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THE SCIENTIFIC NAMES OF INSECTS.

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Every effort to render the present hotch-potch of Entomological names more correct and elegant is welcome to students of the Natural Sciences whose knowledge of the classic tongues is sufficient to render the ear sensitive to the grating jargon of many of our so-called Latin terms. I was therefore pleased to see Mr. Hulst's article in a late number of the CANADIAN ENTOMOLOGIST. He has raised one point that has been little noticed, but well deserves attention.

Having had some experience in the difficulties of scientific terminology, especially when engaged in drawing up a chapter on the subject for Mr. Miller's Catalogue of North American Fossils, I am induced to send a few lines on the subject.

With almost all Mr. Hulst's remarks I fully agree. On one point, however, I think that to follow out the advice given would lead to very great confusion. This would nevertheless be no valid objection were the advice itself beyond all question sound. But the argument supporting it appears to me not so. I refer to the following passage: "A feminine name must not be joined to a masculine noun. It is just the same as saying 'the girl John' to utter such a combination as *Melitaca phaethon*" (not *phaeton*) "or *Danaïs archippus*. We must or ought to write and say *Melitaca phaethona*" (not *phaetona*) "*Danaïs archippa*, and so on through the list."

So long is the list of scientific names that would come under condemnation were the sentence here pronounced carried into effect, that it is worth while to consider if it is absolutely necessary to enforce so stern a decree to the very letter.

The following are only a few specimens picked almost indiscriminately from the docket before the court :

<i>Eudryas unio,</i>	<i>Vespa crabro,</i>
<i>Chrysophanus Thoe,</i>	<i>Thecla Mopsus,</i>
<i>Attacus mylitta,</i>	<i>Telea Polyphemus,</i>
<i>Satyrus nephele,</i>	<i>Scolopendra heros,</i>
<i>Morpho Menelaus,</i>	<i>Cecidomyia destructor,</i>
“ <i>Polyphemus,</i>	<i>Ch. nobas semidea,</i>
<i>Limnitis Hephaestion,</i>	<i>Ceratonia Amyntor,</i>
“ <i>missippus,</i>	<i>Agrotis devastator,</i>
	&c., &c., &c.

The beautiful goddess of Mt. Washington and Pike's Peak (*C. semidea*) would seem less beautiful were she to become a demigod (*C. semideus*). Our old enemy the Hessian Fly (*Cecidomyia destructor*) might become less injurious if made feminine (*C. destructrix*). The Hesperians (*H. Wamsutta*, *H. Mystic*, *H. Hobomoc*) may perhaps be held of either gender, being scarcely Latin in any form. We can scarcely afford to dress Agamemnon's brother in female attire and say *Morpho Menelaä*; and *Polyphema* is yet more unendurable either with *Morpho* or with *Telea*. Before committing ourselves to such wholesale changes it is well to consider if the step is compulsory.

(1) It would introduce into scientific nomenclature a great number of nouns not existing in Latin or any other language, and many of them unnecessary.

In addition to those given above, let us notice the example given by Mr. Hulst, *Melitaea phaethon*, which he would make *Melitaea phaethona*. The change proposed would not make the new word Latin, for there is no reason to suppose that the feminine form of *phaethon* would have been *phaethona*. Moreover, so far as termination is concerned the word as it stands might be considered feminine if necessary, the ending *on* being so used in that language, as, for example, in *Gorgon*.

(2) Some of these words are capable of being explained so as to remove the apparent discrepancy in gender. Take for example Mr. Hulst's second instance, *Danaïs archippus*. The specific name being a modern coinage, must be judged according to the analogy of similar terms in Greek. Applying this test, we find that such compounds usually have but one form for both masculine and feminine genders. *Phillipus*,

perhaps the closest analogue of *archippus*, is in this condition. We may therefore regard the specific name as of both genders, and say *D. archippus* without offending classic taste.

(3) It is by no means an uncommon practice on the continent of Europe, in the Romance languages, to give feminine names to men, and *vice versa*. Any one can find abundant proof of this assertion by looking over a list of the Spanish nobility. Even the maker of the well-known Eau de Cologne bears the complex name Jean Marie Farina. I do not defend the practice; I only mention its existence.

(4) In the classic tongues and in those derived from them it is almost impossible to avoid the apposition of feminine and masculine nouns in consequence of the arbitrary severance of gender and sex. Eutropius begins his Roman History by applying to the Roman Emperor the title *Vestra Tranquillitas*. A Spaniard is compelled by his language to use the feminine noun when addressing his superior, as "*Vuestra Eminencia*," or even "*Suya Eminencia*" to a Cardinal. And though "Your Majesty" and "Her Majesty" may in classic usage accord with Mr. Hulst's rule when applied to Queen Victoria, they must violate it when applied to a king.

(5) It is quite common to find nouns of different genders put in apposition by classical Latin authors. For examples see the first Georgic of Virgil (ll. 5, 10, 32). In the first quotation all three genders are thus placed. And for a yet more conspicuous example see the first ode of Horace, containing the well-known words: "*Maccenas o et praesidium et dulce decus meum.*"

(6) Even among the Romans themselves, and in the construction of their proper names, the practice of mingling together masculine and feminine words was not uncommon. Besides others, perhaps capable of being disputed, we may quote the names of the two Emperors Caius Cæsar *Caligula* Augustus, and Marcus Aurelius Antoninus *Caracalla*. Both these feminine nouns were incorporated into the names unchanged. We need only glance down the list of Consuls to see that the practice was frequent. L. Licinius *Sura* was Consul in 107 A. D.; A. Cornelius *Palma* in 109 A. D., and Q. Ninnius *Hasta* in 114 A. D.

We have therefore abundant classical authority for linking nouns of different genders in apposition in the same name, and may therefore, I think, without offence, save ourselves the trouble of making so many

changes as would otherwise be necessary in our catalogues. On the other hand, I quite agree with Mr. Hulst that such combinations are not desirable, as they create unnecessary difficulty. A cautious author will avoid this as carefully as other dangers in forming a new name, and we must all feel indebted to Mr. Hulst for having called attention to this little noticed source of error and dispute, that it may be avoided in the future.

DESCRIPTIONS OF SEVERAL NEW PROCTOTRUPIDÆ AND CHRYSIDIDÆ.

BY W. H. PATTON, WATERBURY, CONN.

PROCTOTRUPES CRENULATUS.

♀.—Length of body 10 m. m. Red; eyes, ocelli, antennæ (except basal joint), sides and apical margin of scutellum, the post-scutellum, metathorax, extreme base of abdomen and tip of ovipositor, black; mesopleura, disk of mesopectus and spiracles of metathorax, piceous; terminal joints of the tarsi fuscous. Clothed with a short pale pubescence, the abdomen, except the base and a ventral line, glabrous. Antennæ 13-jointed, the basal joint robust, partially concealing the second joint, which is minute; joints 3-13 slender. Prothorax and mesothorax with fine striations on the pleura, the mesopleura with a smooth convex area; the depression on each side of the scutellum with six distinct ridges, its depressed posterior border with short ridges. Post-scutellum depressed at the sides, rugose, separated from the metathorax by a distinct cleft. Metathorax elongate, evenly rounded, traversed by a median longitudinal ridge, on each side of which are oblique wavy ridges forming irregular reticulations, on the sides these reticulations becoming more uniform and anteriorly becoming finer. Wings yellowish-hyaline, costal nervures and stigma piceous, the other nervures testaceous; no recurrent nervure present, radial cell very small, transverse, first cubital cell closed, large, a bulla at its tip on the cubital nervure. Trochanters formed of only one distinct joint. Extreme base of the abdomen with distinct ridges, the remainder of the abdomen highly polished and smooth. Ovipositor as long as the abdomen.

One specimen. Connecticut, Oct. 17th.

In size and in the venation of the wings this species agrees with Say's description of *P. caudatus*. But Say's species is "pale testaceous," has a "blackish transverse line between the antennæ," and is not stated to have the metathorax black.

GONATOPUS CONTORTULUS.

Length 3.5 m. m. Head testaceous, mandibles and scape of the antennæ white; the teeth of the mandibles, second joint of the antennæ and a line on the scape posteriorly, pale testaceous, remainder of antennæ fuscous. A large fuscous spot on the under side of head and another above in front of and including the ocelli; a raised line extending forwards from anterior ocellus to the face. Head transverse, broader than thorax or abdomen; convex beneath, concave behind, above and in front; the mouth prominent; the eyes longitudinally ovate, prominent, not reaching the posterior border of the head. Antennæ 10-jointed, the basal joint stout, the second joint more slender and one-half as long as the first, the third very slender and equal in length to the first and second together, the fourth and following joints slender but gradually becoming thicker, the fourth one-half as long as the third, the fifth a little shorter than the fourth and a little longer than each of the following joints. Thorax and abdomen piceous-black. The thorax slender, binodose. The trochanters formed of only one joint. Anterior coxæ long and robust, pale testaceous with a darker stripe above; anterior trochanters whitish, more slender, clavate; femora large obclavate, dark testaceous, paler at tip; tibiæ as long as the femora, and, together with the first tarsal joint, pale testaceous; terminal joints of the tarsi and the chelæ whitish. The chelæ at rest extending back to the tip of the first joint of the tarsus, the outer claw pointed and slightly curved at the extremity, the inner claw more robust, ciliated internally and with a wrench-shaped curve at the extremity (as in fig. 13); pulvillus tipped with fuscous.

Fig. 13. The other legs slender, the coxæ and the base of femora dilated; testaceous, the coxæ, base of femora, tibiæ above and claw joint of tarsi darker. Abdomen ovate, pointed at tip and with a short petiole.

One specimen. Waterbury, Conn.; taken on herbage a few inches above the ground, Aug. 18th.

This is the first species of the genus discovered in America, the *Gonatopus? alatus* Cress. (Tr. Am. Ent. Soc., iv., 193) evidently belonging to the genus *Dryinus* of Walker and Haliday.

CLEPTES ALIENA.

♀.—Length 6 m. m. Blue-green, the blue tinge more pronounced upon the median thoracic piece and the second and third segments of the abdomen; the head golden in front, the flagellum and the tibiæ within blackish, the tarsi fuscous. Thinly clothed with erect black hairs, the disk of the three basal segments of the abdomen glabrous. Wings subhyaline, the principal nervures black. The pointed tip of the abdomen piceous, with a golden reflection; the abdomen polished, very delicately punctured. Metathoracic spines moderate, sharp. Discoidal cell complete, appendiculated, the tip of the appendiculation connected with the base of the stigma by a bullar streak, cubital vein beyond the bulla distinct; radial cell closed indistinctly. Head finely punctured; thorax strongly punctured, disk of mesothorax and scutellum polished and sparsely punctured, metathorax reticulated, the upper surface with seven longitudinal carinæ.

Como, Wyoming; S. W. Williston. This is the first species of the genus recorded from North America.

NOTOZUS MARGINATUS.

Length 5 m. m.; expanse 8.5 m. m. Dark green with blue and violet reflections; face, vertex of head posteriorly and about ocelli and the disk of the mesothorax with a violet reflection; antennæ black, a slight bluish reflection on scape; mandibles beyond the middle pale testaceous, tridentate at tip, the teeth piceous; tarsi dull fulvous; wings pale fuscous, hyaline towards the base, nervures and tegulæ piceous; posterior face of the thorax and the second segment of the abdomen, particularly at the base, strongly tinged with blue; truncation of the third segment black; body beneath light green. Head with dense but shallow punctures, face excavated, delicately aciculated, posterior borders of head sharp. Anterior femora angulated beneath; the punctures of pro- and mesothorax sparse upon the disk; the punctures on scutellum and metathorax large; spine on post-scutellum flat, blunt and covered with large discoidal punctures; lateral angles of metathorax sharp. Abdomen very delicately and densely punctured, the punctures exceedingly fine on the disk of the first and second segments. Apical segment compressed towards the tip, subcarinate above, truncate at the extremity, the sides bisinuate, margined by a distinct row of large punctures; the truncation with no punctures

excepting a faintly impressed series just within the delicate raised bounding line; an arc of 120° removed from the truncated disk by an emargination which does not reach the centre.

Waterbury, Conn., July 27th.

Slightly larger than *Notosus viridis* (*Elampus viridis* Cress., Proc. Ent. Soc. Phila., iv., 103; Cuba), and differs in the form of the apex of the abdomen.

CHRYSIS VERTICALIS.

Green and dark purple, minute, slender, discal cell obsolete, apex of abdomen truncate; length 4 m. m.

Head and thorax green; flagellum fuscous, a purple spot about ocelli, palpi and tips of the mandibles testaceous, median piece of mesothorax purple, post-scutellum tinged with purple, tarsi white, wings hyaline, outer border of the tegulæ and the nervures dark piceous. Abdomen dark purple, extreme base of the first segment and sides of the first and second segments green, apical margins of the first and second segments and a fascia before the foveolæ and on sides of the third segment blue-green. Body beneath light green. Body clothed with white pubescence. Confluently punctured, the punctures on the abdomen finer and distinct. Head unusually long, the front being very convex, the vertex unusually convex when viewed from before, the eyes prominent and suborbicular, the transverse ridge between the eyes and above the antennary fossa prominent. Prothorax without median groove, grooves of mesothorax distinct; post-scutellum distinct from the metathorax, elevated, but not produced into a spine; metathoracic spines sharp, parallel; discoidal cell of anterior wings obsolete, the radial and sub-medial cells as usual. Abdomen with the median sulcus on the basal segment distinct, the third segment narrowed towards the apex, which is truncate and unarmed; the ante-apical series of foveolæ, consisting of a few large confluent punctures, interrupted in the middle.

Waterbury, Conn., July 22nd; found entangled in a spider's web.

The form of the head in this species is peculiar.

CHRYSIS MARTIA.

Green, abdomen red, wings hyaline; length 5 m. m.

Head and thorax green, with a thin griseous pubescence; antennæ black, the basal joints of the flagellum above and the scape green, the

latter tinged with coppery in front, ocelli enclosed in a blue spot; wings hyaline, the tegulae and nervures piceous; anterior tarsi and tips of the posterior tarsi blackish, the four posterior tarsi mostly pale testaceous. Abdomen dark red, with green and purple reflections, the base of the first segment golden-green, venter green with deep red reflections. Head and thorax densely and strongly punctured; the depression above the antennae well marked, polished; front and vertex convex, no transverse ridge between the eyes. Prothorax with a median groove, four distinct grooves on the mesoscutum; postscutellum and metathorax evenly rounded above. Abdomen densely punctured, the punctures finer than those of the thorax, the median line on the second segment distinct, the series of foveolae on the third segment consisting of twelve deep punctures, the median punctures the largest; second and third segments of equal length, the third segment suddenly narrowed a little beyond the foveolae and produced in the centre, the tip truncate, of more than one-third the width of the segment, not dentate.

Godbout River, Lower Canada; Wm. Couper.

This is the first discovered North American species to which the name "ruby-tail" properly applies.

COLLECTING ABOUT CHICAGO IN 1878.

BY C. E. WORTHINGTON, CHICAGO, ILL.

The early appearance of Lepidoptera gave indication of an unusually good season for field work, but the cold and wet weather in May and June apparently depopulated the woods and fields. Papilios were rare, and the Argynnidae that usually fly in clouds above the prairies were conspicuous by their absence. The number of species taken was not much reduced, but my notes show a less number of examples in proportion to the time given to their pursuit than in any previous season.

My first capture for the year was an example of *Xylina Bethunei* G. & R., on March 11th, fresh from pupa. March 12th, *Phigalia strigataria* and *Taenioampa incerta*; thereafter until May 5th, various species

continued to appear until checked by the cold following that date ; comparatively few specimens were obtained until after August 15th.

I have followed Mr. Grote's Check List closely in the following list of Noctuidæ taken. In the majority of cases these were taken at sugar, the main exceptions being *Cucullias* and *Plusias*.

In this connection I desire to express my obligations to Mr. Lintner and Prof. Grote, who have aided me much.

Squirrels and mice were troublesome at times about the trees, and later in the season timber wolves and some other representatives of the best suburban society, names unknown, were attracted, perhaps more by the operators than the sugar, but at any rate requiring more attention than was compatible with the successful pursuit of Entomology.

<i>Pseudothyatira cymatophoroides</i> , Guen.	July	<i>Agrotis baja</i> , S. V.	July
<i>Pseudothyatira expultrix</i> , Guen. "	"	" <i>haruspica</i> , Grote.	"
<i>Habrosyne scripta</i> , Gosse.	"	" <i>c-nigrum</i> , Linn. March-Nov	
<i>Raphia abrupta</i> , Grote.	"	" <i>bicarnea</i> , Guen.	July
" <i>frater</i> , Grote.	"	" <i>subgothica</i> , Haw. July-Sept	
<i>Harrissimenna sexguttata</i> , Harris	June	" <i>tricolor</i> , Lint.	Aug
<i>Apatela occidentalis</i> , G. & R. Aug		" <i>herilis</i> , Grote.	July-Aug
" <i>morula</i> , G. & R.	July	" <i>plecta</i> , Linn.	June
" <i>lobeliæ</i> , Guen.	June-Sept	" <i>redimicula</i> , Morr.	"
" <i>furcifera</i> , Guen.	July	" <i>pitychrous</i> , Grote.	July
" <i>lepusculina</i> , Guen.	June	" <i>scandens</i> , Riley.	Aug
" <i>Americana</i> , Harr.	July	" <i>fumalis</i> , Grote.	"
" <i>ovata</i> , Grote.	"	" <i>messoria</i> , Harr.	July
" <i>hamamelis</i> , Guen.	"	" <i>velleripennis</i> , Grote.	"
" <i>vinnula</i> , Grote.	June	" <i>venerabilis</i> , Walk.	"
" (<i>Eulonche</i>) <i>oblinita</i> , Sm.— Abb.	June	" <i>ypsilon</i> , Rutt. March-Nov	
<i>Jaspidea lepidula</i> , Grote.	"	" <i>saucia</i> , Hüb.	"
<i>Microcoelia diptheroides</i> , Guen. "	"	" <i>clandestina</i> , Harr.	"
" " var. <i>obliterata</i> , Grote.	June	" <i>brunneicollis</i> , Grote.	July
<i>Agrotis sigmoides</i> , Guen.	July	" <i>alternata</i> , Grote.	Aug
" <i>perattenta</i> , Grote.	"	" <i>cupida</i> , Grote.	"
		" (<i>Eurois</i>) <i>prasina</i> , S-V.	"
		" <i>occulta</i> , Hüb.	"
		<i>Mamestra latex</i> , Guen.	June
		" <i>adjuncta</i> , Guen.	"

<i>Glaea inulta</i> , Grote Oct	<i>Pyrrhia exprimens</i> , Walk. Aug-Sep
<i>Eucirroedia pampina</i> , Guen "	" <i>angulata</i> , Grote Aug
<i>Xanthia togata</i> , Esper "	<i>Tarache candefacta</i> , Hüb June
<i>Scopelosoma Walkeri</i> , Grote "	" <i>erastroides</i> , Guen "
<i>Scoliopteryx libatrix</i> , L. June-Oct	<i>Eustrotia synochitis</i> , G. & R. "
<i>Lithophane Bethunei</i> , G. and R.	" <i>carneola</i> , Guen "
. May-Oct	" <i>apicosa</i> , Guen "
" <i>laticinerea</i> , Grote Oct	" <i>muscosa</i> , Guen "
<i>Anytus sculptus</i> , Grote Sept	<i>Lithacodia bellicula</i> , Hüb "
<i>Calocampa nupera</i> , Lint "	<i>Galgula subpartita</i> , Guen "
<i>Lithomia germana</i> , Morr "	" <i>hepara</i> , Guen "
<i>Cucullia asteroides</i> , Guen "	<i>Drasteria erectea</i> , Cram. May-Oct
" <i>intermedia</i> , Speyer "	<i>Euclidean cuspidata</i> , Hüb "
<i>Adisophanes miscellus</i> , Grote June	<i>Stictoptera divaricata</i> , Grote Sep-Oct
<i>Crambodes talidiformis</i> , Guen "	<i>Parthenos nubilis</i> , Hüb June
<i>Nolaphana malana</i> , Fitch "	<i>Catocala epione</i> , Drury "
" <i>Zelleri</i> , Grote "	" <i>desperata</i> , Guen Sept
<i>Aletia argillacea</i> , Hüb Sept-Oct	" <i>retracta</i> , Grote Aug
<i>Ingura abrostoloides</i> , Guen June	" <i>insolabilis</i> , Guen June-Sep
<i>Calpe Canadensis</i> , Beth Aug	" <i>Levettei</i> , Grote July
<i>Plusiodonta compressipalpis</i> , Guen.	" <i>obscura</i> , Streck Aug
. Aug	" <i>relicta</i> , Walk "
<i>Telesilla cinereola</i> , Guen June	" <i>unijuga</i> , Walk "
<i>Plusia aerea</i> , Hüb Aug-Oct	" <i>briseis</i> , Edw "
" <i>contexta</i> , Grote "	" <i>concombens</i> , Walk "
" <i>biloba</i> , Steph May-Aug-Oct	" <i>amatrix</i> , Hüb Sept
" <i>verruca</i> , Fab Sept	" <i>cara</i> , Guen Aug
" <i>dyaus</i> , Grote Sept-Oct	" <i>coccinata</i> , Grote June
" <i>precatationis</i> , Guen June-Oct	" <i>ultronia</i> , Guen "
" <i>ou</i> , Guen Sept-Oct	" <i>parta</i> , " Sept
" <i>brassicae</i> , Riley "	" <i>ilia</i> , " Aug
" <i>oxygramma</i> , Geyer "	" <i>innubens</i> , " "
" <i>simplex</i> , Guen June-Oct	" <i>cerogama</i> , " "
<i>Chloridea Rhexiae</i> , Sm.-Abb Oct	" <i>neogama</i> , " "
<i>Heliothis phlogophagus</i> , G.&R. Sept	" <i>subnata</i> , Grote "
" <i>luteitinctus</i> , Grote "	" <i>piatrix</i> , " "
" <i>armiger</i> , Hüb "	" <i>palaeogama</i> , Guen "
<i>Heliochilus paradoxus</i> , Grote "	" <i>habilis</i> , Grote "

Catocala Clintonii, " Aug	Homoptera lunata, Drury. . May-Oct
" polygama, Guen. July	Ypsia undularis, Drury. Aug
" crataegi, Saund. "	" aeruginosa. "
" grynea, Cram. Aug	Homopyralis tactus, Grote. June
" fratercula, G. and R. . July	Pseudoglossa lubricalis, Geyer—
" gracilis, Edw. " June-Oct
" amica, Hüb. "	Epixeuxis aemula, Hüb. "
" lineella, Grote. "	" Americalis, Guen " "
Panopoda rufimargo, Hüb. "	Chytolita morbidalis, " June
" carneicosta, Guen. "	Zanclognatha laevigata, Grote " "
Remigia hexastylus, Harvey. . . Sept	Renia Belfragei, Grote. "
" latipes, Guen. Oct	" larvalis, " "
Celiptera frustulum, Guen. June	Bleptina caradrinalis, Guen. "
Parallelia bistriaria, Hüb. "	Bomolocha abalienalis, Walk. " "
Erebus odora, Linn. Aug	" (Euhypena) toreuta, Grote " "
Zale horrida, Hüb. June	" (Macrhypena) profecta " "
Pheocyma lunifera, Hüb. "	" " deceptalis, Walk " "
Homoptera edusa, Drury. May-Oct	" " perangularis, H'y " "
" Saundersii, Beth " "	Plathypena scabra, Fab. . June-Sept

MICRO-LEPIDOPTERA.

BY V. T. CHAMBERS, COVINGTON, KY.

Lithocolletis Scudderella F. & B.

Knowing this species only by Prof. Frey's description, I have in previous notices treated it as identical with *L. salicifoliella* Cham. But among the specimens submitted to me by Dr. Hagen is one of Prof. Frey's *Scudderella*, and being thus enabled to compare it with *salicifoliella*, I find that they are sufficiently distinct.

Scudderella is larger than *salicifoliella*, and has the tuft on the vertex darker. The ground color of the thorax and fore wings is not very different in the two species, but *salicifoliella* usually has the fore wings densely dusted with brown. This character can not, however, be relied on to distinguish the species, for the dusting is frequently almost or entirely

wanting. But on the basal part of the costal margin *salicifoliella* has a white streak, and just behind it another which meets an opposite dorsal streak so as to form an angulated fascia; and this streak and fascia are absent in *Scudderella*. The other costal streaks are similar in the two species, except that in *salicifoliella* the last two, placed just before the apex, usually cross the wing, becoming fascia. There are other differences, but those here indicated are sufficient for the ready distinction of the species.

L. deceptusella, n. sp.

Among my captured specimens of *L. cratagella* Clem. I find a specimen of this species which at the time of its capture I regarded only as a variety, but which a more attentive examination convinces me is a distinct though allied species. The abdomen and two hinder pair of legs are wanting, though otherwise the insect is in good condition, and though there is but a single specimen, I describe it for the purpose of discriminating it from *cratagella*.

Head, antennæ and palpi silvery white, tuft white mixed with saffron, much paler than in *cratagella*. Thorax and fore wings very pale golden brown—much paler than *cratagella*, perhaps more properly described as dark reddish saffron. On the fore wings there are four silvery white costal streaks like those of *cratagella* in shape and position, but smaller and not so distinctly dark margined; the first is about the middle of the wing length, and is dark margined on both sides; the second is behind it and is dark margined only before, as also on the other two, which are in the apical part of the wing. The dark margin of the first streak is continued along the extreme costa to the base. There is a short and narrow white streak on the base of the dorsal margin and a median basal silvery white unmargined basal streak which extends nearly to the middle of the wing. (In *cratagella* this streak is dark margined on both sides and around its apex.) Nearly opposite to, but a little before the first costal streak, is a nearly square large dorsal silvery white spot, which extends to and becomes confluent with the median basal streak just before the apex of the latter. It is directed a little obliquely backwards and is not at all (or but very faintly?) dark margined; opposite to the second costal streak is a triangular silvery white dorsal spot, larger than the costal spot and almost an equilateral triangle. The first of these dorsal spots—the one which extends to and is confluent with the median basal streak—is in

cratægella, and in *L. Hageni* F. & B., represented by a long dorsal streak placed immediately behind the apex of the median basal streak, and curving to a point near the middle of the wing, dark margined, and not confluent with the basal streak. This is the most striking difference between the species except in size (*L. Hageni* is larger than *L. cratægella*, which is larger than this species). In the apical part of the wing is a median dark brown streak extending to the apex. In *cratægella* this streak is much longer, beginning at the first costal streak and connected with the dark margin of all the streaks; in this species it begins behind the second costal streak; and in *Hageni* it is represented only by a small circular apical spot. Ciliæ white with a dark brown hinder marginal line at their base; in this respect it resembles *cratægella*, while *Hageni* has the tips of the costal ciliæ brown and a distinct brown "hook" radiating from the apex through the ciliæ. In this species and in *cratægella* the space at the base of the wing between the median and the dorsal basal streaks is of the general color, except that the color gradually deepens towards the apex, while in *Hageni* the whole dorsal half of the base of the wing is white, so that there is no distinction between the median and dorsal basal streaks; the white, however, extends farther along the middle of the wing than it does along the dorsal margin. Hind wings in this species pale silvery gray, with ciliæ of nearly the same hue. Fore legs white with the tibiæ and tarsi marked on their anterior surfaces with reddish saffron. The fourth dorsal streak is small in this species and in *cratægella*; indeed, in the latter it is sometimes obsolete. It is distinct in *Hageni*, and I am not sure but that a fifth is also there indicated by its small dark margin. This species is nearer to *cratægella* than either is to *Hageni*. The larva of *cratægella* feeds on *Cratægus* and allied genera; that of *Hageni*, according to Prof. Frey, on Oak, and from the locality in which I took the single specimen of this species I suspect that it also feeds on Oak.

Gracilaria purpuriella Cham.

This species was originally described from a few bred specimens and seemed to be distinct from the European *G. stigmatella*. But a larger collection induces me to believe that on a comparison of specimens they will be found to be the same species.

LYONETIA.

Four species of this genus have been described in this country—one,

L. speculella, by Dr. Clemens, and three, *L. alniella*, *L. apicistrigella* and *L. gracilella*, by me. Of these *speculella* and *alniella* are certainly distinct species, and so the others appear to me to be. But considering the amount of variation which is found so commonly in the extent and intensity of the fuscous markings of the known species of the genus, and the fact that two or more of the fuscous marks may by spreading and confluence unite into a larger patch, or may surround a white spot, or may be connected by streaks, etc., it is not impossible that *L. apicistrigella* may prove to be a variety of *speculella* or of *gracilella*, or even all three may prove to be varieties of one species. The truth about this can only be satisfactorily determined by breeding them from the larva, and as yet *alniella*, of Colorado, is the only species the larva of which is known. In the description of that species I alluded to the range of variation in its ornamentation. I have taken in Kentucky two specimens which I incline to refer to *apicistrigella*, though they differ somewhat from the typical specimens, having the whole fore wings pale fuscous and the markings only deeper than the remainder of the wings; but even these deeper markings do not agree accurately with those of typical specimens of the species. I have now before me a specimen which I feel bound to refer to *L. speculella* Clem., though not agreeing at all accurately with it; and I have also before me a specimen which I refer to *gracilella*, though it differs from it to about the same extent that the other specimen differs from *speculella*. This specimen (of *gracilella*), indeed, seems only to differ from *Lithocolletis nidificausella* Packard (Guide, plate 8, figs. 19 and 19a) by the absence of the spots and shading on the basal half of the dorsal margin of the fore wings, and such a difference in this genus would not be of specific value. The figures above referred to leave no doubt that *nidificausella* is properly referable to *Lyonetia* instead of *Lithocolletis*. The mode of pupation there indicated is that of all the known species of *Lyonetia*, and not of any species of *Lithocolletis*.

It may be proper to add that the figure 15c *loc. cit.*, given as representing the mine of *Lithocolletis geminatella*, is not like any of the multitude of known *Lithocolletis* mines, and may possibly be that of a *Lyonetia*, but is much more probably that of a *Nepticula*.

Should *gracilella* prove on breeding it to be identical with *nidificausella*, the latter name has priority.

SOME NEW SPECIES OF NOCTUIDÆ.

BY G. H. FRENCH, CARBONDALE, ILL.

Dicopsis vitis, n. s.

Imago—Length .50 of an inch. Expanse of wings 1.35 inches. Head, prothorax and thorax gray, the second tipped a little with light and containing a fine dark line. Abdomen yellowish gray. Color of primaries below a line running from the outside of the basal line on the costa to near the hind angle, light gray; above this line dark gray, with a slight smoky tinge. The stigmata, a space along the costa in front of the stigmata, the apical space and the subterminal space one-third of the distance from costa to hind margin, the same light gray as the hind or inner part of wing, mottled a little with smoky spots. Basal line obsolete except on the costa. T. a. line black, double, the inner part very faint, strongly but regularly arcuated, the end of claviform connected with it outwardly; from this a brown dash runs to the t. p. line. Transverse shade scarcely visible. T. p. line faint, nearly parallel with the outer margin. Subterminal line scarcely distinguishable save by the dark brown in the terminal space. The brown is in the form of shaded points in the middle that run to the outer margin. Outer margin light gray. Fringe dark gray interrupted with white at the ends of the veins. Secondaries grayish white with a blackish outer border.

Larva—Length when fully grown 1.25 inches. Ground color green, marked as follows with greenish white: very faint dorsal line bordered each side with a darker shade of green, subdorsal line distinct, stigmatal faint, neither of these bordered with darker green. Besides these lines, the body is irregularly mottled with small spots of the same greenish white color. Head a little smaller than the other segments, of a nearly uniform green.

The chrysalis is subterranean; the anal end tipped with four bristles, two rather stout, the other two about half as long as the first two and more slender. The larva was found on a grape vine, upon the leaves of which it fed while in confinement. It is single brooded, pupating the last of June and producing the imago in the following March.

Described from one ♀.

Orthosia signata, n. s.

Length .70 of an inch. Expanse of wings 1.50 inches. Color of head, prothorax and thorax rich cinnamon brown; the abdomen the same

with a slight rose tint to the long hairs on the basal segments, and a slight ochre tint on the posterior part of each segment, the terminal brush a dark brownish ochre. Under side of the body the same as the upper, the long hairs having the rosy tint. *Primaries* the same color as the thorax, marked with darker shades of brown, with a few lighter scales on the veins and a few black scales scattered over different parts of the surface. Basal, t. a. and t. p. lines moderately distinct, double, composed of brown and black scales, in which the black predominates, the included space a little lighter than the ground color; the t. p. line strongly arcuated beyond the reniform. Transverse shade prominent below the median vein and near the costa. Subterminal line light, running nearly parallel with the outer margin, bordered on its inner side with a dark brown that shades out towards the t. p. line. Between the subterminal line and the outer border is the lightest part of the wing. Orbicular and reniform annulated with slightly lighter brown than the ground color, the first somewhat kidney-shaped, the last with a prominent black spot in its lower part. *Secondaries* blackish brown, not very dark, scarcely lighter at the base. Fringes dark reddish brown with a narrow ochreous stripe at the base. Under side a little lighter than above, with a distinct black arcuated line marking the outer third of both wings.

Described from one ♀.

Heliothis Illinoensis, n. s.

Length .45 of an inch. Expanse of wings 1.10 inches. Color of head and thorax reddish brown, the dorsal portion of each having a yellowish cast. The abdomen rather dark nankeen yellow. Under side of body a mixture of yellow and reddish brown. *Primaries* reddish brown, being rather more of a red than a brown, with patches of dark ochre scales between the stigmata, the reniform and the t. p. line, and below the median vein. Basal, t. a. and t. p. lines black, single, the t. a. line with a strong outward angle just before reaching the hind margin, the t. p. line angulated about the same as in other species of the genus. Transverse shade distinct only near the costa and hind margin. Subterminal line broken into about nine black spots without shading. The annulations of the stigmata indistinct, these spots chiefly marked by a few enclosed black scales, portions of the black annulus being seen in places. At the base of the wing, on the hind margin, is a small patch of yellow scales similar

in color to the dorsum of the abdomen. *Secondaries* the same ground color as the fore wings, rather bright, scarcely lighter at base, with an indistinct, blackish, subterminal band, partially interrupted in the middle; under side of wings paler than above, with an arcuated black line marking the outer third of the wings, not distinct on the secondaries, and a black discal dot.

Described from one ♀ taken in Union Co., Illinois.

OBITUARY.

Another veteran in the Entomological ranks has passed to his rest. Frederick Smith, the renowned English Hymenopterist, is no more; he died on the 16th of February, in the 74th year of his age, from exhaustion consequent on a painful and dangerous surgical operation. He was born in London, England, in 1805, and in early life was apprenticed to Mr. W. B. Cooke, an eminent landscape engraver, where he acquired a very thorough knowledge of the engraver's art, which was of great use to him in after life. While still a young man he became an ardent collector of bees and ants, and also devoted some attention to the collecting of Coleoptera; but it was not until 1837 that the first paper from his pen was published, giving an account of the natural history of one of the Gall Flies. From 1842 to the time of his death his publications were very numerous and of great value. A most industrious man, a painstaking and methodical student, and an accurate observer, he has done very much to advance our knowledge of the Order in which he especially labored. By his death Entomology loses a sincere and talented advocate and an earnest votary, and Entomologists will greatly miss a friend who was ever ready to impart his knowledge to others.

CORRESPONDENCE.

DEAR SIR,—

To my list of food plants of *Saturnia io* (CAN. ENT., vol. ix., p. 180) I now add the Black Alder (*Prinos verticillatus* L.) and two species of *Rubus* (*R. villosus* Ait., and *Canadensis* L.)

L. W. GOODELL, Amherst, Mass.

DEAR SIR,—

In recording an article of mine on Jacob Hübner and his works, published in the CANADIAN ENTOMOLOGIST, the Editor of the Bibliographical Record of *Psyche* criticizes the paper very briefly by saying that my article proposed to "settle" the matter, but that I did not meet the principal points of my opponents. My paper did not aim to settle the position of Jacob Hübner in entomological literature at all. That must be left to time. What I tried to "settle," and hope I succeeded in doing, was that Dr. Hagen and Mr. W. H. Edwards, in the last named author's criticisms, had given the date of Ochsenheimer's volume incorrectly, had misrepresented Ochsenheimer by introducing a full stop in the middle of one of his sentences, and in appealing to Ochsenheimer as a rejection of the Tentamen failed to improve their position, for Ochsenheimer adopted genera from the Tentamen, such as *Agrotis*, etc. I think it quite clear that, whatever be the ultimate fate of Hübner's works, it will never do to read him out of entomological literature on account of his alleged ill success with the men of his time, or in such a manner as Mr. Edwards has attempted, or by such erroneous statements. For one I should be glad of a settlement in the matter, but it can never be arrived at in the manner in which it has been attempted by Mr. Edwards and Mr. Strecker. I have fully replied, I think, to their attack in my article aforesaid and in the preface to my Check List of N. Am. Noctuidæ.

But, in any case, I write now to object to the interjectional criticisms in the Bibliographical Record of *Psyche*, rather than to re-open the matter of Hübner's Tentamen and Verzeichniss. It seems to me that such criticisms are entirely out of place in a Bibliographical Record, and their continuance will seriously impair its value and usefulness. One does not look for criticisms in such a place, and, finding them, their impartiality becomes at once suspected. In the present case the criticism is essentially hasty and bad, but, if my friendly advice to avoid such matters in future be taken, I think it will not prove entirely unfortunate for the publishers of *Psyche*.

Respectfully,

A. R. GROTE, Buffalo, N. Y.

DEAR SIR,—

As I did not have the opportunity to correct the proofs of last half of my paper in March No., will you allow me to call attention here to some

errors in printing? On p. 54, 5th and 4th line from bottom, read:—
 “Besides that *Zerene* and *Monticola* are either one species or stand together in a natural series, *purpurascens* is *Zerene* of Behr (*Hydaspe* Bois.)”

On p. 55, erase the reference to Vol. 1, But. N. A., on 22nd line, and insert it at the close of the paper, page 56, after *purpurascens*. The last clause will then read:—

128. ZERENE, Bois., 1852.

Var. HYDASPE, Bois., 1869.

Zerene Behr, 1862.

purpurascens H. Edw., 1876.

Zerene var., Edw., But. N. A., Vol. 1, pl. 32.

Yours truly,

W. H. EDWARDS, Coalburgh, W. Va.

DEAR SIR,—

With infinite mortification, I find that in my article in No. 2 of this volume I committed a blunder bad enough to be considered a crime. Will you permit me to apologise to you, and correct myself? *Papilio brevicauda* is excellent Latin. *Papilio brevicaudus*, which I would have substituted, is a barbarism. I ask such as may have noticed the ludicrous error to take the spirit of what was written and pass by the illustration. The barbarism is itself an apt illustration that something more than an amateur knowledge of a language is necessary in one who would criticise.

None the less, however, is the principle I urge the true one and a necessity.

Very truly yours,

GEO. D. HULST,

Beresford, Volusia Co., Fla., April 8, 1879.

DEAR SIR,—

I beg leave to protest against the publication of such names as appear in Mr. Whitney's recent paper on Tabanidæ. I, for one, will never accept the description of insects baptised with such names as *caclux*, *nigribimbo* and the rest.

Very truly yours,

EDWARD BURGESS, Boston, Mass.