

Giant subjects

Nicholas Fraser

The Dinosauria. Edited by D.B. Weishampel, P. Dodson & H. Osmólska. *University of California Press: 1990. Pp. 733. \$85.*

NEXT year sees the 150th anniversary of the 'invention' of the dinosaurs by the eminent English anatomist and palaeontologist, Richard Owen. It was at the British Association meeting of 1841 held in Plymouth that Owen delivered an address

of the scientific validity of certain aspects of vertebrate palaeontological research. Although the last decade has witnessed a surge in the publication of academic papers on dinosaurs, the same period has seen an even greater production of popular books which usually concentrate on the visual impact of dinosaur restorations. Although some of these books are excellent and provide the reader with accurate and up-to-date information, too many have relied heavily upon speculation regarding dinosaur lifestyles. The publication of a book dealing with the dinosaurs in a rigorous scientific way is long overdue,

common-sense approach to speculation regarding the behaviour and physiology of dinosaurs. They do not dismiss the value of speculating on lifestyles of past life forms, but they do advise and emphasize caution. As a result there are no dogmatic claims; instead well balanced ideas are put forwards which are either backed by stable natural laws or are suggested by analogy with present-day land vertebrates.

Although there will inevitably be those who disagree with opinions expressed by the various authors (I admit that I would question some of the hypotheses put forward), the scientific merit of the book is to be highly commended, and all the hard data on dinosaurs are presented. This volume is a landmark in dinosaur research, and although I am sure that *The Dinosauria* would have met with the approval of Owen, he would surely have wondered why it took so long to produce a book of this calibre. I expect the volume to be the standard academic text on dinosaurs for a considerable length of time, but at the same time I hope we do not have to wait until the 300th celebration of Owen's major contribution to science before it is updated. □

Mary Evans

IMAGE
UNAVAILABLE
FOR COPYRIGHT
REASONS

Nicholas C. Fraser is at the Virginia Museum of Natural History, 1001 Douglas Avenue, Martinsville, Virginia 24112, USA.

Stegosaurus — leaving a trail of fact mixed with fantasy.

on British fossil reptiles. Included within this paper were descriptions of *Hylaeosaurus*, *Iguanodon* and *Megalosaurus*, for which Owen introduced the term Dinosauria. It is perhaps appropriate that the British Association will again convene at Plymouth next year to celebrate the events of 150 years ago.

Since 1841 there has been a wealth of literature published on the dinosaurs and, particularly in recent years, a plethora of new forms have been described. The early papers resulting from dinosaur research were restricted to the scholarly journals and consequently they were not readily accessible to the enquiring mind of young children. Over the years, however, the incredible size of some of these extinct reptilian giants coupled with advances in technology have meant that the public, and in particular children, have been led along on a trail of fact mixed with fantasy. One of the results of this tenuous union between science and the entertainment world has been a somewhat sceptical view

and as a result *The Dinosauria* will be an invaluable addition to many scientific libraries. With the emphasis placed upon cladistic analysis it should help to restore faith in vertebrate palaeontology as a respectable science. I highly recommend it to anyone with more than just a passing interest in palaeontology, and dinosaurs in particular.

The vast majority of the book describes dinosaur taxonomy, and each group is dealt with in an authoritative manner by experts in their fields. Indeed the editors have done a magnificent job in bringing together the world's leading authorities on dinosaurs and producing the volume in a relatively short period of time (the project was first conceived in 1984). The comprehensive indices and the listing of the global distribution of dinosaur finds are indispensable. But in the light of the myths which often surround dinosaurs, I believe the two chapters on dinosaur palaeobiology to be especially important. Both Coombs and Farlow adopt a

New in paperback

- *The Physiology of Tropical Crop Production* by G. R. Squire provides an introduction to the principles of crop physiology in the tropics emphasizing the importance of the physical environment. Published by CAB International, price £13.95, \$24.50.
- From Longman comes the second edition of the *Guidebook to Organic Synthesis* by R. K. Mackie, D. M. Smith and R. A. Aitken, which is aimed at all students of this subject. Price is £14.95.
- *Notes in Classical and Quantum Physics* covers the fundamental principles of mathematical physics. The book is written by Franco Battaglia and Thomas George and is published by Blackwell, price £19.50.
- For an overview of complex formation by macrocyclic ligand systems see *The Chemistry of Macrocyclic Ligand Complexes* by L. F. Lindoy. Published by Cambridge University Press, price £14.95, \$24.90 (also available in hardback, price £45, \$69.50).
- *South East Asian Development* edited by D. J. Dwyer should be of interest to students of geography and developmental studies as well as policy makers. Published by Longman, price £12.95.
- In *Grazing Management: Science into Practice*, John Hodgson provides an introduction to the ecology and management of grazing and grassland farming. Published by Longman, price £11.95.
- Also from Longmans comes *Plant Physiology, Biochemistry and Molecular Biology* edited by David Denis and David Turpin, which provides an overview of recent advances particularly in the understanding of plant metabolism. Price is £19. □