

to this subject, and says strictly that his *Equites* form the first class, *Heliconii* the second, *Danaii* the third, *Nymphales* the fourth, *Plebeii* the fifth.

The closing lines in Mr. Scudder's paper should therefore be amended so as to read thus: "In Linne's mind which was a typical *Papilio*—*Rhamni*, or *Antiopa*, or *Machaon*? The answer is simply that Linne in his study arrived at the conclusion that the first class of his *Papilio* should be formed by the *Equites*. I would remark, however, that Linne *never speaks*, as far as I know, of any particular species being the type of its class, and this idea that his first species is the type is of very recent date.

The fact that so few Entomologists have the opportunity of consulting Linne's older works, induced me to publish these statements.

MICRO - LEPIDOPTERA.

BY V. T. CHAMBERS, COVINGTON, KENTUCKY.

(Continued from page 153.)

ANTISPILA.

A. cornifoliella ? Clem.

Can there be two *Antispila* miners of the Dog-wood? Either there must be, and my specimens are specifically distinct from this species, or Dr. Clemens' description is strangely erroneous in at least one particular, viz., the color of the fascia and streaks, which he says are golden in *cornifoliella*, but which are silvery white in my specimens, all of which—six in number—agree exactly in ornamentation, and all but one of which are bred specimens. The species of the genus generally resemble each other very closely, and some recognized species do not differ from each other more than my specimens do from Dr. Clemens' description. Neither is it improbable that two species mine the leaves of the Dogwood, for the same thing occurs in Europe, where *A. Pfeifferella* and *A. Treitschkiella* both mine the leaves of *Cornus sanguinea*. *A. cornifoliella* and my specimens both mine the leaves of *Cornus florida*. I subjoin Dr.

Clemens' description for the purpose of comparison with my own specimens :

" *Head, face, labial palpi and fore feet dark brown.* Antennae dark brown ; basal joint somewhat ochreous. Forewings rather dull dark brown, with a coppery hue. Near the base is a rather narrow, golden band, *not constricted on the fold, and rather indistinct toward the costa.* where it is somewhat suffused with a coppery hue, and nearest the base on the inner margin. At the apical third of the wing is a small golden spot, and nearly opposite, on the inner margin, another of the same hue, with the hinder portion of the wing tinged with a bright reddish coppery hue ; ciliae dark grayish. Hind wings purplish brown ; ciliae somewhat paler, with a coppery hue."

The italics are Dr. Clemens'. The following description is drawn from the six bred specimens above mentioned :

Head and face dark brown or brilliant metallic, according to the light ; labial palpi yellowish white ; tarsi all yellowish white, with each joint tipped with dark brown on its anterior margin. Antennae dark brown, with the two or three joints nearest the base ochreous, and *the extreme tip white.* Fore wings and thorax dark brown, blackish, bronzed or tinged with purple, according to the light ; before the middle of the wing is a slightly curved fascia, which is widest and nearest to the base on the dorsal margin, *not constricted on the fold, but quite distinct throughout.* A costal and dorsal streak just before the ciliae, the costal streak a little behind the dorsal one. In fresh specimens this fascia and these streaks are silvery white ; in old specimens they have a faint golden hue in some lights. (Clemens describes them as golden.) *Basal half of the ciliae purplish ; apical half grayish silvery.* *Al. ex.* scarcely $\frac{1}{4}$ inch.

Dr. Clemens suggests that *cornifoliella* may be a variety of his *Nysæ foliella*. I have never succeeded in breeding the latter species.

A. isabella, Clem.

I find nearly the same differences between my specimens (bred) of this and Dr. Clemens' description, that I have noted above as to *cornifoliella*. Dr. Clemens says that the fore wings have no greenish or violet reflections, which is certainly incorrect. The fascia is wider than in *cornifoliella*, the thorax more shining metallic, the purple hinder marginal line is less distinct, and the entire wing is less purplish, and the species is a little larger. Nevertheless, they resemble each other very closely. The

costal and dorsal spots in both are of nearly equal size, or the costal one is a little the largest.

A. viticordifoliella. *N. sp?*

Dr. Clemens mentions a mine and larva in grape leaves to which he gives this name, but he was not acquainted with the imago. Though it sometimes happens that more than one species of a genus mines leaves of the same plant, and it is therefore possible that the species described below may not be the same referred to by Clemens, yet from his description of the mine and larva, I feel confident that it is, and have therefore given it the name suggested by him.

Dark brown, inclining to blue black, with a purplish tinge in some lights, and in some lights bronzy brown or greenish; thorax and base of the wings with pink, purple or topaz red reflections, according to the light. A nearly straight silvery white fascia before the middle of the wings, not constricted on the fold, widest on the dorsal margin, where it is also a little nearer to the base; a large triangular silvery white dorsal streak just before the beginning of the ciliae, and a smaller one at the beginning of the costal ciliae. Ciliae white. Tarsi yellowish white, each joint tipped in front with dark brown. Face yellowish white; antennae dark brown, with about six terminal joints silvery white, and the six preceding ones alternately white and dark brown. It is a little smaller than *A. cornifoliella*. The mine, larva and case are smaller than those of *A. isabella*, and the case is elliptical in shape, whilst in *cornifoliella* and *isabella* it is nearly circular.

A. ampelopsifoliella. *N. sp.*

This species is known only in the larval state, unless the species described, but not named below, may be the same. The mine, larva and case are very small, smaller than any other known species. It mines the leaves of *Ampelopsis quinquefolia*, and the mine is elliptical in outline. I find that I have mislaid my notes upon the larva. I have never succeeded in breeding it.

Can not something be done towards determining the original of some cultivated plants by a knowledge of the habits of insects which feed upon them? A great majority of herbivorous insects are doubtless polyphagous, but many are confined to a single group of plants, and some to a single species. When an insect known to feed only on a single wild species, if found feeding on an allied cultivated plant, is it not a fair

deduction that the cultivated one is derived from the wild stock? Dr. Clemens states that he bred his species *A. isabella* from the cultivated grape Isabella, which, if I am rightly informed, is supposed to be derived from *Vitis labrusca*. I have bred it from at least a dozen cultivated varieties, including Catawba, Hartford Prolific and Concord, but I have also bred it from the wild *Vitis cordifolia*, so that this instance proves nothing. But Dr. C. records the larva of *A. viticordifoliella* from the leaves of *V. cordifolia* only, and I have never found its mine in any other species or variety. Would there not be a presumption—if it should now be found mining any cultivated variety—that that variety sprang from the *cordifolia* stock? So Dr. C. records *Phyllocnistis vitigenella* from the leaves of *V. cordifolia* only, whilst I have found it in the leaves of a great many cultivated varieties, including those above named, so that it proves no more than *A. isabella*; but *P. vitifoliella* I have never found elsewhere than in the leaves of *V. cordifoliella*, and one or two cultivated vines of which I find I have kept no memorandum.

Some years ago I bought from the gardener of the late N. Longworth, of Cincinnati, a grape vine of a variety but little cultivated, called "Longworth's Seedling, No. 20," the origin of which the gardener refused to tell me. The foliage is unlike that of any other grape known to me, and is still less like that of *Ampelopsis quinquefolia*, and approaches *V. cordifolia*. Last summer I found its leaves mined by a larva closely resembling that of *A. ampelopsifoliella*, *supra*, and which I suspect to be the same. I have never found it in the leaves of any other plant, though over a dozen other varieties of grapes grow within a few feet of the Longworth vine. From it I bred the species described below, which I do not now name, as it may prove to be identical with *A. ampelopsifoliella*. The single specimen was a little injured, and the description is therefore in one or two respects imperfect.

Palpi pale yellowish? Head and face bright but pale golden, in some lights silvery, tinged with golden. Antennae brown, *faintly* annulate with whitish. Thorax and primaries rich purplish brown, in some lights strongly purple or bronzed; before the middle of the primaries is a somewhat oblique fascia, which is silvery, or bright but pale golden according to the light, widest and nearer to the base of the wing on the dorsal margin, and not constricted on the fold; a silvery or pale bright golden spot on the dorsal margin, just before the ciliae, and a smaller costal one nearly opposite, *and a spot of the same hue at the apex*. Ciliae a little

paler than the wings, but I can not discover any hinder marginal line.
Al. ex. $\frac{5}{16}$ inch.

The larva is white, without maculae, but with the anterior margin of the first segment brown.

A. hydrangæella. *N. sp.*

The mine and larva only of this species is known, and I have never succeeded in rearing the imago. The mine, larva and case resemble those of *A. viticordifoliella*, but are perhaps a little smaller. It mines the leaves of the wild *Hydrangea* (*H. nivea*.)

Dr. Clemens states that the species described by him mine the leaves of the various plants in the latter part of August and in September, from which I infer that he found them only at that time. But the mines of all the species may be found as early as the first of July, and in increasing numbers from that time until the fall of the leaves. I have reared *A. cornifoliella* in the latter part of July, from leaves gathered in that month, and have found the mines and larvae of all the other species, though I have only succeeded in rearing the other species in the spring from mines gathered in the fall.

NOTES ON THE "LIST" OF 1868.

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Preparatory to a fresh edition of the "List of Lep.," of 1868, a few memoranda of the necessary changes will be published.

Sesia uniformis, p iii. This species is distinct from *thysbe*, and has been noticed by Mr. Lintner in his valuable "Entomological Contributions." Mr. Couper found it on *Anticosti*. This can not be *Sesia ruficaudis* Kirby, the description of which is given on p. 27 of the "Synonymical Catalogue" of 1865. Kirby says: two first segments of the body yellow olive, two next black, the rest ferruginous with yellow olive spots. *Uniformis* has the first segments yellow olive, the next deep ferruginous, the next again olive, and the anal hairs black, with ferruginous central tuft. In fact, Kirby's description rather resembles *diffinis* in the body parts. And from his comparison with *fuciformis*, we should think



Chambers, Victor Toucey. 1874. "Micro-Lepidoptera." *The Canadian entomologist* 6, 166–170.

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