gots doesn't leave me with a very clear picture. But these are minor problems. The illustrations are good with the exception of a few of the color plates which are quite unrealistic in appearance. Most biology textbooks devote very little space to blood. This book will fill a very real need and should be a great stimulus to future work in the field of comparative hematology.

RALPH L. ENGLE, JR.
Department of Medicine,
Cornell University Medical College

Modern Biology Series

Interacting Systems in Development. James D. Ebert. Holt, Rinehart, and Winston, New York, 1965. x + 227 pp. Illus. Paper, $3.

Interacting Systems in Development, a volume in the Modern Biology Series, is designed to introduce beginning college students to developmental biology. As indicated, interactions represent the major theme; this includes such diverse phenomena as egg-sperm, nucleo-cytoplasmic and tissue interactions, cleavage and gastrulation, molecular expression of genes expressed during development, products of gene expression and their regulation, humoral regulation of growth, endocrine and nervous coordination, and developmental aspects of immunity.

In the 12 chapters and 216 pages of this paperback book, Ebert presents a well-balanced view of developmental phenomena and problems. Model systems (adequately covered in other books) have been studiously ignored; instead, the actual problems encountered in embryos and other multicellular systems have been presented. Areas of ignorance are clearly and unhesitatingly indicated, along with an invitation to students to prepare themselves for the excitement of becoming involved in attempts to seek answers and solutions.

I like the book, possibly because it takes essentially the approach that I have used in my course. There are, as one would expect, differences in emphasis and organization. For instance, I would tend to devote more than seven pages to gastrulation and to relate this topic more closely to cell sorting and migration. Both of the latter subjects are covered in other parts of the book without relation to the earlier morphogenetic movements. Most of the highlights of the major aspects of development are covered quite adequately for this type of introduction.

Use of many terms without definition could be criticized, but I do not consider such usage a serious drawback. Instead, I believe that it may serve to whet the curiosity of the more interested students. This book should serve admirably to cover the developmental-biology portion of introductory courses in biology. It should also serve as a supplement to many courses in embryology and developmental biology (in fact, I have recommended it as a supplement to my own students in such a course). The blend of the molecular with the structural, the liberal inclusion of genetic analyses, along with the broad coverage and viewpoint, tend to make this a valuable little book.

EDGAR ZWILLING
Department of Biology,
Brandeis University

A Literature Survey

Balsam Fir. A monographic review. E. V. Bakuzis and H. L. Hansen. University of Minnesota Press, Minneapolis, 1965. xxii + 445 pp. Illus. $9.50.

This monograph is an outgrowth of a recommendation, made in 1953 by the Quetico-Superior Wilderness Research Center Advisory Committee to the University of Minnesota School of Forestry, that the literature of *Abies balsamea* (L.) Mill. be surveyed in an attempt to understand the successional role of the species. The authors, assisted by seven contributors, examined 2334 sources of which 1393 are cited. They have done an outstanding job in bringing balance and unity to a work assembled from such a wide background. The book is divided into nine chapters, each with a preface and conclusions. The first five chapters deal with basic fields: Botanical foundations, geography and synecology, ecological factors, microbiology, and entomology. The last four chapters deal with more practical applications: Reproduction, stand development, growth and yield, and utilization. Two indexes list the myxomycetes and fungi and the insects associated with balsam fir. Forty-seven pages are devoted to listing the literature cited, with the sources for each chapter listed separately. The index is helpfully arranged in four subdivisions: General, species, communities, and localities. Tables, figures, and plates are well done—usually completely reworked for clarity and uniformity.

Careful editing and revision is indicated by the unity that exists between chapters of this well-written book. The title could be misleading in that some may, on the basis of the title, think that the book covers a specialized topic. Although it covers the topic of balsam fir exhaustively, it will be useful to a wide range of readers. The ecological approach is so effectively used throughout the book that ecologists and plant geographers, as well as foresters, will find it especially helpful. The commercial value of the species as well as the rich natural history of the spruce-fir region will add to the list of potential readers.

The authors deserve praise for the manner in which they were able to condense the source materials without losing the meaning of the original authors. The conclusions at the end of each chapter effectively summarize the types of studies that have been made, and are especially valuable in that they point out specific areas where further research is needed. An outstanding feature of the book is the stress on and effective use of multidimensional ecosystem models to illustrate the interaction of environmental factor complexes.

GEORGE S. RAMSEUR
University of the South,
Sewanee, Tennessee

Organic Chemistry

Introduction to Mass Spectroscopy and Its Applications. Robert W. Kiser. Prentice-Hall, Englewood Cliffs, N.J., 1965. xii + 356 pp. Illus. $14.

This book has been written especially for the scientist with little or no experience in the field of mass spectroscopy, and it attempts to present systematically basic principles, applications, and recent advances as well as to discuss advances that are likely to be made during the next several years. A historical chapter that gives an interesting introduction to the subject precedes a discussion of the various parts of a mass spectrometer, the various types of complete instru-