

BOOK REVIEWS

BRUSATTE, S. L. 2012. *Dinosaur Paleobiology*. xiv + 322 pp. Wiley-Blackwell. Price £85.00, €102.30, US\$140.00 (HB); £34.95, €42.10, US\$80.00 (PB). ISBN 9780470656570 (HB); 9780470656587 (PB). doi:10.1017/S0016756812000532

Books on the theme of dinosaurs tend (and often are intended) to interest a broad and somewhat eclectic audience; this one is no exception. As the cover informs us it is ‘... intended for students, researchers, and dinosaur enthusiasts’. A modern ‘competitor’ would be *The Evolution and Extinction of the Dinosaurs* by the Daves: Fastovsky & Weishampel (2005). Perhaps two other books worth mentioning are the intellectually lighter *Dinosaurs: A Concise Natural History* also by Fastovsky & Weishampel (2009) and *Dinosaurs: The Textbook* by Spencer Lucas (2005). The latter two are clearly aimed, in terms of presentation and format, as teaching guides for the US undergraduate ‘liberal-arts’ student population who have chosen to take a course on dinosaurs just ... because they can!

Dinosaur Paleobiology comes across as a generally authoritative, up-to-date and detailed overview of the what, how and why of dinosaurs from the perspective of an unashamed enthusiast. It also bears the hallmarks of the vigour and enthusiasm of youth, because the author (whose primary area of interest is carnivorous dinosaurs) is still in the throes of writing up his PhD while based at the American Museum of Natural History, New York.

Dinosaur Paleobiology commences with a chapter of introduction which explores pertinent issues concerned with precisely how they may be distinguished anatomically from ‘near-dinosaurs’ especially when considering their closest archosaurian relatives whose remains have been discovered in Middle–Late Triassic (~230–225 Ma) aged rocks. This is generally well done, certainly the text is clear, but there are a number of residual ambiguities in the cladograms that are used (particularly in the use and placement of skulls and the names of taxonomic groups, which seem to come and go with some abandon). At one level this all makes some sense to the expert (who can interpret as required) but would certainly not do so to the ‘dinosaur enthusiast’. In fact, this general theme of inconsistency (particularly in relation to the illustrations) is something that runs through the entire book, and I feel should really have been picked up editorially. The text also meanders between a clear dispassionate voice: ‘Seeley (1887) differentiated saurischians from ornithischians based on pelvic anatomy ...’) and, in the following sentence, we find a silly colloquialism ‘... as its descriptive moniker implies, ...’ (p. 22) shortly followed by such phrases as ‘plant guzzlers’ (and many more). Youthful exuberance perhaps, but

it grated very quickly on this reader. Nevertheless, the general framework of dinosaur origins and subsequent relationships in the context of the Earth and its changing geography is outlined understandably and with a refreshingly technical ‘edge’. Given the author’s interest in theropods it was slightly odd not to see some discussion of the remaining problems associated with bird origins from dinosaurs. The impression given is one of a ‘done deal’, which is perhaps understandable from Brusatte’s general perspective but a little disingenuous in a book of this type.

Subsequent chapters deal respectively with hard and soft tissues, and the phylogeny of dinosaurs (a chapter that is clearly and obviously biased in favour of consideration of the Theropoda at the expense of the other two major groups: Sauropodomorpha and Ornithischia). Again, in the latter chapter, the mismatch between illustrated examples and clade names on the cladograms is unfortunate. Equally, missing bits of anatomy in skeletal drawings (*Archaeopteryx* seems to have had its toes nipped off) should have been picked up at proof stage. These chapters are followed by ones on *Form; Locomotion and Posture; Feeding and Diet; Reproduction Growth and Physiology; Paleocology and Dwelling;* and finally *Macroevolution and Extinction*. All these chapters are interesting and fact-rich. There is also a very useful and up-to-date (as of 2011) bibliography and an index. A decision was also made to introduce a short section of colour illustrations as ‘centrefolds’ in the book. I found this to be largely a waste of space: several of the illustrations were totally unnecessary space-fillers. Indeed, I would rather that the publishers made more sustained effort to reproduce the in-text illustrations more clearly: some of these should have been in colour while others, particularly the half-tones, needed to be much clearer.

Having ‘nit-picked’ a little (there are a lot of small issues that could, and probably should, have been dealt with at an editorial level) this is, I must say, a good book. It is up-to-date, well-researched and the topics are perceptively argued or discussed, and I would unhesitatingly recommend it, as ‘start-up’ reading, to my own undergraduates and research students.

David Norman
University of Cambridge

References

- FASTOVSKY, D. E. & WEISHAMPEL, D. B. 2005. *The Evolution and Extinction of the Dinosaurs*, 2nd ed. Cambridge University Press, 500 pp.
FASTOVSKY, D. E. & WEISHAMPEL, D. B. 2009. *Dinosaurs: A Concise Natural History*. Cambridge University Press, 394 pp.
LUCAS, S. G. 2005. *Dinosaurs: The Textbook*. McGraw Hill, 304 pp.