

## Explorers of Deep Time: Paleontologists and the History of Life on Earth

**Roy Plotnick**

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"Paleontology is one of the most familiar and accessible of all sciences," Roy Plotnick proclaims. Why? Dinosaurs, of course. Drawn in as children, a lucky few get the chance to make a career out of serendipitous fossil discoveries. From field conditions to demographics, *Explorers of Deep Time* is a realistic survey of what it's like to work as a paleontologist today.

A combination of geology and biology, paleontology asks three main questions about the history of life: Does evolution have a direction? What is the motor of change? And is the change gradual or punctuated? Field work is essential to paleontology, supplemented in the laboratory by microscopy and 3D imaging; knowledge about historical climatic changes and extinctions can help guide preparations for the future.

With his students, Plotnick explores Illinois's Mazon Creek and Thornton Quarry on field trips. But even while sitting in his Chicago office, he can imagine himself back 16,000 years to the time of the mastodons, and then to 300 million years ago, when Illinois would have been a fern forest populated by giant dragonflies. Throughout the book, black-and-white images visualize such reconstructions and illustrate key tools and principles.

Plotnick gives a clear sense of the physical constraints of his career. Hazards such as dangerous terrain and insect bites abound, while existential threats take the form of skepticism about evolution and climate change and a loss of funding—and diminishing expertise, as an older generation of scholars passes on.

Conscious of his privilege, Plotnick acknowledges that working in the discipline is more difficult for women, who may still face harassment and have to make difficult decisions about childbearing. A full chapter on demographics is also sensitive to the situations of people in minority populations.

*Explorers of Deep Time* is an enjoyable and practical introduction to the work of paleontology.

REBECCA FOSTER (January / February 2022)

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