

## Review

Commonwealth Scientific Industrial Research Organization (Ed.) 1994: Insects — a World of Diversity. — C.S.I.R.O., Information Services, 314 Albert Street, East Melbourne, Victoria 3002, Australia. CD-ROM Version 1.0 and printed Teachers' Guide, 104 pp (A4 size, alternatively spiralbound 17.5 × 24.5 cm). CD-ROM available for both Windows and Macintosh versions. System requirements: Windows: IBM-compatible computer 386-33 or faster, super VGA video card and monitor; 4 Mb of RAM, Microsoft Windows 3.1 or later, Microsoft Windows compatible digital audio card and CD-ROM drive. Macintosh: Apple Macintosh computer, 13 inch colour monitor (or larger), 4 Mb of RAM, CD-ROM drive and Quicktime 1.6 or later (provided on CD). Price: CD-ROM: AUD 109.—, CD-ROM and Teachers' Guide AUD 129.—.

The history of entomological literature is long, and the number of books written is extensive. Now in the modern era of computers, the multi media provides a new way of presenting the insects and their diversity. This CD-ROM is produced by the large Australian research organization C.S.I.R.O. and gives an excellent introduction to the world of insects. Its scientific coordinator is Dr. David F.C. Rentz, a well-known orthopterist, for instance co-editor of "The Tettigoniidae Biology, Systematics and Evolution" (1990) (cf. Entomol. Fennica 3 (1992), p. 214).

The contents is divided into six separate sections. The first section entitled "Insect gallery" presents 16 groups of insects, viz. the ants, bees and wasps, beetles, bugs, butterflies, cockroaches, crickets, dragonflies, flies, grasshoppers, katydids, lacewings, moths, praying mantises, stick insects, and other insects. Each group contains a short general description, and presents about 7-40 different specimens per group. The description includes a colour illustration, a short text including Latin name and a sound recording when appropriate.

The second section deals with sounds and contains the cicadas, katydids, crickets and other sound producing insects, and contains 6-8 different species per group. Each species is illustrated and its sound diagram is given. As the sound is played, a bar is moved over the diagram illustrating its different components. Moreover, the sound can also be played in 25% of its original speed describing its composition in detail.

Collecting and identifying insects is covered in the third section, which give the basics on collecting insects; and how to find them in a garden i.e. by clicking with the mouse button on various points in the garden and then get a picture of the insect hiding there; a slide show explaining how to identify insects. Finally, an identification game let you try out the work as a taxonomist in a simplified manner.

The next section is called "Heroes and villains" and contains six mini-videos of about one minute

each, presenting the insect world, terminator weevils, the dung beetle, thistle-eating weevil, termites and the cotton boll-worm. The scanning electron microscope is used in the section "Zoom in", and let you magnify various details of a mosquito, fly, butterfly, two moths, dung beetles and some insect eggs. The degree of magnification varies from 1.5 to 37,000 times natural size.

The last section "Quiz" consists of ten sets of multiple answers/questions from the contents of the CD-ROM. The "Teachers' Notes" is a detailed description of the contents of the CD-ROM, and more overcontains various fact sheets for children of various ages (from 4 to 12 years old).

The contents of this CD-ROM is of high quality and well organized. As a great friend of the Phasmida and Orthoptera I am of course very pleased to see these orders so well represented. The section of sound production really makes full use of multi media, and is a wonderful demonstration of the great variety of insects sound. The printed "Teachers' Guide" is also very well produced. However, some minor problems, of less significant nature, should be mentioned. Generally, the text of the different species could have been somewhat more detailed. The mini-videos are somewhat too dark. One illustration of the Australian stick insect *Extatosoma tiaratum* "showing" the ant mimicking first instar nymph, is actually showing the second nymphal instar which is not ant mimicking.

Conclusively, this is a very well produced CD-ROM, which can be used for a wide audience. For the young children and/or the beginners, this is an excellent introduction to the field of entomology. For the advanced entomologist, section such as "Sound production", can be used as an excellent complement to ordinary textbooks like e.g. "The Insects of Australia" (Naumann, I.D. [ed.] 1991).

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