

Research Notes

L. C. Dunn Retardation
effect of minutes

Retardation effect associated with Mw, M33j25, Mh, Mz, and M12 confined to egg-larval stage. M6 and M12 tested also for retardation in egg stage alone. These do not retard growth of embryos. Order of retardation effect at 25 degrees from most extreme (larval period three days longer than normal) to least extreme (larval period three days longer than normal) = Mw, M33j25, Mh = Mz, M12. None of these retard development of pupae. Mw and M33j25 also act as pronounced minus modifiers of Lx and L4 heterozygotes; M12 as slight minus modifier.

S. Gershenson Mechanism of
chromosome conjugation.

The following conclusions were obtained in a preliminary study concerning the mechanism of chromosome conjugation in flies heterozygous for an X-chromosome containing a long inversion (In y^4-w^a , $y-sc^4$ 8 sc^8-w^a studied). (1) Double crossing-over is approximately normal; (2) Primary exceptions among females are rare, but nevertheless somewhat more often than normally; (3) Primary exceptions among males are frequent (41.5-2%); nearly all of them probably result through the loss of the maternal X due to crossing-over; (4) Heterozygous females produce a large percentage of perishing eggs, indicating a high (perhaps nearly normal) percentage of single crossing-over; (5) Secondary exceptions are significantly more frequent than usually (49-13%), indicating a marked decrease of synaptic affinity between the non-inverted and inverted X's.

H. Kikkawa A dominant eye
color mutant in D.virilis.

It is assumed that dominant eye color mutant found in D.melanogaster are usually correlated with chromosome rearrangements except Henna described by Van Atta (Muller 1930, Van Atta 1932, Glass 1933, Schultz and Dobzhansky 1934). But it seems that no attention has been paid to the dominant eye color mutant Garnet (3-108.5, homo viable) discovered formerly in D.virilis (Metz, Moses, Mason 1923, p.39). To test whether or not any chromosomal aberration is associated with this gene, females of the constitution sv/cn G and sv/cn were mated to sv (short-veins 3-90.0) cn (cinnabar 3-107.0) males respectively. But the result was negative (the difference of recombination percentage for sv-cn region in the two experiments is only 1.6 times the probable error). The former experiment: (0) 595(sv) / 601(cn G), (1) 92 / 60, (2) 7 / 16, Total 1371; $R_1=11.2\%$, $R_2=1.6\%$. The latter experiment: (0) 461(sv) / 414(cn), (1) 56 / 71, Total 1002; $R_1=12.7\%$.

D.E. Lancefield L linkage in
pseudo-obscure.

Some linkage crosses involving compressed and short D.pseudo-obscure Race A are suggestive that more than fifty per cent of recombination may be obtained between these two loci. Further tests are being made to see if this result can be confirmed.