Book review

Review of "What bugged the dinosaurs? Insects, Disease and Death in the Cretaceous" by Poinar G. Jr. and Poinar R

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Book details
Poinar G Jr, Poinar R:
What bugged the dinosaurs?

Review
Have you ever wondered whatever happened to the dinosaurs? George and Roberta Poinar have put forward some evidence that maybe it was not just cataclysmic events, such as meteorites falling on the earth. They surmise that perhaps insects transmitted diseases that contributed to the extinction of the dinosaurs. By studying the arthropods trapped in amber during the Cretaceous (65.5 – 145.5 million years ago) period, they have revealed some extraordinary micro-organisms concomitant with the ensnared invertebrates.

The period is well described in the opening chapters, showing that fossil evidence and especially amber tells us a great deal about the animal and plant kingdoms during those millions of years. Some chapters start with a speculative scene, painting a picture of life in the Cretaceous, the dinosaurs, the plants they feed from and the insects that breed around them, while others discuss in detail the known scientific facts. Herbivory, both by the dinosaurs and the insects is described in detail and the possibility that insects introduced plant viruses and fungi into the food supply, which may have led to the depletion in resources for the large animals. The dinosaurs did benefit from insects, like the dung beetles that removed the vast waste voided by 55–100 ton dinosaurs, and arthropods were part of the diet of the omnivores.

The authors describe how they believe that arthropods were able to acquire blood meals from the dinosaurs in antiquity. By studying the mouth parts of the insects trapped in amber, they have shown that regardless of the outer skin, whether cold or warm blooded, the micro-predators had found a way to obtain the necessary food for survival. Chapters 12 – 18 describe those blood-sucking arthropods that were extant during the Cretaceous, including, important Nematocera and Tabanids, fleas, lice, ticks and mites. For each group the method of haematophagy is discussed and which organisms could have been transmitted with a few examples of ancient parasites observed in amber. There are separate chapters on the worms, cretaceous diseases, and another on the evolution of pathogens, (erroneously Rickettsia are given as the cause of human plague). The numerous color plates illustrate the diversity of arthropods in the Cretaceous, while the original line drawings embellish the theory. This is an assiduously written book for entomologists and parasitologists who would like to learn more on the time-encapsulated data from the Cretaceous, and perhaps stimulate the search for more "paleoparasites".

Competing interests
The author(s) declare that they have no competing interests.
Have you ever wondered whatever happened to the dinosaurs? George and Roberta Poinar have put forward some evidence that maybe it was not just cataclysmic events, such as meteorites falling on the earth. They surmise that perhaps insects transmitted diseases that contributed to the extinction of the dinosaurs. By studying the arthropods trapped in amber during the Cretaceous (65.5 – 145.5 million years ago) period, they have revealed some extraordinary micro-organisms concomitant with the ensnared invertebrates. Insects, Disease, and Death in the Cretaceous on Amazon.com ✓ FREE SHIPPING on qualified orders. What Bugged the Dinosaurs? draws on the Poinars' many studies of fossils in amber to show how dinosaurs interacted with their more abundant invertebrate contemporaries. Reconstructing ancient ecosystems is an ambitious undertaking. Integrative approaches such as those in What Bugged the Dinosaurs? help us build up more sophisticated visions of the past.---Karen Chin, Nature. "The reader...will come away from this volume fully accepting of its premise. We will certainly add this thesis to our own compendium because of the evidence presented by the Poinars. What Bugged the Dinosaurs?: Insects, Disease, and Death in the Cretaceous. By George Poinar Jr. and Roberta Poinar. The Poinars bring the age of the dinosaurs marvelously to life. Analyzing exotic insects fossilized in Cretaceous amber at three major deposits in Lebanon, Burma, and Canada, they reconstruct the complex ecology of a hostile prehistoric world inhabited by voracious swarms of insects. Insects, Disease, and Death in the Cretaceous. April 17, 2008. This is the latest of several books on amber by George and Roberta Poinar and specifically looks at Cretaceous ambers (Lebanese, Burmese and Canadian) and what the inclusions can reveal about past ecology, particularly diseases. It is well illustrated (16 colour plates of amber specimens and 38 black and white figures, including line drawing reconstructions) and there are 23 chapters and three appendices that can be broadly broken down into three main areas: the feeding habits and ecology of insects, dinosaurs and plants; the vectors of disease; and climaxing with diseases contributing to the What Bugged the Dinosaurs?: Insects, Disease, and Death in the Cretaceous - Kindle edition by George Poinar, Jr. & Roberta Poinar. Download it once and read it on your Kindle device, PC, phones or tablets. Use features like bookmarks, note taking and highlighting while reading What Bugged the Dinosaurs?: Insects, Disease, and Death in the Cretaceous. Survivors: The Animals and Plants that Time has Left Behind (Text Only). Survivors: The Animals and Plants that Time has Left Behind (Text Only) - Kindle edition by Fortey, Richard.
What Bugged the Dinosaurs?: Insects, Disease, and Death in the Cretaceous. By George Poinar Jr. and Roberta Poinar. The Poinars bring the age of the dinosaurs marvelously to life. Analyzing exotic insects fossilized in Cretaceous amber at three major deposits in Lebanon, Burma, and Canada, they reconstruct the complex ecology of a hostile prehistoric world inhabited by voracious swarms of insects. In Insects, Disease and Poinar G Jr, Poinar R: What bugged the dinosaurs? In Insects, Disease and Death in the Cretaceous. Review of "What bugged the dinosaurs? Insects, Disease and Death in the Cretaceous" by Poinar G. Jr. and Poinar R. Parasites & Vectors, Mar 2008. In Insects, Disease and Death in the Cretaceous" by Poinar G. Jr. and Poinar R, Parasites & Vectors, 2008, pp. 6, 1. Have you ever wondered whatever happened to the dinosaurs? George and Roberta Poinar have put forward some evidence that maybe it was not just cataclysmic events, such as meteorites falling on the earth. They surmise that perhaps insects transmitted diseases that contributed to the extinction of the dinosaurs. By studying the arthropods trapped in amber during the Cretaceous (65.5 â€“ 145.5 million years ago) period, they have revealed some extraordinary micro-organisms concomitant with the ensnared invertebrates. Insects, Disease, and Death in the Cretaceous. GEORGE POINAR. The Poinars bring the age of the dinosaurs marvelously to life. Analyzing exotic insects fossilized in Cretaceous amber at three major deposits in Lebanon, Burma, and Canada, they reconstruct the complex ecology of a hostile prehistoric world inhabited by voracious swarms of insects. The Poinars draw upon tantalizing new evidence from their amazing discoveries of disease-producing vertebrate pathogens in Cretaceous blood-sucking flies, as well as intestinal worms and protozoa found in fossilized dinosaur excrement, to provide a unique view of how insects infected with malaria, leishmania, and