Bhakta, R.K. and A.S.Mukherjee. University of Calcutta, India. Genetics and epigenetics of some sex-linked lethals in Drosophila melanogaster.

Twelve different sex-linked lethal mutations were recovered in Drosophila melanogaster. The $y^2w^ict^6f$ males were treated with X-ray. These males were crossed with yf:=/w^+.Y virgin females. The F_1 males were pair-mated with FM6/w^{rJ1} virgin females. If a lethal mutation was induced within the map-span of w^{rJ1} deficiency (3A2-3C2), females with $y^2w^ict^6f$/Df(1)w^{rJ1} genotype (yellow, white-ivory ♀) would not appear among the F_2 progeny, and the lethal mutation would be recovered from other F_2 females with y^2w^i 1 ct^6f/FM6 genotype (Fig. 1). The lethals thus isolated were tested with Df(1)w^{rJ2} and Df(1)62g18. The test revealed that the region 3A2-4 contains three lethals (viz., 1^{11},1^{15} and 1^{16}) and the region 3A5-8 contains other nine lethals (viz., 1^1 1^4, 1^7, 1^8, 1^9, 1^{13}, 1^{17}, 1^{18} and 1^{19}). Three complementation groups have been resolved by complementation tests (Fig. 2). They are: 1^1 group with seven lethals, 1^8 group with two lethals and 1^{11} group with three lethals.

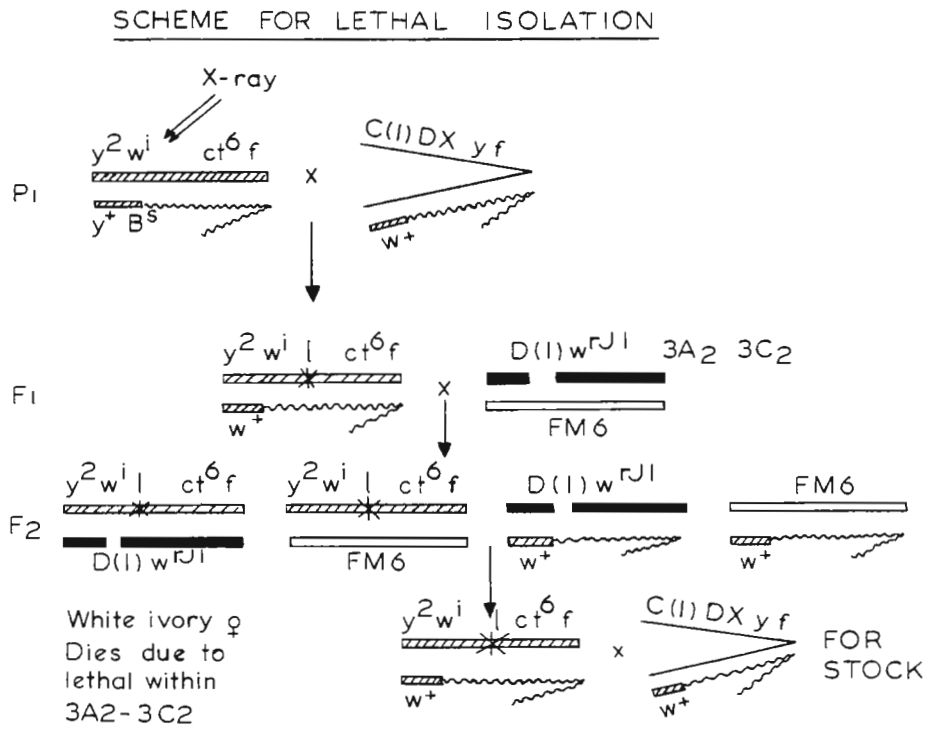


Fig. 1. Scheme for isolation of lethals in the X-chromosome against the deficiency w^{rJ1} spanning from 3A2-3C2.

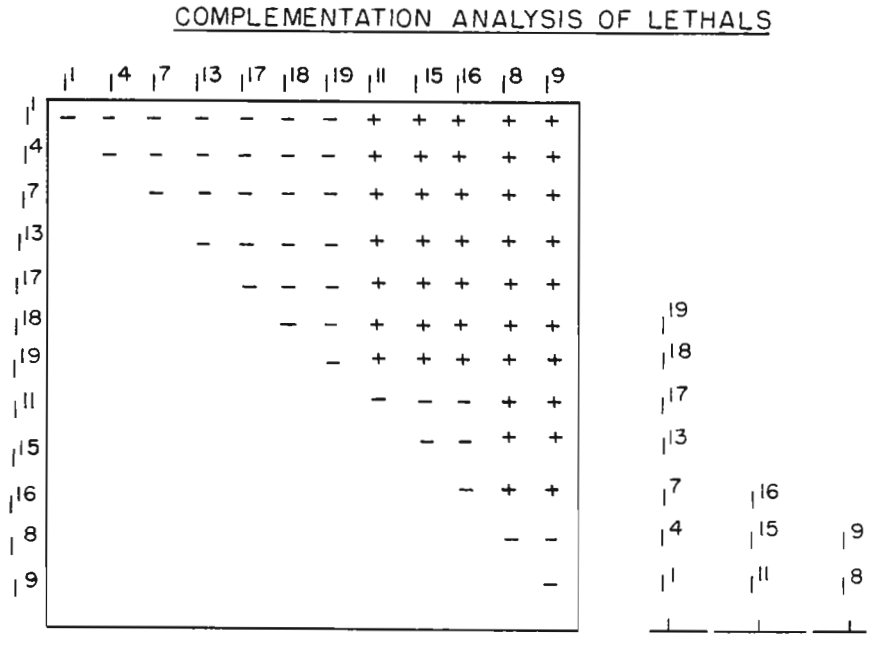
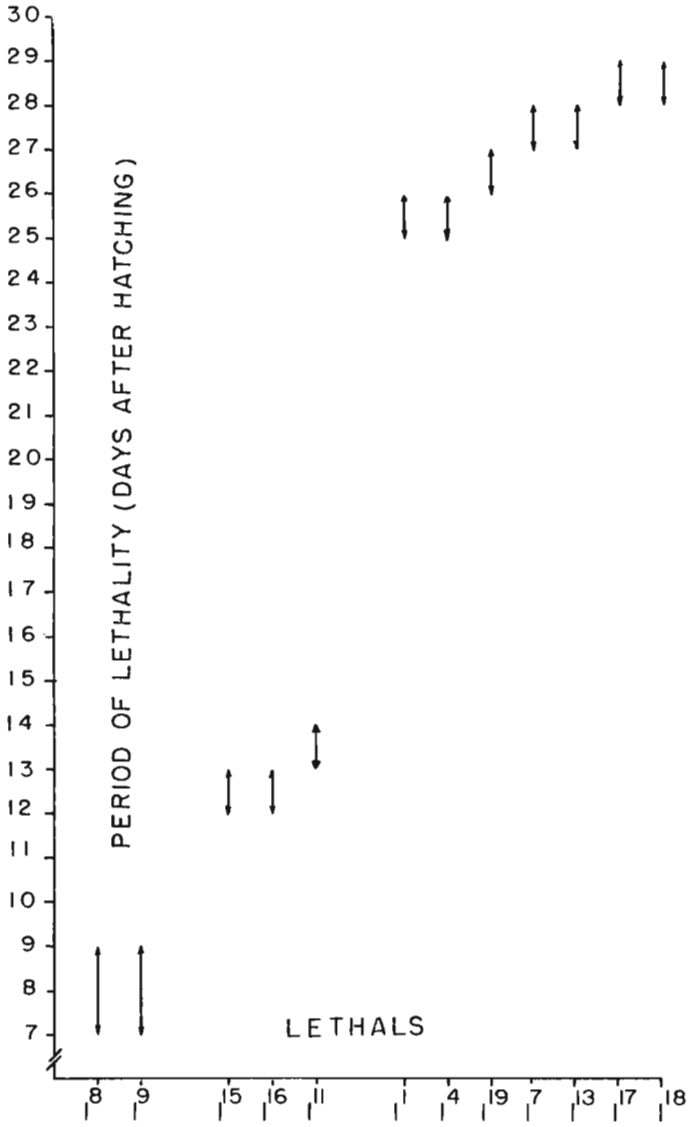


Fig. 2. Complementation test of the lethals to divide them into three groups (viz. 1^1, 1^{11} and 1^8).



To find out the time of lethal action and for the epigenetic characterization, the lethals were allowed to develop without cover. It was observed that they all die in larval condition, at different but specific age of their larval life. When the lethals were grouped on the basis of their duration of larval time, they could be divided into three groups which correspond with the respective complementation groups. the 1^{8} group survived up to 7-9 days after hatching, the 1^{11} group died within 12-16 days after hatching, but the 1^{1} group showed a very sharp deviation from others by their survival time up to 25-29 days after hatching (Fig. 3). The length and weight of the uncovered lethal larvae were measured for each lethal and from this study different lethals in different groups could be again divided into three groups as obtained from complementation study.

These studies suggest a clear correlation between the complementation group and the epigenetic integrity of the lethal mutants.

Fig. 3. Epigenetic study of the lethals by finding the period of lethality in uncovered condition.

Bock, I.R. La Trobe University, Melbourne, Australia. A matter of priority.

Wheeler (1981 The Genetics and Biology of Drosophila, Vol 3A) proposed a number of new synonymies; among them, D.hydeiodes was given as a synonym of D.nigrohydei.

The following statement is to be found on page 62 of GBD vol. 3b: "[Wheeler] does not recognize hydeoides and nigrohydei as distinct species. Since hydeoides has page priority in the publication in which both species were originally described, it, rather than nigrohydei, will be considered the valid name."

As the ignorance of ordinary taxonomic procedure revealed by this statement may not be confined to its author, it may be worthwhile to elaborate on the point concerned.

The International Code of Zoological Nomenclature governs the formation and emendation of all subspecific, specific, generic and family names within the animal kingdom. "The object of the Code is to promote stability and universality in the scientific names of animals, ..." (Code, Preamble), and adherence to the provisions of the various Articles ensures these simple objectives.

Nobody would dispute that synonymies are an inconvenience if not a curse, but given the level of activity on Drosophila species in many parts of the world, they cannot easily be avoided. In most cases, nomenclatural priority is simply established: the names