

Preface

This is the second volume of *The Year in Ecology and Conservation Biology*—a series we launched last year in an attempt to improve the flow of information among academic scientists and those charged with the conservation of species and natural ecosystems. As with the first book, this volume represents our efforts to identify thoughtful and provocative reviews and essays that should be disseminated to a broader community of practitioners and scientists. We have solicited authors and topics of broad relevance to both basic and applied ecology and conservation biology and provided authors with a forum as free as possible from constraints on scholarship. The volume is produced in hardcopy and distributed electronically with any subscription to the *Annals of the New York Academy of Science* to ensure widespread availability.

We begin this volume with a prospectus for the likely impact of humans on the planet, using Peter Turchin's review of what historical records say about our own future population dynamics. While the trajectory of our population growth may not be smooth, the greater human numbers will surely mean greater impacts on nature, including species loss. Zavaleta *et al.* suggest how we may predict the influence of such loss in ecosystems, while Bean reviews the success of our current, major tool, the Endangered Species Act, in stemming the tide of lower biodiversity. Looking forward, Wilson *et al.* suggest how to set conservation priorities for the future, and Primmer suggests some ways in which the use of new techniques from molecular biology may improve our success.

Human impacts occur on both the land, where they are easy to see, and in the oceans, where they are largely overlooked. We try to give equal time to both, beginning with the review by Crain *et al.* describing threats to coastal marine ecosystems, and the focus by Riegl *et al.* on coral reefs. Ongoing changes in forested ecosystems—some driven by continuing air pollution impacts (Lovett *et al.*), some anticipated from changes in global climate (McMahon *et al.*), and some derived from the arrival of new species (Holmes *et al.*)—offer a wide array of challenges to ecologists. The public, of course, demands that we preserve forest wildlife and fisheries, and potential new approaches are reviewed for forests (Lindenmayer), mammals (Morris *et al.*), and freshwaters (Sabo *et al.*). Finally, Lawler recommends that we use ecosystem services as an organizing principle, and Goldman and Tallis offer welcome suggestions of how to implement such a system, while Tallis and Polasky present a program (InVEST) for doing so.

As with the first volume, we are indebted to our editorial board for identifying, reviewing, and improving early drafts of the chapters herein; to anonymous reviewers who we called to help in the process; and to staff at the New York Academy of Sciences who manage the publication of the *Annals*. We hope this volume—truly a group effort—will be within easy reach and a great use to conservation scientists and managers around the world. We have much to do and little time at our disposal!

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