

Charting Forestry's Uncertain Future

Frederick J. Swanson

US Forest Service, Pacific Northwest Research Station, 3200 Jefferson Way, Corvallis, Oregon 97331
USA

A review of Franklin, Jerry F., K. Norman Johnson, and Debora L. Johnson. *Ecological Forest Management*. Waveland Press, Inc., Long Grove, Illinois, 2019.

Ecological Forest Management marks a major transition in forestry and charts a new path forward. This is the fifth edition of the textbook *Forest Management* which has spanned 50 yr; the previous four editions under the lead authorship of L. S. Davis were founded on economic principles and emphasized long-range planning assuming a rather stable and predictable future. However, profound changes in forestry and its social and environmental contexts have forced change. The Pacific Northwest of the United States, home of the authors of this new text, has been a crucible of conflict and creativity in forest ecology and forest management, forging that change. Forests are increasingly viewed as complex ecosystems rather than simple collections of trees; top-down, governmental decision-making is giving way to more collaborative, inclusive, bottom-up approaches; and uncertainty of future social and climate environments is more deeply embraced.

This book reviews these changes and lays out a comprehensive view of forests as whole ecosystems that can be managed to sustain ecological processes, while providing some flow of forest products and other services to humans. It begins with a chapter “Sustaining forests and their benefits,” containing sections on the major themes of the book: (1) “An ecological approach to forest management,” (2) “The contributions of expanded scientific knowledge,” (3) “The public policy framework for forest management,” (4) “Negotiation: An essential element of forest management planning,” (5) “Change and uncertainty: An enduring constant in forest management,” and (6) “Coping mechanisms: mysteries, wickedness, and tenets.” Four or five chapters comprise each of the four core parts of the book: “Ecological foundations,” “Economic and social context,” “Current issues in forest management,” and “Forest planning.” A single concluding chapter, “Potential contributions of ecological forest management,” addresses overall goals and philosophy and the emerging adoption of ecological forestry perspectives world-wide. Although the authors are rooted in the Pacific Northwest of the United States, their view and their examples span the country and give special attention to National Forests.

The book is beautifully produced. The text is clean; varied font aids in following the story and identifying key terms and their definitions; and sidebars offer explanation and elaboration. The bibliography is extensive and up to date. The numerous photographs, conceptual diagrams, and maps are very well done, and a set of eight pages of color plates adds to the visual storytelling. Of special note are 21 of forest ecologist/artist Robert Van Pelt's pen-and-ink illustrations of individual, exceptionally large, ancient trees with tiny human figures at their base for scale. These images evoke a sense of the humility we should embrace in our attempts to understand and even “manage” these organisms whose lives span many centuries, even millennia. Other Van Pelt images depict stands, wildfire scenarios, and an 800-year succession following wildfire in a 38 cm long figure.

The authors of this book have been deeply and creatively involved in all aspects of the recent transition in perceptions of forests and forestry during their 50+ yr careers. Franklin brings credentials of a Forest Service scientist, a forest ecology professor, and president of the Ecological Society of America. Norm Johnson has had a career as a forest policy and planning professor. Together they advised leaders in all branches of the federal government, state governments, tribal lands, and other policy makers. Debby Johnson has been a long-time consulting forester for owners of small woodland properties. These lead authors enlist specialists Christopher Dunn, Cristina Eisenberg, and Matthew Thompson to craft chapters in their specialties concerning fire, biological diversity, and wildlife. Together, this is a powerful and effective team and their extensive background in publications of many sorts shows in the quality of the book.

Franklin and Johnson understand governance and policy making. They have been in the thick of it at all levels from the local public meetings and field trips to logging shows with cantankerous interest groups up to the big table in President Clinton's 1993 Forest Summit in Portland, Oregon. They were central players in the Forest Ecosystem Management Assessment Team that framed the foundation for the Northwest Forest Plan, setting the course of management of 10,000,000 ha of federal lands in the range of the northern spotted owl (*Strix occidentalis caurina*) spreading from San Francisco to the Canadian border.

Over the course of his career, and especially in his leadership of ecosystem research at the H.J. Andrews Experimental Forest during the 1970s and early 1980s, Franklin led the transformation in perceptions of forests from a collection of trees treated as crops in plantations to viewing forests as unimaginably complex ecosystems from bottom (deep within the soil) to top (up through the canopy) and inextricably linked with the stream systems laced through the landscape. Federal laws of the 1970s helped frame this transition of perception, but federal land management agencies took a couple decades to make the adjustment and then did so only reluctantly and with the encouragement of a cascade of law suits. Norm Johnson has been an insider in the attendant changes in policy and planning.

The authors' experiences of change lead them to offer not a tight blueprint for future, on-the-ground practice, but rather a set of fundamental ecological principles and guidance for adaptive, flexible social processes for navigating uncertainties of the future world. As with many matters in forestry, concepts in this book have received mixed reactions, ranging from "there's nothing new here" and "we're already doing it" to "this is an innovative, positive step forward." The value of this book is its comprehensive exposition of ecological, economic, and social processes essential to charting the future of forestry, which will be done through social processes region by region and jurisdiction by jurisdiction.

I expect *Ecological Forest Management* to have a long shelf life in personal libraries of scientists, educators, and citizens engaged in forestry issues or management of their own land. It will serve well as a textbook or major reference in natural resources, environmental studies, and, of course, forestry classes at undergraduate or graduate levels. All readers will find the text interesting and accessible. The historical perspectives are lasting, and the authors' thoughts on many emerging issues will provide provocative prompts for critical thinking in the future on topics addressed in the book, such as maintaining biological diversity, addressing climate change in terms of forest resilience and carbon sequestration, the fate of small communities, living with wildfire, and sustaining water resources. Despite its length (646 p), large format, and fine illustrations, the cost makes it accessible to many potential readers (under \$95 paperback).