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The Canadian Entomologist.

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ANNUAL ADDRESS OF THE PRESIDENT OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO, 1874.

To the Members of the Entomological Society of Ontario :

GENTLEMEN,—I beg to offer you again, after the lapse of a year, my hearty congratulations upon the continued prosperity of our Society. As you have already learnt from the Report of our Secretary-Treasurer, we have been favored with a slight increase in our list of membership—as large, indeed, as can fairly be expected in a Society which confines itself to the study of a particular branch of Natural Science, and which cannot therefore attract into its ranks many who are not specially engaged, to some extent at least, in this limited field of investigation.

It is especially pleasing to find that our number of branches continues to increase—a highly successful one, with its headquarters in Montreal, having been organized since our last annual meeting. Its first annual report has been already presented to us in the pages of our journal.

The CANADIAN ENTOMOLOGIST, upon whose success the well-being and fair fame of our Society so largely depends, has—I am sure you will all agree with me—been more ably sustained than ever before. The thanks of the whole Society are assuredly due to the energetic and talented Editor, Mr. Saunders, who has been, indeed, its mainstay from the issue of its first number until now. It would be well if all our members would aid him, not only by contributions, but also by increasing the circulation, and thereby improving the means of support of the publication.

When I applied just now the term “limited” to our field of enquiry, I only did so when considering Entomology as one amongst a large number of sections of the great circle of natural sciences, which includes within its area the study of all things material which come within the range of man’s intellectual powers. If we look, however, at Entomology and its objects alone, we cannot fail to see at once that it is practically

without limit—that there is work enough for thousands of investigators for almost innumerable generations to come. And when we couple with Entomology other kindred sciences, such as Botany, Geology and Physical Geography, which are so closely allied that no student can safely overlook them, we begin almost to be overwhelmed with the vast extent of this field of knowledge that we seek to explore. So vast, indeed, is the field that no one now ventures to survey the whole of it, except in a very general way; each explorer finds himself compelled—if he would do any effective work—to confine his labour to some one or two of its sections or subsections. By this division of labour, all departments of the Science will by degrees be taken up, and much that is now a '*terra incognita*' will become familiar to the patient explorer.

In our own country—within the bounds of this great Dominion—there is need of many more students and explorers. Even in this Province of Ontario, the headquarters of our Society, where more has been done than in any other part of Canada, there is yet room for a great increase to our band of collectors and investigators. How incomplete, for instance, is even yet our list of Diurnal Lepidoptera, and how many pages are still blank in the life history of some of our commonest butterflies? Our able Editor, my excellent friend, Mr. Saunders, has done much to fill up these blank pages, and his work is everywhere recognized as thorough and authoritative; but yet there remains much more to be done, that we hope our members will before long accomplish. If we turn to Crepuscular and Nocturnal Lepidoptera, we must feel almost appalled at the extent of our ignorance. For those who have the time and the ability, I can think of no more interesting or attractive field of enquiry—none that will sooner or better repay the pains-taking student, whether he looks for fame or pleasure, whether he sighs for fresh fields to conquer, or desires to set his foot where man has not trodden before. In a department where so much remains to be done, we all, I am sure, offer a most cordial welcome to one who has recently cast in his lot among us, and has traversed the broad Atlantic in order to study the Noctuidæ of this country. I allude to Mr. George Norman, of St. Catharines, late of Forres, in Scotland.

In another order of insects, the Coleoptera, much no doubt has been accomplished. Through the pains-taking labours of a Billings and a Pettit, not to mention other good workers, and by the aid of the great authorities in the neighbouring States, Dr. Leconte and Dr. Horn in particular, we have been able to increase our list of Canadian beetles from a few hundreds at the birth of the Society, to more than as many thousands

now. But still how very much more remains to be done? What a field of labour there is before both student and collector in the Carabidæ, the Staphylinidæ, the Curculionidæ and other numerous families of beetles! May we not hope that during the coming winter our present scattered stores of knowledge will be utilized and made available for the good of all, by the compilation and publication of a large addition to our old and valuable list of Canadian Coleoptera?

If there remains so much to be done in these two favorite orders, what shall I say of the remainder, that are so generally neglected? It is surely time that some of our members should devote themselves to the working up of such interesting orders as the Neuroptera, the Hymenoptera, the Orthoptera, the Hemiptera, even if no one can be found at present to take up the study of the more difficult Diptera.

In all these orders there is the nucleus of a collection in the cabinets of our Society, while no doubt much additional material would be furnished by individuals to any member who will take up in earnest the study of any one of them. It would be a great contribution to our knowledge of Canadian insects if there could be published by the Society carefully prepared lists of as many species as possible in each of these orders. Such lists would, of course, be very incomplete at first, but they could easily be so arranged in publication that additions might be made to them at any time, as our stores of knowledge increase.

Such, gentlemen, are some of the modes in which, I think, we should endeavour to extend the operations of our Society. If each year, when we assemble together for our annual meeting, we can point to some such work done in the previous twelvemonth, we shall have good reason to congratulate ourselves upon real permanent progress—upon building up the foundation of an Entomological structure that will prove enduring and substantial in time to come.

Thus far I have referred to Entomology as a purely scientific pursuit; there is another aspect in which we cannot refrain from regarding it, viz., as a subject of very great economic importance to every inhabitant of our land. This view of Entomology has been especially brought before us of late by the havoc that has been produced in our farms and gardens by hordes of destructive insects.

The dreaded Colorado Potato Beetle (*Doryphora decem-lineata*) has spread eastward with great rapidity, and has now reached the Atlantic coast in some parts of the United States. I have been informed by

friends who reside in various parts of the Union, that while little, if any, diminution in the numbers of the pest is to be observed in the west, it is becoming very destructive where it has attained to its second year of colonization. During the first year of its invasion of a particular locality, no appreciable damage is done by it, but as its armies increase in geometrical progression, the potato crops of the following season generally suffer to a terrible extent. It has now covered the whole of the Province of Ontario, and is very destructive throughout the western half of it, though we are happy to say that our intelligent farmers and gardeners are effectually using the remedies suggested by our colleagues, Messrs Saunders and Reed, in their Report to the Legislature a few years ago. In Quebec it is but beginning to be observed; no doubt it will be found there in myriads next year. Across the border, it has penetrated to the western portion of Vermont, into New Jersey, down to the sea coast in Pennsylvania, and in Maryland; at Baltimore, Md., it is very abundant, while straggling outposts have been found as far south as Washington. The whole of New York and Ohio have been pretty well covered with the insect, while in Missouri it is as abundant as ever. In Indiana and Michigan there is a local diminution in the numbers of the pest, but nowhere are there as yet any signs of its cessation. The people of Europe are now beginning—and with good reason—to feel alarmed at the prospect of its crossing the Atlantic. The English and French scientific and agricultural publications are commencing to publish notices of the insect and to talk of restrictive measures, while in Germany, we are told that stringent regulations will probably soon be put in force by the Government to prevent the invasion of the country. Unless some regulations of this kind are put in general force throughout the whole of Western Europe, I believe that—judging from the spread of noxious European insects on this side of the Atlantic—the Colorado Beetle will soon become there as familiar an object and as destructive a pest as it is here.

While the Colorado Beetle from the Rocky Mountains has been over-spreading the whole northern continent eastward, there has been moving southward and westward in a similar manner another insect—the Cabbage Butterfly (*Pieris rapæ*)—that is almost as injurious as the other. This insect, an European importation, as of course you all know, starting from Quebec some few years ago—there first noticed by our friends, Messrs. Couper and Bowles—has now spread westward over almost the whole of Ontario. At Port Hope it has been this year by far the most common of all butterflies; thousands were to be seen throughout the whole

season, from early summer to the present time, flitting about along every road, and hundreds hovering over or alighting in every garden. There is hardly a cabbage or cauliflower fit to be eaten anywhere in the neighbourhood, while stocks and mignonette have been ruthlessly demolished in all the flower gardens. Its spread westward, however, has hardly been as rapid as its movements to the south. The two maritime provinces of New Brunswick and Nova Scotia, and all the New England States, have for some time been occupied, and now I am told that this year it is most plentiful as far south as Washington, and that it is by no means rare in Virginia.

While referring to the wonderful spread of noxious insects during the past few years, and to their excessive prevalence now, I must not omit to mention the affliction caused to our north-west Province of Manitoba and to many of the western States by the swarms of locusts, or grasshoppers as they are termed (*Caloptenus spretus*). The accounts of the sufferings caused by this terrible plague are perfectly appalling, and rival anything that we have read of the ravages of the Eastern locusts. Happily for us they do not seem to extend much further to the east than the Missouri River, though, occasionally they penetrate to some of the broad prairies beyond. As a detailed account of this insect will probably be afforded you in the forthcoming Annual Report of our Society, I need not detain you with any further remarks upon it.

The only other insect to which I need now call your attention for a moment, is the Grape-Vine *Phylloxera*. I am glad to learn that its ravages in the vineyards to the south of us have been comparatively trifling this year, and that in all probability the summer droughts to which we are so liable, will prevent its ever being as formidable a foe as was at one time apprehended.

To turn from this not very cheerful subject, I may mention, before concluding, that Mr. Saunders and myself duly attended the recent meeting at Hartford, Conn., of the American Association for the Advancement of Science. There we had the pleasure of meeting a large number of Entomologists from all parts of the United States, and we had the further gratification also, of being presided over, in general session, by the ablest of American Entomologists, Dr. Leconte, and in the Zoological Section, by another great worker in our department, Mr. S. H. Scudder. Informal meetings of Entomologists were frequently held, and finally it was agreed upon to form an Entomological Club of Members of the A.A.A.S., who should assemble annually a day before the meeting of the Association

in the place that may be from time to time selected for its sessions. In this way we trust that much may be done for the furtherance of our favourite branch of science, and that Entomologists generally, from all parts of the continent, will bring together their types of new species and the surplus of their collections for mutual information and benefit.

Without further trespassing upon your time and attention, I beg to thank you, gentlemen, for the kind consideration you have shown to my colleagues and myself during our term of office, and with hearty wishes for the continued prosperity of our Society,

I have the honour to be, gentlemen,

Your obedient servant,

CHARLES J. S. BETHUNE,

President E. S. of O.

Trinity College School, Port Hope, Sept. 22, 1874.

ON SOME CHANGES IN THE NOMENCLATURE OF NORTH AMERICAN COLEOPTERA, WHICH HAVE BEEN RECENTLY PROPOSED.

BY JOHN L. LECONTE, M. D., PHILADELPHIA.

Since the issue of the Check List of N. A. Coleoptera by the late Mr. G. R. Crotch, I have been asked by several persons interested in that branch of science, if I would advise them to change the labels in their collections in accordance with the nomenclature of several familiar genera as therein set forth. To all such applicants I have answered, that such changes are not expedient, unless they are fully convinced of the propriety of admitting them. For my part, I considered them quite unnecessary, and still further, contrary to the code of laws of nomenclature under which I supposed we were acting.

Circumstances, which it is unimportant for me to specify, have prevented me from heretofore making known the views upon which I formed the opinion thus given, but as confusion of ideas upon the adoption or non-adoption of Mr. Crotch's nomenclature now exists, I think that the time has now arrived for a full discussion of the subject.

For the purpose of confining attention to the more radical changes proposed, I will leave for a future time all questions relating to specific names, and consider at present only those affecting genera.

With the exception of some very unimportant examples, these chiefly turn upon the validity of the genera proposed and defined by Dr. Geoffroy in his *Histoire Abregee des Insectes*.

The first edition of this valuable work, in which, as is justly said by Mr. Crotch, he displayed "a degree of acumen far in advance of his age," bears date on the title page, 1764*, and was printed at Paris. The last edition, with supplements, was printed also in Paris, year of the Republic vii, (1799.)

The binominal nomenclature was first distinctly used in zoology in the 10th edition of the *Systema Naturæ*, by Linnæus, in 1758, and repeated in the 12th edition, 1766-67.

After the publication of the work last mentioned, Fabricius and others, devoting themselves more exclusively to entomology than Linnæus had done, divided his genera, and in describing new ones adopted other names for several of those described by Geoffroy.

The names of these later authors have, until the changes proposed by Mr. Crotch, been adopted without cavil.

Thus much as to the history of the question. Now as to the argument.

The most systematic attempt to reduce the laws of nomenclature in zoology to a code, capable of being easily understood and applied, was that of the British Association, acting through a committee, which reported at the meeting held in 1842.

Without discussing the details of this report, some of which might be and, indeed, were subjected to criticism, it is sufficient to state that the principles therein recommended were adopted by the Association, and without important modification, were reaffirmed by the Association of American Geologists and Naturalists at the meeting held in 1845.† These laws have been accepted and acted on by nearly all investigators in Natural History ever since.

Some discussions having taken place which indicated a possibility of improving the code, it was again referred by the British Association to

* Mr. Crotch states 1762, but I know not on what authority.

† *Am. Journ.*, 2nd series, ii, 423—(1846).

a committee, which reported substantially the same rules, with a few closer definitions of moot points and some useful commentaries upon certain rules.

This report was adopted at the meeting in 1865, and was reprinted with notes by Prof. A. E. Verrill, in the American Journal of Science and Arts, 2nd ser., xlviii, 92, in 1869.

It would therefore appear that the common law under which Zoologists now act in questions of nomenclature, is the code, the history of which I have just given. The only other alternative is, that there are no established rules, and that in the Republic of Science each citizen is a judge, capable of expounding the law for himself, and amenable to no tribunal.

I will therefore assume that until a different code is formally adopted, American naturalists are disposed to abide by the recommendations of the two important scientific bodies, whose reports are above mentioned.

As the language of all three reports is equally clear and definite upon the points I wish to make against the reception of the Geoffroyan genera, I shall quote from the latest, reprinted in Silliman's Journal, 1869, as being most easy of reference.

"Rule III. The committee are of opinion, after much deliberation, that the XIIth edition of the Systema Naturae is that to which the limit of time should apply, viz., 1766"(p. 94.)

P. 96. "As our subject matter is strictly confined to the *binomial system of nomenclature*, or that which indicates species by means of two Latin words, the one generic, the other specific, and as this invaluable method originated solely with Linnaeus, it is clear that as far as species are concerned, we ought not to attempt to carry back the principle of priority beyond the date of the 12th ed. of the Systema Naturae, 1766. Previous to that period, naturalists were wont to indicate species not by a name comprised in one word, but by a *definition* which occupied a sentence, the extreme verbosity of which method was productive of great inconvenience."(p. 97.) "The same reasons apply to genera." . . . "Brisson, who was a contemporary of Linnaeus and acquainted with the Systema Naturae, defined and published certain genera of birds which are *additional* to those in the 12th edition of Linnaeus' works, and which are therefore of perfectly good authority. But Brisson still adhered to the old method of designating species by a sentence instead of a word, and therefore while we retain his defined genera, we do not extend the same indulgence to the titles of his species, even when the latter are accidentally binomial in form."

By reference to the several editions of Geoffroy it will be seen, 1st, that he did not adopt the binominal nomenclature, except in regard to the additional species described in the supplements to the edition of 1799*; 2nd, that he did not admit himself any rule of priority in generic names, inasmuch as he described genera previously proposed by Linnæus under other names, quoting Linnæus in synonymy; 3rd, that he made no reclamation either in genera or species, in the last edition of his work.

It must also be kept in mind that Olivier and Latreille, cotemporaries and friends of Geoffroy, used his generic names only so far as they did not conflict with the genera established by other authors up to the date of their respective memoirs. They did not therefore 'revive' these names, as claimed by Mr. Crotch, but adopted them and introduced them into the proper and permanent literature of scientific terminology, thus placing them upon a new basis.

It would therefore appear, that notwithstanding the great value of the work of Geoffroy, and the importance of the views of classification which he proposed (and none will be more ready to admit the merit of his labors than myself,) he did, by an unfortunate want of appreciation of the necessity of adopting the Linnæan binominal nomenclature, and by not recognizing the principle of priority, exclude himself from being cited *either for genus or species* under the existing code, except so far as relates to the supplemental species in the edition of 1799.

In all other instances the names of his genera are free, and must be attributed to the authors who subsequently employed and defined them, *either with or without* reference to his use of the names.

In order that the evidence upon which I have based my opinion may be readily accessible, I have appended the remarks of Mr. Crotch upon the priority of his names, and two tables, one of synonyms, the other of homonyms of all the Coleopterous genera defined by Geoffroy.

In conclusion, I would recommend to those who use the Check List to substitute for the generic names adopted from Geoffroy in that work, the following, which have been in current use:

P. 37.—*Peltis* Geoffr. to *SILPHA* Linn., and change *Silpha* to *NECROPHORUS* Fabr. Fabricius was the first to divide the Linnæan

* An abridgment of his work under the name of —Fourcroy, with binominal nomenclature, was issued in 1785, and must be taken, therefore, as the earliest date for his species.

Silpha into two genera. The idea of type species, now commonly (though by no means universally adopted), did not then exist, and consequently it was competent for Fabricius to determine for which part of the genus he would retain the original name. If it was for the part corresponding with Geoffroy's *Peltis*, the latter must sink. Fabricius' *Necrophorus*, as will be seen in the table, is contained in *Dermestes* Geoffroy.

P. 42.—Change *Tritomida* to MYCETOPHAGIDÆ, and *Tritoma* to MYCETOPHAGUS Hellw., or else cite the name *Tritoma* from Fourcroy, 1785. The name in this sense should, in my opinion, be suppressed, as it was founded on a false character, and should not have been separated by Geoffroy from his *Dermestes*.

P. 79.—Change *Clerus* Geoffr. to TRICHODES Herbst., and *Thanasimus* Latr., so far as it relates to the 1st division of the genus, to CLERUS Fabr. Herbst first divided the genus as established by Geoffroy, and adopted by Fabricius, and therefore had the right to apportion the names to the divisions he founded.

P. 88.—*Stenocorus* Geoffr. The same reasoning would change this name to RHAGIUM Fabr.; the latter author having divided *Stenocorus*.

P. 51.—Change *Ciste'ida* to BYRRHIDÆ, and p. 52, *Cistela* to BYRRHUS Linn.

P. 93.—Change *Spermophagida* to BRUCHIDÆ, and *Mylabris* Geoffr. to BRUCHUS Linn.

P. 105.—Change *Tenebrionellus* Cr. to TENEBRIO Linn. *Tenebrio* Geoffr. is considered by Mr. Crotch to have *Asida* as its type, and therefore the change was proposed by him for the genus, as restricted by Fabricius, who first commenced its division into several genera. The same reason here applies as in several of the preceding instances.

P. 107.—Though not connected with the present subject, I may remark that the change of ULOMA to *Phaleria*, and of PHALERIA to *Halophalerus* Cr., has been produced by the assumption of generic types for the genera of authors who would certainly have repudiated the idea, had it been proposed to them. *Phaleria* Latr. was founded on three species, now belonging to different genera, and in course of time, and by the will of those who divided the genus, the 1st species has gone back to the previously established genus *Gnathocerus*, the 2nd became *Uloma* and the 3rd retained the name *Phaleria*.

P. 108.—Change *Pseudocistela* Cr. to CISTELA Fabr.

P. 115.—*Cantharis* Linn. should read *Geoffr.* The table of synonyms of Geoffroy's genera will show that by adhering to the received code of laws of nomenclature, the name *CANTHARIS* Linn. should be restored to some genus of Telephoridae which contains Linnaean species. Of these perhaps *Podabrus* would be the most convenient, while for the blistering flies, a dismemberment of *Meloe* Linn., the name proposed by Fabricius, *LYTTA*, must be adopted.

Remarks of Mr. Crotch on the Genera of Geoffroy, Trans. Ent. Soc. London, 1870, 43:

"1762. Geoffroy, in his *Histoire Abreegee*, divides the Coleoptera into 50 genera, displaying a degree of acumen far in advance of his age, which was but little appreciated by his contemporaries; the ill-concealed jealousy of Linnaeus is only too evident in his 12th edition; Olivier and Latreille succeeded in restoring the majority of Geoffroy's names, but there are still several which must be adopted. . . . *Platycerus* and *Peltis*, often attributed to Geoffroy, must either be rejected as synonyms, or, if allowed to remain, be quoted from Latreille and Illiger, who revived them. The others ought to be all retained."

Table of Synonyms of Geoffroy's Genera.

1764.	1767.	1775.	1789.	1796-1806.
GEOFFROY.	LINNÆUS.	FABRICIUS.	OLIVIER.	LATREILLE.
1. <i>Platycerus</i>	<i>Lucanus</i>	<i>Lucanus</i>	<i>Lucanus</i> <i>Trogossita</i>	<i>Lucanus</i> <i>Trogossita</i> <i>Platycerus</i>
2. <i>Ptilinus</i>	<i>Ptinus</i>	<i>Hispa</i>	<i>Ptilinus</i> <i>Drilus</i>	<i>Ptilinus</i> <i>Drilus</i>
3. <i>Scarabæus</i>	<i>Scarabæus</i>	<i>Scarabæus</i> <i>Cetonia</i> <i>Trichius</i> <i>Trox</i> <i>Melolontha</i>	<i>Scarabæus</i> <i>Cetonia</i> <i>Trox</i> <i>Melolontha</i>	<i>Scarabæus</i> <i>Cetonia</i> <i>Trichius</i> <i>Trox</i> <i>Melolontha</i> <i>Aphodius</i> <i>Geotrupes</i> <i>Oryctes</i> <i>Hoplia</i> <i>Copris</i> <i>Ateuchus</i>
4. <i>Copris</i>	<i>Scarabæus</i>	<i>Scarabæus</i>	<i>Copris</i>	

1764.	1767.	1775.	1789.	1796-1806.
GEOFFROY.	LINNÆUS.	FABRICIUS.	OLIVIER.	LATREILLE.
				Sisyphus
				Onthophagus
5. Attelabus	Hister	Hister	Hister	Hister
6. Dermestes	Dermestes	Dermestes	Dermestes	Dermestes
	Silpha	Necrophorus	Necrophorus	Necrophorus
		Tritoma	Ips	Ips
			Dryops	Dryops
		Sphaeridium	Sphaeridium	Sphaeridium
		Elophorus	Elophorus	Elophorus
		Nitidula	Nitidula	Nitidula
7. Byrrhus	Ptinus	Anobium	Anobium	Anobium
	Dermestes			
8. Anthrenus	Byrrhus	Anthrenus	Anthrenus	Anthrenus
9. Cistela	Byrrhus	Byrrhus	Byrrhus	Byrrhus
10. Peltis	Silpha	Silpha	Silpha	Silpha
				Choleva
11. Cucujus	Buprestis	Buprestis	Buprestis	Buprestis
12. Elater	Elater	Elater	Elater	Elater
				Throscus
13. Buprestis	Carabus	Carabus	Carabus	Carabus
	Cicindela	Cicindela	Cicindela	Cicindela
		Elaphrus	Elaphrus	Elaphrus
				Loricera
				Panagæus
				Bembidium
				Harpalus
				Brachinus
				Lebia
14. Bruchus	Ptinus	Ptinus	Ptinus	Ptinus
				Gibbium
15. Lampyris	Lampyris	Lampyris	Lampyris	Lampyris
		Pyrochroa		
16. Cicindela	Cantharis	Cantharis	Telephorus	Telephorus
		Malachius	Malachius	Malachius
		Necydalis	Oedemera	Oedemera
				Dasytes
17. Omalysus			Omalysus	Omalysus
18. Hydrophilus	Dytiscus	Hydrophilus	Hydrophilus	Hydrophilus
19. Dyticus	Dytiscus	Dytiscus	Dytiscus	Dyticus
				Hyphidrus
				Haliphus
20. Gyrimus	Gyrimus	Gyrimus	Gyrimus	Gyrimus

1764.	1767.	1775.	1789.	1796-1806.
GEOFFROY.	LINNAEUS.	FABRICIUS.	OLIVIER.	LATREILLE.
21. Melolontha	Chrysomela	Cryptocephalus	Clytra	Clythra
22. Prionus	Cerambyx	Prionus	Prionus	Prionus
23. Cerambyx	Cerambyx	Cerambyx	Cerambyx	Cerambyx
24. Leptura	Leptura	Lamia	Necydalis	Lamia
	Cerambyx	Saperda	Saperda	Cerambyx
	Necydalis	Callidium	Callidium	Prionus
25. Stenocorus	Cerambyx	Stenocorus	Stenocorus	
	Leptura	Leptura	Leptura	Leptura
		Donacia	Donacia	Donacia
		Rhagium		
26. Luperus			Luperus	
27. Cryptocephalus	Chrysomela	Cryptoceph.	Cryptoceph.	Cryptoceph.
			Eumolpus	Eumolpus
28. Crioceris	Chrysomela	Crioceris	Crioceris	Crioceris
	Hispa	Hispa	Hispa	Orsodacna
29. Altica	Chrysomela	Altica	Altica	Altica
30. Galeruca	Chrysomela	Crioceris	Galeruca	Galeruca
31. Chrysomela	Chrysomela	Chrysomela	Chrysomela	Chrysomela
				Prasocuris
32. Mylabris	Bruchus	Bruchus	Bruchus	Bruchus
33. Rhinomacer	Attelabus	Attelabus	Attelabus	Attelabus
			Rhynchites	Rhynchites
			Apion	Apion
			Apoderus	
34. Curculio	Curculio	Curculio	Curculio	Curculio
				Calandra
				Brachyrhinus.
				Lixus
				Cionus
35. Bostrichus	Dermestes	Bostrichus	Bostrichus	Bostrichus
				Anthribus
36. Clerus	Dermestes	Clerus	Clerus	Clerus
	Attelabus	Notoxus	Necrobia	Necrobia
		Dermestes		Thanasimus
				Opilus
				Anthribus
37. Anthribus	Dermestes	Curculio	Anthribus	Anthribus
		Bruchus	Macrocephalus	
38. Scolytus		Bostrichus	Scolytus	Scolytus
39. Cassida	Cassida	Cassida	Cassida	Cassida
40. Anaspis	Mordella		Mordella	Anaspis
41. Coccinella	Coccinella	Coccinella	Coccinella	Coccinella

1764.	1767.	1775.	1789.	1796-1806.
GEOFFROY.	LINNÆUS.	FABRICIUS.	OLIVIER.	LATREILLE.
42. Tritoma	Chrysomela		Mycetophagus	Mycetophagus
43. Diaperis	Chrysomela	Chrysomela	Diaperis	Diaperis
44. Pyrochroa	Lampyris Cantharis	Pyrochroa	Pyrochroa	Pyrochroa
45. Cantharis	Meloe Necydalis	Lytta Necydalis	Cantharis Oedemera Lagria	Cantharis Oedemera Lagria Sitaris
46. Tenebrio	Tenebrio Silpha	Tenebrio Opatrum Blaps Helops Cistela	Tenebrio Opatrum Blaps Helops Cistela	Tenebrio Opatrum Blaps Helops Cistela Asida Pedinus
47. Mordella	Mordella	Mordella	Mordella Cistela	Mordella Cistela
48. Notoxus	Meloe	Notoxus	Notoxus	Notoxus
49. Cerocoma	Meloe	Cerocoma	Cerocoma	Cerocoma
50. Staphylinus	Staphylinus	Staphylinus Paederus Oxyporus	Staphylinus Paederus Oxyporus	Staphylinus Paederus Oxyporus
51. Necydalis	Cantharis	Cantharis	Telephorus	Malthinus
52. Meloe	Meloe	Meloe	Meloe	Meloe

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Notes to Table of Synonyms:

1, *Trogosita Fabr.*; 3, *Geotrupes Fabr.*; 4, *Ateuchus Fabr.*; 6, *Lyctus Fabr.*; *Parnus Fabr.*; *Dryops Latr.*; 7, *Dermestes Fabr.*; 13, *Brachinus Fabr.*, *Weber*; 15, *Lycus Fabr.*; 16, *Telephorus Schaeffer*, 1766; *Dasytes Fabr.*; 17, *Omalysus Fabr.*; 19, *Hydrachna Fabr.*; 21, *Clytra Laicharting*, 1781; 24, *Prionus Fabr.*; 26, *Crioceris Fabr.*; *Ptinus Fabr.*, 27, *Eumolpus Fabr.*; 28, *Lema Fabr.*; 29, adopted by Fabr. in *Syst. Ent.*, 1775; transferred to *Galleruca* in *Ent. Syst.*, 1792; some of the species also under *Crioceris* and *Chrysomela*; 30, *Galleruca Fabr.*; 32, the name *Bruchus* was adopted by Linnaeus from Kalm.; 34, *Lixus* and *Calandra Fabr.*; 35, Fabricius referred *capucinus* to *Bostrichus* in 1775, but in 1792 transferred it to *Apate*; 36, *Clerus Latr.* = *Trichodes Herbst, Fabr.*; 38, *Eccoptogaster Herbst.*; 40, *Mordella Fabr.*; 42, *Ips Fabr.*, *Mycetophagus Fabr.*; 43,

Diaperis, Hispa *Fabr.*; 45, Lagria *Fabr.*; 48, Notoxus *Fabr.*, 1782, Anthicus *Fabr.*, 1801; 50, several of Gravenhorst's genera, also adopted by Latreille.

These notes are not intended to give in all instances the authority by whom the additional names of genera were first proposed, but only to show their use by the authors quoted.

Table of Homonyms of Geoffroy's Genera, with their Reference to Modern Families :*

1. Platycerus; Lucanide. Lucanide (*Latr.*)
2. Ptilinus; Ptinide. Ptinide (*Oliv., Latr.*)
3. Scarabaeus; Scarabaeide. Scarabaeide (*Linn., &c.*)
4. Copris; Scarabaeide. Scarabaeide (*Oliv., Latr.*)
5. Attelabus; Histeride. Curculionide (*Linn., &c.*)
6. Dermestes; Dermestide. Dermestide (*Linn., &c.*)
7. Byrrhus; Ptinide. Byrrhide (*Linn., &c.*)
8. Anthrenus; Dermestide. Dermestide (*Fabr., Oliv., Latr.*)
9. Cistela; Byrrhide. Cistelide (*Fabr., Oliv., Latr.*)
10. Peltis; Silphide. Trogositide. (")
11. Cucujus; Buprestide. Cucujide. (")
12. Elater; Elateride. Elateride (*Linn., &c.*)
13. Buprestis; Carabide. Buprestide (*Linn., &c.*)
14. Bruchus; Ptinide. Bruchide (*Linn., &c.*)
15. Lampyris; Lampyride. Lampyride (*Linn., &c.*)
16. Cicindela; Telephoride. Cicindelide (*Linn., &c.*)
17. Omalysus; Lycide. Lycide (*Oliv., Latr.*)
18. Hydrophilus; Hydrophilide. Hydrophilide (*Fabr., Oliv., Latr.*)
19. Dytiscus; Dytiscide. Dytiscide (*Linn., &c.*)
20. Gyrinus; Gyrinide. Gyrinide (*Linn., &c.*)
21. Melolontha; Chrysomelide. Scarabaeide (*Fabr., Oliv., Latr.*)
22. Prionus; Cerambycide. Cerambycide (*Fabr., Oliv., Latr.*)
23. Cerambyx; Cerambycide. Cerambycide (*Linn., &c.*)
24. Leptura; Cerambycide. Cerambycide (*Linn., &c.*)
25. Stenocorus; Cerambycide. Cerambycide (*Fabr., Oliv., Latr.*)
26. Luperus; Chrysomelide. Chrysomelide (*Oliv.*)
27. Cryptocephalus; Chrysomelide. Chrysomelide (*Fabr., Oliv., Latr.*)

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28. Crioceris ; Chrysomelide. Chrysomelide (*Fabr., Oliv., Latr.*)
 29. Altica ; Chrysomelide. Chrysomelide (*Fabr., Oliv., Latr.*)
 30. Galeruca ; Chrysomelide. Chrysomelide (*Oliv., Latr., Fabr.*)
 31. Chrysomela ; Chrysomelide. Chrysomelide (*Linn., &c.*)
 32. Mylabris ; Bruchide. Meloide (*Fabr., Oliv., Latr.*)
 33. Rhinomacer ; Attelabide. Rhinomaceride (*Latr.*)
 34. Curculio ; Curculionide. Curculionide (*Linn., &c.*)
 35. Bostrichus ; Bostrichide. Bostrichide (*Oliv., Latr.*) Scolytide
 (*Fabr.*)
 36. Clerus ; Cleride. Cleride (*Fabr., Oliv., Latr.*)
 37. Anthribus ; Anthribide. Anthribide, *Oliv., Latr.*
 38. Scolytus ; Scolytide. Scolytide (*Oliv., Latr.*) Carabide, *Fabr.*
 39. Cassida ; Chrysomelide. Chrysomelide (*Linn., &c.*)
 40. Anaspis ; Mordellide. Mordellide (*Latr.*)
 41. Coccinella ; Coccinellide. Coccinellide (*Linn., &c.*)
 42. Tritoma ; Mycetophagide. Erotylide (*Fabr., &c.*)
 43. Diaperis ; Tenebrionide. Tenebrionide (*Oliv., Latr.*)
 44. Pyrochroa ; Pyrochroide. Pyrochroide (*Fabr., Oliv., Latr.*)
 45. Cantharis ; Meloide. Meloide (*Oliv., Latr.*) Telephoride (*Linn.,
 Fabr.*)
 46. Tenebrio ; Tenebrionide. Tenebrionide (*Linn., &c.*)
 47. Mordella ; Mordellide. Mordellide (*Linn., &c.*)
 48. Notoxus ; Anthicide (*Fabr., Oliv., Latr.*) Cleride, *Fabr.*
 49. Cerocoma ; Meloide. Meloide (*Fabr., Oliv., Latr.*)
 50. Staphylinus ; Staphylinide. Staphylinide (*Linn., &c.*)
 51. Necydalis ; Telephoride. Cerambycide (*Linn., Oliv., Fabr.*)
 Oedemeride (*Fabr.*)
 52. Meloe ; Meloide. Meloide (*Linn., &c.*)
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DISCREPANCIES IN RECENT LISTS OF LEPIDOPTERA.

BY W. F. KIRBY, ENGLAND.

The opponents of the law of priority in nomenclature have taken occasion, both in England and America, to argue against the restoration of obsolete names, on the ground that the names employed in my Catalogue of Diurnal Lepidoptera do not always harmonize with those used in Staudinger's Catalogue of European Lepidoptera. Although this

argument looks plausible at first sight, a little reflection will probably convince many that it is baseless. We may leave genera out of the question now, as Staudinger has not attempted to grapple with the difficulties which they present ; but as regards species, it must be remembered—1st, that Staudinger starts from 1758, instead of 1767, and that I should have done the same had I investigated the question fully when I commenced my work ; and 2nd, that Staudinger, working at European Lepidoptera only, was necessarily better acquainted with the special literature relating to them than myself. Had I selected 1758, and possessed Werneburg's *Beitrag zur Schmetterlings kunde* at the time I was writing my own Catalogue, or had Staudinger's new Catalogue been published in time for me to verify the references contained in it, I think I may say that many of the alleged discrepancies would have disappeared, although, in some cases, I may have made use of materials which Staudinger does not appear to have employed, or may have seen reason to disagree with him as to the determination of certain species. Unless two authors have exactly the same materials to work with, or one copies from the other, no rules will be sufficient to insure their absolute agreement in every case ; but by the strict law of priority, the chances of disagreement are reduced to a minimum.

MICRO - LEPIDOPTERA.

BY V. T. CHAMBERS, COVINGTON, KENTUCKY.

(Continued from page 170.)

ANTISPILA.

A. ampelopsisella. - *N. sp.*

In the preceding paper on this genus I mentioned that I had found the larva of this species mining the leaves of *Ampelopsis quinquefolia*. Since that paper was placed in the hands of the Editor, many months ago, I have succeeded in rearing it from the mine.*

* The specimen mentioned in that paper as having been bred from the Longworth grape-vine, is now too much denuded for satisfactory comparison with this species, but I believe it to be the same ; certainly it is not any of the other known American species, and I have never met with it except in the Longworth grape leaf.

It is much smaller than any of the previously described species of this country, measuring only $\frac{3}{8}$ of an inch *alar ex.*, whilst *cornifoliella* is larger $\frac{1}{4}$, *Isabella* a little larger still, and *Viticordifoliella* is $\frac{1}{4}$ an inch. But it differs still more decidedly by having an almost lunate, rather large snow-white streak extending along the base of the dorsal ciliae nearly to the apex.

The distinctions between the described American species are as follows: The fascia and dorsal spot in *isabella* are wider than in *cornifoliella*. *Isabella* has the palpi white and the anterior feet yellowish, with brown annulations. Dr. Clemens is in error when he says that it is without violet and greenish reflections; I find it shows them about as in *cornifoliella*. In all the species I should call the fascia silvery rather than golden, though it certainly is tinged with golden. *Isabella* has the antennæ brown, with faint purplish reflections in some lights; the basal joint is pale ochreous yellow, but the terminal joint is of the general hue. In *cornifoliella* the stalk appears a little darker, and the terminal joint is white. The head in *isabella* can scarcely be said to be golden, as Dr. Clemens describes it, but has metallic hues; it appears to be like the fascia, silvery tinged with golden, though in some lights it appears to be brown. I have not been able to detect any appreciable differences between the fore feet of these two species. The face of *cornifoliella* is more decidedly brown and less metallic than that of *isabella*, and the palpi are somewhat darker.

The most striking differences are in the size and form of the fascia. *Viticordifoliella* differs from both *isabella* and *cornifoliella* in the fascia, which, however, resembles that of *isabella*, except that it is narrower on the costa. The costal and dorsal white spots in *viticordifoliella* are much more nearly regular triangles than in the other two species, in which they approach the trapezoidal form, and the costal spot is relatively smaller than the dorsal and a little further back, but the most striking difference is that the wings of *viticordifoliella* are more of a dead brown hue, the violet and bronzy green reflections being much less distinct. Its anterior tarsi are silvery white, and the head and palpi silvery tinged with yellowish. *Ampelopsiella* has the palpi white; face and head silvery, the face with a blue tinge; antennæ dark purple brown, with the tip white; fascia much as in *cornifoliella*; costal and dorsal spots rather as in *viticordifoliella*, but its most distinguishing mark is the curved white spot or streak along the dorsal ciliae.

ANNUAL MEETING OF THE ENTOMOLOGICAL SOCIETY
OF ONTARIO.

The annual meeting of the above society was held (by the kind permission of the Provost) in the library of Trinity College, Toronto, on the 23rd of September, at 3 : 30, p. m. The report of the Secretary-Treasurer was presented, showing a slight increase of membership and a satisfactory condition of the finances, after which the President read his annual address, which was, by request of those present, kindly placed at the disposal of the Printing Committee for publication.

The following officers were then elected :—

President, Rev'd C. J. S. Bethune, M. A., Port Hope ; Vice-President, R. V. Rogers, Kingston ; Secretary-Treasurer, J. H. McMechan, London ; Council—E. Baynes Reed, W. Saunders, Rev'd G. M. Innes, J. M. Denton, London ; G. J. Bowles, Montreal. Editor of ENTOMOLOGIST, W. Saunders. Editing Committee—Rev'd C. J. S. Bethune, M. A. ; E. Baynes Reed ; J. G. Bowles. Library Committee—W. Saunders, E. Baynes Reed, J. H. McMechan. Auditors—Chas. Chapman and J. H. Griffiths, London.

CORRESPONDENCE.

BRIEF NOTICE OF MR. STRECKER'S LAST ISSUE (NO. 10.)

The number bears the date of May, but its issue is certainly later, copies having been sent to subscribers in August ; its exact date is therefore uncertain. It contains brief descriptions of some supposed new species of moths, besides its curious account of North American Lycænæ, and pretty plate. The description of *Macroglossa fumosa* is in so far objectionable as Mr. Strecker is ignorant that all the allied species have, on emerging from the pupa, a light clothing of scales on the pellucid portion of the wings (see Ann. N. Y. Lyc., Vol. 8, and Lintner's N. Y. State Reports) which is easily brushed off.

Sphinx eremitoides is very probably *S. lugens* Walk.

Catocala magdalena is *C. illecta* Walk. (my No. 37).

Catocala aspasia is apparently *C. Arizona*, the description, so far as it goes, corresponding, with allowances for Mr. Strecker's "scarlet" hind wings.

A. R. GROTE.

PURCHASE OF INSECTS.—It often happens that an Entomologist is at a loss to procure specimens of certain rare species that he desires for purposes of study or to complete a series in his cabinet; he has seen them, perhaps, in the collection of a friend, or read of them in some publication, but is unable to obtain them for himself. We are glad to find that a provision has been made for such cases by the establishment of the "Philadelphia Agency" for the sale of specimens of insects; it is under the management of Mr. J. H. Ridings (518 South 13th Street), and is evidently in close connection with the American Entomological Society. The Agency not only sells to purchasers, issuing price-lists of species from time to time, but also receives and disposes of collections from individuals upon commission. The names, moreover, of all insects sold by the Agency are guaranteed to be correct. We would recommend any of our friends who desire to procure rare and beautiful specimens, to send to the Agency for a price-list.

BOOKS RECEIVED.

- On the Noctuidæ of North America, by Aug. R. Grote; from the 6th Report of the Peabody Academy of Science, Salem, Mass., 1874, pp. 18.
- Descriptions of New North American Phaleniidæ and Phyllopoða, by A. S. Packard, jr., *ibid.*, pp. 19.
- On the Transformations of the Common House Fly, with notes on allied forms, by A. S. Packard, jr. M. D.; from *Proc. Boston Soc. Nat. Hist.*, Feb., 1874, pp. 10, one plate.
- Bulletin of the Buffalo Society of Nat. Sciences, Vol. ii, Nos. 1, 2 and 3.
- Proceedings of the Boston Society of Natural History, vol. xvi, part iii, Jan. & Feb., part iv, Feb. to April, 1874.
- Report of the Department of Agriculture, Washington, June to October.
- Proceedings of the Convention of the American Association of Breeders of Short Horns.
- Proceedings of the Academy of Natural Sciences of Philadelphia, October—December, 1873, and Jan., Feb. and March, 1874.
- Report of the Council of the Agricultural and Arts Association of Ontario for 1873; Prize List of do. for 1874.
- Additions to the Library of the Linnean Society, London, Eng., pp. 25.
- The Observer of Nature, Lawrence, Kansas, vol. i, Nos. 1 and 2.
- Entomology in Missouri, by Prof. C. V. Riley, from the *American Naturalist*, March and April, 1874, pp. 10.
- The Zoologist and Newman's Entomologist, May to September; from Mr. Reeks, Science Gossip to September.
- Nature to Oct. 1.
- The Horticulturist, N. Y., to Aug.
- The American Agriculturist to July.
- The Prairie Farmer, Chicago.
- The Canada Farmer, Toronto, to July 15.
- The Maine Farmer, Augusta, Me.
- The Journal of Education, Toronto, to July.
- The Indiana Farmer, Indianapolis.
- Le Naturaliste Canadien, Quebec, to July.
- Journal of Education to Sept., 1874.