

Wasserman, M. and H.R. Koepfer. Queens College, Flushing, New York. A new inversion found in a *D. pseudoobscura* balanced lethal stock.

We have been isolating *D. pseudoobscura* strains which are homozygous for their third chromosomes. These strains originated from males collected in Ruidoso, New Mexico and the Black Forest, Colorado. The technique used is a slightly modified version of that developed by

Spassky et al. (1960). Wild males are crossed to the multiple marker stock: Blade, Scute, purple/orange, Lobe. This stock is a balanced lethal system with Blade, Scute, purple on a Standard chromosome and orange, Lobe marking a Santa Cruz chromosome. In our method, the cytological analysis is made on larvae which are heterozygous for the Blade, Scute, purple (Standard chromosome) and the wild chromosome. Between 15 and 20% of these larvae from both New Mexico and Colorado proved to be heterozygous for a new, small, subterminal inversion. This inversion is independent of, and distal to, both the Pikes Peak arrangement (Figure 1) and the Arrowhead arrangement (Figure 2). It was not found among the 244 chromosomes analyzed directly from the offspring of females taken in the same collections with our Ruidoso males (Dobzhansky, personal communication). It appears, then, that the new inversion is not a naturally occurring one, but arose and is present in the multiple marker stock. In our laboratory stock, many of the Blade, Scute, purple chromosomes carry this new stock inversion. The breakage points of the stock inversion overlap those of Santa Cruz and therefore these two inversions are mutually exclusive.

It is not known when or where the stock inversion arose. Perhaps it is not limited to our laboratory, but may be present in others as well. Therefore this report should serve to alert workers in other laboratories who may have occasion to use this balanced lethal stock or some other modification of the Blade, Scute, purple marker chromosome that their stocks may be heterozygous for this inversion.

Reference: Spassky, B., N. Spassky, O. Pavlovsky, M.G. Krimbas, C. Krimbas, and Th. Dobzhansky, 1960 Genetics 45: 705-722. This work is supported by grants from the City University of New York Faculty Research Award Program and from N.I.H. FR-07064.

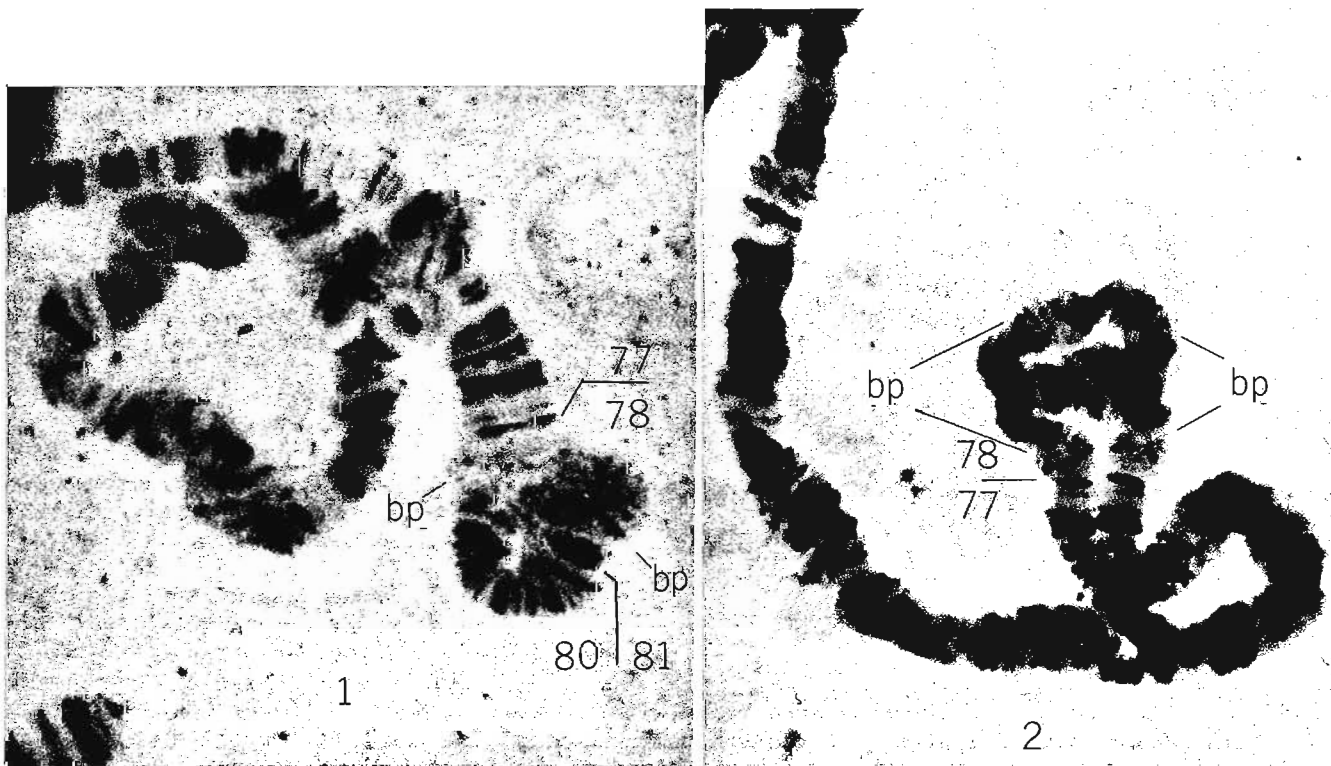


Fig. 1. Pikes Peak/Stock inversion heterozygote Fig. 2. Arrowhead/Stock inversion heterozygote