
 Book review

Würgler, F.E.; Graf, U.: *Drosophila* Genetik. Praktikum der Genetik, Bd. 2. Berlin, Heidelberg, New York, Tokyo: Springer 1983. xi + 291 pp., 30 figs. Soft bound DM 29.80.

This book (in German) fills a gap in the field of genetic textbooks available in German-speaking countries. A number of genetic experiments with *Drosophila* is assembled which covers the main requirements of teaching genetics, starting with a dihybrid cross, via sex-linked inheritance, to developmental and population genetics. In an addendum a detour into the molecular genetics has been made by giving the protocols for isolating and analyzing nucleosomes from *Drosophila* eggs (contributed by O. Pongs).

The experiments are selected from teaching experiences of the authors. This assures that it will be possible to carry them out without many problems if the protocols are followed. The outlines of the experiments are so prepared as to permit immediate use in a practical course: they contain space for the evaluation of the experiments and raise questions related to the particular experiment.

In reading through the book one does not always feel entirely happy since the text is not throughout carefully assembled. Since the book is also supposed to be used at high schools, it might have been useful to introduce some readers into the technique of crossing by mentioning that a cross has to be carried out by bringing males and females together. But to add that this is also required if only the segregation of autosomal factors is studied appears somewhat excentric (p. 9). Between the genetic experiments one would like to see something about position effects, and especially more about developmental genetics. Although the technique of analysing somatic crossing-over is introduced, its important application is not properly considered. In this way the book becomes somewhat one-sided towards the particular field of interest of the authors.

I have also some concern about the suitability of using nucleosome isolation as a tool of introduction into molecular genetics. This certainly is not an elementary approach. From my own teaching experience I would consider that a more adequate introduction into molecular genetics could be made with the aid of an experimental system which is more closely related to classical genetics. The introductory experiments into trans-plantation techniques and the experiments dealing with eye colour would make it much more coherent to use the P element transformation and the available mutations of the *white* locus (w^a , carrying a copia element, or other mutants with P elements). By such an experimental approach the tight connection between classical and molecular genetics can be demonstrated much more convincingly. The isolation of nucleosomes leads on one side into a field of complexity which is comprehensible only to advanced students. It could also more easily have been done with other materials.

In addition, the population genetics experiments could have been more thoroughly worked out. I have some doubts about the justification of calculating selection coefficients for each generation of a cross as carried out according to the protocol since the variability in the representation much more likely represents random drift rather than changing selective forces.

In summary, I welcome this new text book, which will be of much help in many University courses and probably also to school teachers. But I hope that a forthcoming edition will provide a somewhat more balanced book. Its application in teaching will also help omit mistakes and misleading parts of the text. Better illustrations would also be an improvement. It is difficult to understand why, for example, such bad illustrations as the ones displaying the early embryonic development have been chosen. It would also be useful to have the list of mutants at the very beginning or the very end of the book.

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