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## Preface to the Second Edition

The first edition of this book (1998) classified and characterized the regional-scale ecosystem units (ecoregions) of the Earth as shown on a map that I developed with the encouragement of several international organizations. In addition to the descriptive account, my primary goal was to suggest explanations of the mechanisms that act to produce the world pattern of ecoregion distribution and to consider some of the implications for land use. I included ocean types since understanding land regions depends on understanding ocean systems.

The Chief of the US Forest Service, Mike Dombeck, distributed this book to Forest Service field offices, Washington Office staff directors, heads of other agencies, Secretaries of Agriculture and Interior, leaders of professional societies and conservation organizations, Vice President Gore, and select members of Congress. He wrote in his transmittal letter, "The Forest Service is beginning to look beyond national forest boundaries and, based on Bailey's work, expand its horizons to view forests from a larger ecoregion-based perspective."

The increasing importance of ecoregions is confirmed by the fact that much planning, research, and management efforts by the Forest Service, The Nature Conservancy, World Wildlife Fund, and other organizations are taking place now within the framework of ecoregions. For example, in 1993, as part of the National Framework of Ecological Units, the US Forest Service adopted ecoregions for use in ecosystem management.

Over the last 14 years since the book was first published, a number of studies have greatly contributed to a better understanding of the Earth's ecoregions. This second edition is a completely updated and expanded version. The main purpose of the revision is to incorporate the latest factual information and the newest geographic ideas. However, it was felt that the book would benefit from new sections that address how ecoregions are changing under the relentless influence of humans (such as modification of fire regimes and the introduction of invasive species) and climate change, use of ecoregional patterns to transfer research results and select sites for detecting climate change effects on ecosystem distribution, use of ecoregional patterns to design monitoring networks and sustainable landscapes, and how the system used in this book compares with other approaches.

This book is intended for several audiences. In addition to environmental planners and decision-makers, it should be particularly useful to those

involved with monitoring global change. For example, worldwide monitoring of agricultural and other natural-resource ecosystems is needed to assess the effects of possible climate changes and/or air pollution on our global resource base. Monitoring of all sites is neither possible nor desirable for large areas, and so a means of choice has to be devised and implemented. This is where ecoregions come in. Ecoregion maps show the Earth's land areas subdivided into regions based on large patterns of ecosystems. These regions define large areas within which local ecosystems recur in a predictable pattern. By observing the behavior of the different systems within a region, it is possible to predict the behavior of an unvisited one. Hence the maps can be used to spatially extend data obtained from limited sample sites. The results of observations at representative sample sites from each region are potentially useful in detecting and monitoring global change effects.

Content of this revised edition borrows heavily from my previous works specifically because the repetition provides the information framework necessary to support the new material.

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