(hyperdiploid females), however, only rarely show one or two bristles faintly forked in comparison with the weak but definite forking in nearly every bristle of practically every individual of the composition $\frac{\overline{\quad\quad}\;+}{\overline{\quad\quad}\;f}$ 3A. More data are now being accumulated in an effort to localize the region in the left hand portion of the X-chromosome which appears to be responsible for the weakening of dominance of the normal allel of forked in $\frac{\overline{\quad\quad}\;+}{\overline{\quad\quad}\;f}$ 3A aneuploids.

Pogossianz, H. E. The gene scute in D. virilis.

Among 60,986 F^1 females, 46 scute flies were obtained from the cross of sc y sc v c females to normal males, given 4000 r of X-ray treatment. Simultaneously in melanogaster only 3 scute mutations occurred among 12, 858 F^1 females. Since the method and dosage in both experiments are the same and the allels of scute in females used are phenotypically similar, the following conclusion can be drawn: the gene scute in virilis mutates more frequently than in melanogaster. This is confirmed by the data obtained on melanogaster by other authors (Goldat 1936, Glembozky 1936). Among 46 scute mutations 16 were not tested; they were sterile or perished. The remaining 30 flies carried the newly arisen mutations. 18 of which proved to be viable and fertile, 4 sterile in males, and 8 lethals. All these mutations are studied at present both genetically and cytologically. The description of the new scute mutations is given in this issue of DIS.

Sirotina, M. I. Cytology of D. Busckii.

An investigation of metaphase plates in larvae ganglions and in ovaries of a stock of D. busckii of Kiev origin showed the presence of only three pairs of chromosomes (instead of four pairs reported by Metz for the American D. busckii). The X-chromosome is rod-like with a sattelite on its proximal end. The autosomes are V-shaped, with equal arms; both pairs are alike in length. The Y-chromosome is likewise V-shaped, but one arm is longer than the other. An analysis of salivary gland nuclei revealed the absence of the granular amorphous central mass characteristic for D. melanogaster, and the presence of a heavily staining nucleolus. All the elements are connected with this nucleolus by thin threads. The number of elements is 6 in the female and 7 in the male; the extra element in the male is the Y-chromosome (or its part), containing about 14 discs. The sattelite of the X-chromosome is likewise represented in salivary nuclei as a free element. The X-chromosome and the sattelite are more strongly connected with the nucleolus than all the other elements. A rather detailed map of the salivary chromosomes of this species has been prepared and will appear in the paper which is now being prepared for press.

Serebrovskaja, R. I. X-ray induced mutations in D. hydei.

By means of X-rays (3000 and 4000) the following mutations were obtained in D. hydei: (1) scute - sex-linked, recessive (2) white - sex-linked, recessive (3) vermilion - sex-linked, recessive (4) forked - sex-linked, recessive (5) Notch - sex-linked, dominant (lost) (6) orange eyes - sex-linked, recessive (7) red eyes - sex-linked, recessive (8) miniature - sex-linked, recessive (lost) (9) Dichaete-type - autosomal dominant (lost) (10) Spread-type - autosomal dominant (lost). In total, 32751 flies were examined. Both sexes were studied and X-rayed simultaneously. The greatest