

**Comment on the proposed conservation of the usage of the generic name of *Drosophila* Fallén, 1823 (Insecta, Diptera)**

(Case 3407; see BZN 64: 238–242, 65: 55–56, 137–150, 214–215, 304–307)

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The nomenclature of the genera related to *Drosophila*, as used in recent taxonomic papers, is based on the paper of Sturtevant (1942). However, Throckmorton (e.g. 1962) and subsequent authors recognised that the taxonomic relationships within the group are partly different and showed them on cladograms, without suggesting nomenclatural changes. Now it is quite apparent that the conception of Throckmorton is, in principle, correct and its modifications are presently discussed. After forty seven years, time is now more than mature to reflect the changes in the nomenclature. If the Commission maintains *Drosophila funebris* (Fabricius, 1787) as type species of the genus *Drosophila* Fallén, there are two possibilities how to reflect the situation: 1. *Sophophora* Sturtevant, 1939 would be elevated to the rank of genus and consequently many geneticists, physiologists, etc. would have to adopt the name *Sophophora melanogaster* for their favourite research subject. 2. Alternatively, more than ten currently independent genera would be connected with the genus *Drosophila* (see comment by P. Štys, BZN 65(2): 144). In this case, the currently independent genera *Scaptomyza*, with about fifteen subgenera, and probably *Hypselothyrea*, *Phorticella* and *Zaprionus*, with two subgenera each, would become part of the genus *Drosophila*. It is evident that the names of these genera, and/or their subgenera, could not then be used as genus-group names.

On the other hand, accepting the proposition to use the name *Drosophila* s. s. for the genus based on *D. melanogaster* Meigen, 1830 would also bring various constraints, as discussed in BZN 65(1) and 65(2). Apparently there is no perfect solution and I do not intend to anticipate the decision of the Commission. However, if *D. melanogaster* is to be accepted as type species of the genus *Drosophila*, the name of the present subgenus *Drosophila* (based on *Musca funebris* Fabricius, 1787) has to be changed at the same time. This nomenclatural act needs a comment.

Apparently no suitable genus-group name, other than *Drosophila*, has ever been used for the present type species *D. funebris*. The only available name, *Oinopota* Kirby in Kirby and Spence, 1815, is based on *Musca cellaris* Linnaeus, 1758. Type material of *M. cellaris* does not exist. Although Meigen (1830) considered *M. cellaris* synonymous with *M. funebris* Fabricius, 1787, most subsequent authors have not accepted this synonymy and *M. cellaris* is considered a nomen nudum (e.g. Brake & Bächli, 2008). Moreover *M. cellaris* was not originally included in *Drosophila* and, in my opinion, cannot become the type species of the taxon currently known as *Drosophila* s.str.

There are several genus-group names used for various subordinate taxa of the present genus *Drosophila*. The names *Idiomyia* Grimshaw, 1901 and *Hypenomyia* Grimshaw, 1901 should not be taken into consideration; they have been used for endemic Hawaiian species now considered by many authors, including Brake &

Bächli (2008), to belong to the genus *Idiomyia* Grimshaw, although this arrangement is not unequivocally accepted. Consequently the two names used by Duda, 1923 are the candidates. In the application (BZN 64(4): 239), the name *Chaetodrosophilella* Duda, 1923 (p. 40) is suggested for the present subgenus *Drosophila* (anticipated there to be raised to the genus level). However, *Chaetodrosophilella* has been used as a valid name only once before, notably for the group based on, and including only, *Drosophila quadrilineata* de Meijere, 1911 from southeast Asia and Micronesia, and has already been replaced by *Chaetodrosophila* Duda, 1924a in his subsequent publication. Therefore I do not consider it very suitable for a subgenus of several hundred species. The other genus-group name used by Duda, 1923 (p. 47) is *Spinulophila*. Duda soon transferred to *Spinulophila* the common cosmopolitan species *immigrans* Sturtevant, 1921 (misidentified as ‘*tripunctata* Loew, 1862: Becker, 1908’ by Duda, 1924a, but recognized as ‘*D. immigrans* Sturtevant?’ by Duda, 1924b), which is often used as an object of genetic, physiological and ecological research, and the term ‘*immigrans* group’ has been commonly used for more than sixty years (Sturtevant, 1942) for a group currently comprising almost 100 species. The ‘*immigrans* group’ is close to the ‘*funnebris* group’ and all taxonomic treatments show that they are congeneric. Furthermore *Spinulophila* has been, from the very beginning, used for a group which is not monotypic.

Other genus-group names used for subordinate taxa of the present *Drosophila* (*Acrodrosophila* Duda, 1924a, *Spinodrosophila* Duda, 1924a, *Sordophila* Wheeler, 1949, disregarding unjustified emendations) are younger. They are also apparently disqualified because they represent groups of one to several species limited to one of the zoogeographical regions (considering the Holarctic region as a single unit). The same applies to the names presently used for the other extant subgenera of *Drosophila*, which moreover represent taxa unrelated to *Drosophila funnebris*.

In summary: if the name *Drosophila* were to be used for the genus based on *D. melanogaster* Meigen, 1830, I suggest giving the present subgenus *Drosophila* the name *Spinulophila* Duda, 1923 (although this name does not have page priority over *Chaetodrosophilella* Duda, 1923), mainly because *Spinulophila* originally represents a well known group of numerous species, including one cosmopolitan species and several others important for genetic research, the group being clearly congeneric with *D. funnebris* (Fabricius, 1787), type species of *Drosophila*.

### Additional references

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