The manifestation of dominants in the triploid. Jack Schultz - Most of the dominants available in D.melanogaster have been observed in the triploid, in the course of a series of experiments concerned with the effects of upsets of genic balance on dominance relations. The following are easily classified when present in single dose in the triploid: Bar, Beadex^2, Bristle, Curly, Deformed, Dichaete, Hairless, Hairy-wing, Jammed, Lobe^2, Moire, Stubble. Those which are almost completely suppressed include: Delta, Gull, all Minutes, Notch, Plexate, Plum, Star. It may be noted that in no case is the manifestation as extreme in the triploid as it is in the diploid and many of the first group show a marked diminution of the effect.

A few of these dominants have been studied in double dose. The Minutes and Moiré do not survive. The following survive, manifesting the dominant characters in extreme form: Delta, Dichaete, Gull, Hairless, Plexate, Plum, Stubble.

Inversions in the x-chromosome of D.melanogaster - A. H. Sturtevant and G. W. Beadle - As is well known, there exist many different inversions in the X. When two of these are put in the same female, single crossovers occur within the common inverted region, and in several combinations viable crossover offspring are produced. The crossover chromosomes carry net deficiencies and/or duplications for the regions at the end-points of the inversions. These (especially the deficiencies) make it possible to determine the end-points with a precision limited only by the number of recessive mutations whose loci are already accurately mapped adjacent to the breaks.

The nomenclature of the inversions is now in a chaotic state; and becomes intolerably confusing when one begins dealing with crossovers between different inversions. We are using the following scheme: Each inversion is given an arbitrary letter; the sequence in ClB is referred to as "In B", that in y^4 as "In Y". Then, for each pair of inversions, two single crossovers are theoretically possible; these are described by the use of both letters concerned. In the case of the two referred to, the crossover that has the left end of ClB and the right end of y^4 is called "B-Y"; that with the left end of y^4 and the right of ClB (which has not been obtained) would be "Y-B".

The following inversions in the X have been studied in this laboratory. The end-points are given as accurately as our present data allow - they are being determined still more closely in most cases.

Current designation	New equivalent	Position of left inversion-point	Position of rt inversion-point
ClB	In B	Between ec and bi	Between sy and fu
dl-49	In D	No new data(near rg)	No new data(fw-g)
sc^8	In E	Between ac and sc	To rt of bb
y sc^4	In F	Between ac and rst	Between cr and bb
bb-deficiency*	In O	Between rb and rg	To rt of cr
roughest	In R	Uncertain	Uncertain
sc^7	In S	Unknown	Between fa and sn
y^4	In Y	Between y and ac	Between fu and cr

*Of Dobzhansky, not of Gershenson. The latter is "F-E" on our terminology.

In D and In S have not given single crossovers in any of our experiments. In R is a long inversion, which gives crossovers with several of the others; it is, however, complicated by the presence of a 1-3 translocation, with probably at least three points of breakage in X. The analysis is still incomplete.

The following crossovers have been obtained and studied: B-O; B-Y, E-F, E-Y, F-E, F-Y, O-Y, R-E, R-F, R-O, Y-E and Y-F. Others can presumably be produced, though several of them (such as Y-B) are known to be inviable.

These studies are being continued, with the object of attacking problems concerning crossing-over, disjunction, and the somatic effects of duplications and deficiencies.

Breakage point in x-chromosome for Blond-translocation (Tl-2). M. Demerec - A certain proportion of offspring from crosses with Blond are deficient for the yellow end of the x-chromosome from the point where the breakage occurred to the end of the chromosome. These flies have minute characteristics. In test made with y, ac, br and pn yellow, achaete and broad showed in minute flies but prune did not show. This indicates that pn is not included in the translocated piece and that y ac and br are included. The breakage point, therefore, is between br and pn.

Intersexes of D.virilis. G. A. Lebedeff - Out of four lines of flies producing morphologically different types of intersexes (Amer.Nat., 68:68-69, 1934), line 2, producing intersexes predominantly of the hermaphroditic type, is still segregating. The three other lines are producing practically only one type of intersexes. These lines are: (1) ♀-like intersexes; (3) intersexes of ♂-like type retaining ♀ shape of abdomen; (4) intersexes of the ♂ type. F_1's from crosses between 1 x 3, 1 x 4, and 3 x 4 lines are morphologically intermediate between lines. F_1's from 1 x 3 and 1 x 4 besides having external and internal genitalia of the ♂, also