

HILL, D. S. 1994. Agricultural Entomology. Timber Press; Portland, Oregon. Hardback, 640 p., 27 × 20 cm. ISBN 0-88192-223-4. \$89.95.

Dennis Hill is well known for his authorship of two previous volumes on agricultural pests of the tropics and of temperate regions. In these he provided a world-wide perspective on insect pests, providing brief accounts of their biology, damage, and distribution. He also included useful lists of host plant associations and information on pest control.

In this new treatise, which is being marketed as a college textbook, Dennis Hill takes a decidedly different approach to the presentation of information while preserving the international flavor of his works. *Agricultural Entomology* takes a taxonomic approach to classification of pests rather than the more traditional grouping of pests by crop or geographic region. He reviews all major orders, the important families, and selected subfamilies, providing general information on their morphology and habits. Included in each section is a list of the most important species, accompanied by a few key facts such as host range and distribution; this usually comprises only a line or so of information. With over 300 photographs and 400 drawings, this text is unusually well illustrated.

The strengths of this book include the large format, copious illustrations, and world-wide perspective. The paper quality, format, and binding seem to be an improvement over the aforementioned agricultural pest volumes, thereby making it more suitable for student use. The introductory material, 100 pages in length, make a good introduction to insects, their biology, interrelationships with the environment, and the basis for "pesthood."

Weaknesses include the questionable value of long lists of pest species with only cryptic information about them, the lack of **any** information on pest control, and the overly brief description of collection, preservation, and identification. No keys are included. The only references recommended for collection and preservation techniques are British. The pests selected for inclusion seem, perhaps not surprisingly given Hill's experiences, to slight the western hemisphere. While the author has obviously made an effort to include some pests that are exclusively American, I anticipate that students will be unhappy about a book that pictures so few collectible insects.

There are, of course, some spelling errors and mislabeled pictures; it seems impossible to publish without a few. On the whole, however, the book is rather accurate. The biggest source of irritation for both students and professors will be the use of common names. Every continent (sometimes each country) seems to have its own set of common names, and many that are included in this book will not be recognizable to American users. An example that will plague readers of this book is *Diabrotica* spp. Hill's figure 10.97 is called southern corn rootworm but it is (and was in the "pests of temperate regions" book) the northern corn rootworm. The scientific name ascribed to this figure matches neither common name according to current use patterns.

There is some value in having pests arrayed taxonomically—it reinforces the importance of identification and reduces the duplication that occurs when polyphagous

insects are associated with several crops. For this approach to work with students, however, previous exposure to a course that includes identification will be needed. Alternatively, supplementary keys could be provided. I can't imagine an agricultural entomology course without information on pest control, so some supplementary information is likely needed here also. Looking past these annoyances, I think that on the whole Hill has made a useful contribution to entomology education through the publication of this book. Not only does he provide instructors with an alternative organizational approach, nicely complementing the current books on the market, but he provides a world-wide perspective that is increasingly valuable in our more mobile and international society.

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