MISCELLANEA

INSECTS.

FURTHER NOTES ON SYNONYMY IN CORETHRINAE.—The history of *Corethra* and the allied genera has become somewhat confused of late, mainly due to the placing of the type species of that genus, *culiciformis*, Degeer, in a genus founded by Loew (*Mochlonyx*), for a congeneric species *velutina*, Ruthe; and partly to the discovery quite recently that a genus *Chaoborus*, Lichtenstein, erected in 1800, is synonymous with *Sayomyia*, Coq., which latter (proposed in 1903) has been adopted of late by the workers in Culicidae in place of *Corethra* (as applied to those species other than *culiciformis* and its congeners).

Corethra was established by Meigen in 1803 for *Tipula culiciformis*, Degeer; there can therefore be no argument against this being the type species. Two other species, *pallida*, Fab. (1781), and *plumicornis*, Fab. (1794), were added, and it was twenty years after the creation of the genus that a fourth species appeared. This was *punctipennis*, Say., followed by *flavicans*, Mg., in 1830, others being added subsequently.

Ruthe described *velutina* as a *Corethra*[1] and this species was made the type of *Mochlonyx* by Loew. When Loew set up *Mochlonyx* (in 1844), there were known only four species, *culiciformis*, *plumicornis*, *pallida* and *fusca*, all placed in *Corethra*. In separating those species with a metatarsus distinctly longer than the 2nd joint from those in which it is several times shorter than the 2nd joint, Loew was morphologically correct, but made the mistake of selecting the wrong group of species for his new genus.

Now this seems a strange thing for so sound a dipterologist as Loew to do, but if we premise that Loew *never actually saw culiciformis*, we have an explanation of the whole situation. This is on the assumption that neither Degeer nor any other early writer gave a specification of the relative lengths of the tarsal joints.[2]

In this case Loew would conclude that *culiciformis* as well as *plumicornis*, *pallida* and *fusca* possessed long metatarsi, and that in *velutina*, Ruthe, he had found an isolated case to the contrary, which he was justified in placing in a new genus.

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[1] Isis, 1831, p. 1205. As though to complicate matters still further, even Ruthe contradicts himself, for in the two short preliminary diagnoses in Latin and German he says 1st tarsal joint much *shorter* (the italics are mine) but in the full German description following he says much "longer:" but that this is an error is obvious by the continuation that the fore pair are "shorter still," being only one fourth as long as the 2nd joint, which itself is twice as long as the 3rd.

[2] This is a point I have no means of verifying, Degeer's work not being accessible, but Coquillett (Can. Ent., xxx, 189), in establishing *Sayomyia*, says that the figures are useless for deciding the question.

Moreover, in the light of the definite information of the very short 1st tarsal joint in *culiciformis* as specially supplied me by Mr. Hill after an examination of examples of the species in the British Museum, it seems almost certain that Schiner also never saw the species, as otherwise he would have corrected Loew's error. It was not a case of the point being overlooked, since Schiner accepted the differentiation of the genera on Loew's character,—the relative lengths of the metatarsus and 2nd tarsal joints.

Coquillett, recognizing Loew's error in selecting the wrong group of species for his new genus, proposed *Sayomyia*[1] for those species with long metatarsi, taking as his type *punctipennis*, Say., a North American species,[2] and until recently this generic term has been in general use for those species of "*Corethra*" *sensu lato*, apart from the congeners of *culiciformis*.

The recognition quite recently (1910) by Coquillett himself that *Chaoborus*, Lichtenstein (1900), is synonymous with *Corethra* itself and antedates Meigen's genus by three years, throws all the species lately placed in *Sayomyia* into this ancient genus.

In my previous notes on this subject[3] the identity is explained.

Regarding some other species, *manilensis*, Sch., was described only four years after that author published his "Fauna Austriaca," so that it is evident it must be a *Chaoborus* also.

"*Corethra asiatica*," Giles, has the metatarsus distinctly longer (about $1\frac{1}{3}$ to $1\frac{1}{2}$ times) than the 2nd joint, which latter is a little longer than the 3rd. It is therefore a *Chaoborus*.

"*Sayomyia cornfordi*," Theob., I am informed by Mr. Hill, who has kindly examined the type on my behalf, has the metatarsus $1\frac{1}{2}$ times as long as the 2nd which is $1\frac{3}{4}$ times as long as the 3rd, the remaining joints being subequal, each a little shorter than the 3rd. *Cornfordi* therefore is also a *Chaoborus*.

Although I quite agree with Prof. Kertesz in believing only two sub-families should be allowed (Culicinae and Corethrinae[4]), as has been always customary until the connection between mosquitoes and malaria drew the attention of many students to the subject who were not dipterologists, it is difficult to understand why he places "*Mochlonyx*," Lw. (with the three species *culiciformis*, Deg., *velutinus*, Ruthe, and *effoetus*, Wlk.,[5] which of course are true *Corethrae*), in the sub-family Culicinae, retaining "*Corethra*" in Corethrinae for those species that I have shown have to be relegated to *Chaoborus*.

So far as my information carries me, *Corethra*, Mg., *sensu stricto*, will contain only the two species *culiciformis*, Degeer, and *velutina*, Ruthe, the latter with *effoetus*, Wlk., as a synonym.

[1] Can. Ent., xxxv, 189. [2] Journ. Acad. Sci. Phil., iii, 16 (*Corethra, id.*).
[3] Rec. Ind. Mus., iv, 317 (1911).
[4] In my catalogue of Oriental Culicidae published recently I admitted more than two sub-families merely out of compliment to workers in this family, and I may do so for the same reason in my forthcoming extensive supplement, but I am convinced that from a zoological point of view the two sub-families are quite sufficient.
[5] This is synonymous with *velutina*, Ruthe.

In *Chaoborus*, Lichtenstein, must certainly be placed the following: *plumicornis*, F., *pallida*, F., *fusca*, Staeg., *flavicans*, Mg., *manilensis*, Sch., *punctipennis*, Say., the latter with *trivittata*, Lw., as a synonym.

Prof. Kertesz's catalogue gives the following species under "*Corethra*" and there are no means to hand of testing their true generic position, but the probability is that the majority, perhaps all of them, belong to *Chaoborus*. It may be noted that the above-mentioned catalogue uses the term *Corethra* to embrace the species now certainly referred to *Chaoborus* as well as the following ones of uncertain position: *antarctica*, Huds. (New Zealand), *nyblaei*, Zett. (North Europe), *obscuripes*, Wulp (Central Europe), *pilipes*, Gimm (Eastern Europe), and *rufa*, Zett. (North Europe).

E. Brunetti.

CRUSTACEA.

On the distribution of the different forms of the genus *Ibla*.—Until a few years ago only two forms of the genus *Ibla* (*I. quadrivalvis* (Cuvier) and *I. cummingi*, Darwin) had been described, but in 1907 Hoek described a third under the name *Ibla sibogae* (*Siboga-Exped.*, Mon. xxxia—Cirripedia Pedunculata—p. 48, pl. iv, figs. 20—22, pl. v, figs. 1—8, 1907). The most curious difference between *I. quadrivalvis* and *I. cummingi* is, as Darwin pointed out, the fact that whereas the large individuals of the former are hermaphrodite and possess a well-developed penis, similar individuals of the latter are exclusively female and possess no penis (*Mon. Cirripedia*—Lepadidae, p. 204). The typical form of *I. cummingi* can be readily distinguished on superficial examination by blue markings on its valves which are quite absent from those of *I. quadrivalvis*. All other differences are trivial and, in my opinion, fall well within the limits of individual variation. *I. sibogae* (except for minute structural differences which I also consider of little importance) differs from *I. cummingi*, with which its sexual features are in agreement, in the absence of the blue markings; from *I. quadrivalvis* it can hardly be distinguished unless the animal be dissected out of its shell.

I have recently obtained cotypes or paratypes of *I. sibogae* and have examined considerable numbers of specimens of the genus from the Gulf of Oman, the coast of Burma, the Straits of Malacca, the Gulf of Siam, Port Jackson and New Zealand. With the exception of those from Australia and New Zealand, these specimens agree either with *I. cummingi* or (more commonly) with *I. sibogae*. The series from the coast of Burma is a large one and includes almost every grade in a transition between these two forms, and I have no doubt that the form *sibogae* must therefore be considered merely as a variety of *I. cummingi*, as Hoek himself thought might prove to be the case. Among the specimens that represent this variety in the collection before me are some of those