

Volume preface

When I began writing this book, the intention was that it was going to be a textbook based in many ways on my earlier *Soil and Vegetation Systems* book. Here, I had produced a number of diagrams which showed functional linkages in ecosystems; the simple proposition was to write about environmental change in terms of how changed conditions would alter the nature of these functional linkages. This is still a viable proposition in that the diagrams could be used to follow through the consequences of changes in, say, temperature and rainfall leading to changes in weathering, nutrient inputs and leaching. However, it soon became apparent that, firstly, this represented a particular view of ecosystems which could be, and was, contested. Thinking about responses to environmental changes led me to writings which challenged the nature and validity of our ecosystem models. I sympathized with a student who said that she used to know what to think at "A" level but now wasn't sure – which after all is simply the beginning of thinking in new ways. Secondly, it became clear that thinking about environmental change also challenged our attitudes, values and assumptions about nature. Cultural constructs of nature became as an important issue as the validity of the models and so man–nature relationships became a central theme.

Views of nature have changed from a mechanistic, compartmentalized complexity, which nonetheless might be controlled, to involve more fluid, open concepts of self-organization and mutual reactivity, with an attendant less predictable response. Enabling nature to respond to changed conditions became a key concept. In parallel with this, social themes emerged about access to ecosystem products and societal goals where the tempting "win-win" scenario of simultaneously enabling nature and society emerged. What follows therefore is not so much a textbook but a series of essays which aim to explore the consequences of environmental change for ecosystem science and also for our cultural attitudes and values.

Even though, as an undergraduate at Bristol I read Geography with Geology and Sociology (and I have to admit here that I only gained a bare pass in the latter), it makes me somewhat nervous in venturing into sociological fields. As I am writing I can hear both ecosystem scientists and social scientists tut-tutting at what I am sure they will find an inadequate representation of each of their fields. It has been a bit of a struggle, though also enjoyable, challenging and stimulating, for me to move from limestone geomorphology through soil

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and vegetation systems and environmental issues to then encompass both social and psychological issues. However, I am convinced about the need for an approach which encompasses physical science on the one hand and the social science approaches which involve examining concepts, attitudes and values on the other. Believing it to be important to do this, I thought "why not have a go myself?" This still seems reasonable, spurred on by the dual thoughts that I was confident that what I was writing was good and that I would succeed, and simultaneously the gnawing thought that it might not be and that I wouldn't. Both sets of thoughts are the necessary fulcrum of creativity (despite the fact that the latter sense of inadequacy has led to huge bills from Heffers Bookshop). At the very least it meant that I no longer kept all my "science" books in the Department and the literature, "cultural" and philosophical books at home, but brought them all together in college. As I write, Henry Williamson's *Lone Swallows*, Bill Bryson's *Walk in the Woods*, Thoreau's writings, Aldous Huxley's *The Human Situation*, Dunbar's *Trouble with Science*, Steinbeck's *Grapes of Wrath*, Bell *et al.*'s *Environmental Psychology*, Russell's *Soil Conditions and Plant Growth*, Bouwman's *Soils and the Greenhouse Effect*, Richards *et al.*'s *Geomorphology and Soils*, Retallack's *Soils of the Past* and Golley's *Ecosystem Concept in Ecology* all lie together in a confused but hugely enjoyable and stimulating jumble of sources on my desk. The unattributed poems in the text are, I am afraid, mine.

In undertaking this endeavour I might also record that I am no fan of C.P. Snow's famous two cultures, a concept which I believe presents a false dichotomy – both science and the arts are about deriving stories which make sense of what we experience. I am also encouraged by the number of writings which also tackle this necessary but challenging approach. For example, texts such as Berkes and Folke on building ecological and social resilience, Atkins *et al.*, on people, land and time, Berkes on traditional knowledge and resource management, Ghimire and Pimbert on social change and conservation, Perlman and Adelson on exploring values in conservation, to mention a few, all sit squarely in the key areas of the arena of the debates about the crucial questions: *How should we view nature? What do we do for the best – how should we act – what are we trying to achieve and what should we be guided by?*

In order to answer these questions we can no longer rely on answers from the sciences alone or, alternatively, say, on responses from social surveys on attitudes – both are important, and the dialogue between the two is crucial. I don't pretend to have all, or necessarily any, of the answers but the hope is to assist in the evolution of a next generation of students which is better equipped to face the challenges. Thus I have attempted to rehearse some of the issues involved in the belief that geographers, with their physical and human traditions, should be central to the theme of the future of man–nature relationships. Many authors discuss whether man is part of nature or separate from it – I see this as a rather pointless and sterile discussion. The real thing to say is that we are *involved* with nature, both conceptually and physically, even those people who live in cities. It therefore seems to me to be appropriate that we should discuss our involvement with nature and the nature of that involvement, which is what I have attempted