



A recessive X wing mutation in *Drosophila dunnii*.

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The *dunnii* subgroup has been found to contain seven species, whose distribution is limited to the Lesser Antilles, Puerto Rico, and Jamaica. No island has more than one species of the subgroup, and the species show significant genetic and chromosomal differences, and postmating isolation, with the evidence favoring male hybrid sterility as the major isolating factor (Heed and Krishnamurthy, 1959; Heed 1962). Nevertheless, the species' gross morphologies are quite similar, except for some differences in abdominal pigmentation, as are their male genitalia (*ibid.*). When placed in the laboratory, all species save one can form at least partially fertile hybrids with at least one other species of the subgroup, and usually with several. The subgroup has thus been a good model system to study the role of sexual behavior in speciation. In this note, we describe a finding in *Drosophila dunnii*, the most studied species of the *dunnii* subgroup, which species is known to inhabit Puerto Rico, St. Thomas, Vieques, and Tortola. Most of the flies of Puerto Rican origin have been collected on the grounds of the Agricultural Experiment Station of the University of Puerto Rico (AES), as was our study material. More specifically, in 1996 we found a wing mutation, which arose spontaneously in one of our *D. dunnii* isofemale lines originally collected at AES in 1989. The mutant morphology closely resembles the "cut" mutant in *D. melanogaster* (Lindsley and Grell, 1968).

A cross of the original mutant male to wild virgin females yielded only wild type F1 progeny. F1 *inter se* crosses all yielded both mutant and wild F2 males in a 1:1 ratio, while all F2 females were wild type. To confirm that the mutation was an X-linked recessive, F2 male mutants were crossed with putatively heterozygous F1 females and, as expected, the cross yielded both mutant and wild type males and females. F2 mutant males and females were then crossed to establish a pure stock of the mutant.

References: Heed, W., 1962, *Univ. Tex. Publ.* 6205: 173-206; Heed, W., and N.B. Krishnamurthy 1959, *Univ. Texas Publ.* 5914: 155-179. Lindsley, D.L., and E.H. Grell 1968, *Genetic Variations of Drosophila melanogaster*, Carnegie Institute of Washington Publication, Washington, D.C.