lepidoptera were modified hypodermic cells and homologous with hairs. The pigment of the scales is derived from the blood, a haemolymph, of the chrysalis, which fills the scales while the pigment is forming. The haemolymph is an albuminous fluid containing a strong acid; its mineral bases contain a large amount of iron and also potassium and sodium in small quantities. The following facts confirm the statement that the pigments of the mature wings are derived from the blood of the chrysalis. The red band on the hind wing of Samia cecropia becomes yellow by the addition of hydrochloric or nitric acid, but its red color is restored by ammonia. The blood of the pupa of that species when treated with warm nitric acid becomes yellow, and is changed to orange-red by ammonia; the application of hydrochloric or nitric acid again turns it yellow, the color being restored by ammonia, exactly as is the case with the red color of the mature wing. Also, if the blood of Callosamia promethea is treated with hydrochloric acid and a minute crystal of chlorate of potash at a gentle heat, it becomes purple, but is blackened to a drab color by nitric acid. The purple spots near the outer edge of the hind wing of the female moth are similarly bleached to a drab color upon application of nitric acid. Most of the colors of the wings are probably derived from the blood of the chrysalis by processes of oxidation.

In answer to questions, Mr. Meyer stated that it was in the last stages of the pupa that the pigment was developed; and that colors
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