

EXPLANATION OF PLATE XIV.

- Fig. 1. *Dorcus dublonensis*, sp. n., male.
 Fig. 2. Ditto, female.
 Fig. 3. *Dorcus carolinensis* Arrow, male.
 Fig. 4. Ditto, female.
 Fig. 5. *Aegus alternatus* Fairm., male.
 Fig. 6. Ditto, female.

All slightly enlarged.

XLIX.—On the Generic Nomenclature of certain Homoptera,
 with a Note on the Status of Family Names. By W. E.
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Superfamily FULGOROIDEÆ.

Dr. E. P. Van Duzee has recently published a note ("Pan Pacific Entomologist," xv. no. 2, p. 66) on the standing of the genus *Liburnia* Stål. I therefore feel bound to state the other side of the case, first propounded by the late Dr. F. Muir (Proc. Hawaiian Ent. Soc. iii. (4) p. 332, 1917; and Bull. Exp. Sta. Haw. Sug. Plant Assoc., Ent. ser., Bull. no. 15, p. 18, 1924).

Van Duzee maintains that *Liburnia* Stål was actually a new name for the genus *Delphax* Latr. nec F. He also says that in 1807 Latreille designated *pellucida* F. as the type of *Delphax* Latr. by reason of his statement "*pellucida* Fabr. ejusd *Delphacis flavescens, striata, marginata, minuta.*" Therefore, insists Van Duzee, the type of *Liburnia* is *pellucida* F.

We cannot agree with this interpretation. In the first place Latreille's statement does not, in our view, fix the type of *Delphax* Latreille nec. F. Secondly, there is in the Insecta only one genus *Delphax*, that of Fabricius, 1798. *Delphax* Latreille et auct. is not a validly established genus but only a misconception of *Delphax* F., 1798. Any fixations of genotype of *Delphax* auct. are really invalid fixations of *Delphax* F. Until a new name (*Liburnia*) was given to this "generic misconception," we could not for nomenclatorial purposes treat it as a genus, and the fixation of the genotype cannot antedate 1866, when the name *Liburnia* was given.

Liburnia was established by Stål in 1866 (Hemipt. americana, iv. p. 179) with two synonyms, *Delphax* auctor.

and *Embolophora* Stål, 1853. The species were divided up in key form into section *a*, including *Embolophora monoceros* Stål, and section *aa*, including *Delphax vitticollis* Stål, *D. lautipes* Stål, *D. maculigera* Stål and *Cixius centralis* Sign. Muir declared that since Stål included *Embolophora* as a synonym of *Liburnia*, and that name has priority over *Liburnia*, the latter must henceforth be known as *Embolophora*, haplotype *E. monoceros* Stål. Van Duzee has argued that Stål meant to write *Delphax* Latr., and he would overcome the inclusion of *Embolophora* by assuming that the divisions *a* and *aa* were intended by Stål as subgenera. I have asked the opinion of various colleagues, and they are all of the opinion that *Delphax* auct. (as written by Stål) has no status as a genus and that *Liburnia* is in effect a new genus, and that its genotype must be selected from the species included under the original description. Dr. Uvarov suggested that the reason why Stål changed his generic name *Embolophora* to *Liburnia* may have been that his first name was a descriptive one and did not apply to all the species which he wanted to associate under one genus. Therefore, he renamed it *Liburnia* and sunk *Embolophora* as a synonym. This certainly supplies a motive for Stål's extraordinary behaviour. As to Van Duzee's second argument, even if we agreed that Stål effectively divided *Liburnia* into two subgenera, *a*, *Embolophora* with the haplotype *monoceros* and *aa*, *Liburnia* with *vitticollis*, *lautipes*, *maculigera* and *centralis*, and assumed, therefore, that Distant's 1906 genotype fixation of *monoceros* was invalid, then the genotype of *Liburnia* would still have to be one of the above four species, and cannot be *pellucida* F.

L. vitticollis has already been cited by Muir (1917), thereby transferring the name *Liburnia* to the species at present placed under *Sogata* Distant and still leaving the *pellucida* F. group without a name, unless we use *Delphacodes* Fieber.

Personally, I am of the opinion that the fate of *Liburnia* Stål depended on the first type fixation. This was first cited by Distant (Faun. Brit. India, Rhyn., iii. p. 480, 1906) as *monoceros*, thereby irrevocably sinking *Liburnia* as a synonym of the South African genus *Embolophora*. Muir's 1917 fixation of *vitticollis* is invalid.

The synonymy of the confused genera runs as follows :—

EMBOLOPHORA Stål, 1853.

Haplotype : *E. monoceros* Stål, S. Africa.

Syn. *Liburnia* Stål, 1866. Logotype : *E. monoceros* Stål (cited by Distant, 1906).

DELPHACODES Fieber, 1866.

Logotype : *Delphax mulsanti* Fieb., S. France (cited by Muir, 1917).

Syn. *Delphax* Latr., 1807, at auct. Logotype : *D. pellucida* F. (cited by Latreille, 1807 ?).
Liburnia auct. nec Stål, 1866.

ASIRACA Latr., 1796.

Logotype : *Delphax clavicornis* (cited by Latr., 1810).

ARAEOPUS Spin., 1839.

Haplotype : *Cicada crassicornis* Puz. (= *Delphax crassicornis* F.).

Syn. *Delphax* Fabr., 1798 (name preoccupied by *Delphax* Walbaum (ex Klein), *Artedi Ichth.* (3) ed. 2, p. 579, 1792, *Mammalia*).
Gonotype : *D. crassicornis* F., the single residual species after removal of *clavicornis* F. to *Asiraca* Latr.

Superfamily **JASSOIDEÆ**.

In his Check-List of the Hemiptera of America north of Mexico, 1916, Van Duzee brought forward the name *Cicadella* Latr., 1817, for that genus of Jassidae, which up to that time had gone by the name *Pettigonia* Oliv., 1789, or *Pettigoniella* Jac., 1903. At the same time he drew attention to the fact that the Jassidae (sens. lat.) had been given the group name Cicadellae by Latreille in 1825 ('Fam. Nat. du Règne Animal,' p. 427), and should therefore be called Cicadellidae instead of Jassidae, as hitherto used since 1858 (Stål).

The generic name *Cicadella* Latr., 1817, had been missed by Kirkaldy in his Nomenclature of the genera of the Rhynchota ('Entomologist,' xxxiii, p. 265, 1900), because at first sight it appears to have been used as a group name for the Membracidae, Cercopidae and Jassidae (sens. lat.) together. However, as pointed out by Van Duzee (in correspondence), Latreille ('Le Règne Animal,' iii,

p. 406, 1817) divided up the Homoptera into three "families" (p. 401), *Cicada* Oliv. (p. 402), *Fulgora* Lin. Oliv. (p. 404), and *Cicadella* (p. 406), one of which (*Fulgora*) he calls a genus. Under *Cicadella* he gives five divisions, *Attalions* Latr., *Ledra* Fabr., *Membracis* Fabr., *Cercopis* Fabr. and *Tettigonia*, which he apparently regards as subgenera, since under *Attalions* (p. 406) he refers to "the following subgenera."

Van Duzee rightly maintained that one of these five subgenera should take the name of the genus *Cicadella*, and appropriately assigned it to the subgenus *Tettigonia*, which Latreille, in the 1829 edition of 'Le Regne Animal,' refers to as "les Cicadelles propres." *Cicadella* Latr., 1817, therefore became a synonym of *Tettigonia* Oliv., but as the latter name was preoccupied by the Orthopterous *Tettigonia* L., 1758, *Cicadella* Latr. took its place, and of course had priority over *Amblycephalus* Curtis, 1833, and over *Tettigoniella* Jac., 1903, which was also proposed as a new name for *Tettigonia* Oliv., nec. L. Kirkaldy contended that Geoffroy's *Tetigonia*, 1762, spelt with one "t," was valid and different from the Orthopterous genus spelt with two "t's." Unfortunately we cannot agree with Kirkaldy that Geoffroy's 1762 work (Hist. Abreg. des Ins.) should be accepted, since it is not binomial. As pointed out by Kirkaldy, most of Geoffroy's genera were validated by Müller, in his *Fauna Ins. Fridrichsdalina*, 1764, who gave a comparative table of Linnean and Geoffroyan genera side by side. Unfortunately, however, he omitted *Tetigonia* Geoffr., which therefore is not validated until 1785 (Fourcroy, Ent. Paris. i. p. 193). Still, if this name is accepted as different by one letter from *Tettigonia* L., then it will antedate *Cicadella* Latr., 1817. Van Duzee states that the orthotype of *Cicadella* Latr. is *Cicada viridis* L., but there is no mention of this species in either the 1817, 1829 or 1836 editions of 'Le Regne Animal.'

It now appears that the name *Cicadella* was first used by Duméril in his *Zool. Analyt.*, Paris ed., p. 266. 1806. He gave a correct generic description to cover the Jassidæ (sens. lat.) as opposed to the Membracidæ, Fulgoridæ, Cercopidæ and Cicadidæ, but he mentioned no species. In the German edition, translated by L. F. Froriep and published at Weimar in the same year (1806), specific

names are added to Duméril's genera, and under *Cicadella* (p. 267) is given the single species *Cicada vittata* L. This means that the well-known *Eupteryx* Curt., 1833, of the family Typhlocybidæ (=Eupterygidæ), in which genus *Cicada vittata* L. now stands, will become a synonym of *Cicadella* (Duméril) Frorip, while *Cicadella* Latr., 1817, which is preoccupied and must take another name, becomes *Amblycephalus* Curtis, 1833, orthotype *Cicada viridis* L. The synonymy of these confused genera is as follows:—

Family Typhlocybidæ (=Eupterygidæ).

CICADELLA Duméril, 1806.

Haplotype: *Cicada vittata* L.

Syn. *Eupteryx* Curtis, 1833. Orthotype: *Cicada picta* F. (= *atropunctata* Goeze).

Family Cicadellidæ (=Tettigoniellidæ).

AMBLYCEPHALUS Curt., 1833.

Orthotype: *Cicada viridis* L.

Syn. *Cicadella* Latr., 1817 (Van Duzee, 1917). Logotype: *Cicada viridis* L., cited by Van Duzee, 1917.

Tetigonia Geoffroy, 1762 (invalid), Fourcroy, 1785. Logotype: *Cicada viridis* L.

Tettigonia Oliv. 1780 nec L. Logotype: *Cicada viridis* L., preoccupied in Orthoptera.

Tettigoniella Jacobi, 1903, nom. nov. for *Tettigonia* Oliv. 1780 nec L. 1758.

The above cases give a striking example of the disadvantages of adopting the principle, advocated by McAtee (Proc. Biol. Soc. Washington, xxxi. p. 109, 1918), of basing the family name on the oldest genus instead of on the oldest group name. If the oldest genus principle is adopted, the name of the Typhlocybidæ, which Kirkaldy, followed by McAtee, changed to Eupterygidæ, must now be changed to Cicadellidæ, based on the oldest genus *Cicadella* Duméril. On the other hand, the oldest genus in the Tettigoniellidæ is *Cicadella* Latr., 1817, but since a family name based on this would be preoccupied by the other Cicadellidæ, it would be necessary to take the next oldest genus, *Proconia* Lep. & Serv., 1828, and call the family Proconiidæ. The subfamily in which *Cicadella* Latr. stands would take the name of the oldest genus,

which would be *Amblycephalus* Curtis, 1833, and become the Amblycephalinæ.

All these changes of family name are still not necessarily final, because a still older genus may some day be transferred into a family.

Families should therefore be based either on the oldest group name or better still should be fixed by the International Commission as that name which has been most used for the group in the past.