

## Taxonomic Review of the Australian *Drosophila setifemur* Species Group, a New Name for the *D. dispar* Species Group (Diptera: Drosophilidae)

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**ABSTRACT.** Examination of the holotype and a paratype of *Drosophila setifemur* Malloch, 1924 in the Australian Museum has resulted in the discovery that it is not a synonym of *D. sulfurigaster* as had previously been assumed. Instead, *D. setifemur* is a senior synonym of the widespread eastern Australian species *D. dispar* Mather, 1955. The so-called *Drosophila dispar* species group is renamed the *Drosophila setifemur* species group and *Drosophila unguicula* is removed from it. An illustrated key to Australian drosophilids with spinescent fore-femora is provided.

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The genus *Drosophila* accommodates a great range of drosophilids, with numerous aggregations at various levels between genus and species (viz. subgenus, species group, subgroup, complex, etc.). A rapidly growing body of knowledge is allowing us to know with ever increasing certainty the true genetic relationship between species. But ultimately, even when the tree that relates every lab strain and every field-sampled specimen is known with a high level of confidence, there will remain the task of affixing the taxonomically valid names to each of those samples and to biological species.

*Drosophila* currently has c. 1,600 described species; c. 350 are classified with *D. melanogaster* in the subgenus *Sophophora*, and another c. 730 species are treated as *Drosophila* s.str. Nearly all are attracted to fruit baits and can be established as cultures in the laboratory. The following synonymy involves *Drosophila dispar* Mather, 1955: 570 (a species in the *dispar* species group of the *Drosophila* subgenus *Sophophora*) and *D. setifemur* Malloch, 1924: 351 (a species incorrectly classified as synonymous with *D. sulfurigaster* (Duda, 1923: 48) in the *nasuta* subgroup, *immigrans* species group of *Drosophila* s.str.).

Removing *D. setifemur* from synonymy with *D. sulfurigaster* and placing it in synonymy with *D. dispar* leads to a need to rename the *Drosophila dispar* species group (established by Mather, 1955).

### Historical overview

When Malloch examined four specimens collected in Sydney, he found they were members of a new species which he named *Drosophila setifemur*—a fly with distinctive setation on both the posterior and anterior faces of the fore-femur. They were all females and the importance of this will become apparent below because there is marked sexual dimorphism in this species. In 1942, Patterson & Wheeler described *D. spinofemora* from a live culture originating from Honolulu, they used *spinofemora* as a name to denote distinctive but very short femoral spines. Yet another species, the widespread, peridomestic species *D. immigrans* Sturtevant, 1921: 83 also has a distinctive series of closely spaced femoral spines—seriate spinescent setulae. Patterson & Wheeler (1949) placed *D. spinofemora*, together with *D. setifemur* and 16 other species, in the *immigrans* species