

Nicolas Fraser and Douglas Henderson: *Dawn of the Dinosaurs. Life in the Triassic*

An Illustrated Time Machine

The age before the dinosaurs was called the Triassic. This breathtakingly illustrated book enables the reader to travel back in time. *Bon Voyage!*

It isn't obvious why the Triassic period is disregarded by laypeople as an uninteresting wallflower. Probably you can blame Steven Spielberg's film *Jurassic Park*, since the end of the Triassic marks the beginning of the age of the dinosaurs (high time that the boring Triassic period came to an end, in many people's opinion!). Those who prefer the Jurassic to the Triassic are missing out, though.

As the author of *Dawn of the Dinosaurs*, Nicolas Fraser, writes in his introduction: For others, [the Triassic period] is a world of truly fantastic creatures. Botanists might add: "and of course of stunning plants as well". After all, the first flowering plants evolved during this time. Fraser's book is not for botanists. He is an expert on extinct animals. And he adds: *The Triassic signalled the first steps toward the establishment of modern terrestrial ecosystems. It was a melting pot of the ancient and modern.*

Fraser, a geologist by trade, is the Curator of Vertebrate Paleontology and the Director of Research and Collections at the Virginia Museum of Natural History. He undoubtedly has a point. We are talking about a dramatic geological and biological

dramatic extinction event, erasing 96 percent of marine species and 70 percent of terrestrial vertebrate species.

As Fraser argues, *the Triassic can be viewed as a drama in four acts*, and it is therefore logical that he has subdivided his book into four chapters: *The curtain opens on a stage that has been decimated by the Permian extinctions. By Act Two, center stage is dominated by a terrestrial fauna of archosaurs and mammal-like reptiles. The climax of the play comes first with an explosion of bizarre life-forms toward the end of the Triassic, followed by a major extinction event. In the last act, we see the origin of practically all the major groups of modern tetrapods, plus, of course, the dinosaurs and pterosaurs.*

Weird landscapes, weird animals

That sounds weird at times and the animals represented in this book look really quite astonishing. On page 152, for example, a glaring red-headed *Postosuchus*, one of the most successful predators of its era, tries to ward off a competitor by baring its large, dagger-like teeth (see adjoining image). Another scary member of the archosaur family can be found on page 71:

a broad-headed *Erythrosuchus* with his unlucky victim and two small, cheeky *Euparkeria* reptiles, greedily sniffing at the carcass.

These pictures are painted by Douglas Henderson, an artist from Montana, USA. Henderson is a skilled expert on dinosaur and earth history as well as a traditional natural history illustrator of 20

years' standing. He has done a fine job. His illustrations are amazingly lively. The reader smells the swampy air of the everglades in an ancient Araucarioxylon forest and hears the rhythmic rumbling of pre-historic waves, striking against a late Triassic coast, while a lone sphenosuchid crocodile searches for prey. When viewing Hender-



son's marvellous landscapes, time becomes unimportant. The book contains nearly 300 large-scale pictures, in which

science and art collaborate to recreate ancient life on earth (as the publishers write on the book cover. They are right.).

The text, by Nicolas Fraser, is written in a more scientific way. He provides the reader with nearly 400 references (listed at the end of the book), but, fortunately, pulls off the balancing act between providing reliable information and a comprehensible story that is easily understood by non-academics. As appendices, the reader is supplied with extensive information on tetrapod anatomy, phylogenetic and taxonomic methods and more. Fraser is no dogmatist, a fact that makes his remarks likeable and authentic. He presents the actual state of palaeontological science and if there is more than one possibility, he is fair enough to mention every single theory. As an example, in chapter twelve (*A Catastrophic Finale?*) he speculates on the reasons for the world's great mass extinctions. Do these mass extinctions happen periodically, every 26 million years or so, as some authors think? Were they caused by a catastrophe, perhaps by a meteor crashing into earth? Did most of earth's species disappear as the result of volcanic eruptions, or, as recently proposed, of flood basalts?

Fraser doesn't give us an answer (because there isn't any reliable answer at the moment), but one can assume that the curator from Virginia favours the "deep impact" theory. Why? Quite simply: Doug Henderson's accompanying illustrations show a huge killer asteroid striking the earth in an immense fireball. Beautiful and terrifying – like many other pictures in this impressive book. WEANÉE KIMBLEWOOD

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"Shove off, that's my snack!". A Triassic *Postosuchus*, defending its prey from a competitor.

cal era lasting more than 50 million years, from 251 to 200 million years ago and flanked by two major extinction events, the famous "Great Dying" at its beginning and the Triassic-Jurassic extinction at its end. The latter opened an ecological niche allowing the dinosaurs to adopt their dominant role, the former was earth's most