

Preface

Earth's climate is warming, many natural areas are being degraded and destroyed, rivers and oceans are being polluted, biodiversity is being lost. The picture is grim, and many agree that the current generation of scientists and policy experts must figure out how to slow or even stop the damage before it becomes irreversible. Solutions will ultimately need to be political, but appropriate environmental policies and their advocacy require ecological knowledge. Ecologists and conservation biologists have been on the front lines of documenting these alarming changes, determining how fast they are occurring—where, and with what likely consequences. Despite the youthfulness of ecology and conservation biology as scientific disciplines, the quantity and quality of information about natural ecosystems and how they function are extraordinary. The vast majority of this information is contained in relatively short articles on highly specific topics published in peer-reviewed, specialty scientific journals. This way of communicating knowledge has many benefits, including clarity and precision. But the individual papers have some serious shortcomings when the scientific community and its partners in environmental policy and management need to grasp the “big picture” and apply it to solving problems.

In early 2007, the two of us engaged in discussions with Kirk Jensen, executive editor of the *Annals of the New York Academy of Sciences*, about starting a new review and synthesis series covering diverse topics in ecology and conservation biology. We were avid readers of other outlets for ecological reviews, such as the *Annual Review of Ecology, Evolution, and Systematics* and *Trends in Ecology & Evolution*, but we thought that vacant niche-space remained. In particular, a new series could have a strong impact by focusing on broad topics spanning various subdisciplines of ecology and conservation biology, emphasizing the links between ecological knowledge and applications to environmental problems, and relaxing some traditional editorial constraints on manuscript length and citations that can impede thorough scholarship. We appreciated that the *Annals of the New York Academy of Sciences* is one of the oldest scientific publications in the United States and among the most cited of multidisciplinary scientific serials worldwide. We were also convinced that distributing book-length annual volumes electronically to all libraries holding a subscription to the *Annals*, as well as more traditional bound books, would maximize impact.

We named the series, *The Year in Ecology and Conservation Biology* for two reasons: first, to be consistent with a companion series, *The Year in Evolutionary Biology*, which is edited by Carl D. Schlichting and Timothy A. Mousseau (another series, *The Year in Ecological Economics*, to be edited by Karin Limburg and Robert Costanza, is planned to commence publication in 2009); and second, because we thought that a series with the acronym TYIECOB was bound to be a hit. [Note for non-baseball fans: Ty Cobb—a centerfielder for the Detroit Tigers in the early 20th century—was perhaps the best batter in the history of baseball.] Each year, with the help of our distinguished editorial advisory board, we

will invite about 15–20 review papers on topics of broad interest and urgency and subject them to rigorous peer review. Inquiries by prospective authors are also welcome.

The first volume of the series consists of 12 reviews covering a wide range of subjects. Some chapters concern terrestrial systems (Gaston *et al.*, Johnson and Miyanishi, Conner *et al.*, Perfecto and Vandermeer, Drewitt and Langston); others focus on marine systems (Moline *et al.*, Guinotte and Fabry); and yet others include terrestrial, freshwater, and marine components (Jeschke and Strayer, Whelan *et al.*, Bernhardt *et al.*, Cadenasso *et al.*, Hannah). Various reviews focus on the major anthropogenic causes of environmental change: climate warming/greenhouse gases (Jeschke and Strayer, Moline *et al.*, Guinotte and Fabry, Hannah); habitat destruction, fragmentation, and disturbance (Whelan *et al.*, Gaston *et al.*, Johnson and Miyanishi, Perfecto and Vandermeer, Conner *et al.*, Drewitt and Langston); species invasions (Jeschke and Strayer); and pollution (Bernhardt *et al.*, Cadenasso *et al.*, Guinotte and Fabry). Issues pertinent to a wide taxonomic diversity are addressed by some reviews (*e.g.*, Jeschke and Strayer, Gaston *et al.*, Guinotte and Fabry), whereas others are taxonomically more specific (*e.g.*, Whelan *et al.*, Conner *et al.*, Drewitt and Langston). Much of the earth's geography is covered by the various chapters. Of course, the collection of 12 reviews is not intended to provide comprehensive coverage of all pressing issues in ecology and conservation biology, although we hope that such coverage might be achieved as the series matures.

We are excited about this project because of its potential to provide a crucial scholarly service to ecologists and conservation biologists, to embrace and expand policy and management applications of our science, and to reach more readers than many traditional books. We are most grateful to Kirk Jensen and his colleagues at the *Annals*, especially Steven Bohall and Ralph Brown; our editorial advisory board: Gretchen Daily, Paul Falkowski, Ilkka Hanski, John Harte, Peter Kareiva, Tom Lovejoy, Margaret Palmer, Stuart Pimm, Hugh Possingham, Mary Power, Daniel Simberloff, and David Wilcove; the various peer-reviewers; and, of course, the authors who responded so graciously to our invitations and nagging. These authors have provided a set of reviews and syntheses that we think will help ecology and conservation biology meet society's urgent demands.

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