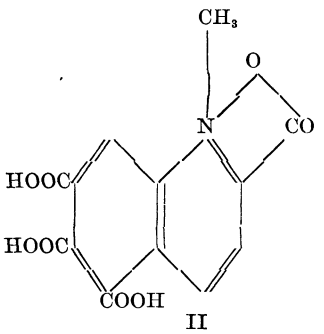


II

acid II. The already reported production of propionic acid on alkali fusion appears to be compatible with the cleavage of Ring D. Likewise the methyl group of the above methyl naphthylamine can be formed by cleavage of Ring D. And finally, the dimethylaminobenzaldehyde reaction given by lysergic acid would be expected from this formula since the α position of the indole nucleus is free. In the older carboline formula this point remained a difficulty.

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## THE CHROMOSOMES OF DROSOPHILA ANANASSAE[1]

DURING the autumn of 1933, *Drosophila ananassae* De Meijere (*D. caribbea* Sturtevant) was found frequently in Tuscaloosa, Alabama. Cytological examination of neurocytes of male larvae showed the presence of a J-shaped Y-chromosome. The stock differs, therefore, from the Panama and Cuba material with a rod-shaped Y, used by Metz[2] in his original description of the chromosomes of this species. Recently, through the kindness of Dr. W. P. Spencer, I have been privileged to examine a stock of *D. ananassae* from Dr. H. Kikkawa's laboratory in Kyoto. This also has a J-shaped Y. Further knowledge of the extent of distribution of the two types of Y-chromosome within the species awaits the study of material from those regions of tropical America from which *D. caribbea* has been reported.[3]

There are eight chromosomes in diploid cells of *D. ananassae;* four pairs of V-shaped chromosomes in the female; three pairs of V-shaped autosomes, a V-shaped X and the Y in the male. One pair of the autosomes are considerably shorter than the others. In the aceto-carmine preparations used for the present study, two of the longer autosomes show the same type of pronounced sub-median constriction which exists in the left arm of the second chromosome of *D. melanogaster.*[4] The other pair of long autosomes have constrictions in positions similar to those of the third chromosomes of *D. melanogaster.* The short autosomes are attached to the nucleolus (or nucleoli) during early prophase stages in ganglion cells of both sexes. In the male, however, the Y-chromosome forms the third member of a group which is associated with the nucleolus. The absence of a nucleolus-forming region from the X-chromosome of this species contrasts with the condition in other species of Drosophila, in which the nucleolus develops in the X.[4, 5]

Several of the ganglia studied, both male and female, contained patches of tetraploid tissue. Trisomics and XO individuals also were found.

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# SCIENTIFIC APPARATUS AND LABORATORY METHODS

## CARDBOARD FOR ANATOMIC RECONSTRUCTION MODELS

IN 1905 (published in 1907) Mrs. S. P. Gage[1] demonstrated a method for making reconstruction models from microscopic sections, which involved the use of blotting paper instead of the usually employed wax. The technique of this method was further developed by Dr. S. W. Miller in 1931[2] and 1932.[3] He also described apparatus for cutting and mounting the paper sections. Blotting paper has the following advantages over wax: (1) it is less expensive, (2) the labor involved in rolling plates is saved, (3) it is not softened in hot weather, and (4) the resulting models are much more durable in other respects. A material which is still better than blotting paper, in my judgment, is described in this article.

About three years ago, I attempted to get blotting paper of uniform and special thickness. I was informed, however, by the paper dealers whom I consulted that only one thickness was available in large sheets and that was not uniform. I learned, however,

[1] A preliminary note.
[1] *Anat. Rec.*, 7: 166–169.
[2] *Anat. Rec.*, 48: 191–196.
[3] *Anat. Rec.*, 51: 249–250.

[2] C. W. Metz, *Amer. Nat.*, 50: 587–599, 1916.
[3] A. H. Sturtevant, Publ. 301, Carnegie Inst. of Wash., 1921.
[4] B. P. Kaufmann, *Jour. Morph.*, 56: 125–155, 1934.
[5] E. Heitz, *Zeitschr. Zellforsch. u. mikr. Anat.*, 20: 237–287, 1933.