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ing to twenty-one, though often there are but ten abdominal rings. The embryo of *Diplax* in this respect presents more degradational characters than the embryo of *Phryganea*, described by Zaddach, where the abdomen consists of but ten segments.

No sexual organs were observed in the embryo, or young larva, though they may yet be discovered on more careful examination.

Mr. S. H. Scudder compared the symmetry of the fore and hind parts of these embryos with that of the embryos of vertebrates, recently described before the Society by the President. This symmetry was produced in the two groups in diametrically opposite ways. In vertebrates, the different parts develop gradually from the centre toward the two extremities; in arthropods, the succession of growth is from the extremities toward the centre.

ON *LACHLANIA ABNORMIS*, A NEW GENUS AND SPECIES FROM CUBA BELONGING TO THE EPHEMERINA. BY DR. H. HAGEN.

In a very excellent collection of insects from Cuba received by the Museum of Comparative Zoölogy from Mr. Wright, in the winter of 1867-1868, I found six female imagos of an Ephemerideous insect. When I first saw them, their habitus induced me to suppose that the insect belonged to the most abnormal Ephemerideous genus *Oligoneuria* Pictet. This genus is very remarkable for the abortive condition of the legs, these organs being so greatly atrophied, that they must be nearly useless for the purpose of locomotion; remarkable also for the strength of the few longitudinal veins in the wings, and the rarity of transverse veinlets, which exist only near the anterior margin of the fore wings; remarkable also for the very singular appendage at the base of the fore wing, lodged below the heart-shaped apex of the mesothorax; remarkable finally for the curious strength of the junction of the fore and hind wings, which has induced such excellent Entomol-

or pedicel of the second maxilla, or labium, the expanded terminal portion being drawn separately; *d* and *a*, two movable stout styles representing, perhaps, the labial palpi; the lobe to which they are attached is multidentate, and adapted for seizing its prey; on the right side the two styles are appressed to the lobe. *x*, represents, perhaps, the ligula: but we have not yet studied its homologies care fully; this part is attached to a transversely linear piece soldered to the main part of the labium. *y*, the 11th abdominal tergite, with its pair of conical anal styles. *z*, the last tarsal joint and pair of long slender claws. All the drawings in this article, except Figure 6, were made from nature and put on wood by Mr. J. H. Emerton of Salem, to whom I am indebted for many facts noticed and communicated to me while making these drawings.

ogists as Dr. Imhoff in Bâle and the late Senator von Héyden in Frankfort to state erroneously that the fore and hind wings are united.

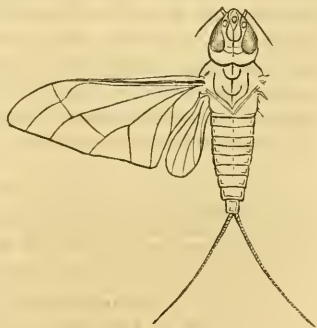
Pictet has founded the genus on a female in dry state from Brazil, *O. anomala*. Dr. Imhoff has since described *O. Rhenana*, which swarms in a great part of Central Europe. Probably the pair from Hungary, described by me in the Stettin Zeitung, 1855, p. 268, and the species figured by Costa from Naples are the same. Mr. McLachlan, in the Entomological Monthly Magazine for January, 1868, p. 177, described a third species from a single female, *O. Trimeniana*, from Natal. He mentions that he saw a few years since in the Museum in Paris a species from Mexico, but neglected to make a description of it. From a drawing of the fore-wing, received in a letter from him, I am induced to believe that the species now before me from Cuba may be the same, or at least, belongs to the same genus. An accurate examination of the six females from Cuba has convinced me that it cannot be placed under *Oligoneuria*. The venation of the wings, and the number of the caudal setæ separate them very clearly, and I propose for the new genus the name *Lachlania*.

Lachlania abnormis Hag.

Fem. fusca, subtus pallida; capite nigro, prothorace nigro-fusco, lato, margine postico medio emarginato; setis albidis; pedibus nigris; alis griseis, semihyalinis, venis griseo-fuscis crassioribus; anticis quatuor longitudinalibus, primâ, secundâ et quartâ furcatis; transversis tribus, intermediis; alis posticis venis longitudinalibus tribus, mediâ furcatâ; transversis nullis.

Patria Cuba. Dom. Wright. In Mus. Cambridge. Long. corp. 6-7 millim.; exp. alar. ant. 18-20 millim.; long. setar. 5 millim.

Head black, broader than long; eyes large, globular, separated; vertex a little longer than broad, oblong, depressed; the posterior margin rounded and a little emarginated in the middle, separated by an impressed transversalline, from which diverges a similar median longitudinal line, ending in an anterior impressed line, surrounding a circular flat elevation before the ocelli; the three ocelli globular, well marked, the middle one a little advanced; face with a membranous, gray, triangular lobe standing out in front, truncated before; antennæ with two inflated pale, basal



Lachlania abnormis.

joints, and a long blackish terminal seta; the basal joint is mostly concealed in the large orbit.

Prothorax black-brown, much broader than the head, flat, short rounded behind, the margin a little emarginated in the middle. Thorax brown, polished above, pale beneath, stout, cordiform and sub-inflated behind. Abdomen light brown, beneath paler, conic, a little depressed, the lateral margins produced into teeth, more noticeable in the penultimate segment; the ultimate segment truncated; the oviparous lobe on the antepenultimate ventral segment oblong, rather broader than long, the margin a little emarginated; a mass of greenish eggs is protruded. The two abdominal setæ white, a little shorter than the abdomen (the end is broken), slender, with short joints, glabrous, with very little pubescence at the tips. Legs black, the basal articulation very much developed; the femora probably stout and short; the tibiæ and tarsi atrophied, not adapted for an accurate description in the dry state.

Wings grayish, semi-opaque, without ribs at the margins; fore wings long, broad, triangular, with four very strong longitudinal, grayish brown veins; the first, third and fourth, furcate from behind about the middle; the furcate vein of the third not so strong as those of the others; the furcate vein of the fourth going to the middle of the abdominal margin. Three strong transversal veins (no others exist) about in the middle of the wing, rather nearer to the tip, unite the first with its furca, the second and the third; but the transversals are not always exactly in the same line; at the base of the fore wing is a long, very small membranous appendage lodged under the prominent edge of the mesothorax as in *Oligoneuria*. Hind wing not in good condition for examination; it seems to have three longitudinal veins, the middle furcated; no transversal veins. The fore border of the hind wings is very closely pressed against the corresponding border of the fore wings, as in *Oligoneuria*. The border seems to be more opaque and scabrous than the rest of the wing.

The character of the genus *Lachlania* can not be given completely, until the male is known. But it is evident that the species can not be placed under *Oligoneuria*. Two abdominal setæ instead of three, and three strong transversal veins in the middle of the wing are the most evident characteristics of *Lachlania*. The last is very exceptional in the family of the *Ephemerina*, and gives to the animal a very strange and abnormal appearance.

Dr. Hagen further remarked that Mr. Burgess had kindly communicated to him two american species of *Psocus* arranged as microscopical objects.

One of them is very interesting, belonging to the genus *Clotilla* Westwood, with 3-jointed tarsi, slightly dilated femora, 24-articulated antennæ and short, scale-like wings. This species is certainly different from *Cl. picea* Hag. from California, the only described American species. I think the species communicated is very similar, probably identical with *Clotilla studiosa* Westw., formerly described by Linnaeus as *Termes pulsatorius*, and afterwards always confounded with *Atropos divinatorius* Muell. I may add that I have positively found the last species in the boxes of the Cambridge Museum, containing a collection of Australian insects, and O. Fabricius found the same species long since in Greenland.

The other species, with two jointed tarsi, 10-articulated antennæ, without elytra and ocelli, is apparently a young larva of a species of *Psocus*. I think it cannot be the *P. lucifugus* Ramb., a doubtful and much larger species.

SUPPLEMENT TO A LIST OF THE BUTTERFLIES OF NEW ENGLAND. BY SAMUEL H. SCUDDER.

Five years ago, I published, in the third volume of the Proceedings of the Essex Institute (Salem, Mass.), a list of New England butterflies. Eighty-one species were enumerated, together with the time of their appearance in each successive stage, the localities which they frequented, and the comparative abundance in which they were found. In the following paper I have endeavored to extend our knowledge of their relations to the outer world, and correct the mistakes that must naturally creep into a first attempt of the kind; the names of other butterflies now known to inhabit New England have also been inserted. Ninety-three species are enumerated, and the numbers by which those of the previous list were specified are prefixed in parentheses.

I am indebted for my material to the favor of many friends, among whom I may mention Mr. S. I. Smith of Norway, Me., Messrs. F. G. Sanborn and J. C. Merrill, Jr., of Boston, and Mr. P. S. Sprague of Dorchester. Professor A. E. Verrill has kindly lent me some of the butterflies of Yale College Cabinet for examination.

1. (1.) **Papilio Asterias** Drury. The first brood may appear as early as the 10th of May, and good specimens of the second can be found as late as the middle of September; larvæ, which changed to chrysalids, July 27th and August 3d, in Norway, Me. (Smith), escaped May 27th and 29th of the following year.

2. (2.) **Papilio Troilus** Linn.

3. (3.) **Papilio Turnus** Linn. Extremely abundant in the