

New Titles

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more frequent and ecological thresholds will be encountered more often. The resulting changes in species' distributions are likely to reconfigure nature, creating assemblages and ecosystem dynamics that move beyond what has occurred in recent centuries or even millennia—to what have been called “no-analogue” systems.

It is the specter of these changes that haunts the pages of this book. When national parks and wilderness areas were first established in the United States, it was largely because they appeared to be something close to pristine nature, places “untrammelled by man,” in which natural processes would reign supreme. As the transformation of much of the continent accelerated, maintaining the “naturalness” of these areas became the guiding force behind stewardship. This involved more than putting a fence around the area to exclude development or exploitation; the aim was to restore or maintain historical conditions and to minimize human impacts. As pressures on parks and wilderness areas and their surroundings have increased, stewardship has entailed more active intervention—wildfire management, wildlife harvesting, or the shepherding of human visitors to designated areas—in order to maintain the “naturalness” of protected areas. It is the thesis of this book that a continued emphasis on an idealistic (and probably mythical) vision of “naturalness” is no longer appropriate and will certainly not be feasible in a no-analogue future. To realize the value of parks and wilderness in the coming era of change, new approaches are needed.

Beyond Naturalness develops these approaches in three sections. The first reviews the environmental changes that compel us to rethink why protected areas are important. If protecting and stewarding “naturalness” is no longer appropriate, what should managers try to do? Depending on the situation, the goals may differ, but whatever they are, they should be clearly and operationally articulated. This is particularly important as goals shift from what they have been in the past.

The second section develops four approaches to managing protected areas that differ in their objectives. A detached, hands-off approach may be appropriate if the objective is to respect nature's autonomy and let events take their course, even if this means losing some components of the ecosystem. The other three approaches emphasize maintaining the ecological integrity of ecosystems, fostering a fidelity to historical conditions, or enhancing resiliency in the face of change. No single approach is advocated as being best, and there are frequent calls for using—and reusing—a combination of approaches to confront the coming uncertainty and risk. Clearly, each emphasis reflects a different philosophy about what is to be valued in nature. Despite valiant attempts, however, the defining terms—*ecological integrity*, *historical fidelity*, and *resilience*—remain just as nebulous as *naturalness*. The third section contains a somewhat eclectic set of chapters covering the specific challenges created by invasive species, climate change, management scale, uncertainty, and “wild design” (how to exercise management intervention in a protected area without destroying the values one is trying to protect). The final chapter does a good job of synthesizing the main themes that emerge from the previous chapters.

Overall, the material in *Beyond Naturalness* is clearly and compellingly presented. The book does not suffer the common maladies of disconnectedness and uneven presentation that plague many edited, multiauthor volumes; instead, the editing is so strong that all of the chapters read as if they had been written by a single person. Individuality has been lost in favor of consistency. This perhaps accounts for the annoying (to me, at least) overuse of quotations in many chapters.

The overarching message of *Beyond Naturalness* is that we are on the cusp of massive changes in environments and ecosystems that will require increasing levels of management intervention to maintain the ecological values of parks and wilderness. The emphasis of this

management should be on facilitating the adjustment of species and ecosystems to coming change instead of clinging to the belief that we can keep nature as it is or was. Species will be lost. Ecosystems will change. We can no longer follow Aldo Leopold's admonition that the first rule of intelligent tinkering is to save all the parts. Managers will need to do their job with an incomplete set of old parts and some new parts with unknown functions, and they will need new tools to do so. It is not the intent of *Beyond Naturalness*, however, to provide the toolbox and the plans for stewardship of nature in the future. Rather, the aim of the book is to shake us out of the belief that our past approaches need only be tweaked and that all will be fine. Instead, the intent is to provide the fodder for thinking outside the box of traditional park and wilderness stewardship. In that, *Beyond Naturalness* succeeds admirably.

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