

The small size of the individual families does not permit speculation on whether the high incidence of monoploidy observed is due mainly to the effects of one gene in the male gamete.

Tests are now underway to score the efficiency of monoploid induction by the derivatives of the above populations on unrelated material.

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2. Wanted:

Seedling character mutants (liguleless, glossy, dwarf, midribless) found in highly inbred lines.

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1. Noncrossover derivatives from serial duplications.

The available evidence indicates that noncrossover alpha derivatives from the beta: alpha  $A^b$  complex in maize are the result of an intrachromosomal event. Critical evidence that the homologue is not involved is the occurrence of noncrossover alphas from hemizygotes deficient for the  $a_1$  region. Since there is evidence that the members of the  $A^b$  complex are serial duplications, it seemed appropriate to determine whether similar derivatives occur from other serial duplications.

The Bar duplication in *Drosophila melanogaster* provides an opportunity for such a test, and offers the possibility of cytological analysis of any derivatives obtained. Deficiency  $B^{263-20}$  was used for the *Drosophila* tests in heterozygotes with Bar marked with forked and fused.  $B^{263-20}$  includes the forked locus, thus permitting no crossovers between  $f$  and  $B$ . Unfortunately, however, band 7 of the Bar region is not included in the deficient piece and may allow for pairing of the Bar segments to give crossover wild type derivatives.

Heterozygous females  $Df + \underline{fu}/f \underline{B} \underline{fu}$  were crossed with males from a number of stocks carrying different autosomal markers to produce progenies for analysis. As the deficient chromosome is lethal in males, only  $f \underline{B} (\underline{fu})$  males are expected.

However, among approximately 70,000 males scored, 17  $f +^B$  individuals were found. Of the 15 which thus far have been analyzed genetically, all have segregated the autosomal marker introduced by their father, and 14 have transmitted  $f +^B$  to their grandsons. Of these 14, four are noncrossovers for the  $\underline{fu}$  marker and ten are recombinants for  $\underline{fu}$ .

Stocks of the four noncrossover derivatives and of the crossovers are now being grown for cytological study.

Two other experiments with Bar are now being set up. First, we are attempting to obtain with X-rays a deficiency which includes all of the Bar duplication bands, so that crossover derivatives, and particularly close-distance multiple crossovers can, as in the case of  $A^b$  in maize, be positively ruled