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Hybridization between D. lutea and D. paralutea.

The melanogaster species group is now known to contain about 80 species classified into 11 subgroups, in several of which pairs or groups of morphologically extremely similar species occur (Bock and Wheeler, 1972). All of the 7 members of the takahashii subgroup in particular are very similar in coloration and in morphology of sex-combs and male genitalia; within this subgroup D. lutea Kikkawa and Peng 1938 (distribution: Japan and Korea) and D. paralutea Bock and Wheeler 1972 (distribution: Thailand) are a pair of siblings distinguished in the male sex by the greater number of transverse rows of bristles in the sex-comb of the latter species.

Attempts to hybridize D. lutea and D. paralutea by mass matings have now proved successful in both directions; in either case a relatively small number of F_1 offspring was obtained and examination of the testes of the hybrid males revealed that all were considerably reduced in size and contained no motile spermatozoa. Pairing between homologous chromosome arms in the salivary glands of hybrid larvae is consistently poor (Fig. 1); it nevertheless appears that the two species are distinguished by several chromosomal rearrangements, and it is anticipated that further work will admit of a more precise polytene chromosomal comparison between the species.

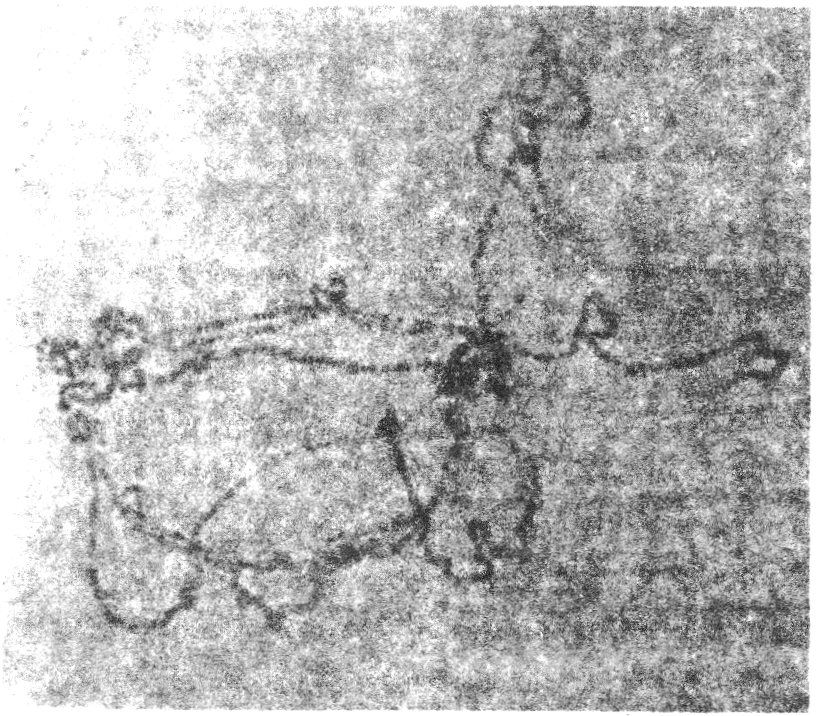

Figure 1. D. lutea x D. paralutea

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Reference: Bock, I.R. and M.R. Wheeler 1972, Univ. Tex. Publ. 7213:1-102.