could take for a new graduate student in evolutionary biology would be to put Stearns's book in her or his hands and say, "Read this."

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Windows in Time

Life in Amber. GEORGE O. POINAR, JR. Stanford University Press, Stanford, CA, 1992. xvi, 350 pp., illus., + plates. $55.

Dinosaurs capture the popular imagination, but the romance of amber is rapidly gaining ground. Amber is fossilized tree resin, hardened and rendered inert over millions of years of polymerization. Hundreds of deposits of various botanical origins occur around the world, varying in age from the Carboniferous to the Recent. Insects and other small organisms became mired in the sticky ancient resin before it hardened, as did some wafting plant debris. The result: fossils in exquisite three-dimensional detail, sometimes with ultrastructural cellular detail seen in living tissues. The recent publication of DNA sequences from two groups of insects in 25- to 30-million-year-old amber shows that it may provide the most consistent preservation of fossilized DNA. Organisms aren't the only "fossils" in amber: paleoclimatologists debate just how ancient the air in amber bubbles really is.

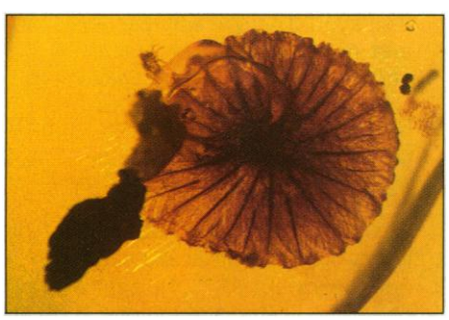
"A feather in Dominican amber." [From *Life in Amber*; Smithsonian Institution collection]

The paleobiology of such a unique kind of fossil is thus rich and diverse, and *Life in Amber* attempts a synthesis.

The bulk of the book is devoted to brief family-by-family treatments of fungal, plant, and animal inclusions, such as the myriad insects in the Tertiary ambers, particularly those from the Dominican Republic and Mexico. The whole book, in fact, is very similar in scope and format to Sven Larsson's 1978 book *Baltic Amber: A Palaeobiological Study* (Scandinavian Science Press, Klampenborg, Denmark). Larsson was able to draw upon a century of European research on Baltic amber; research on the New World ambers, by contrast, is in its adolescence. Production of a book like this owes a great deal to several individuals in particular. One is Jean Langenheim, whose classic 1969 *Science* article on the botanical origins (as determined with the aid of infrared spectroscopy), localities, and ages of the world amber deposits will always be an invaluable reference. The other is Dieter Schlee, curator of amber at the Staatliches Museum für Naturkunde in Stuttgart. Schlee has globe-trotted in pursuit of breathtaking specimens of fossiliferous and other ambers from around the world. It is a pity that no photographs of fossils from that wondrous collection or other major ones are used to grace the pages, which mostly show just specimens from Poinar's personal collection.

Another unique aspect of "amberization" is the examples of parasites and inquilines preserved with their hosts. A chapter is lavished upon this favorite subject of Poinar's, who is himself a parasitologist. Several specimens in various collections show my favorite such example: a phoretic pseudoscorpion with one claw latched onto the hind end of a wood-boring beetle, hitching a fateful ride.

Arthropods (by far the most numerous and diverse inclusions in ambers) are the first great radiation of terrestrial animals; they originated in the Devonian, and some modern orders appeared in the Permian. The faunas in Tertiary ambers are essentially modern in terms of genera and families, so they reveal little about higher relationships. Yet, evolutionarily, there are some surprises. Between 1940 and 1970 Kjell Ander and Willi Hennig (the renowned insect systematist) found that numerous insect fossils in Baltic amber have their closest living relatives at the southern end of the earth. Within the Dominican amber there are also some startling extinctions, many as yet unpublished. Little is said about this in the concluding section, where in fact Poinar goes awry on biogeography. He confuses the presence of a group in Dominican amber as evidence of Caribbean island vicariance. The age of such a fossil merely establishes a possibility that a certain tectonic scenario influenced modern distributions.



"A mushroom, *Coprinites dominicana* Poinar & Singer, in Dominican amber." [From *Life in Amber*; Poinar collection]

The book is more review than synthesis, and, errors of interpretation and omission aside, it will appeal to any paleontologist and insect biologist. It is to be hoped that it will inspire further American interest in amber paleobiology, which has traditionally been the provence of Europeans.

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Environmental Philosophies

Toward Unity Among Environmentalists. BRYAN G. NORTON. Oxford University Press, New York, 1991. xvi, 287 pp. $29.95.

After Earth Day. Continuing the Conservation Effort. MAX OELSCHLAGER, Ed. University of North Texas Press, Denton, 1992 (distributor, Texas A&M University Press, College Station). xxi, 241 pp. $24.50; paper, $15.95. Philosophy and Ecology.

The environmental movement, so some have observed, is a notably pragmatic affair. While those whose main task is one of dealing with ideas have often found environmental matters to be grist for their mill, they have remained apart from the main scene of action and often appear to be somewhat irrelevant to it. There are few journals of environmental theory, in sharp contrast, for example, to the many publications on economic theory that socialists were long known for. Instead, the environmentalist journals are journals of action, working out the details of concrete policies and exhorting their followers not so much to think rightly as to act rightly.

Amid this context, the main theory has