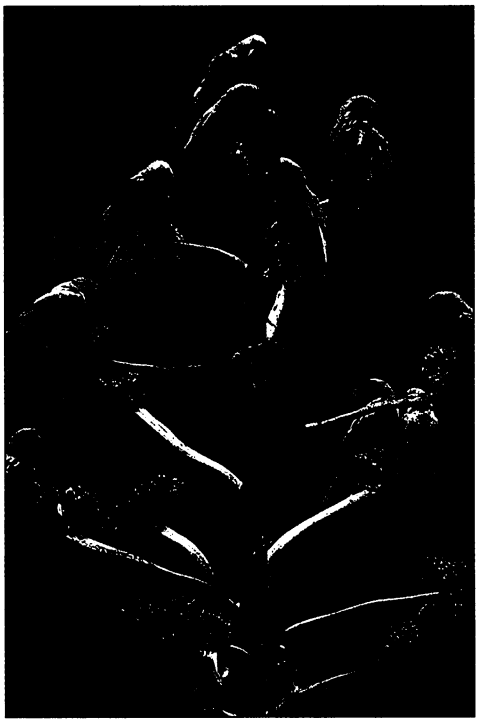
Highlighting the geometries of structures and fabrics, Ramsay and Lisle argue for thorough and careful characterization of naturally deformed rock. They emphasize geometric and kinematic analogies between rock structures and the results of elastic or viscous boundary value problems, and they are conservative in the inferences they draw from their comparisons of continuum mechanics models and natural structures. Their inferences are, in my view, robust and highly general, and their approach is worthy of emulation.

Applications of Continuum Mechanics in Structural Geology offers an excellent conclusion to the series. Like its predecessors, it is thoughtfully conceived and carefully completed. As Ramsay and Lisle state repeatedly, for the foreseeable future structural geology will require thorough characterizations of natural structures along with effective analyses of the stress, displacement, or velocity fields inferred to be responsible for them. Because this volume exemplifies successful ways to accomplish both tasks, it is a fine introduction to modern structural geology.



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BROWSINGS

The Living Wild. *Art Wolfe.* Wildlands, Seattle, WA, 2000. 256 pp. $65, C$100. ISBN 0-9675918-0-5.

To promote the preservation of biodiversity, Wolfe presents spectacular photographs of charismatic animals in their natural surroundings—from islands and oceans to mountains and the polar regions to the tropics. He includes brief accounts of the wildlife, their future prospects, and his experiences in recording them on film. Accompanying essays by William Conway, Richard Dawkins, Jane Goodall, John Sawhill, and George Schaller discuss the current status and future prospects of wildlife conservation. These maroon-fronted parrots (*Rhynchopsitta terrisi*) inhabit pine forests of Mexico's Sierra Madre Oriental, where they are threatened by habitat destruction from logging, agriculture, and grazing.

BOOKS: ENVIRONMENT

Why We Must Worry

Peter Raven

One constantly wonders why books and papers about the global environment and our effects on it are so widely ignored when the arguments are ostensibly so convincing. Perhaps their often alarmist tone, which frequently engenders a feeling of powerlessness, contributes to the problem. Or perhaps, in some instances, a wooden writing style dissuades readers. If such factors are to blame, *The World According to Pimm* should offer a certain cure. Not so much an original treatment of the field as a highly engaging, beautifully presented one, this is an outstanding effort that surveys the relevant facts extremely well.

With passion and grace, Stuart Pimm (a professor of conservation biology at Columbia University) presents a view of the world that is both personal and universal. His informative account draws on his wide travels and extensive scientific studies of the environment, which have taken him to each of the continents. Pimm uses his rich background in evaluating the status of Hawaii's rarest birds as a jumping-off point for considering the fate of the world as whole, its myriad species, and its extraordinary beauty. Offering readers a rare combination of vivid imagery and close attention to detail, Pimm presents our relation to our planet—its forests, drylands, prairies, and oceans—with a precision and clarity that have seldom been approached in other works on this topic. Writing so as to be understood by any intelligent reader, he skillfully reviews the current condition and likely future of our impacts on the land and in the oceans. The book is exceptionally well documented, and it presents the facts of environmental degradation as clearly and forcibly as any work that I have encountered.

The World According to Pimm
A Scientist Audits the Earth
by Stuart L. Pimm
McGraw Hill, New York, 2001. 303 pp. $24.95. ISBN 0-07-137490-6.

The impact of 6.1 billion humans on our planet is staggering and affects every aspect of our lives, whether we realize it or not. Pimm emphasizes the accelerating loss of biological diversity. A few centuries ago, about 10 of the estimated 10 million species on Earth disappeared each year; now perhaps 1000 are lost annually, and the rate is rapidly climbing toward 10,000 per year as human impacts intensify everywhere. In addition, species are not interchangeable. The product of at least 3.8 billion years of evolution, each has its own importance, its own meaning in the function of ecosystems, and its own potential for us. Because extinction is irreversible, it has permanent effects on Earth and on human prospects.

Humans currently consume more than 40 percent of the world's annual biological productivity, and we use and borrow more than half of its accessible global freshwater runoff. Our situation is clearly not sustainable. We are living off the principal, not the interest, and we face the same consequences that such a strategy would have if it were applied to a personal bank account.

In his epilogue, Pimm does an especially good job of highlighting the lack of attention economists and politicians pay the environment, and the grave dangers implicit in such negligence. Earth has only so much to yield, and only at our peril can we assume it can continue to respond to our needs. It is important that we learn about Earth and its biota much more efficiently and rapidly than we currently do, because we need such knowledge to manage our home sustainably. We must address these problems at a global scale, "with at least enough precision to detect a decade of change." In an outstanding imaginary dialogue with an economist, an environmentalist, and someone governed by social and religious values, Pimm presents lively and convincing arguments about what we can do and why we should do it. *The World According to Pimm* is a remarkable testament to the ideas presented in its closing sentences: "Our world is a spectacularly beautiful, interesting, and diverse place. Only by attending to its problems will it remain so."

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