Liebäch, W. Gene manifestation. 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 of the manifestation were divided into qualitatively distinguishable classes. Further investigations concern the influence of alcohol upon D. melanogaster.

Morgen, L. V. A compound duplication of the X-chromosome of D. melanogaster. 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 section (X^p) 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 between the two entire X's was less frequent than in the diploid control, as in other duplications. In the region homologous to X^p the reduction in crossing-over is proportional to the length of X^p 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^p) 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