Conservation of rare or little-known species: Biological, social, and economic considerations

AS PART OF THE NORTHWEST FOREST PLAN (1994), federal agencies in the Pacific Northwest were tasked with inventorying and conserving an estimated 300 exceedingly rare or poorly understood species, whose status was possibly imperiled. This group encompassed little-known species such as arthropods, fungi, and mollusks, which are often buried in substrate or hidden in the forest floor. Given the difficulty in detecting rare species, the lack of scientific understanding of little-known species, and the inherent extinction risks, conservation planning and management seemed overwhelming. Furthermore, planning and implementation occurred in an environment of significant uncertainty and political controversy (Raphael and Molina 2007). Facing this challenge, in 2003 the USDA Forest Service, U.S. Geological Survey, U.S. Fish and Wildlife Service, Bureau of Land Management, Oregon State University, The Nature Conservancy, and the Society for Conservation Biology sponsored a symposium, "Innovations in Species Conservation," where participants grappled with a variety of questions:

- What are some alternative approaches to conservation of rare and little-known species? What are the goals of these approaches, and what is the likelihood they will be successful?
- How do different groups of constituents in society feel about these approaches?
- What are the economic implications?
- What are the legal and policy requirements associated with different conservation approaches?
- What constraints are imposed on land managers and natural resource use by the various approaches?

Conservation of rare or little-known species: Biological, social, and economic considerations is the outcome of this symposium. The book thoroughly discusses "species rarity," provides definitions and attributes of little-known species, and addresses special considerations for studying and managing such species. By using case examples of successful and failed applications of conservation practices at both species and system levels, the authors emphasize practical considerations—including social values and economic costs and benefits—that land managers face in developing and implementing conservation strategies. Martin G. Raphael, Randy Molina, and 10 other contributing authors discuss approaches to conservation planning, identify the main assumptions and

point out the strengths and weaknesses of each approach for rare or little-known species, and ultimately supply a thorough scientific evaluation of management options for conserving rare or little-known species in terrestrial environments. The authors highlight legal, biological, sociological, political, administrative, and economic considerations for evaluating conservation strategies. The topics covered help resource managers determine which strategy or combination of strategies will best meet their goals and objectives. Although no fixed or easy answers exist, the book suggests an overall procedure for selecting management approaches. Perhaps most importantly, the book guides readers in how to reach the ultimate goal of long-term buy-in and commitment of a devised strategy for conserving rare or little-known species.

Reference

Raphael, M. G., and R. Molina. 2007. Conservation of rare or little-known species: Biological, social, and economic considerations. Island Press, Washington, D.C., USA.

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