

New in paperback

Powers of Ten: About the Relative Size of Things in the Universe by Philip Morrison and Phyllis Morrison. W H. Freeman/Scientific American Library, \$19.95, £13.95. Based on a film made by the Office of Charles and Ray Eames for IBM, this book takes readers on a wonderful pictorial tour of the Universe using 42 consecutive scenes, each at a different 'power of ten' level of magnification.

The Strange, Familiar and Forgotten: An Anatomy of Consciousness by Israel Rosenfield. Picador, £5.99. The author presents a variety of classical clinical cases — patients with amnesia, aphasia, multiple personalities, alien limbs — to support his ideas about how memory and consciousness work. Reviewed by Christopher Longuet-Higgins in *Nature* **360**, 117 (1992).

Speciation and the Recognition Concept: Theory and Application edited by David M. Lambert and Hamish G. Spencer. Johns Hopkins University Press, £29. A collection of 17 papers on the new concept of species developed by Hugh E. H. Paterson in the 1970s. "The concept is claimed to remedy several problems with the earlier [biological species concept] and to aid research on

speciation. These claims do not survive close examination", argued Jerry A. Coyne in *Nature* **364**, 298 (1993).

The Limits of Safety: Organizations, Accidents, and Nuclear Weapons by Scott D. Sagan. Princeton University Press, \$14.95, £12.95. "Important and refreshing. . . ranges from the general theory of accidents to how-to-do-it suggestions for any nation's nuclear planners. It is a skilful blending of social, physical, organizational and military science and is highly recommended to readers in all four fields", wrote David L. Sills in *Nature* **367**, 30 (1994).

The Great Power-Line Cover-Up by Paul Brodeur. Back Bay Books (Little, Brown), \$12.95. The author, a writer at the *New Yorker*, alerted Americans in 1968 to the health hazards of asbestos. In this updated edition of a book first published in 1993, he now sets out to show "how the utilities and the government are trying to hide the cancer hazards posed by electromagnetic fields.

Order, Chaos, Order: The Transition from Classical to Quantum Physics by Philip Stehle. Oxford University Press, £22.50. "A serious exposition of an intellectually enthralling tale", wrote Brian Pippard in *Nature* **371**, 485 (1994).

plants in a constant competitive battle that requires invasion, consolidation of position, establishing supply lines, sexual conquest, numerical enhancement, the enslavement of local animal populations and the development of foraging systems penetrating into neighbouring areas. All these behavioural techniques are displayed in the series by means of the most remarkable footage of time-lapse photography ever used to document these rarely watched aspects of the life of plants.

It is traditional, and necessary, that a book should be published to accompany the series, not only to provide a permanent record of some of the memorable pictures of plants, but also to act as a set of notes recording details of parts of the script and, most especially, the names and particulars of some of the examples shown on the screen. The popularity of such a publication is evidenced by the fact that this book has already reached the top of the UK bestsellers' lists. But can a traditional book format, however well illustrated, substitute for the mobile image that has succeeded in convincing us that plants really are living, even apparently sentient, organisms? Obviously it cannot, and those who expect the same level of spectacular imagery are bound to be disappointed. A still picture of a bent honeysuckle stem with the caption "plant searches for a hold on a neighbour" cannot encapsulate the fascinating film of spiralling, extending stems blindly groping for support.

But one should not expect this of a book. What one hopes to find is a text that is written in the same informative, lively, enthusiastic manner and with the same mixture of awe and excitement that characterizes the television script, accompanied by high-quality colour stills that can at least generate mobility in the reader's imagination. In this Attenborough has succeeded most admirably. As ever, he manages to combine readability and ease of style with academic respectability. Factual errors are scarce (pollen grains are certainly not 20–250 nanometers in diameter) and the temptation to anthropomorphize is generally avoided. Technical jargon is virtually absent, and I for one welcome this — botanists are too often guilty of hiding their ignorance behind a veil of pseudoscientific verbosity. Scientific names, however, add precision and the author has adopted the useful technique of including them in the index so that serious students can follow up his examples in more detail.

The book and the television series will open up the world of botany to a generation of budding biologists and lead many young scientists into this fascinating and fast-developing field. □

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measures an enemy might use to bring the war home to our own societies and, if possible, victory should be achieved with the minimum number of enemy casualties. Shukman therefore finds himself exploring ant-like robots deputizing for soldiers, methods of dealing with ballistic missile attacks, and nonlethal weapons such as gases that cause engines to break down. Meanwhile, much effort still follows the key developments of recent decades — towards a more accurate eye, impeded by neither night nor cloud, and methods of striking with precision so that the target is disabled with the minimum of effort and scant risk of collateral damage.

Journalists let loose among defence scientists are liable to produce awe-struck prose. Shukman is too experienced to be taken in by all the stories of the wizardry to come, although he might have been a little more sceptical about US ideas for 'brilliant pebbles' in space to intercept stray ballistic missiles. He is sufficiently unnerved to find himself caught on the horns of the classical dilemma of wondering whether resources and talents are being wasted while fearing the consequences if the breakthroughs are left to be exploited by more sinister forces. □

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Life in the slow lane

Peter D. Moore

The Private Life of Plants. By David Attenborough. *BBC Books: 1995. Pp. 320, £17.95. To be published in the United States later this year by Princeton University Press.*

PLANT-WATCHING, unlike bird-watching, has never really gripped the imagination of the general public. The reason, of course, is quite simple: plants don't behave. They simply don't do anything. At least, they don't do anything at the kind of pace that allows us to sit and watch them. Plant physiologists have long tried to convince us that plants are as sensitive to their environment as any other living organism and that they respond to the stimuli that surround them. But, although we have learned of such phenomena since our earliest biological training, few of us have been particularly impressed by all the tropisms, nutations, 'sleep movements' and touch sensitivities of plants that the textbooks describe. Animals, ourselves included, are such hasty creatures that we cannot actually appreciate the more leisured world of plants.

David Attenborough's BBC television series about the private life of plants shows it to be anything but pacific. The relentless struggle for existence involves