

Information Crossfile*

SUMMARIES

The changing face of park management: Stewardship in an era of global environmental change

A LONG-STANDING PRINCIPLE OF CONSERVATION IS waning in the face of unprecedented ecological stress, and the inevitable dilemma looms: For what values are we managing parks and other protected areas? “Naturalness,” despite (or because of) a plethora of meanings and interpretations to choose from, can no longer guide conservation planning and decision making. In a treatise on the future of protected area management, Hobbs et al. (2010) argue that as national parks and other protected areas are subject to innumerable human influences, resource managers ought not labor solely under this vague and impractical notion. Resource managers should shed the singular goal of attaining naturalness—an essentially meaningless concept from a management perspective—and embrace multiple goals and approaches, which potentially may involve increasing intervention.

As the effects of climate change make themselves known, wholesale reliance on the goals of historical fidelity (parks as we have known them), autonomy of nature (reluctance to control or actively manage nature), and aesthetic preservation are being called into question. Instead, a broader list of conservation goals is emerging, to include ecological integrity, resilience, and protection of biodiversity. Traditional principles of protected area management need to be supplemented by more robust concepts that may be better able to accommodate climate change, forming the basis for a “more focused but pluralistic approach to park and wilderness management.” Indeed, past conditions are no longer “benchmarks for the future,” the authors state, and carefully crafted management goals and planned intervention appear to be the best path forward. Historical fidelity, for instance, is still a valid management objective, not to mention an important principle of the park aesthetic, but it simply can no longer be a resource manager’s only desired outcome.

Along with the need for a shift in guiding principles, the authors reason that policies for protected area management must also evolve. Going back to 1916, the National Park Service Organic Act states that the fundamental purpose of parks is “to conserve the scenery and the natural and historic objects and the wild life therein . . . unimpaired for the enjoyment of future generations.” And even now NPS *Management Policies 2006* (section 4.1, National Park Service 2006) are premised on the goal to preserve “components and processes in their natural condition.” Though,

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as the authors note, NPS policy illustrates some cases where intervention may be appropriate, managers will need guidance in setting meaningful and realistic management goals.

Climate change, invasive species, and altered fire regimes have affected even the most remote park and wilderness ecosystems. Hobbs et al. (2010) discuss why intervention in the physical and biological processes for the sake of maintaining historical conditions in perpetuity is increasingly problematic. They urge that prescribed burns, controlling ungulate populations, thinning forests, and assisting species migration be evaluated on the basis that ecosystems are dynamic and the values of park ecosystems to be protected must be clearly and specifically articulated. “The major challenge to stewardship of protected areas is to decide where, when, and how to intervene in physical and biological processes, to conserve what we value in these places,” write the authors.

Thus, Hobbs et al. (2010) vouch for the conservation of nature to cease as the guiding management goal, and be replaced by a suite of guiding principles including ecological integrity, historical fidelity, and resilience, among others. Ecological integrity, a concept already embraced by Parks Canada, focuses on retaining native biodiversity and ecosystem function. Thresholds of acceptable change are set and monitored, and when exceeded trigger management action. Furthermore, human involvement is fully acknowledged and park managers may even try to mimic past human interventions when a system has coevolved with a human component. This concept, the authors explain, “shifts the focus from cause to effect and from past to future.”

Another useful principle, resilience, defined as the capacity of a system to absorb change and persist without undergoing a state shift or fundamental loss of character, is useful when dealing with dramatic but uncertain change. “It might require letting go of the way landscapes look today,” the authors explain, while deciding which key processes and functions to work to retain. Indeed, attempting to prevent or resist change will only increase the risk of greater change in the future (e.g., historical fire suppression).

Ecological integrity and resilience are just two of many possibilities that Hobbs et al. (2010) propose that would allow for and support uncertainty in the environment and provide opportunities for change and adaptation. In the face of rapid environmental change, deliberate and meaningful experimentation, public involvement in the decision-making processes, and flexibility in operational objectives are options for resource managers to be more adaptive than previously thought.

References

Hobbs, R. J., D. N. Cole, L. Yung, E. S. Zavaleta, G. H. Aplet, F. S. Chapin III, P. B. Landres, D. J. Parsons, N. L. Stephenson, P. S. White, D. M. Graber, E. S. Higgs, C. I. Millar, J. M. Randall, K. A. Tonnessen, and S. Woodley. 2010. Guiding concepts for park and wilderness stewardship in an era of global environmental change. *Frontiers in Ecological Environment* 8(9):483–490.

National Park Service. 2006. Management policies 2006. National Park Service, Washington, D.C.

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