

ENVIRONMENT

Conserving Living Natural Resources in the Context of a Changing World

By Bertie Josephson Weddell. 2002. Cambridge University Press, 40 West 20th Street, New York, New York 10011-4221 USA. 426 pages. £70 Cloth, £24.95 Paper.

Conserving Living Natural Resources in the context of a changing world is an excellent information source for anyone interested in natural resource management; in the evolution of attitudes, mainly North American, and knowledge regarding natural resources; in the development, over time, of the relationship between human beings and the natural environment – or any combination of the above.

Weddell writes in the preface that she designed the book as an introduction to natural resource conservation for students, and as a review for managers. As such it covers three different approaches to natural resource management – utilitarian, preservationist, and sustainable-ecosystem – in more or less chronological order.

For each approach, Weddell traces the historical conditions that set the stage for that type of resource management and discusses its strengths and weaknesses. She also explains the approach's central concepts, both philosophical and scientific, and describes its principal techniques. Weddell makes sure to emphasize why it is important to learn about the different approaches, even if certain aspects are now slightly outmoded. She makes four excellent points: (1) that there is no single correct way to manage natural resources; (2) that our generation has not necessarily discovered "the truth"; (3) that it is important to understand how we got to where we are today so that we can learn from our mistakes; and (4) that some of the approaches discussed in the book, even if they are out of date, are still widely applied today.

Part I of the book, "Management to maximize production of featured species – a utilitarian approach to conservation", discusses the commodification of resources, the impacts (habitat alteration, species declines, extinctions) of the commodification, and the responses (regulation, protection) to those impacts. It also traces the development of the discipline of natural resource management, describes the central concepts of the utilitarian approach (population growth, interactions between populations, habitats), and explains its main techniques (harvest management, habitat management, management to minimize conflicts between pest species and people).

In Part II, "Protection and restoration of populations and habitats – a preservationist approach to conservation", Weddell describes economic and demographic

changes after World War II, and discusses the increasing awareness of ecological problems during that period (invasive species, toxic substances, ongoing extinctions). She also covers the rise of preservationist management, its central concepts (causes of extinction, speciation, classification), and the principal techniques relating to species protection and restoration, and to ecosystem protection and restoration.

In Part III, "Management to maintain processes and structures – a sustainable-ecosystem approach to conservation", Weddell provides an overview of more recent pressures to move beyond the protection of species and reserves, including practical, scientific, political, ethical and philosophical considerations. She also traces the rise of sustainable-ecosystem management, describes its central concepts (equilibrium theories, the flux of nature), and discusses two main techniques: conserving natural processes and contexts, and including people in the conservation process.

The book covers a lot of ground, much of it fairly complex, and it isn't short. But Weddell's clear and simple writing style makes the content is easy to read and understand. And she includes lots of helpful diagrams and dynamic examples. It all makes for pleasant and highly informative reading – particularly the historical background sections, which provide a valuable and relevant context for understanding the discipline of natural resource management.

Weddell closes the book by emphasizing that each of the natural resource management approaches – utilitarian, preservationist and sustainable-ecosystem – has much to teach us about solving contemporary problems. She stresses that each approach has advantages and disadvantages that make it appropriate to particular circumstances, and that it is possible to blend elements from all three approaches.

She also points out, and I quote: "I believe that as we continue to search for responsible ways to manage living natural resources, a large dose of humility is appropriate. Science, whether theoretic or applied, is an ongoing process.... Although our understanding of the natural world is more detailed than it used to be, there is still a lot we do not know. Management should err on the side of caution, therefore. There will always be surprises." Wise words.

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