

Book review

Weather and Climate (CD-ROM) by Harald Frater (Springer, 1999). ISBN 3-540-14667-9. US\$49.95.

The use of multimedia is becoming increasingly important in teaching. A generation of students raised on the Internet will expect a creative use of graphics and images in lectures and seminars. Accordingly, this CD-ROM is one of a number of multimedia products now on the market dealing with meteorological topics.

This CD gives a general overview and explanation of many topics in weather and climate: types of clouds and weather, tropical cyclones, El Niño, the enhanced greenhouse effect, and so on. Other phenomena described include tornadoes, trade winds, the monsoon and the characteristics of mid-latitude weather systems. In all, more than fifty separate subjects are covered. The CD is clearly intended for use in teaching, as the material is presented at a high school or early undergraduate level.

Installation was relatively easy, although not aided by having the installation instructions appear on the screen only in German. There is an accompanying booklet in English that gives information on installation and navigation of the CD. When the CD is started up, the music over the credits is rather pseudo-eighties synthesiser stuff, which may date the work for a high-school or undergraduate audience. The navigation design of the CD is quite good, with a 'Navigator' switch that enables the entire contents of the disk to be accessed from one screen, rather than just by following the links in a purely hierarchical fashion.

There are many nice diagrams on the CD, but it is a pity that the designers have not included an export facility so that diagrams can be quickly pasted into presentation software packages (PowerPoint, for example). Diagrams can be printed out, so it would be possible to print the Postscript to a file and then convert to .gif for input to PowerPoint. The CD also has a number of animations and videos. Many of the animations are genuinely instructive and well done: the

sea-breeze animation, for instance. I would consider using this one in an undergraduate meteorology lecture. Others are a little perfunctory: an animation is given of a tropical cyclone track that contains only a few frames and consequently has jumps of several hundred kilometres in the position of the cyclone between frames. The videos are mostly descriptive short films of different world locations illustrating their climates; these are more appropriate for high school students. There is also a collection of Internet weather links that can be accessed interactively while running the CD.

For southern hemisphere users, the CD has some drawbacks. The focus of the material is very northern hemisphere, which leads to at least one major inaccuracy. Readers of the *Australian Meteorological Magazine* will be surprised to learn that 'the tropical and subtropical regions of the Southern Hemisphere are seldom affected by tropical cyclones.' Given the author's subsequent reference to cold currents in the southern hemisphere preventing tropical cyclone formation, I think he means just in the southeast Atlantic and southeast Pacific oceans. The English in the text of the CD is occasionally convoluted and sometimes lacks exact precision: 'the movement of the air masses within the zonal Walker circulation is vertical to the meridional movement of the Hadley cells.' There are a few examples like this, and they could make it hard for students to follow some of the explanations on the disk.

Overall, given the relatively low price of the CD, it may be a useful acquisition for university or high school libraries. Because of the above inaccuracies, though, an instructor might be selective in choosing which material to use.

Kevin Walsh

Kevin Walsh is a scientist at CSIRO Atmospheric Research and is the book review editor of the Australian Meteorological Magazine. He lectured at Melbourne University in 1999, presenting the second semester of the second year subject 'Weather and Climate Systems'.

