

Paperback Re-issue

Life occurs, as far as we know, only as part of the earthly biosphere. Yet the earth's biotic resources are experiencing a spreading crisis that is leading not only to the most rapid loss of species in the last 65 million years, but also causing abrupt changes in the structure and function of natural communities. This disturbance, unfortunately, is the result of human carelessness in the name of advancing civilization. As our technologies and societies continue to improve and grow, we remove ourselves more and more from our natural habitat; as a consequence, we destroy countless numbers of species of every style and complexity. Natural communities are impoverished and ultimately irreversibly lost through the cumulative effects of chronic encroachment, and a disastrous global warming has begun. These intensive human abuses have, in turn, threatened the stability of the human habitat. In short, we are destroying our own surroundings.

To identify and begin rectifying this dangerous situation, a group of outstanding environmental scientists has compiled a collection of case studies that illustrate the changes being wrought on the biosphere by the human presence. The topics discussed are broad-ranging and pertinent. The first part of the book frames the issue with a series of chapters on global change and patterns of impoverishment, with particular emphasis on the effects of air pollution. Successive sections explore the nature of chronic disturbances in a variety of ecosystems including forests, woodlands, grasslands, tundra, and aquatic systems. The book concludes with two chapters that offer possible solutions to this critical situation. By defining the major types of changes in the structure and function of natural communities exposed to chronic disturbance, the authors hope to instill concern and, ultimately, a change of policy.

The Earth in Transition will be of interest to researchers and students of ecological systems and environmental change. It can also be read with profit by those studying geography, human affairs, and economics.

The cover illustration shows the effects of ionizing radiation on a forested area at Brookhaven, New York. This resulted in the systematic impoverishment of the forest, including total destruction of life in the central zone, where exposures were in excess of 1,000 R/day.

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