

Book review • Knygos recenzija

George Poinar Jr. and Roberta Poinar.

What Bugged the Dinosaurs? Insects, Disease, and Death in the Cretaceous. Princeton, 2007. 296 p. 61 colour illustrations.
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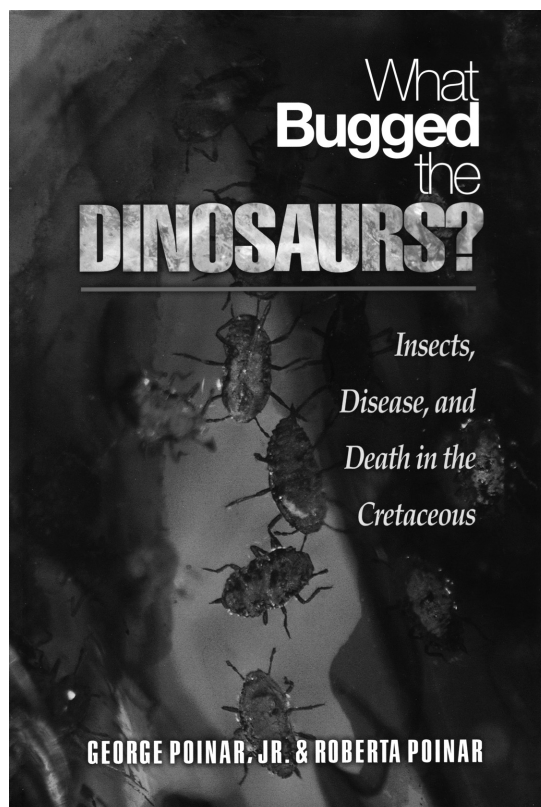
Usually we imagine dinosaurs as they are in the museums – separately from the environment that surrounded them. We think of them as of idealized majestic rulers of the Earth during the Mesozoic, but we forget about the small creatures that were buzzing around them.

Dinosaurs in the book by George Poinar Jr. and Roberta Poinar are revitalized in vivid colours, in real habitats with many hazards awaiting for them at each corner, despite their enormous size or menacing appearance.

With the use of fossil material, first of all from Lebanese, Burmese and Canadian ambers which represent the beginning, middle and end of the Cretaceous, the authors reconstruct the environment of the Cretaceous, drawing a picture as complete as possible, where much attention is devoted to the smallest but often very important components of the environment – single-celled organisms, bacteria, viruses. Here are represented their ties with all the surrounding environment, not only with dinosaurs which are like the central axis of the book, but also with plants and invertebrates in which, like in recent faunas, one of the most important and dominant links is insects. Insects were not only competing with dinosaurs for the food sources, but used dinosaurs themselves as a source of proteins for themselves and their offspring. Together, insects were transmitting many pathogenic organisms, they were linked to many serious diseases which probably were if not the only, but one of the most important scores leading to the demise of dinosaurs at the Cretaceous-Tertiary boundary some 65.5 mya ago.

In strictly scientific publications, only exact facts are discussed and no wider excursions are allowed, but in this book the authors could afford farther reaching conclusions constructing very likely scenarios of the Cretaceous. Because fossil material in many cases is very scarce, our window on the past is very dimmed, but even a few brighter beams of light could bring us a lot of new information and make the overall picture much sharper, giving more background for new discussions and searches.

The book itself is composed of two parts. The first one deals with the overall ecological and geological conditions during the Cretaceous, and the second is concerned with separate groups of insects and other invertebrates that influenced the prosperity and demise of Cretaceous reptiles. The authors show that not only the impact of an extraterrestrial body, not only the catastrophic geological and climatic events at the C/T boundary were the reason for the extinction of dinosaurs.



It seems very probable that armies of smallest crawling and flying creatures were the main force that led these huge reptiles to the extinction. The book shows that thinking about the grandiose events that changed the face of the earth some 65 mya ago is not always right; we need to change our minds and consider first the smallest but very numerous organisms in nature. Not only patient scientific research and interesting findings led authors to these far reaching conclusions, but also a lot of luck when finding extremely rare specimens in very interesting situations like snapshots of that ancient world fixed in a drop of liquid resin.

I would recommend this book to everyone who is interested in the geological history of our planet. Here, he or she could find a very detailed analysis of geological and biological conditions of the Cretaceous, the time when the Earth was ruled by dinosaurs. The book is written in an easy and understandable language.

As an entomologist, I have found very valuable appendices at the end of the book, especially the first one (A) in which a list of all known Cretaceous insect families is given, showing also which group was described from Lebanese, Burmese or Canadian amber.

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