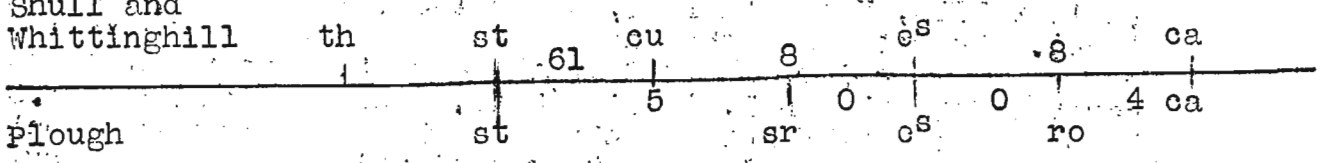
H.J. Muller Balancing chromosome 1 with scute^{sl} A rather extreme scute allel, found by Sinitskaya in March 1934, analyzed genetically by Muller and cytologically by Prokofyeva, includes a long inversion having its left break close to the right of scute and right break in inert region, and also a small inversion, somewhat smaller than delta 49, and having the positions of both its breaks included within the positions of the two breaks of the latter. No crossovers were found between sc^{sl} and normal chromosomes in a count of 700. Homozygous sc^{sl} females are sterile and have rather low viability; males are fertile and with fair viability. This therefore provides a very convenient balancing chromosome for many sex-linked genes, etc.

H.H. Plough Crossing over in male D.melanogaster following heat. At the meeting of the Genetics Society at Woods Hole in August 1934, I reported finding 6 cases of crossing over in chromosome 3 following exposure of 5 day old larvae to 36.5° for 18 hours. Although it was unknown to me at the time, Shull and Whittinghill had reported in July 1934 (Science 80:103-4) 77 cases in the same chromosome, of which 32 were all of the same type and derived from a single male. While neither investigaion is complete it is of interest to summarize these two series of tests up to this point.

Crossovers in Males heterozygous for genes in Chromosome 3.



My results do not show correspondence with those of Shull and Whittinghill in the ratio of crossovers in the st-cu-sr region and this fact suggests perhaps that their irregular group of 32 may need to be reinterpreted. In any case the distribution of the whole series indicates that crossing over in the male may take place in any region of chromosme 3 following exposure to heat.

N.W. Timoféef-Ressovsky Experiments on intraspecific evolution in Drosophila. Ecological and physiological experiments with different Drosophila-species are of importance in connection with the genetic analysis of evolutionary and zoogeographical problems. A good method of testing "adaptations" is the determination of the "relative viability" of different mutants and biotypes under different envi onmental conditions (see my paper in Z.Ind.Abst.Vererb.,66:319-344,1933). Some difficulties arise when geographically different normal populations of a species should be compared in respect to their "relative viabilities", since they can not be distinguished phaenotypically, and hence the methods of backcrosses or of counting flies in overcrowded bottles containing equal numbers of eggs of the two types to be compared can not be used. In these cases another simple method can be applied. Different populations of one species can be compared, in