

Differences between stock A and B and between them and H<sup>1</sup> in Table 1 are as great as the differences between alleles in Table 1.

A critical test for the inactivity of H mutants could be performed using a cytologically identifiable deficiency of the <sup>+</sup>H region. There is, as yet, no suitable deficiency available to me.

#### References:

- Gowen, J. W. (1933). *Amer. Naturalist* 67, 178.  
 Nash, D. (1965). *Genet. Res.*, Camb. 6, 175.  
 Plunkett, C. R. (1926). *J. Exp. Zool.* 46, 181.

Schalet, A. University of Connecticut, Storrs, Connecticut. Additional data concerning genes in the proximal region of the X chromosome of *Drosophila melanogaster*.

The following information is presented as a supplement to the research note of Schalet and Finnerty (DIS-43:128). Correction: Lethal A7 of Kaplan and Lethal N-30 of Himoe are alleles. A7/N-30 is lethal.

Additions: Lethal A7 and lethal N-30. Males carrying either of these lethals and a y<sup>+</sup>Yma-1126 chromosome, in which the deletion that eliminated the ma-1<sup>+</sup> region from the Y involved a break close to the normal allele of the lethal locus, often exhibit malformations of the eyes, legs, wings and antennae. In extreme cases a leg may be branched or completely duplicated, an antennae or arista may be duplicated or triplicated. Males carrying these lethals and a y<sup>+</sup>Yma-1106 chromosome or males carrying a y<sup>+</sup>Yma-1126 chromosome and a more proximally located X chromosome lesion, including the loci from lethal DCB1-35c thru bb, fail to show these abnormalities. When either lethal A7 or N-30 is made heterozygous with a y bb<sup>1158</sup> chromosome (Oak Ridge), some females show malformations.

Little fly (lf) of Fahmy (DIS-33) located at 68.1 according to Lindsley and Grell is allelic to lethal t2-14a of Kaplan. lf/t2-14a is viable and lf in phenotype.

Lethal LV7 of Kaplan. LV7/Y males and LV7/deficiency females occasionally survive. They are phenotypically identical with the description given for uncoordinated (unc) found by Fahmy and placed at 65.9 by Lindsley and Grell.

Relative positions of sw and mel. In the previous note mel was tentatively placed between sw and ma-1. This position is made more secure on the basis of obtaining a single crossover between sw and mel. Females of the genotype y v sw ma-1<sup>2</sup>/y mel 1(1)20•Dp(1)sc<sup>V1</sup>y<sup>+</sup> were crossed to Y/y v f mel males and incubated at 24-25 degrees. From eggs laid during the first six days, 280/10,711 (2.6%) of the female offspring represented crossovers between mel and y<sup>+</sup>. This frequency is consistent with the earlier data: sw--ma-1 (0.5%); ma-1--su-f (2.2%); and su-f--y<sup>+</sup> (0.06%). At 24-25 degrees only about 15% of the sw males eclose and all show the expected wing and/or eye abnormalities. If the correct order is sw mel ma-1, then single crossovers between sw and lethal(1)20 can produce three classes of viable males with respect to the mel and ma-1 markers: 1) ma-1<sup>2</sup> 1) mel ma-1<sup>2</sup> and 3) mel. Since some ma-1 offspring segregating from non-ma-1 mothers are subject to a maternal effect, all non-sw male offspring were crossed to y v f ma-1 attached-X females to confirm the presence or absence of ma-1. The two mel classes can be distinguished from the mel<sup>+</sup> class by the body color and wing phenotype of mel, and the "dull red eye color" of the mel class is distinguishable from the mel ma-1<sup>2</sup> class which exhibits a "brownish red eye color" similar to the phenotype of ma-1<sup>2</sup>. (The eye color of the v mel combination is usually quite similar to v alone and readily separated from the v mel ma-1 combination which appears very much like v ma-1.)

There were 65 y sw<sup>+</sup> male offspring but only 1 was mel<sup>+</sup> and it also proved to be ma-1<sup>2</sup>. Of the remaining males, 10 failed to breed, ten were mel ma-1<sup>2</sup> and 44 were mel ma-1<sup>+</sup>. If the parental males had produced equal numbers of functional X and Y bearing sperm then the 65 sw<sup>+</sup> males would represent a crossover frequency between sw and lethal(1)20 of about 1.2%. From the earlier positioning of lethal(1)20, less than 0.1% to the left of su-f, this is about one half the expected frequency. This reduction is probably not due to lowered viability of y mel or y mel ma-1<sup>2</sup> males, since the total of 280 recombinant females included 156 that were y mel in phenotype and only 124 that were wild-type in appearance. By taking 2.6% as a better approximation of the crossing over between sw and lethal(1)20, mel is located closer to sw, and approximately 1/11 of the map distance of 0.5 units between sw and ma-1.