

Frye, Sara H. P.O. Box 267, Irvine, Kentucky. Correction in the report of Sara M. Frye (DIS 41:205).

I have been informed (as of late February) that the double marker mutant stock ( $Y/y \cdot ac$  In49  $B^{M1}$   $\sigma$  &  $Y/y$   $f:=$   $\phi$ ) reported by Frye (1966, DIS 41:61, 175 and 205) is not available from the Pasadena stock center.

I would suggest that anyone interested in this stock for the purpose of cytological analysis write to Dr. E. Grell of Oak Ridge, Tenn. This stock is important for the following reasons:

First, the double marker mutant did not originate in a scute-8 or scute-8-like inverted X-chromosome, but it did originate in an irradiated (2 kr) In49  $B^{M1}$  chromosome which is like a normal X-chromosome from the distal tip of the X-chromosome up to the left break (between 1, 7.5 and 1, 13.7) of In49 which is the more distally located of the two inversions. This X-chromosomal area (1, 0.0 - 7.5 or 1, 0.0 - 13.7) includes the normal alleles of the more useful mutant markers of lethal-Jacobs-1 (1  $J1^+$ ), yellow ( $y^+$ ), achaete ( $ac^+$ ), scute ( $sc^+$ ), and lethal to right of scute ( $li^+$ ?). The origin of In49 of Muller and Stone is not given in the 1944 edition of Bridges and Brehme (see p. 97), however, the origin of  $B^{M1}$  (In $B^{M1}$ ) is "from X-rayed wild type" (ibid. p. 20).

Second, the origin of the scute-19i chromosome is "from X-rayed In49, bb" (ibid. p. 167). Scute-19i chromosomes contain an insertion of the normal alleles of the more useful mutant markers yellow ( $y^+$ ), achaete ( $ac^+$ ), scute ( $sc^+$ ), and lethal to the right of scute ( $li^+$ )\* from the distal tip of an irradiated In49 bb chromosome, and these normal alleles are re-located between the normal alleles of the recessive markers, dumpy (2, 11.0) and clot (2, 16.5) in the second chromosome.

In both chromosomal environments, i.e., In49  $B^{M1}$  (or In49 bb) and scute-19i the yellow region is free of chromocentral heterochromatin and therefore not like a scute-8 chromosome where chromocentral heterochromatin is adjacent to the yellow-achaete region. Unfortunately, I am not trained in the cytological analysis of the yellow-achaete-scute region and therefore I am not qualified to give an opinion as of the presence of intercalary heterochromatin in the neighborhood of the y-ac-sc region in either chromosomal system.

\*see Serebrovsky, Ivanova, and Ferry, 1929, Journal of Genetics 21:287-314.

Whittinghill, M. University of North Carolina, Chapel Hill, North Carolina. Somatic spot confirmation of the chromosome arm loci of in ri and p.

The relation of the in and ri loci to each other and to the kinetochore has been in doubt, and they are variously placed on different maps and lists. Other workers have established that the gene order is st in ri p, before we ob-

tained further confirmation in ordinary testcrosses. Now a single specimen confirms the location of the spindle attachment as being between st and in.

A mosaic female from a testcross with st in ri pP females and a male showing G1 st Ubx produced the expected offspring in both sexes; some were scarlet and the remainder showed Glued orange eyes and were Ultrabithorax. No sib of the mosaic showed inturned or radius incompletus. Most of the mosaic resembled her st sibs, except that less than half of the right eye showed st alone. The remainder of that eye and the entire left eye were orange, st pP. Recessive inturned showed on the entire right abdomen and on the right mesothorax. The right wing had ri clearly expressed in vein II. The contiguous presence of in and ri on the same side of the thorax and of pP in part or all of the eye would be explained by somatic crossing over between the spindle attachment and the in locus. No deletion as long as this would be likely to survive let alone multiply to occupy so much of the classifiable regions of the body. No double fertilization seems possible here, because the mother was homozygous recessive st in ri pP and the father contributed + alleles for all six marked loci except scarlet. It would be too much to suppose that somatic crossing over and segregation took place in both arms of the third chromosome in this fly, so all three somatically segregating loci must be in the right arm.