

overview of measures that are used or can be used in cultural control of stem borers in Africa. These include intercropping or manipulation of planting date which are often the only measures available for smallholders in Africa and this chapter shows that differences in geographical bioecology may influence the feasibility of the different control measures. The last chapter by Overholt on biological control of stem borers gives a complete overview of the attempts and partial successes of natural enemy introductions.

The only small point of criticism I have about this book is that the text is very descriptive. Only a few authors try to synthesize new views and ideas. For instance, can we learn anything if we compare the stem borer situation in Africa with other tropical and non-tropical parts of the world. What will the future bring? What can we expect from the impact of the current biological control attempts? Can transgenic maize be a solution for tropical stem borer management? A chapter outlining the future into the next millennium would have been appreciated.

To summarize, this book provides a highly valuable source for the correct characterization of African stem borers and their natural enemies and provides fundamental information necessary for formulating integrated pest management of African stem borers. It is nicely produced and very well illustrated with 72 colour plates and 670 figures. It will be the standard reference book on African stem borers for many years to come. The chapters on the taxonomy and characterization of natural enemies associated with African lepidopterous stem borers will provide a sound framework for the considerable amount of taxonomic work that is still required to classify species and genera of Dipteran and Hymenopteran parasitoids. This book is not only highly valuable for taxonomists, but also should not be missing from the bookshelf of any agronomist or entomologist involved in integrated pest management in the tropics.

Reference

Khan, Z.R., Ampong-Nyarko, K., Chiliswa, P., Hassanali, A., Kimani, S., Lwande, W., Overholt, W.A., Pickett, J.A., Smart, L.E., Wadhams, L.J. & Woodcock, C.M. (1997) Intercropping increases parasitism of pests. *Nature* **388**, 631–639.

Roel P.J. Potting

Electronic Media

CABIKEY to the Indo-Australian Dacini fruit flies (CD-ROM). By I.M. White & D.L. Hancock (Wallingford: CAB International, 1997) £195/US\$320.

The following brief review is based on actual use of this CD against specimens. A comprehensive review, including a detailed description of the contents and recommended computer system specifications, was published recently (Steck, 1998), and these data will not be repeated here.

This CABIKEY is the first CD devoted to the identification of dacine fruit flies (Diptera: Tephritidae), or in fact of any group of fruit flies. For someone such as myself who, for a good part of his life has enjoyed identifying organisms (plants, snakes and fruit flies, to mention just a few) using printed keys, this tool is a miracle of technology and innovation. Over 500 species are authoritatively covered by illu-

strated keys and associated information (such as descriptions, distribution and hosts), and this coverage sets a new record in published information on fruit flies. This CD should appeal to a variety of users, primary taxonomists and quarantine personnel at ports of entry, and any others interested in fruit flies, and I wholeheartedly recommend it to all of them.

I tried the CD on ten species of Dacini, including pest and non-pest, previously identified and fresh (one of which appears to be undescribed), Oriental and even Afrotropical species. I also, and deliberately, tried all the options and appendices. All but one of my identifications were confirmed by previous authoritative identifications or confirmed with the associated descriptions and data in the CD. The only exception was a species reared from a cucurbit in Taiwan, which ran to *Bactrocera diversa* Coquillett, but clearly differs in several characters. Although this is apparently an undescribed species, which would therefore not be included in the key, it could still be easily and clearly separated from any included species by the associated data.

I have only a few, rather minor, points of criticism:

1. Some of the potential users of this CD may not be fruit fly experts or know what Dacini are; such knowledge is a prerequisite for efficient use of the CD. For such users, the diagnosis of the Dacini is too professional, too little and too obscure. I would like to have seen included on the main route to the keys a more general diagnosis including habitus traits, such as 'wasplike appearance' and typical colour patterns, accompanied by 2–3 habitus illustrations.
2. The illustrations are mostly clear and work well, although I personally do not consider some of them aesthetically pleasing.
3. There are some minor spelling and other errors, e.g. *Bactrocera tau* Walker is known from Taiwan, but its occurrence there is not marked on the distribution map; I am opposed to the use of the word 'depth' in describing the marginal band on the wing, because this band is two dimensional, and I would have phrased this character differently (e.g. only use the veins as landmarks); in addition, one of the CD authors (IMW) pointed out to me that a paper by Chao & Lin (1996), in which six new species of the subgenus *Sinodacus* were described, was inadvertently omitted. He also pointed out that *B. ishigakiensis* (Shiraki) responds to cue lure and *B. diversa* responds to methyl eugenol, although both species were coded as lure response unknown.

In summary, I enjoyed using and playing with the CD, which is indeed user-friendly, and I arrived at very satisfactory results. However, I have to admit that using the computer and stereoscopic microscope simultaneously is considerably more cumbersome than using a book and a microscope, and would be better accomplished in tandem. One need not be Jules Verne to predict that the next step in key and computer science will probably be a scanner that processes the specimen and scans it, while the identification and associated data appear on the screen.

Amnon Freidberg

References

- Chao, Y.S. & Lin, X. (1996) Notes on the genus *Sinodacus* Zia (Diptera: Tephritidae) with descriptions of three new species from China. *Entomotaxonomia* **18**, 125–134.
- Steck, G. (1998) Book reviews. *Florida Entomologist* **81**, 127–129.