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The Canadian Entomologist.

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No. 7

ABOUT NAMES.

BY A. R. GROTE, A. M., BREMEN, GERMANY.

I have read, as all of us have, the review of a book by C. J. Maynard, on our Butterflies, by Mr. W. H. Edwards, and which appeared in the February number of the CANADIAN ENTOMOLOGIST. Whatever Mr. Edwards writes is trenchant and to the point, so that we have received the impression that Mr. Maynard's book is really not what it ought to be, is not up to current scientific knowledge, and is inferior in its illustrations. There is no more to be said about the book on this head; its publication will probably do very little real good, except perhaps that here and there a reader into whose hands it may chance to fall may have his interest excited in the subject, and so be led to buy a better one, as, for instance, that of Prof. French, to say nothing of Mr. Edwards's splendid volumes. But I was interested in Mr. Edwards's remarks about the names of butterflies, in which the critic leaves his prey to "regret to say that Mr. Scudder is our greatest sinner in this respect" (p. 39). Mr. Scudder, who never defends himself, might well need a champion as far as I understand the average opinion of students. I am all unworthy to assume such a rôle, and am not at all called upon to do so, nevertheless as what I have to say is rather in mitigation of his offence, I must be regarded somewhat in that light. And first, we are all sinners, miserable sinners, as the Church puts into our proper confession, but I doubt if it is right for us to apply the word *inter nos*. There has been quite a shower of adjectives unenlivened by wit, as well as of censure unredeemed by humor, and often unexcused by candor, in our entomological press, and to this I have, in my humble way, quite strongly objected. We are not authorized by our positions to assume so much, nor is our subject sufficiently important, as the world goes, to warrant the issue of ukases upon entomological topics. The particular offence of Mr. Scudder in the matter of names is that of the English ones. Now English names for insects existed before Latin ones, as might indeed be

supposed. I think it is De Saussure who assures us of the ultimate triumph of the English tongue in the contest for existence between the languages, and it is a matter of at least secondary importance that the English names of our butterflies come into use. A butterfly has as good a right to an English, or common name, in an English speaking country, as a plant. And plant names are part of our literature, of our poetry. Perhaps what I said in the "Popular Science Monthly" might be repeated here. The introduction of common names for our Lepidoptera is evidently a matter not to be forced, but to be left to itself. The rule of priority which Linnæus appointed to govern Latin names cannot obtain here. Some of our butterflies have received several English names, as our "Milk-weed butterfly." Some of the names for moths in use in England are very pretty, such as the "Arches" and "Wainscots." English names will, it is to be hoped, gradually appear in our American literature and come into use. The vernacular names proposed in our economic works, mere translations from the Latin, are often very ugly and have nothing to commend them. But see what lovely names they have in England for their moths! The "Kentish Glory," the "Peach Blossom," the "Buff Arches," the "Common Wainscot." About the vernacular names for our moths must come the cooling touch of time; they cannot be struck out in the heat which accompanies the coining of a Latin name for a new species (struggling for priority). Around their cradle some tutelary divinity must hover; some old and idle tale, like an ancient crone, must be its nurse; out of some melody, dedicate to fields and flowers, must the words be taken which are to serve as the common title of the insect haunting these pastures. And not the first but the best known, and in itself the best name, must be chosen, and to exercise this choice there must be some literary taste in the writer, some quaint appositeness in the name itself. Here, in Germany, with its wonderfully supple language, and the frequency of compound words, common names have been easily made and pass current. My young friend Eugene, as to trusting whom with a cyanide bottle I feel some scruples, talks quite glibly and confidently to me about the "Grosser" and "Kleiner Fuchs;" the latter he has not been able to catch yet, but he knows how it looks from his little handbook, which has fairly good figures and the common name preceding the Latin one for each species. It seems to be a fact, and I do not see how Mr. Edwards can get around it, that young ento-

mologists, *aetat* 10 for instance, prefer their living nursery language to the dead one from the toms. And we are well counselled to remember the little ones always! What would I not have given to have known the common names for our insects on Staten Island in the fifties!

What Mr. Maynard may choose to call our butterflies cannot be thrown up against Mr. Scudder, who, as I understand it, has merely proposed corresponding titles for our butterflies with those used in England, as the "Blues" and "Coppers," using these names in somewhat of a generic sense and supplying some fresh titles of his own, whether fortunately or not, I am not here enquiring. This is a matter subject to a later review on occasion. Certainly we must be guided by some general agreement with English names in use in England for similar but different species, and this without a too vigorous enquiry. Certain hairy caterpillars in England (and in Germany also) are called "Bears" (I don't know what brings Bacon's curious sentence, "the body of nature is elegantly and with deep judgment depicted hairy," etc., into my mind), and there are certain common names used in a generic way from resemblances occurring to the casual observer. These we must use, and for my part I think that, in a natural way, we shall come into using certain common names as collecting becomes popular among the young and as popular books increase with us.

Far more than on this head am I concerned about Mr. Scudder's proposed book on our butterflies. I think there is a mean between Mr. Scudder's Latin nomenclature and that of Mr. Edwards, which latter is based on Doubleday's, and perhaps since Doubleday we may have advanced in our knowledge as to the structure of butterflies, and are authorized to express this advance in our Latin names. It is many years ago since Mr. Robinson and I set about classifying our Diurnals, and this was before Mr. Scudder's classification. I only published about that time the genera *Feniseca* and *Calephelis*, and as these are not objected to, I think that what I here say, with great diffidence, is entitled to some consideration on both sides. I am quite satisfied, and was before Mr. Scudder, that our Hackberry butterflies, *cellis*, *clyton*, etc., do not belong to the European genus *Apatura*, and that the structural characters separating the two are real and of generic value. Also am I of opinion that our eastern *arthemis*, *ursula*, *disippus*, *eros*, form a group of themselves, distinct from *Limenitis* proper, and that Mr. Scudder's

term *Basilarchia* should be retained. On the other hand I think Mr. Scudder's divisions of *Argynnis* and *Lycacna* are not valid, as now shown by Prof. Peabody and others. I hope Mr. Scudder will not retain these, and also that he will be guided by Dr. Speyer's classification of the *Hesperidae*. These latter afford good, apparent, readily understood generic characters as we understand these in the moths, and there is nothing gained by making too many genera out of them on "measurements." These latter are now proved to be illusory, and should not be again brought forward. As to the general arrangement of the families, the arrangement of Meigen and others, commencing with the groups in which the front legs are useless for walking, and which are taken out of the ambulatory series, has an approved philosophic basis. It is warranted under Prof. Dana's theory of cephalization. Mr. Scudder's paper on the structure of *Papilio* in the Transactions of the American Entomological Society, has not been answered. I think the caterpillars of *Papilio* are of a lower type than those of the rest of the true butterflies, and that there are no reasons for placing the "Swallow Tails" at the head of the rest except that they are large and showy insects. The structure of the feet is evidently of importance no less than the method of pupation, and this is recognized consistently in Mr. Scudder's arrangement. There is certainly no system in commencing with the groups with six walking legs, then following with those of four, and winding up again with those with six. The moths have generally six walking legs, and the abortive front pair may be consistently regarded as a later phase. I have great confidence in Mr. Edwards's remarks as to genera, that these can be traced in all stages from the egg upwards, and in this respect it would be well if Mr. Scudder, for the sake of reason, which, as Zschokke says, is the "daylight of the mind," would abate from hair-splitting. But I have great regard for Mr. Scudder's general appreciation of classificatory characters and those which point to higher or lower rank and which determine the confines of large groups, and on this head it would be well if Mr. Edwards relented from his present views. There is then, to my mind, a possible agreement between the two authorities, and that such an agreement would be of great value cannot be doubted. Where there is any reasonable principle involved, I advise neither to give way. Time, Mr. Strecker's friend, must level such differences by throwing more light on the subject. But much that divides the two scientists lies in the

wide domains of unreason, upon which we all trespass during our earthly journeyings, and where many of us, I am afraid, almost permanently reside.

STUDIES OF THE NORTH AMERICAN PROCTOTRUPIDÆ, WITH DESCRIPTIONS OF NEW SPECIES FROM FLORIDA.

BY WILLIAM H. ASHMEAD, JACKSONVILLE, FLORIDA.

Sub family PLATYGASTERINÆ.

In this second paper on the North American *Proctotrupidæ*, I have taken up the sub-family *Platygasterinæ*, comprising, for the most part, small black species, all parasitic in larvæ belonging to the Dipterous families *Cecidomyiidæ* and *Tipulidæ*.

It will be seen that I have recognized in our fauna species in all of the described genera but *Iphetrachelus* Haliday, and one new genus parasitic on Cecidomyious hickory galls.

XLVI. *Iphetrachelus* Haliday.

XLVII. *Allotropa* Foerster.

74 (1). *Allotropa Americana*, n. sp.

♂. Length, .07 inch. Black, sub-opaque, finely punctate, scape and legs pale brown. Antennæ 9-jointed, terminating in a 4-jointed club, joints serrate, flagellum and club dark brown. Mesothorax with two grooves. Scutellum convex, rounded posteriorly. Abdomen black polished, first and second segments striate, the second segment greatly lengthened. Wings hyaline.

Hab.—Florida.

XLVIII. *Metaclisis* Foerster.

75 (1). *Metaclisis belonocnemæ*, n. sp.

♀. Length, .07 inch. Black, finely punctate. The 10-jointed antennæ and legs pale brown. Thorax with two grooves. Wings hyaline.

Hab.—Florida.

Described from one specimen, reared in April, 1883, from galls. *Belonocnema Tretæ* Mayr, probably parasitic on a Cecidomyious guest fly inhabiting this gall.

XLIX. *Monocrita* Foerster.76 (1). *Monocrita melanostropha*, n. sp.

♀. Length, .08 inch. Black, sub-opaque, finely punctate, middle of mesothorax and the somewhat flattened scutellum, polished. Antennæ entirely black, terminal joint one-third longer than the preceding joint. Mesothorax with two grooves. Legs red, the femora obfuscated or blackish. Abdomen polished black. Wings hyaline, submarginal vein black.
Hab.—Florida.

77 (2). *Monocrita Canadensis*, n. sp.

♀. Length, .14 inch. Black, head and prothorax finely punctate. Antennæ 10-jointed, filiform antennæ with the legs are pale brownish yellow. Thorax with two deep grooves, converging and almost meeting posteriorly. Scutellum slightly convex, punctate, pubescent, separated from the thorax by a deep depression. Wings fuscous.

Hab.—Canada. Kindly given me by Mr. W. H. Harrington.

L. *Isostasius* Foerster.78 (1). *Isostasius musculus*, n. sp.

♀. Length, .04 inch. Black, polished. Ocelli distant from inner border of eye. Antennæ 10-jointed, black, club 4-jointed, the joints broader than long. Thorax without grooves. Legs black, femora at base and tarsi reddish. Abdomen ovate, not quite as long as the thorax, and but slightly compressed from above. Wings hyaline, submarginal vein black; no other veins.

Hab.—Florida.

LI. *Inostemma* Haliday.79 (1). *Inostemma Horni*, n. sp.

♂, ♀. Length, .06 to .07 inch. Black, sub-opaque, microscopically punctate. Antennæ 10-jointed, entirely black. The horn in female is prolonged over the thorax, extending to base of ocelli, gradually narrowed at base. Legs black, tarsi pale brown, in some specimens the tibiæ are pale at tips. Abdomen acuminate ovate, longer than head and thorax combined. Wings hyaline, submarginal vein black. The male is without the projecting horn, and is difficult to distinguish from other species in this group, the shape of the abdomen, which is acuminate ovate, less depressed than any others, and the basal ocelli, which are contiguous to the

inner border of the eye, must be depended upon to separate it. The mesothorax has two delicate grooves.

Hab.—Florida.

This species is dedicated to my friend, Dr. Geo. H. Horn, the distinguished American Coleopterist. It is at once distinguished from the European *Inostemma Bosci* by its stouter form, shorter horn; in that species the horn projects over the entire head; and by its differently colored legs.

80 (2). *Inostemma Cressoni*, n. sp.

♀. Length, .09 to .10 inch. Robust, black, finely punctate. It is at once distinguished from *I. Horni* by its larger, more robust form, its much stouter horn, which is of a uniform thickness throughout, not narrowed at base, and by having rufous colored tibiae and tarsi.

Hab.—Florida.

Described from two specimens and dedicated to my friend, the learned American Hymenopterist, Mr. E. T. Cresson.

81 (3). *Inostemma Rileyi*, n. sp.

♂, ♀. Length, .04 inch. Black, polished. This species is at once distinguished from all others by its much smaller size, rufous colored femora and tibiae, sometimes obfuscated in the middle, and the horn in female extends only to the base of the head.

Described from ten specimens, and dedicated to my friend, the eminent economic Entomologist, who so ably fills the position of U. S. Entomologist, Dr. C. V. Riley.

82 (4). *Inostemma Packardi*, n. sp.

♀. Length, .07 inch. This species is at once distinguished from the others by the brevity of its horn, which reaches only slightly beyond the middle of the thorax and obliquely truncate at tip, not rounded as are the tips in the other species. Head and pleurae punctate. Antennae black, scape reddish at base. Legs red, coxae at base black. Wings hyaline, submarginal vein black.

Hab.—Florida.

Described from one specimen, and dedicated to my learned friend, Prof. A. S. Packard, from the study of whose excellent work, "Guide to the Study of Insects," I early derived so much benefit and imbibed some of my love for the study of insects.

LII. *Acerota* Foerster.

83 (1). *Acerota opaca* Prov. Add. et Corr. a la Faune Hym., p. 184.
Hab.—Canada.

84 (2). *Acerota caryæ*, n. sp.

♂, ♀. Length, .07 to .09 inch. Black, shining, microscopically punctate. Antennæ and legs pale yellowish-brown. The four-jointed antennal club is black or brown, in the male the antennæ are generally uniform yellow-brown. The mesothorax has two faint grooves on its disk; scutellum prominent, slightly pubescent. Abdomen smooth, polished. Wings hyaline.

Hab.—Florida.

85 (3). *Acerota Floridana*, n. sp.

♀. Length, .07 inch. Black, antennæ and legs dark red; two grooves on mesothorax; scutellum sparsely pubescent; metathorax with denser, longer, white pubescence. Wings hyaline.

Hab.—Florida.

LIII. *Catillus* Foerster.

86 (1). *Catillus maculipes*, n. sp.

♀. Length, .03 inch. Black, polished. Antennæ and legs rufous, femora and tibiæ with dark blotches above. Mesonotum without grooves. Wings hyaline.

Hab.—Florida.

LIV. *Xestonotus* Foerster.

87 (1). *Xestonotus andriciphilus*, n. sp.

Female. Length, .07 inch. Black; face finely punctate. Antennæ and legs brownish-yellow. Mesothorax with two sharply defined, parallel grooves. Scutellum not greatly prolonged, but compressed at sides. Wings hyaline.

Hab.—Florida.

Described from one specimen reared from the Cynipidous gall, *Andricus blastophagus* Ashm.

LV. *Amblyaspis* Foerster.

88 (1). *Amblyaspis longipes*, n. sp.

Male. Length, .08 inch. Form somewhat slender, black. Antennæ and the unusually long legs pale yellowish brown; flagellum darker, the

last joint being twice as long as preceding joint, cylindrical, the others narrowed at base. The scutellum is very long, acute, elevated over the metathorax. Metathorax covered with white pubescence. Wings hyaline.

Hab.—Florida.

This species bears a close resemblance to *Amblyaspis aliens* Nees, but the scutellum is longer and more acute.

89 (2). *Amblyaspis Americana*, n. sp.

Female. Length, .04 inch. Black. Antennæ and legs pale brown, posterior femora and tibiæ obfuscated toward tips. The apex of the long scutellum is yellowish, and the hyaline wings have their borders strongly ciliate, differing in this respect from all other species in my collection.

Hab.—Florida.

LVI. *Leptacis*, Foerster.

90 (1). *Leptacis cynipsiphila*, n. sp.

Male and female. Length, .05 to .07 inch. Black. Head in front finely punctate. Antennæ and legs rufous. Antennal club 4-jointed, dusky. Thorax sparsely, metathorax densely covered with white pile. Scutellum with a small acute projecting spine at tip. Wings hyaline, strongly pubescent.

Hab.—Florida. Described from specimens reared from an oak gall.

LVII. *Isorhombus*, Foerster.

91 (1). *Isorhombus hyalinipennis*, n. sp.

Female. Length, .05 inch. Black. Antennæ and legs pale brown; the three-jointed club which distinguishes this genus from *Leptacis*, is black or dark brown. The mesothorax is without grooves, the scutellum slightly pubescent, unarmed. Wings hyaline, almost devoid of pubescence.

Hab.—Florida.

LVIII. *Epimeces*, Westwood.

(= *Ectadius*, Foerst.)

92 (1). *Epimeces Americanus*, n. sp.

Male and female. Length, .04 to .07 inch. Slender, black, shining. The filiform antennæ and legs are dark rufous. Mesothorax with two grooves. Abdomen narrow, elongate, sub-cylindrical, gradually narrowed towards tip, about one-third longer than head and thorax combined. Wings hyaline.

Hab.—Florida.

This species is very much smaller than *Epimeces subulatus* Nees, which it closely resembles. The genus *Ectadius* Foerster seems, without doubt, to be identical with this genus, as I have indicated.

LIX. *Sactogaster*, Foerster.

93 (1). *Sactogaster anomaliventris*, n. sp.

Female. Length, .03 to .05 inch. Black, polished. Antennæ and legs black; tarsi reddish. The joints of the four-jointed antennal club are broader than long. Mesoscutum smooth, without grooves. Scutellum armed with a small acute spine. The second abdominal segment is inflated below, having the appearance of a small globe; the other segments are narrow, cylindrical, and project beyond it in the form of a tail. Wings hyaline.

Hab.—Florida.

LX. *Synopeas*, Foerster.

94 (1). *Synopeas melanocera*, n. sp.

Female. Length, .10 inch. Black, polished. Face, just above insertion of antennæ, grooved, and thence to ocelli finely punctate. Antennæ filiform, black, the terminal joint longer than the preceding. Mesothorax with two grooves. Scutellum with a small spine near tip. Legs dark red. Abdomen as long as head and thorax combined. Wings hyaline.

Hab.—Florida.

LXI. *Anopedias*, Foerster.

95 (1). *Anopedias incertus*, n. sp.

Female. Length, .06 inch. Somewhat robust, black. Antennæ and legs rufous, thighs obfuscated. Antennal club 4-jointed, brown-black. Thorax without grooves. Scutellum flattened, with a spine at tip. Mesopleuræ highly polished; metapleuræ and metathorax densely pubescent. Wings hyaline.

Hab.—Florida.

The structural characters of this species seem to agree with the definition of this genus, but I have doubts as to its belonging here.

LXII. *Isocybus*, Foerster.

96 (1). *Isocybus longiventris*, n. sp.

Female. Length, .04 inch. Black, highly polished. Head large, cubical. Antennæ and legs pale yellowish-brown. Thorax rather short,

much narrower than head, smooth. Abdomen long, acuminate ovate, nearly twice as long as head and thorax combined. Wings hyaline.

Hab.—Florida.

This species is placed in this genus only provisionally, as the non-grooved thorax and shape of abdomen will probably exclude it from the genus.

LXIII. *Trichacis*, Foerster.

97 (1). *Trichacis brunneipes*, n. sp.

Female. Length, .10 inch. A slender, elongate, polished, black species. Antennæ and legs pale yellowish-brown, flagellum and club rust-brown. Mesothorax with two parallel grooves. Scutellum, which is transversely convex, is well separated from thorax by a deep depression, and has a thick tuft of grey pubescence at tip. Metapleuræ densely pubescent. Wings dusky hyaline.

Hab.—Florida.

LXIV. *Hypocampsis*, Foerster.

98 (1). *Hypocampsis Pluto*, n. sp.

Female. Length, .06 inch. This species is highly polished, including antennæ and legs, entirely black. Mesothorax with two grooves. Scutellum rounded, highly convex. Abdomen with the lateral carina broad and turned downwards. Wings hyaline.

Hab.—Florida.

LXV. *Polygnotus*, Foerster.

99 (1). *Polygnotus solidaginis*, n. sp.

Male and female. Length, .05 to .07 inch. Black polished. Antennæ dark reddish-brown, scape paler; club, female, five-jointed; male antennæ filiform. Legs dark red, femora black, tibiæ obfuscated. Mesothorax smooth, without grooves. Scutellum elevated, highly convex, more than twice as broad as long, and separated from mesothorax by a deep transverse groove. Wings hyaline.

Hab.—Florida.

Described from numerous specimens reared from a Cecidomyious gall (*Cecidomyia nebulosa* Ashm. MSS.) From six to eight specimens were reared from each fly; they make parchment-like cocoons, placed side by side, as illustrated by Prof. Westwood on the genus *Platygaster*, "Introd. to Study of Insects," vol. ii., f. 78, No. 14.

100 (2). *Polygnotus baccharicola*, n. sp.

Male and female. Length, .03 to .06 inch. Black, polished. Differs from the above species in its smaller size, more slender form and in having uniformly colored dark red legs. The femora are not black.

Hab.—Florida.

Described from numerous specimens reared from a Cecidomyious gall (*Cecidomyia baccharicola* Ashm. MSS.)

LXVI. *Platygaster*, Latreille.

101 (1). *Platygaster pallipes* Say, Leconte's Ed. Say's Works, I., p. 383. Hab.—Indiana.

102 (2). *Platygaster Canadensis* Prov. Add. et Corr. a la Faune Hym., p. 181. Hab.—Canada.

103 (3). *Platygaster error* Fitch. Sixth Rep. N. Y. State Agr. Soc., p. 818. Hab.—New York.

104 (4). *Platygaster Herricki* Packard. Third Rep. U. S. Ent. Comm., p. 220. Hab.—Western States.

105 (5). *Platygaster Floridensis*, n. sp.

Female. Length, .06 to .07 inch. Black, polished, more slender than *Platygaster niger* Nees. Antennæ and legs of a uniform pale yellowish-brown. Mesothorax smooth. The scutellum is convex, broader than long, and is not separated from the mesothorax by a deep transverse groove, as are the species in the genus *Polygnotus*, sparsely pubescent towards tip. Wings hyaline.

Hab.—Florida.

106 (6). *Platygaster gracilis*, n. sp.

Male. Length, .05 inch. Very slender, polished black. Antennæ filiform, black, scape at base pale brown. Legs reddish, femora obscured. Wings hyaline.

Hab.—Florida.

The new genus recognized in this family will be described in another paper, when I hope to be able to give a good illustration of its peculiar characters.

STRAY NOTES ON MYRMELEONIDÆ, PART 2.

BY DR. H. A. HAGEN, CAMBRIDGE, MASS.

I. *Species figured in A. Seba Thesaurus.*

I have quoted, Synops. Hemerob., p. 457, as belonging to *Pamexis*, a new species figured in Seba Thesaur., vol. iv., pl. 86, f. 20. The explanation says, "Color pallide subfuscus, maculis suture fuscis." I can not here compare a colored copy of Seba's work, nevertheless the figure proves to be a male of a species of *Pamexis* without antennæ. The figures of insects in Seba are not good; but as the species belongs surely to *Pamexis*, and is larger than the other known species, and different from them, I wish to draw attention to the existence of a new species of this curious genus. It is, besides the figure given by Thunberg, the only species figured. Seba's collection was sold in the beginning of the last century to Peter the Great, but as far as I know, was destroyed entirely in St. Petersburg, as well as the collection of Madam Merian, of which only a few of the large Lamellicorns are left. Seba has figured on plate 86 six Myrmeleonidæ, five of which belong to *Palpares*. Fig. 17 is quoted by Linné, Syst. Nat. ed. xii., in the appendix, to be his *Libettula capensis*, p. 904, n. 19. This species belongs certainly to a *Palpares* from Cap. b. sp. Among the species known to me it is near to *P. latipennis*; the quotation in my Syn. Hemerob., p. 456, by *P. latipennis*, f. 5, is a typographical error for f. 17, as Prof. Brauer justly remarks.

Of the four other figures by Seba; is f. 18, a male of *Palpares*, perhaps the unknown male of *P. Caffer*. The fig. 5 is, as Prof. Brauer has proved, Wien. Z. B. Ges., xvii., p. 521, *Myrmeleon sinuatum* Oliv., Enc. Meth., viii., p. 121, No. 4, from Cap. b. sp., which was described only from Seba's figure. The figure well represents *Palp. hæmatogaster* Gerst., except that the posterior margin of the hind wings is not subfalcate, as in Gerstaecker's species. Therefore Prof. Brauer believes it to be different. McLachlan, Jour. Linn. Soc., ix., 243, has established for *P. hæmatogaster* the genus *Crambomorphus*, and believes Olivier's *M. sinuatum* to be the same species; but he has apparently at the time not compared Seba's figure, as he would have stated the difference of the hind wings. For the species *P. gigas* Drury, *contrarius* Walk., *moestus* Hag., and *falcatus* McLachlan, this author has established the genus *Symma-*

thetes; but he writes always *P. gigas* Dalman instead of Drury, for which error probably I am responsible. Dalman has only given a diagnosis made from Drury's figure, which diagnosis is so defective, that Burmeister applied it to a very different species.

The figures 12 and 13 on Seba's plate belong probably to the genus *Stenares*; as far as I know, they are not yet determined nor quoted anywhere.

2. *Acanthaclisis Americana*.

Drury, Ins., vol. 1, p. 111, No. 4, pl. 46, f. 4. Burm., ii., p. 996, No. 17. Ramb. Neur., p. 380, No. 4. Hag. Syn. Neur. N. Amer., p. 223, No. 1. Taschenberg, Zeitschr. Halle, 1879, vol. 52, p. 186. See for literat., Hag. Syn. Hemerob. Stett. E. Zeit., 1866, p. 378.

Brown, clothed with whitish hairs, stout; front and labrum yellow to the antennæ, whitish villous above; vertex reddish brown with two large flat elevations, separated by a middle impressed line; cut straight in front; anteriorly with a yellow band; on top a black band, and a transversal series of flattened spots, and some behind, two of them approximate in the middle, all black; antennæ strong, a little longer than the prothorax, flattened on tip, black, the joints with a yellow basal ring; the basal joints below yellow. Maxillary palpi short, yellow, the joints a little brownish at base; the third joint longer, thickened on tip, curvate; the fourth a little shorter than the fifth, which is cylindrical, a little curvate on the base, the tip obtuse, very little notched. Labial palpi longer, black, hairy; second joint curvate on the base, thickened on tip; third joint a little shorter, straight, fusiform on tip, which is yellow, or yellow-pointed black, suddenly thinned and pointed. Prothorax a little longer than broad, narrowed in front; side margins straight; front margin sub-convex, with a small median notch; a strong transversal dorsal depression before the middle of the prothorax is a little curvate, more curvate near the side margins; another smaller depression exists near the mesothorax; the prothorax dull grayish brown, with a large black longitudinal median band, and another, on each side on the side margin, not well defined; a yellow spot, little visible, each side externally near the anterior depression; prothorax above clothed with long black hairs, and with whitish ones laterally. Mesothorax grayish brown, with a black median band, and another on each side; below the whole thorax is rufous brown, whitish villous. Legs strong, short, whitish villous, mixed with black hairs, blackish brown,

femur brown, a little fallon at base ; tibia blackish externally, with a narrow ring, and a spot more apical yellow ; tarsus black, base of last joint yellow ; spurs brown, as long as the three basal joints, pointed, curvate in demi-circle, but not fractured ; claws brown, after a short, larger base, suddenly curvate. Abdomen strong grayish black, base whitish villous ; end of abdomen black. Wings large, hyaline, similar to *A. occitanica* ; veins black interrupted with yellow ; space between sub-costa and median and space between the fourth and fifth vein nearly filled with brown dots ; some brown apical dots on the small forks of the veinlets ; some brown shadows on the hind margin after the oblique vein ; hind wings a little longer ; space between sub-costa and median a little spotted, and a brown spot on the end of the hyaline space between fourth and fifth vein ; the pterostigma of all wings yellow, internally with a black dot, costal space of front wings in the apical half or two-thirds with a double series of irregular cells ; costal space of hind wings with undivided ante-cubitals ; all wings moderately pointed, hind wings slightly sinuated before tip on hind margin ; all wings on tip with a series of small gradate veins beginning behind the pterostigma, running down in a curve in the middle of this part of the wing and ending opposite to the tip ; in the fore wings are between 15 to 9, in the hind wings 7 gradate veins.

Length of body 47 to 50 m.m. ; length with wings, 64-75 m.m. Exp. al. 110 to 130 m.m.

Hab.—Newbern, North Carolina, coll. by Ordway, presented by Mr. S. H. Scudder ; Millin, Scriven Co., Georgia, near Ogechee River, coll. by H. K. Morrison ; Crescent City, Florida, raised by Mr. H. G. Hubbard. The three specimens before me are all females. I have seen besides three females. The type of Prof. Burmeister, from South Carolina, coll. by Zimmermann.* As far as known to me, this specimen was the only one known to exist in Europe till 1867. I have seen it only after the publication of my Synopsis. Further, a female from Florida in Mr. S. Henshaw's coll., and a female from Sandy Hook, New York, in Mr. H. Edwards's coll. As the first specimen described and figured by Drury in 1770 is said to be from New York, Mr. Edwards's specimen is especially interesting. He found it in a small inn, inside near the window, last summer. Mr. L. Cabot told me that he had seen this species several

* The type of Burmeister is described by E. Taschenberg, *Zeitschr.*, 1879, p. 126. It should have been stated *CANAD. ENTOM.*, vol. xix., p. 111, that the type of *P. par-dalinus* Burm. has been described l. c. p. 184.

times when hunting in N. Carolina. Mr. H. Garman, from Champaign, Illinois, informed me that he collected three females in the house of the John Hopkins Marine Laboratory, at Beaufort, N. Carolina, inside near the window. Newbern is only a few miles distant from Beaufort. Among my papers I found a description of a female from Columbia, from the collection of Mr. H. de Saussure, in Geneva, Switzerland. This species is quoted without description in my list of South American Neuroptera, p. 324, as *Acanthochisis striata* Hag. The description was made more than thirty-five years ago, when I had never seen the North American species. Now in studying *A. americana*, I was astonished to find that the description of *A. striata* agrees so well that there cannot be any doubt of the identity of the two species. Indeed the description printed above is my old one of *A. striata*, to which I was not able to make additions or corrections after the new material. The specimen was returned at the time to Mr. de Saussure, and will be in his own collection or in Geneva Museum.

The figure of the male by Drury is similar to the female, and is indeed well made. The venation is accurate, and gives also an indication of the gradate series on the tip. The costal space shows a double series of cells to the base, probably an error, as in the specimens seen by me at least the basal third has only one series. The basal knob on the hind margin of the hind wing is wanting in the figure. The anal appendages a little longer than 3 m.m., are slightly bent. The dimensions of the figure are like those of the female; the length of body greater, nearly 60 m.m. The description agrees except that the thorax is said to be yellow, though the figure gives it gray.

(To be Continued.)

A PRACTICAL NOTE ON COLLECTING INSECTS.

BY PROF. E. W. CLAYPOLE, AKRON, OHIO.

In reference to two notes on collecting in the June number of your ENTOMOLOGIST, will you allow me to make a few remarks? Entomology is with me a secondary subject, my time being for the most part occupied with another science. Perhaps this has led me to devise means for economizing time and labor more than I should otherwise have done;

but the study of insects has great attraction for me, and I spend no little time upon it.

The method which I desire to mention may be too well known to deserve any space in your columns—if so, I can only ask you to overlook my intrusion—but I have never seen it mentioned in print anywhere, nor have I ever seen it used by any entomologist of my acquaintance. Perhaps also there may be some objections to its adoption which I have not discovered in the course of several years' use. In that case I shall be glad to learn them.

Your contributors speak of chloroform and cyanide of potassium as their favorite insecticide materials. Both these I have abandoned for some years, the former because it is expensive, and the latter because it is unpleasant and dangerous, especially the latter to young students, and both because they are comparatively imperfect in their effects. For example: I have often known an insect, especially one of the large bodied *Bombycids*, that recovered after having been apparently killed by chloroform, and even after having been pinned out in the case. The result usually is that it is seriously injured by flapping about. Chloroform is an anæsthetic and not a poison, and its effect soon passes off unless its action is renewed or long continued so as to insure death.

In regard to cyanide of potassium, I may state that last year I found one of my cases badly infested with the fur moth (*T. pellionella*). I put an open bottle containing cyanide of potassium into the case and closed it. For a fortnight it remained so, when desiring to know the result of the poison, I opened it. It was strongly impregnated with the well known smell of the cyanide. To my surprise, however, I could not find a dead moth, and the larvæ were as lively after breathing for fourteen days the so-called deadly atmosphere as if they had been all the time in the open air. As a substitute for both of these I have for years used no other insecticide for the purpose of killing my specimens than benzine or gasoline. The latter at fourteen cents a gallon is merely nominal in cost and perfectly efficacious in action. I use it without hesitation on the Lepidoptera in any quantity. With most of them it causes instant death, and with the few that slightly resist its effects the resistance is very short-lived. I recollect one day seeing a large *Cecropia* moth enter the room where I was sitting and alight on the knob of the door handle. I took my bottle of gasoline and poured some of the liquid on the body of the

insect, when it dropped to the floor as if shot and never moved a wing. The result is not in all cases quite so rapid, but it is never tedious. By this means I prevent the mischief that ensues when a fine specimen flutters in a bottle of cyanide or chloroform for several minutes, as is often the case.

I employ the same plan with all insects, and with equal success. The moths that so long resisted the cyanide vapor, as mentioned above, at once yielded to the deadly gasoline, and in five minutes not a living larva was left in the case.

I need scarcely add that the use of this exceedingly volatile liquid never in the least degree injures the delicate plumage of the Lepidoptera. Many of my best specimens have been repeatedly drenched with gasoline. In five or ten minutes they are as dry as before it was applied.

Let me add one word more. I find the most convenient way of applying the gasoline is to carry it in an ounce phial, having a cork through which passes a finely pointed glass tube. The large outer end of this tube is capped with a small india-rubber capsule. The whole may be bought at a drug store for a few cents, under the name of a dropping tube. In this way the tube is always full of liquid ready to be squirted out on an insect in the net or even at rest in the open air, and the specimen is at once fit to be pinned out. This I do on the spot in a cigar box, or in one lined with cork, and so avoid an accumulation of material, which is a great annoyance to a man whose time is otherwise occupied, or indeed to any one at the end of a hard day's work.

The small weight of the outfit here required is an advantage not to be overlooked when compared with the weight of the loaded cyanide bottle usually employed. There are one or two other points which I should like to mention, but having already written more than at the outset I intended, I will forbear.

CORRESPONDENCE.

BRACHYS AEROSA AND BRACHYS OVATA.

Dear Sir: I notice Dr. Packard, in his "Bulletin No. 7," on "Insects Injurious to Forest and Shade Trees," speaks of *Brachys aerosa* M., as probably mining the leaves of our oaks in its larval state, but says

that its life history is not known. I am not aware that the habits of this beautiful little Buprestid have since been published, and as I have reared two fully developed specimens from the larvæ, I think it may be of interest to the readers of the ENTOMOLOGIST to know the life history so far as I have been able to determine it.

Last Oct., while collecting leaf-miners from not less than twenty different trees and shrubs at the Michigan Agricultural College, I took two poplar leaves from which I got, to-day, the two beetles above mentioned. The following is the description of one of the larvæ made at the time they were taken :

Mining the leaves of our common poplar next to the upper surface. A whitish larva 9 m.m. long, broadest at head and gradually tapering to the tail. Jaws brown and first joint back of head with brown rectangular plates above and below. The anal end with a small black spine extending back which is used by the larva in pushing itself forward. Larva quite flat and segments deeply notched.

B. ovata Web.—A leaf of either the red or black oak containing a leaf-miner was taken at the same time, and from this I got *B. ovata* less than a week ago. No description of the larva was made.

C. P. GILLETTE.

Michigan Agricultural College, May 7th, 1887.

BOOK NOTICES.

RHOPALOCERA MALAYANA: A Description of the Butterflies of the Malay Peninsula. By W. L. Distant. London, 1882-86, 4°, 16; 486 p., 46 plates.

A short time ago we called attention to a work in progress on the Butterflies of India. Immediately thereafter there came to hand the final part of another notable work on the butterflies of a region still nearer our antipodes—the Malay Peninsula. In this instance the work was undertaken by the author under peculiarly favorable circumstances, inasmuch as all pecuniary anxiety was removed by the appearance of a Maecenas in the person of Mr. D. Logan, of Penang, to whom all credit is due by naturalists the world over, not only for the generous way in which he has allowed the work to be gotten up and illustrated, but for his excellent choice of an author. For Mr. Distant, on his side, has performed his task

in a very scholarly manner, and given us a book leaving little to be desired, beyond that constant and bitter craving of naturalists for a knowledge of the earlier stages of life of the insects treated. We could indeed wish that the structural characteristics of the larger divisions had been more amply treated, and that the author had not rested satisfied with groupings in the *Lycaeninæ* and *Hesperidæ*, newly manufactured, confessedly artificial and temporary, and to which the very descriptions which follow do violence. But the excellence of the entire work, the consistent manner in which the task has been carried out, the technical skill, excellent judgment and broad learning everywhere displayed, as well as the very considerable addition to our knowledge involved, disarms adverse criticism and invites only praise. Would that such a *Mæcenas* and such an author might oftener company together!

The work is published in quarto in sumptuous style, is unexceptionable in typography and profusely illustrated. Besides 46 plates of some of the best chromo-lithographs of butterflies which we have ever seen, there are 129 wood cuts scattered through the text, generally illustrating special structural features, especially in neuration and leg structure, which are of the greatest value. The author, as would have been expected of one of our best lepidopterists, familiar with the structure as well as the early stages, the form and coloring of butterflies, has followed closely in the lines of the classification made prominent in recent years by Bates, in which the *Hesperidæ* are immediately preceded by their nearest allies, the *Papilionidæ*. It remains only to say that a good deal of interesting reading will be found scattered through the portly volume, and that there are points in the preface worthy of careful attention. About 500 species are described.

SAMUEL H. SCUDDER.

THE OTTAWA NATURALIST. Vol. i., Nos. 1 and 2, April and May, 1887.

A welcome addition to our few Canadian serials on Natural Science; we heartily wish it abundant success.

A REVISION OF THE LEPIDOPTEROUS FAMILY SATURNIIDÆ. By John B. Smith. Proceedings of the United States National Museum. Washington, Dec., 1886.

A very valuable illustrated paper on this interesting family of moths.