

***Scaptodrosophila acclinata*:**
A New *Hibiscus* Flower-breeding Species
Related to *S. hibisci* (Diptera: Drosophilidae)

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ABSTRACT. Physiological, ecological and evolutionary studies of *Scaptodrosophila hibisci* have led to recognition of a second species in the Northern Territory (Australia) which is described here as *Scaptodrosophila acclinata* n.sp. The new species is readily distinguishable by reference to the first orbital: it is large and proclinate in *S. hibisci* and small and reclinate in *S. acclinata*. *Scaptodrosophila hibisci* has been collected from the flowers of five *Hibiscus* species in eastern Australia and *S. acclinata* uses eleven *Hibiscus* species in the Northern Territory. Only *H. meraukensis* is a host for both, and there is no evidence of narrow host-specialization. The distributions are apparently disjunct. The two species can be reared in the laboratory on cultured plants. Hybridization studies showed the two species to be partially interfertile; *S. acclinata* has delayed sexual maturation and extended copulation latency when compared to *S. hibisci*. This species pair is already the subject of various eco-physiological and reproductive-biological studies because of so many useful experimental attributes: they are interfertile and can be laboratory-cultured, their hosts and reproductive biology are known, they are abundant and easy to find, and research is underpinned by extensive genetic information already available for *Drosophila*.

MCEVEY, SHANE F., & J.S.F. BARKER, 2001. *Scaptodrosophila acclinata*: a new *Hibiscus* flower-breeding species related to *S. hibisci* (Diptera: Drosophilidae). *Records of the Australian Museum* 53(2): 255–262.

There are about 300 drosophilid species recorded from Australia, with some 90% of them described. The genus *Scaptodrosophila* Duda, 1923 (for many years treated as a subgenus of *Drosophila* but see Grimaldi [1990] for revised status) has 81 named species and is by far the largest. The predominance of *Scaptodrosophila* among the 36 genera represented, is striking and distinguishes the Australasian

fauna from major drosophilid radiations in other regions—Afrotropical, Neotropical and Hawaiian. In Australia, the other large genera *Drosophila* (35 species), *Hirtodrosophila* (31 species), *Leucophenga* (25 species) and *Mycodrosophila* (24 species) are much smaller by comparison. In general, *Drosophila* species are attracted to fermenting fruit and may be reared easily in the laboratory; whereas *Scaptodrosophila*