

Liebach, W. Gene manifestation.

of the manifestation were divided into qualitatively distinguishable classes. Further investigations concern the influence of alcohol upon *D. melanogaster*.

Since 1936 the manifestations of a variable wing-gene (*vli*) shortening the longitudinal veins has been under examination. In the first place the different forms

Morgan, L. V. A compound duplication of the X-chromosome of *D. melanogaster*.

section (X^D) from *fu* to the spindle fiber attachment. In one line (1,1) the fragment is attached to one X at spindle attachment and in the other line (1,f) the fragment is free on its own spindle attachment.

Crossing-over and disjunction have been studied in two lines of a duplication (Dp-100) in which the extra fragment is a deficient X-chromosome containing a distal section (X^d) from the *y* end to *prune* inclusive and a proximal

Crossing-over between the two entire X's was less frequent than in the diploid control, as in other duplications. In the region homologous to X^D the reduction in crossing-over is proportional to the length of X^D when compared with the proximal Dp-138 and other duplications studied by Dobzhansky (Studies III '34). The reduction in this region is the same in both lines of Dp-100. In the region homologous to X^d the reduction is very slight and is much less than in distal duplications (carrying some of the inert region) of comparable length. In the 3rd region, *cv-ct* (not homologous to the fragment), crossing-over is as frequent as in the control in the (1,1) line and is still more frequent in the (1,f) line. In the (1,1) line when a Y-chromosome is present, crossing-over is still more reduced especially in the most proximal region. Crossing-over of the proximal fragment (X^D) is only 0.3 times as frequent as crossing-over between the X's in the homologous region in line (1,f) and only about .08 times as frequent in line (1,1). Crossing-over within the distal fragment (X^d) rarely takes place.

Non-disjunction of X's occurs in about 3.5% of gametes in the (1,f) line. The X's of XXY females are usually non-crossovers, but a small percentage in one experiment were crossovers for a distal region. It is computed that non-disjunction of X's occurs in about 31% of no-exchange tetrads. Non-disjunction of X's in line (1,1) was infrequent being about the same as in XX controls. When a Y was present in the (1,1) line there was about 19% of non-disjunction which is 56% of estimated no-exchange tetrads.

Moriwaki, D. *Drosophila repleta* found in Tokyo.

In Tokyo, where *D. repleta* had never been found, the flies were first collected last year, 1936. Mr. S. Uchida, a student of Tokyo Imperial University, collected a few of them on November 13, 1936 at Shibuya-district in