

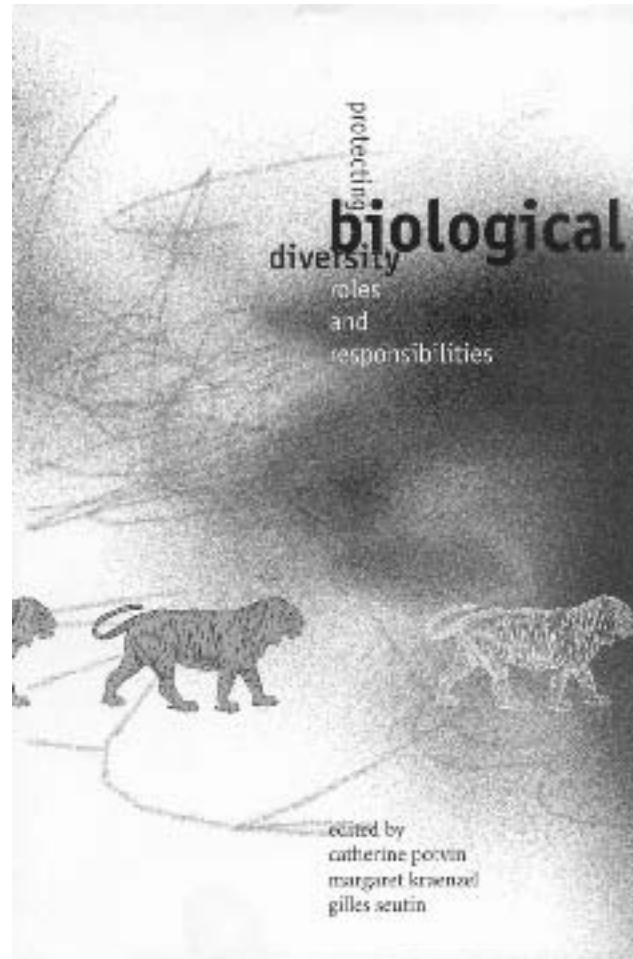
BOOK REVIEWS

Three on Consilience: The Difficult Art of Combining Biological and Social Sciences to Protect Biodiversity

1. *Protecting Biological Diversity: Roles and Responsibilities*. 2001. Edited by Catherine Porvin, Margaret Kraenzel, and Gilles Seutin. McGill – Queen's University Press, Canada, 160 pages. Hardback - ISBN: 0773521585 - \$75.00. Paperback - ISBN: 0773521593 - \$24.95.
2. *Experiments in Consilience: Integrating Social and Scientific Responses to Save Endangered Species*. 2003. Edited by Frances R Westley and Philip S Miller. Island Press, USA, 328 pages. Hardback - ISBN: 1559639938 - \$70.00. Paperback - ISBN: 1559639946 - \$35.00.
3. *The Future of the Wild: Radical Conservation for a Crowded World*. 2006. By Jonathan S. Adams. Beacon Press, USA, 296 pages. Hardback - ISBN: 0807085103 - \$27.95.

Life is full of ironies, and this is not the least of them: Many of us “got into wildlife” because we like nature, yet spend most of our professional lives dealing with “people” issues. The rapid extinction of species and the ongoing homogenization of what is left bring a sense of urgency to anyone who would like to see biodiversity protected. Not surprisingly, conservation biology has often been called a crisis discipline. Because the problem is human-caused, the answers must also involve humanity. Conservationists have long realized that biologists and social scientists will have to collaborate, and E. O. Wilson coined the word “consilience” to more-or-less describe this idea in a 1998 book of the same name. The matter of application has remained somewhat fuzzy, however. The three recent books reviewed here attack this question from different perspectives and with varying degrees of success.

One of the ironies of conservation is that the ideology, know-how, and finances typically come from technologically and economically developed but biodiversity-poor countries, whereas the biodiversity to be conserved is usually found elsewhere. *Protecting Biological Diversity* focuses on the need for scientists and practitioners from both spheres to collaborate effectively and equitably. Concerned about the perceived lack of clear ethical guidelines for conservation practitioners, the editors “strive to determine what ‘good practice’ may be.” An edited volume resulting from an IUCN symposium held in 1996, this is a truly international effort. Of the 26 authors, only nine call North America home; nine are from India, and the rest originate from across the tropics. Perhaps because of this unusual makeup of authorship, the book focuses on an important but often-ignored issue: The tension between local and expatriate outlooks on joint conservation projects. Eight chapters offer case studies and make some references to the importance of collaboration between locals



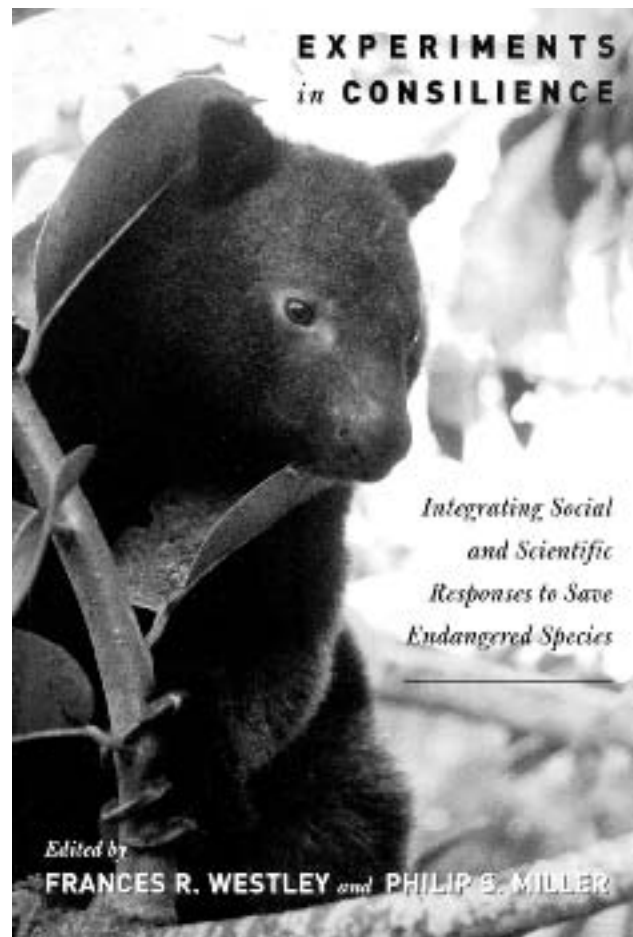
and foreign conservation biologists. For example, chapter one states that “overall, these co-operative and collaborative projects have been remarkably successful...” In general, the authors tend to highly value local knowledge, ignore local deficiencies, and focus on the mismatches. For example, “the philosophy behind the integral reserve is that of pure conservation [but] in a poor country, such as Madagascar, where citizens depend on wood for fuel, it has proved impossible to prevent use of these resources” (chapter 5). The language is often rather strong. For example, chapter 1 denounces “The arrogant and shocking attitudes and behaviour of some European experts.” It goes on to recount “A well-known incident [that] involved an African researcher who

was refused the right to take his seriously-ill spouse to the health centre ... while the Belgian expert allowed himself the luxury of using the vehicle to spend the weekend in the regional headquarters." Potentially most helpful is the ninth chapter, which includes a list of recommendations. Many of these, such as respecting local people, laws, and customs, are commonsensical. Finding ways to remunerate local populations when profit is to be made from their knowledge or biodiversity and making results available to local authorities should also prove non-controversial. However, the authors of this and other chapters take it a big step further: Researchers should not only provide results, but also include field notes. They should not only communicate in the official language of the host country, but "using local dialect in all communications."

As this book amply illustrates, western scientists have not always acquitted themselves well. Scientific imperialism, often in the form of ignoring the contributions of local team members when authorship is decided, is a pernicious problem, and I commend the editors and authors of *Protecting Biological Diversity* for discussing it openly. Nonetheless, statements such as "conservation biologists and ethnobiologists have not yet proved their willingness to conform to either local or universal values" (editors' introduction to the final chapter) seem excessively strong. Working in a foreign country, under time and budget constraints and within a different culture and language, can be overwhelming. Regardless, many western scientists have taken these challenges on because of a deep commitment to helping solve complex problems in far-away places. The book offers some thoughts on how to be culturally sensitive, behaving ethically, and giving credit where it is due, and thus providing insights on how incoming collaborators can enhance the chances of forming successful partnerships. However, the responsibility of host nations to also invest in the collaboration seems to have been forgotten by the authors and editors of this volume, which I generally found repetitive and one-sided.

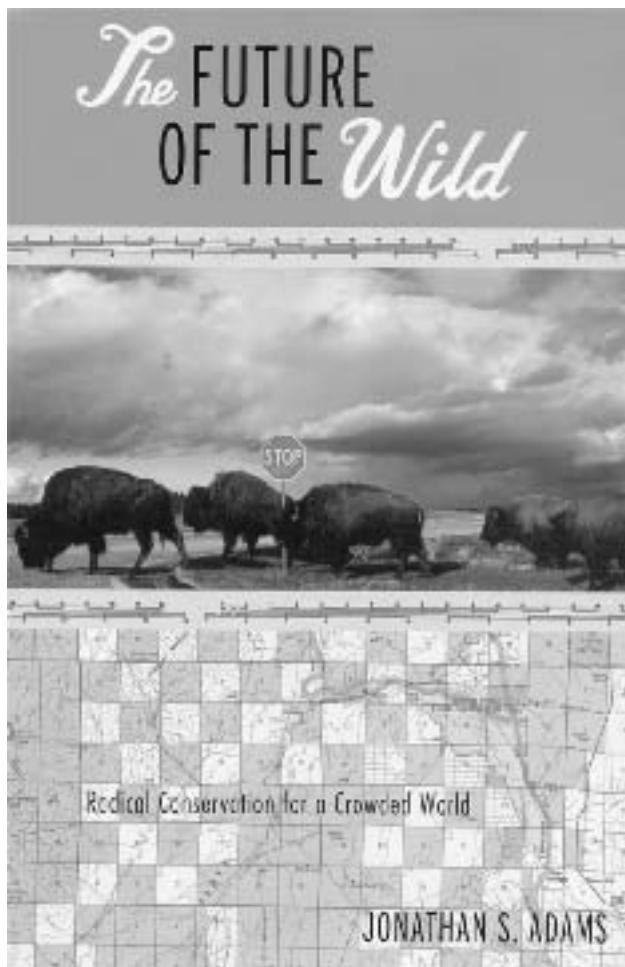
The second book, *Experiments in Consilience*, emerged from a 1997 Canadian initiative "to build interdisciplinary connections and stimulate the exchange of expertise among specialists concerned with the conservation of biodiversity." Social and biological scientists working in teams analyze a series of workshops conducted by the Conservation Breeding Specialist Group of the IUCN. Overall, the authors agree that "bridge building between specializations" is both feasible and advantageous, but also costly and only "useful if it contributes to species conservation." The tone throughout is fairly optimistic. For example, chapter 5 evaluates in detail the overall performance of the IUCN workshops and concludes that the process "is indeed both generic and robust and worthy of further study and development." Ironically, given the recommendations of the previous book, the authors of chapter 2 identify "globalization of scientific norms and culture," rather than conformation to local language and customs, as one of the most important characteristics contributing to their success. Another encouraging conclusion is that "progressive resource-based companies are motivated to become involved in ... conservation of species and habitat" (chapter 16).

This book would be primarily of value to those planning similar workshops. Where similarities exist between the two



books, this one is clearly superior. For example, chapters 9 and 15 focus on how to incorporate local knowledge into conservation projects, and this issue is also addressed in other chapters. Nonetheless, weaknesses exist, most having more to do with the subject matter than with the book itself. "Just as there is no free lunch, there is no (or little) free interdisciplinary collaboration." Most of the species and habitats in need of attention are far less glamorous than the gorillas and wolves (typical of the obsession with birds and mammals so common in conservation) featured in this book, and the IUCN workshop approach would be hard to replicate. The closing paragraph of this book states that "we must continue to refine this and other conservation processes to make use of the conservation world's greatest resource: the judgment and wisdom of all those who care about saving our endangered spaces and the species therein." I finished the book, perhaps as the editors did, with a better understanding of the experiment and a glimmer of hope, but with no abiding enthusiasm or sense of closure.

The final and most recent volume, *The Future of the Wild*, is a single-authored effort by one of the leaders of The Nature Conservancy. His approach carries a different flavor, more an extended op-ed piece aimed at an educated lay audience than detached scientific discourse. In his introduction, Adams explains the impetus for his work: "Across North America and indeed



around the world, conservation scientists, activists, and communities have begun crafting visions for conserving and restoring wild creatures and wildlands. Such visions smack of particularly naïve optimism,” Adams argues, because our idea of the wild is overly simplistic in today’s world. The scale at which we are used to framing conservation questions is too small: “Parks and reserves need to be large enough to absorb the blows from a once-in-a-century” event, whereas “tiny refuges tucked into a landscape otherwise completely converted to intensive human use will not long survive.” Part 1 of the book, entitled “thinking big,” is devoted to making this point by using examples such as the Spotted Owl. Adams argues that science, rather than “politics, aesthetics, and economics,” must be allowed to determine the shape of conservation efforts. To do that, “conservation must come to grips with the human communities that surround parks as well as the more distant communities that value parks and

wilderness ... that they never see.” Adams provides a positive conceptual framework: “Conservation cannot just be the art of saying no ... [it] must offer a sense of the possible, and a reason for hope.” Part 2, “science and community,” focuses on how landscapes in California and Florida have mainly become urban or near-urban over the last few hundred years and how some communities are trying to address conservation problems in such modified landscapes. Adams expects both conservation and society to change. “Some of the changes in conservation will be revolutionary, others evolutionary. All will require new appreciation for where science, community, and values intersect.”

Arguably, the element most missing from modern conservation biology is hope. The number of new reserves being established worldwide, even tiny ones, has declined precipitously since the 1980s, and the administrations of several western countries are trying to dismantle protections for many of those that currently exist. Adams offers some hope in Part 3, where he presents Yellowstone as an example of how things might work. He emphasizes ideas that have been important in the conservation literature for some years, such as looking at landscape-level effects and creating connections among smaller reserves by judicious use of wildlife corridors, but he does so in the context of actual community-wide efforts to achieve integration in fragmented, multiple-use landscapes. The challenge is how to achieve this grand vision on the required scale.

Recent decades have brought the unpleasant realization that, while the human sphere is growing, the rest of the biosphere is in decline. As the human population continues to expand and the average resource consumption per individual maintains an upward trajectory, the need for the priority-juggling exercise that is conservation grows as well. Thus, the better we understand the human element of this equation, the more effective we can become in reaching our goals for the biological side. Adams’s thought-provoking and accessible book, which could be the basis of discussions in undergraduate classes, might offer a small step in this direction.

The three books address a variety of mostly non-overlapping topics involving the interaction between the human and natural sciences in conservation. Ultimately, however, the underlying issue remains the ever-growing size and impact of the human population. As global climate change shows, even the largest and best-protected preserve established today may offer little conservation value tomorrow. Literature in this field could thus benefit from further integrating this topic into its analyses — something that has become rather rare in current mainstream conservation literature.

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