The portion of the book dedicated to applied palynology contains some unusual choices. For example, the use of palynology in plant taxonomy, ecology, and evolution is treated as a minor application. In contrast, an entire chapter is devoted to the study of pollen trapped within honey. A large portion of this discussion reads as an advertisement extolling the health effects of “bee pollen” and honey, despite a lack of scientific evidence and citations to that effect. The remaining chapters are where the book hits its stride. These chapters deal with the aerobiology of pollen and spores and describe the history of the discipline, collection techniques, pollen calendars, global patterns, and allergies; common allergies and source plants are also discussed. An interesting chapter on the role of pollen and spores in forensic palynology is followed by an overview of the role of palynology in coal and oil exploration.

Overall, the authors provide a good sampling of the various applications of palynology across science. However, the book is also poorly organized, suffers from occasional misspellings and sentence fragments, and lacks numerous citations, giving readers no way to check the veracity of the claims or pursue subjects in greater depth.

Andrew B. Schwendemann, Ecology & Evolutionary Biology, University of Kansas, Lawrence, Kansas

An Introduction to Plant Breeding.


I teach two introductory courses in plant breeding and plant genetics, and my students routinely look, but rarely find, references as useful as An Introduction to Plant Breeding by Brown and Caligari. This concise volume presents the basic outline of plant breeding theory and practice in a highly accessible and compact form. There is no question that upper undergraduate students and beginning graduate students could make very good use of this book as a companion to a first course on plant breeding principles. And, in fact, it is likely that the volume could be a useful foundation for students who wish to expand their repertoire into more advanced textbooks such as Allard’s Principles of Plant Breeding (1999. Second Edition. New York: J. Wiley), Simmons and Smartt’s Principles of Crop Improvement (1999. Second Edition. Malden (MA): Blackwell Science), or Sleper and Poehlman’s Breeding Field Crops (2006. Fifth Edition. Ames (IA): Blackwell Publishing). The current publication should provide all the background and clarity they need.

The authors have made a very strong attempt to develop a clear and useful text that includes all of the major relevant principles and theories in plant breeding along with applications in the field. In most cases, concepts are introduced and described without much supporting material or reference. It would have strengthened the presentation to include additional studies and foundation literature. However, one could also argue that this is why more advanced textbooks are produced. In another case, I believe that methods of plant reproduction and their genetic consequences might be best demonstrated by diagrams or figures, but many of the other concepts are indeed presented with easy-to-understand graphics and clear explanations. That this is a beginning textbook is obvious enough, and those interested in what lies beneath these theories or beyond them in plant breeding practice can search out that information on their own.

The greatest strength of this volume rests with Chapters 4, 5, and 6, which cover quantitative genetics, predictions, and a very in-depth view of selection theory and practice. The level of quantitative detail in Chapter 5 is outstanding, and would be of use to even advanced students who have already wrestled with these concepts. Each chapter contains a set of “think questions,” which appear at times to be overly simplistic, but should allow both students and teachers to formulate useful ideas for discussion. The sections on practical applications, such as greenhouse management and experimental design, are also excellent ways to help bring a more practical focus to this subject. My overall impression is quite positive of this new volume, and I would not hesitate to recommend it to my beginning students who wish to have a companion textbook to our principles course.

Irwin L. Goldman, Agricultural & Life Sciences, University of Wisconsin, Madison, Wisconsin

FRUIT: EDIBLE, INEDIBLE, INCREDIBLE.


My introduction to Kesseler’s art was in the first volume in this series on pollen (R. Kesseler and M. Harley. Pollen: The Hidden Sexuality of Flowers. 2006. New York: Firefly Books), where he laid bare the remarkable beauty, precision, and function of these miniature voyagers. Pollen and, in the second volume, seeds (Seeds: Time Capsules of Life; reviewed in QRB 82(2):152) came alive in the delicately tinted scanning electron micrographs, leav-
The aesthetics of this third installment are strikingly evident, no doubt because fruits, more than seeds or pollen grains, are visually experienced. A strawberry colored to be a facsimile of itself (the cover image of the book) inevitably makes the familiar strange, creating a dissonance between art and experience. That said, there is a visceral delight in thumbing through the superb and arresting images as well as reading the engaging and accurate text, making this latest project sure to excite people about the wonderful world of plants.

In summary, I find this volume, like its predecessors, to be the very best of “coffee-table” books: both informative and delightful.

Andrew Doust, Botany, Oklahoma State University, Stillwater, Oklahoma

ZOOLOGY


The second edition of this volume represents a substantial revision of the previous edition. The text is organized into 12 chapters: An Overview of Insect Ecology; Insects and Climate; Insect Herbivores; Resource Limitation; Natural Enemies and Insect Population Dynamics; Evolutionary Ecology; Physiological Ecology; Insects in Ecosystems; Biodiversity; Insect Conservation; Insects and Diseases; and Insect Pest Management. Chapter 7 is completely new and Chapters 9 and 10 have been separated into individual chapters (in the first edition they were combined into a single chapter). The text has been expanded in size by approximately 40%. Nearly 35% of the citations are new and represent contemporary publications.

The book is well-titled in that the organizational emphasis generally centers on topics associated with an entomological curriculum. Most of the chapters deal with subjects that form the substance of an expanded course offered in an entomology program (e.g., integrated pest management, insect biodiversity, and biological control). The focus is on the ecological issues associated with the entomological subjects. This approach is in contrast to textbooks in ecology organized around levels of integration—i.e., individuals, populations, communities, ecosystems, and landscapes (see M. Begon, C. R. Townsend, and J. L. Harper. 2006. Ecology: From Individuals to Ecosystems. Malden (MA): Blackwell Publishing). The “levels of integration” approach generally relegates the entomological discussion to examples that illustrate ecological principles and concepts.

This volume is a clearly written, contemporary, and scholarly treatment of the ecology of insects, which can serve as both a classroom textbook or general reference. The production of the volume is average. Line drawings and tables are clear, but the use of black-and-white images detracts from the quality of the written text. There is a bank of color images in the center of the book, but they are not well integrated into the text. The authors are recognized scholars in entomology and ecology, and their areas of specialization are complementary.

Robert N. Coulson, Entomology, Texas A&M University, College Station, Texas

Reproductive Biology of Crustaceans: Case Studies of Decapod Crustaceans.

As stated in the subtitle, this book presents a series of case studies (14 chapters in total) related to the reproductive biology of crustaceans. After a short overview, Chapter 2, one of the longest in the book, is a compendium of crustacean phylogeny. Although very useful to people interested in crustaceans, this chapter probably does not belong in this work. The rest of the chapters cover a very wide variety of subjects, including population and