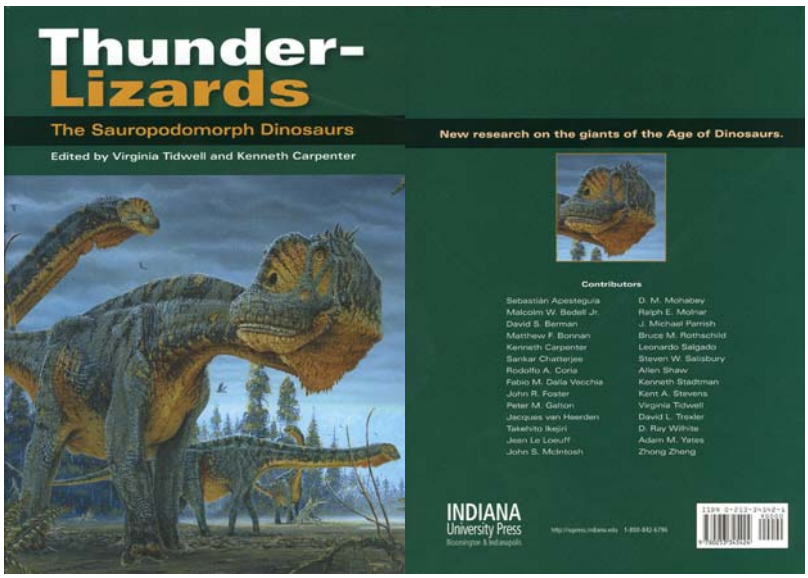
Tidwell, V. & K. Carpenter. Eds. 2005. Thunder–Lizards: The Sauropodomorph Dinosaurs. – Bloomington, Indiana University Press

Book review[1] by M. Wedel



'Thunder–Lizards: The Sauropodomorph Dinosaurs' is a collection of 20 papers on sauropods – and one on a prosauropod – sandwiched in a cloth binding and wrapped in an attractive and colourful dust jacket. You can rapidly gauge your level of interest in the book by asking yourself this question: how badly do I want to read 21 papers on sauropodomorphs?

The book pays lip service to its subtitle with a single chapter on a non–sauropod: the 'prosauropod' *Melanorosaurus*. (Some recent phylogenies have suggested that the traditionally recognized prosauropods include a few basal sauropodomorphs and many basal sauropods; in these phylogenies, *Melanorosaurus* is a sauropod after all.) The remaining 20 chapters exclusively cover neosauropods, the clade that includes diplodocids, camarasaurs, brachiosaurs, and titanosaurs.

The papers in the book are grouped under four broad themes. 'Sauropods Old and New' contains osteological descriptions of *Melanorosaurus*, *Barosaurus*, *Astrodon* (=*Pleurocoelus*), and *Ampelosaurus*. Jack McIntosh's paper on *Barosaurus* is the most substantial publication on that genus in more than 80 years, and I am sure that it will take its place alongside the classic monographs of Hatcher, Gilmore, and Janensch in the eyes of future workers. 'Sauropods Young to Old' collects four papers on ontogenetic variation in sauropods. This is a problem that most sauropod workers run into at some point, and the papers in this section are welcome additions to our growing knowledge of sauropod ontogeny. However, all of the papers are essentially case reports on a handful of taxa from the Morrison and Cedar Mountain Formations of the western U.S., which may limit their broader applicability. In the absence of a comprehensive treatise on sauropod ontogeny, they are still valuable contributions.

The third section of the book, 'Body Parts: Morphology and Biomechanics', has the lion's share of the papers in the book (nine, compared to four each in the other sections). Topics covered include neuroanatomy, neck posture, feeding habits, vertebral structure, and variation, function, and evolution of the appendicular skeletons of sauropods. Half of the papers in the section deal with sauropod hands and feet, and should provide a strong foundation for future studies of sauropod locomotion.

The final section, 'Global Record of Sauropods', has chapters on sauropod remains from Australia, India, Patagonia, and the Adriatic coastline. As in the other sections of the book, the papers are individually valuable but leave the reader wishing for the comprehensive coverage half–promised by the section title. Nevertheless, each of these papers figures a lot of interesting material, and together they add significant value to the volume as a potential reference. Fabio Dalla Vecchia's paper on Cretaceous sauropods from Adriatic carbonate platforms is especially well illustrated, and hopefully it will bring more attention to these important but infrequently cited finds.

As is often the case in edited volumes, the quality of the contained papers varies widely. Some are important and well executed, many are journeyman work, and a few are deeply flawed. The appearance of such

[1] Second version, updated 3 January 2007.

mixed bags of papers has become a depressingly common phenomenon in academic publishing. However, it is probably unfair to stigmatize this particular volume for being so uneven. It does not purport to cover any of its topics comprehensively or evenly. In fact, with no foreword, introduction, afterword, overview, or editorial communication of any kind, it does not purport to do anything. Even brief overviews of each topic that set the papers into some kind of context would greatly increase the usefulness of the book, especially for students or others new to the field.

The book is also filled with minor errors. References are occasionally listed incorrectly or not at all. In particular, there does not seem to have been a common standard for citing other papers in the same volume. Some figures appear to have compression artefacts (p. 470), or they are so overexposed that the boundaries of the bones are hard to make out (pp. 21 and 463), or they do not include abbreviations used in the caption (p. 400), or the scale bars have no units (p. 109) or there is no indication of scale at all (pp. 81, 96, 101, 106). Such carelessness extends down even to verb tenses and spelling. On page 80 Hatcher 'notes' something, but in the next sentence he 'concluded' something else. In the same chapter, *Sauroposeidon* is consistently misspelled as *Sauroposeiden*. What is most troubling is that these errors are concentrated in the four chapters authored wholly or partly by the book's editors (chapters 3, 6, 7, and 8). Combined with the utter lack of any overviews or editorial communications, this sloppiness raises the question of what effort went into the 'editing' of the book.

It would be disingenuous to not mention that another book on sauropods was published in 2005: 'The Sauropods: Evolution and Paleobiology', edited by Kristi Curry Rogers and Jeff Wilson, and published by the University of California Press.

It is pointless to ask which of the two is the better book, because they are so different in emphasis. The papers in 'The Sauropods' are mostly analytical. They have lots of charts and graphs and largely deal with aspects of sauropod biology that are amenable to quantification. The papers in 'Thunder–Lizards' are mostly descriptive. They have lots of photos of bones and largely deal with practical problems like identifying baby sauropods and distinguishing the scapulae of *Diplodocus* and *Apatosaurus* (to pick two from a large field of examples). Curiously, neither book covers the origin of sauropods except in passing, and neither covers the maximum size attained by sauropods at all. Since two of the most interesting questions about sauropods are 'Where did they come from?' and 'How big did they get?', these omissions are puzzling.

If you are interested in sauropods and you can afford to, get both books. Fortunately they are accessibly priced (just under $ 60 for 'Thunder–Lizards', and $ 65 for 'The Sauropods'), and even students can get both if they are willing to hold back some beer money or ask politely before the holidays.

The best thing I can say about 'Thunder–Lizards' is that it is useful. I had a copy with me when I visited the collections at BYU and the NHM last summer, and I used it every day. The book's editorial problems are annoying but not crippling. Although it does not systematically cover sauropods either taxonomically or anatomically, 'Thunder–Lizards' is still the densest concentration of sauropod morphology ever published. If you work on sauropods, there is no need to make space for 'Thunder–Lizards' on your bookshelf – you'll be using it too often to set it down for long.

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