



THE TWO "VARIETIES" OF *DROSOPHILA MONTIUM*

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The recent comments of Freire-Maia (1949) in this column entitled "Balanced polymorphism in *Drosophila montium*" should be of interest to present-day taxonomists as offering additional evidence of a simple genetic basis for the antiquated systematic term "variety." Modern *Drosophila* taxonomists seldom use the term, and subspecies are rarely designated without careful genetic study. It has not always been so. In the many descriptive papers of Dr. O. Duda, for example, a large number of varieties were erected, some of them having been considered earlier as distinct species. The modern *Drosophila* worker is at a loss to know how to interpret them.

Drosophila montium was first described by de Meijere in 1916 from Tjibodas of Java. In 1924, Dr. Duda described two varieties, *xanthopyga* and *atrophyga*, from Java and Formosa (but not *respectively* as indicated by Kikkawa and Peng, 1938). The former was distinguished from the latter by the fact that the last abdominal tergite was yellow in color instead of black as in the latter. This color difference is undoubtedly that found by Freire-Maia in Brazil and which was shown to be due mainly to a single autosomal gene. It seems logical to suggest that future use of the terms "*xanthopyga*" and "*atrophyga*" should be discontinued since they most likely represent only individual genetic phenotypes and further, as individual variants rather than populations, are not deserving of taxonomic designation.

One might wish to suppress all varietal names appearing in the older taxonomic literature but, unfortunately, the varieties of former taxonomists do not always have such a simple genetic explanation. Such a situation is demonstrated by Duda's (1925) designation of *D. fasciola*, *pygmaea*, *prorepleta*, *ramsdeni*, *hydei* and *mulleri* as varieties of *D. repleta*, whereas labora-

tory tests have shown conclusively that at least the last two forms must be considered as distinct species.

Little is known concerning the geographic distribution of the two color phases of *D. montium*. Freire-Maia states that in natural populations of southwestern Brazil both dark and light individuals are found. The extensive collections reported by Kikkawa and Peng (*op. cit.*) for the Japanese Islands, however, revealed only specimens belonging to the light form. Living stocks maintained by the Texas laboratory from Japan, Hangchow, China and from Oahu, Hawaii similarly contain only light-colored individuals. Sturtevant (1927) listed only "*atrophyga*" from India but the reference was based upon a single male specimen.

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