

F<sub>2-4-6</sub> etc. rn mr/ab<sup>2</sup> pr mr (only ♂ breeds)      rn mr/ab<sup>2</sup> rn (steril<sup>a</sup>)  
 ab<sup>2</sup> pr mr/ab<sup>2</sup> pr mr (sterile)      ab<sup>2</sup> pr mr/ab<sup>2</sup> rn  
 (only ♀ breeds)

Test for lethals and visibles in P<sub>1</sub> or F<sub>n</sub>:

P<sub>1</sub> or F<sub>n+1</sub> 1(?) rn mr/ab<sup>2</sup> 1(?) pr mr ♂ X<sup>1</sup> Cy,pr/s ♀  
 (Same method used for testing ab<sup>2</sup> pr mr/ab<sup>2</sup> rn ♀)

F<sub>1</sub> or F<sub>n+2</sub> (Mate Cy, non-pr together . (Mate Cy,pr together)  
1(?) rn mr/Cy,pr ♂ and . ab<sup>2</sup> 1(?) pr mr/Cy,pr ♀

F<sub>2</sub> or F<sub>n+3</sub> 1(?) rn mr/1(?) rn mr . ab<sup>2</sup> 1(?) pr mr/ab<sup>2</sup> 1(?)  
 . pr mr

(Look for presence and . (Look for presence and  
 normality of rn mr flies . normality of ab<sup>2</sup> pr mr  
 in F<sub>2</sub> or F<sub>n+3</sub> . flies in F<sub>2</sub> or F<sub>n+3</sub> .

Stern, Curt    Technique for  
obtaining large numbers of  
unfertilized females.

Following a request by the  
 editors of DIS a description  
 is furnished of a genetic  
 method published in 1929,

.Zeitschr. Abstgsl. 51: 315-316. A stock of the following  
 constitution is maintained (Pasadena, Cold Spring Harbor,  
 Rochester and other laboratories): g<sup>2</sup> B XY' Y''/y Y''. The males  
 thus possess the long arm of the Y-chromosome (Y') attached to  
 the X-chromosome and a Y-fragment (Y'') consisting of the short  
 Y-arm plus part of the long arm. Y' carries the factor (or  
 complex) K<sub>1</sub>, Y'' carries K<sub>2</sub>, both of which have to be present  
 to permit male fertility. The females have attached X-chromo-  
 somes and the Y'' fragment. The stock keeps constant without  
 selection.

1) In order to obtain unfertilized females with attached  
 X-chromosomes virgin y Y'' females of the stock are mated to  
 males from any normal stock. The F<sub>1</sub> females will be yy and  
 the F<sub>1</sub> males XY''. If the P-individuals of such a culture have  
 been removed before the hatching of the F<sub>1</sub>, all males present  
 will be XY'' and sterile. All F<sub>1</sub> females, in spite of the pre-  
 sence of their brothers, will be unfertilized accordingly.

2) In order to obtain unfertilized females without attach-  
 ed X-chromosomes, XY'Y'' males from the original stock are mated  
 to virgin females from a normal stock (in order to exclude the  
 accidental use of XXY females it is advisable to take short  
 bristled females from a bobbed stock). The F<sub>1</sub> males being XY''  
 will be sterile and the F<sub>1</sub> females (XXY') will be unfertilized  
 again.

The original stock should occasionally be tested for the  
 occurrence of the very rare cross-overs in the XY' Y'' males  
 which lead to the reconstruction of a normal Y-chromosome.  
 Test method: Mate in one bottle 1 female and 1 male from the  
 stock and add females from a bobbed stock. Test the sons of  
 the bobbed females for fertility. If sterile, continue the  
 stock from the offspring of the test culture.