Insects on Palms

HOWARD, F. W., D. MOORE, R. M. GIBLIN-DAVIS, AND R. G. ABAD. 2001. Insects on palms. CABI Publishing; Wallingford, Oxon, UK, xiv + 400 pp. ISBN 0-85199-326-5. Hardback. $120.00. [Sales in the USA handled by Oxford Univ. Press, New York]

This book seems to be the first on the subject and thus fills a void. It deals extensively and intensively with the phytophagous insects and mites that feed on or in palms, and with their natural enemies including biological control agents. As such, it serves as a textbook for anyone wishing to protect palms from damage by insects and mites, or from insect-transmitted diseases, or to encourage pollination by insects. But, it is more than that because it reviews the behavior and ecology of the insect and mite fauna of palms and makes the literature available to anyone interested in the academic subject of insect/plant relationships.

It is not a multi-authored book with four editors, but a book written by four authors. It is subdivided into only eight chapters; this was possible only through good integration. F. W. Howard is the major contributor to it. His opening chapter is "The animal class Insecta and the plant family Palmae" which has a useful 29-page condensation for the uninitiated (e.g., most entomologists) about the biology, cultivation and use of palms. There are four pages of introduction for the uninitiated about insects. Detailed information about the insects is, of course, in the other chapters.

The other chapters are: 2, Defoliators of palms; 3, Sap-feeders on palms; 4, Insects of palm flowers and fruits; 5, Borers of palms; 6, Population regulation of palm pests; 7, Principles of insect pest control on palms; and 8, Field techniques for studies of palm insects. The chapters are followed by a 47-page section of integrated References, and this by a 20-page integrated Index. Tables in the text summarize a lot of information usefully. Table 3.3 is a list of species of Derbidae (Hemiptera: Auchenorrhyncha) reported on palms, with host palms, distributions and literature references. Table 4.4 lists, by palm genus, arthropods associated with pollination of palms. It summarizes arthropod behavior, but how can it write "larvae probably breed in the flowers" when breeding is a function restricted to adults? Boxes in the text develop items of especial interest that would otherwise destroy the flow, such as Box 2.2, the story of classical biological control of a coconut leaf-miner in Fiji, and Box 5.2, an account of red-ring disease. The book's numerous black and white photographs, including electron micrographs, serve admirably. It even has 16 plates of color photographs, most of which have been reproduced well.

I have few criticisms. The book (p. 3) claims that insect biogeography "lacks standardized place-names." If by this is meant that insect biogeography uses names for biogeographical regions that have evolved from some proposed in the mid-19th century, that is true. But, in making this claim, the book equates the outmoded expression "Ethiopian Region" with all of Africa, when for over two decades sub-Saharan Africa with Madagascar has been called the "Afrotropical Region" (Crosskey & White 1977). The northern tier of African countries has long been attributed to the Palearctic Region. It asserts (p. 94) that presence of a mite, *Pyemotes ventricosus,* detected in Fiji in 1921, was due to "inadvertent introduction." This makes three assumptions: 1, that the mite is not native so must be adventive; 2, that it was not introduced (deliberately) so it must be an immigrant; and 3, that it did not arrive by natural means so must have arrived as a hitchhiker in some sort of cargo transported by humans. Evidence for those assumptions is not presented. The weevil *Metamasius mosieri*, which is stated (p. 279) to be associated with palms in tropical America, in fact feeds on bromeliads as an adult and larva (Larson et al. 2001). Anyone who expects to use the book as a source of describer (author) names for the scientific names of palms and their associated insects and mites will be disappointed—they are not given. The book's rather high price ($120) will surely deter some purchasers who are interested but uncommitted. But, it is carefully edited and largely free of the typographical and grammatical errors, and bloated bureaucratese expressions that are all too common in many technical books. This makes it a pleasure to read.

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