inversion through to the chromocenter, one half of the split being the normal and the other, the inverted half. In such a figure the bands could be carefully followed along the length of the chromosome to the end of the inversion where the matching bands were found in corresponding positions. This figure was also checked by C. B. Bridges. Although the similarity in size and shape of 4D1 and 12A1 make it possible that this interpretation is incorrect, evidence seems to indicate that 4D1 and 12A1 are the outside limits of d1-49.

Karp, M. L. The distribution of mutant genes affecting the number of sternital bristles in chromosome 3 of D. melanogaster. In chromosome 3 of D. melanogaster the presence of at least six mutant genes affecting the number of sternital bristles, independently of the possible effect of the gene markers, has been shown. These genes possess a considerable power of action, approximately 5 to 15 per cent of the manifestation of the character. Being opposite in tendency and alternately located, they are more or less balanced, not only along the whole length of the chromosome, but within its small regions as well. In the chromosome, causing the reduction of 5-6 bristles on 2 sternites of the abdomen, were detected genes which determine conjointly the reduction of 18-21 bristles on the same 2 sternites, and on the other hand there were found genes which together intensify the character by 12-20 bristles. Hence the genic balance of the chromosome examined offers the possibility of a considerable change as to the extent of the manifestation of the character.

Kaufmann, B. P. Drosophila ananassae (D. caribbea) In the autumn of 1933, D. caribbea was collected in the vicinity of Tuscaloosa, Alabama, which is considerably north of the range of distribution of the species as indicated by Sturtevant. Male flies of this stock have a J-shaped Y-chromosome, whereas the stock used by Metz (1916) had a rod-shaped Y. Recently a Nipponese stock, secured through Dr. W. P. Spencer, has been examined. This also has a J-shaped Y. Additional material, especially from America, is desired for further study.

Kerkis, J. Sex-Linked vestigial like mutant in Drosophila simulans On May 28, 1935 a single male was found in a normal mass culture of D. simulans which was like a vestigial of D. melanogaster. This male was crossed with normal simulans v. The F_1 was normal. Flies from F_1 were inbred and in F_2 there were 269 normal ♀♀, 105 normal ♂♂, and 81 vestigial ♂♂. There were no vestigial ♀♀. Males from F_2 were crossed to their sisters and in F_3 homozygous flies were produced from which a stock has been propagated. One of the ♂♂ was mated to a yellow white attached ♀♀ of D. simulans and gave in F_2 308 vestigial

♂♂ and 254 yellow white ♀♀, 2 normal ♀♀ and 3 yellow white ♂♂. The latter two classes were produced by separation of the attached X's of the yellow white ♀♀.

The data on the location of the new mutation show that it is located in the right end of the X-chromosome.

Kikkawa, H. Systematics of Drosophila. While examining the salivary chromosomes of various species of Drosophila I realized that there are (at least) two different groups with respect to the ratio of the total length of autosomes to length of X-chromosome, viz., the one giving the ratio of about 4:1 and the other, about 1.8:1. D. melanogaster, virilis, funebris, ananassae, repleta, etc. belong to the former group, while D. pseudoobscura, affinis, miranda, etc. belong to the latter. Morphologically, there is also a distinct difference between the two groups in the shape of testis. These characteristics may be worthy of dividing the genus Drosophila into two subgenera. My inference proposed in Proc. Imp. Acad. Tokyo, 9, 1935, may be applicable only to the former group. Full investigation in connection with genetics is now underway.

Parker, D. R. Locus of wy^2 (formerly cx_b). Crossover counts on the male offspring of females y v f/y^2 wy^2 g^2 were made in order to determine the locus of wy^2 more accurately. The results are given: v f - 1163; wy^2 g^2 - 1111; v wy^2 g^2 - 151; f - 126; v g^2 - 27; wy^2 f - 38; v - 208; wy^2 g^2 f - 180; v wy^2 f - 1; g^2 - 0; v wy^2 g^2 f - 5; + - 5; v g^2 f - 1; wy^2 - 1; v wy^2 - 1; g^2 f - 0; Total 3018.

These data place wy^2 about 2 units to the left of garnet. 100% of the F_1 females of a cross of wy^2 x wy were phenotypically wy; there was no crossing-over observed between wy and wy^2 in 1328 offspring from wy/wy^2.

Stark, M. B. Varieties of tumors. Selected stocks heterozygous for lethal-7, where the l-7 males die from the development of melanotic growths, show that the tumors occur in characteristically different tissues. A preliminary description of the stocks follows:

& ♀ 1 Carcinoma or melanonoma of salivary gland
& ♀ 2 " " " of stomach region
& ♀ 3 " " " of lower intestine
& ♀ 4 Lympho-sarcoma
& ♀ 5 Pigmented lipoma

The third-chromosome "benign" tumor is found to involve connective tissue.

Stone, Wilson. Allemorphic phenomena. y^{35a} An allele, phaenotypically like y^1, induced in the inversion, 99b, by x-rays.

y^{31e} (y^{303h}) A mutation accompanying a long inversion, probably y^{3P} as designated by Muller, for it gives the same males hypoploid for y and ac by crossing-over with sc^8. This mutation