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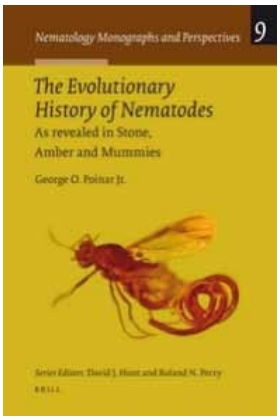

The Evolutionary History of Nematodes as Revealed in Stone, Amber and Mummies (Nematology Monographs and Perspectives, Volume 9), by George O. Poinar, Jr., 2011, Brill, Leiden and Boston, 429 p., ISBN: 9789004175211, paper, USD197.00

George Poinar has produced a true biological-paleontological masterpiece! The author is eminently qualified to deal with the entire phylum Nematoda, by previous training and experience with fossils as well as living taxa, from the many varied environments that nematodes inhabit today. Roundworms occur in just about as many or more environments than any other major invertebrate taxon and are worthy of serious consideration by both paleontologists and biologists. The enigmatic, completely soft-bodied phylum Nematoda, whose relations to other phyla are still a subject of debate, now has a reasonable fossil record, thanks to the author of the present work. Poinar reviews all previously known fossil nematodes and describes 31 new fossil genera and 66 new fossil species from around the globe. The book will be of great value to teachers as an example of what can be learned about the fossil record of a soft-bodied group of invertebrates, and perhaps even more importantly, it will introduce students to the many fascinating evolutionary questions posed by nematode parasites fossilized along with their hosts.

The beautiful illustrations (color and black and white) of both living and fossil examples of nematode parasites, often together with their hosts, provide teachers with a good excuse to explore the biological and evolutionary questions posed by invertebrates with a parasitic mode of life. The present work shows that the Nematoda are just about the only group of internal parasites with a reasonable fossil record. For the specialist, the exhaustive tabulation and description of all known fossils from the Paleozoic to the Pleistocene and subrecent, including many new taxa provided here by the author, provide an unrivaled summary of what is currently known about this little studied but obviously very important group. For the molecular biologist concerned with calibrating molecular clocks regarding various nematode lineages, the book provides invaluable information about the minimum time of a taxon's appearance in the fossil record. The concept of collective group genera is discussed and will be of interest to all concerned with the parallel concept of form genera.

The book is divided into 13 sections, plus an important Appendix with descriptions of all fossil taxa. The sections are: Introduction, Types of Preservation, Systematic Treatment of Fossil Nematodes, Nematodes from the Precambrian, Nematodes from the Palaeozoic, Nematodes from the Mesozoic, Nematodes from the Tertiary, Nematodes from Pleistocene and Holocene Deposits, Human Parasites from Pleistocene and Holocene Remains, Dubious Nematode Fossils, Nematode Artifacts, Nematode Time Lines, and Functional Morphology and Behaviour of Fossil Nematodes. The Evolutionary History of Nematodes will be of interest, not only to nematologists and paleontologists, but also to parasitologists, invertebrate pathologists, and ecologists.

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