

Marshak, A. Salivary chromosome slides.

Examination of slides prepared by the technique previously described and mounted in carmine-saturated glycerine, have been reex-

amined a year and four months after their preparation. The chromosomes are still well preserved with the bands well defined and with no apparent change since the first examination.

Ono, H. Induction of mutations by electric current.

Larvae of *D. virilis* were placed in 24 mm² paraffin canal filled by ca. 1/100 N KCl solution. Direct current of 6 M.A. was trans-

mitted through the canal for 7 minutes. Out of 162 F₁ flies raised from these treated larvae 37 were mutants (all of wing deformity). Under normal conditions this stock gave about one per cent wing deformed mutations.

Shapiro, N. The method of studying the process of mutation in a limited region of the chromosome.

The investigators usually when studying mutation induced by X-rays use either the ClB method, or the method of attached X-chromosomes. In both cases mutations arising along the

whole length of the X-chromosome are picked up. The solution of many important problems of genetics requires sometimes the study of the mutation process in a limited region of the chromosome. This may give the following possibilities: (1) to follow all the variety of mutation in a small region of the chromosome. (2) to establish the number of loci present in the region capable to mutate. The latter will enable us to estimate the minimum number of genes not only in the region studied but in the whole chromosome set. Using the current genetical method and wishing to isolate among the mutations found only those which are located in a definite region we are obliged to use the crossing-over method. The latter offers many technical difficulties and sometimes is even not valid to solve the problem (when the mutation is associated with an inversion). We propose, therefore, to modify somewhat the ClB or attached X methods for cases when the investigator wants to study the process of mutation in a limited region of the chromosome.

We give two examples for the study of the left end of the X-chromosome in order to illustrate the modification we suggest.

(1) Yellow males are X-rayed and mated to attached-X-females, carrying a deletion. F₁ males with the deletion are selected and mated individually with ♀♀ XX. In case a lethal arose during treatment in the region of the left end covered by the deletion, the progeny of such a cross would give only males carrying the deletion. No yellow males will appear.