

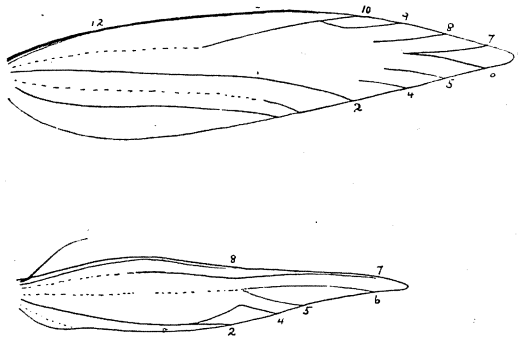
NEW GENERA AND SPECIES OF TINEINA.

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Several species of Tineid moths in the writer's collection belonging to genera apparently new are of considerable interest because of their phylogenetic significance or because they show relationship to isolated genera or groups of genera. The present paper includes the description of these genera, together with descriptions of a number of new species recently bred. The types are in the writer's collection.

Corythophora, new genus.

Face smooth; head elongate, with an erect tuft between the antennæ. Antennæ $4/5$, basal segment enlarged and concave beneath to form an eye-cap, with pointed projecting flap of scales anteriorly. Labial palpi moderate, drooping, smooth-scaled. Maxillary palpi rudimentary.

Fig. 18.—Venation of *Corythophora aurea*.

First segment of anterior tarsi thickened with scales; posterior tibiæ hairy. Fore wings elongate ovate, costa thickened for two-thirds its length; 1b simple, 3 absent, 6 and 7 connate, 9 and 10 arising near costa, 11 absent; transverse vein absent between 2 and 9. Hind wings $2/3$, narrow, lanceolate, cilia 4; 3 absent, 5 and 6 stalked, transverse vein absent between 4 and 5. (Fig. 18).

Type—*Corythophora aurea*.

The relationship of this genus to *Leucoptera* Hb., *Crobylophora* Meyr., and *Proleucoptera* Busck., is suggested at once by the general appearance of the insect, and a study of all the characters substantiates this view. It is a much earlier form and undoubtedly indicates the stem from which the genera of this group have sprung.

Legs bronzy brown, hind tarsi tipped with pale yellow.

Expanse: 7-8 mm.

Two specimens, Fredalba, San Bernardino Co., Cal. Larva in brownish blotches in leaves of a species of *Cornus*. The completed case appears somewhat truncate at each end. Mines received, August 6; imagos emerged May 21 and 25.

More closely allied to *A. nyssæfoliella* than to any other species, but the more reddish colour and the more slender fascia will separate the two species.

Obrussa, new genus.

Head and face tufted. Antennæ $2/3$, simple in ♂, basal segment enlarged and concave beneath to form an eye-cap. Labial palpi well developed, porrected. Maxillary palpi long, filiform, folded. Tongue rudimentary.

Posterior tibiæ with spines above; middle spurs above the middle of the tibiæ.

Fore wings elongate ovate; 1b simple at base, 2 becoming obsolete shortly beyond transverse vein, which closes the cell before the middle of the wing, 3 and 4 absent, 5 and 6 stalked, the stalk out of 8, 7 to costa out of 8, 9 absent. Hind wings a little over $1/2$, cilia $2\frac{1}{2}$; 1c faintly visible, 3 and 4 absent, 6 absent, 5 and 7 stalked from before middle, cell open between 2 and 5. Frenulum of many spines. (Fig. 23).

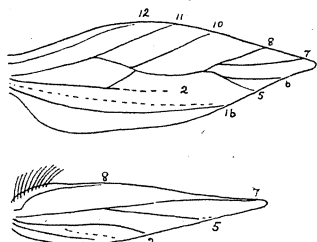


Fig. 23.—Venation of *Obrussa ochrifasciella*.

Type: *Obrussa ochrifasciella* Chambers (Can. Ent., V, 128, 1873.).

The genus seems to approach *Ectædemia* Bsk. more closely than any of the other allied genera; from *Ectædemia* it differs chiefly in the presence of vein 5 of the fore wings and in the position of the spurs of the hind tibiæ, which are situated above instead of below the middle. *Obrussa* is relatively somewhat shorter and broader winged than either *Ectædemia* or *Nepticula*.

In describing *Nepticula ochrifasciella*, Chambers probably had before him males only, which are uniformly smaller than females. and alone show the distinct ochreous under surface of the basal

half of the fore wings. A fuller description embracing both sexes is here given:

Palpi pale ochreous. Tuft on face and head reddish ochreous. Antennæ fuscous, eye-caps ochreous.

Thorax and basal third of the fore wings black, apical two-thirds tinged with brown. A broad pale ochreous fascia crosses the wing at the basal third. From base to outer edge of fascia on costa, and nearly to tornus on dorsum, the under side of the wing in the ♂ is ochreous; in the ♀, this area though paler is not definitely outlined. At two-thirds are some scattered paler scales, sometimes (in ♀) forming an indistinct line across the wing. Cilia around the apex and last row of scales at the extreme apex pale ochreous. Cilia elsewhere concolorous with the wing. Hind wings gray, cilia concolorous.

Legs dull ochreous, mixed with fuscous; outer surface of fore and middle tibiæ and tarsi dark brown.

Expanse: 6.5 mm. (♂); 7-8 mm. (♀).

I have always found this species resting on leaves of saplings in dense woods with sparse undergrowth. The specimens in my collection were taken May 30 to July 6; a single specimen is dated August 5. I have thus far no clue to its life history.

BOOK REVIEWS.

THE HOUSE-FLY. ITS STRUCTURE, HABITS, DEVELOPMENT, RELATION TO DISEASE AND CONTROL. By C. Gordon Hewitt, D.Sc., F.R.S.C., Dominion Entomologist, 382 pp., 105 figs., Cambridge, at the University Press, 1914. Price 15 shillings net.

It is unusual to find a book dealing with as wide variety of subjects as this one, that does not show some inequality of treatment when carefully analyzed. The author generally reveals the fact that he is more at home in some branches of the subject than in others. Of Dr. Hewitt's book this cannot be said. Whether he discusses questions of minute anatomy or parasitology, bacteriology or the practical problems concerned with public health, he shows a thoroughness of grasp and a clearness of diction only possessed by the master.

The present work is an outgrowth of Dr. Hewitt's admirable monograph on the House-fly, which first appeared in three parts