

Wilson, E. R. 2022. Book Review: Baker, P. J., D. R. Larsen and A. Saxena (editors). 2022. *Forests as Complex Social and Ecological Systems: A Festschrift for Chadwick D. Oliver*. Springer, Cham, Switzerland. 334 p. *Scottish Forestry* 76(3): 48

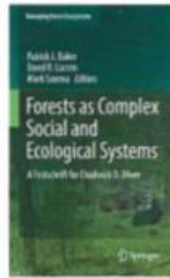
FORESTS AS COMPLEX SOCIAL AND ECOLOGICAL SYSTEMS: A FESTSCHRIFT FOR CHADWICK D. OLIVER

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ISBN: Hardback 978-3-030-88554-0 eBook 978-3-030-88555-7

Springer, 2022

Hardcover, xviii + 334pp, £129.99; eBook £103.50



The papers in this *Festschrift* were presented at a conference on 11 October 2019 to mark Chadwick D Oliver's retirement as Pinchot Professor of Forestry and Environmental Studies from Yale University. The book recognises Professor Oliver's major intellectual contributions to forest science and natural resources management. Included are current research and case studies on the subject of forests as complex systems.

Chad Oliver is an American forester, researcher and teacher. He studied forestry at the University of the South and Yale University, completing his doctorate on the dynamics of mixed-species, even-aged stands. An academic career followed, with tenures at the University of Washington (1975–2001) and Yale (2002–2020). As the son of a forester, he recognised the needs of professional practitioners and actively sought to bring research and practice together through synthesis, outreach and capacity-building. The publication of *Forest Stand Dynamics* (1990, updated 1996), with long-time collaborator Prof. Bruce Larson, confirmed Oliver's reputation as a leader in forest science. Concepts presented in that book now serve as the framework for defining stand development patterns around the world. *Forest Stand Dynamics* currently ranks as

the most-cited publication in forest science.

Perhaps the most controversial aspect of forestry practice throughout the 20th century has been the drive to reduce complexity and to develop simple ecosystems with highly predictable patterns of development and productivity. Much friction and conflict have arisen from forestry's adherence to this paradigm. Oliver's insights have helped realise an alternative approach, one that integrates ecological theory more effectively with forest management to embrace complexity, rather than work against it. In recent decades, techniques and technologies have emerged in remote sensing, social sciences and data processing that have made it possible to study complex natural systems in greater detail and across spatial and temporal scales. This book serves as an important review of developments since the initial publication of *Forest Stand Dynamics*.

The *Festschrift* has three parts. Part I presents chapters on complex forest stand dynamics; Part II explores forests as complex ecological systems; and Part III considers forests as complex social systems. Examples of ecology and silviculture papers are: the role of remote sensing in the assessment of stand structural complexity in New Brunswick; the development of new forest management options in Alaska; and the application of a forest stand dynamics approach to the conservation of Leadbeater's possum in Australia. Case studies on social aspects include: conservation of the Amur tiger in China; understanding the dynamics between forest landscapes and local livelihoods in India; as well as community-owned forest management initiatives in developing countries. These and other papers apply an understanding of forest dynamics to contemporary issues and present pathways to more effective management of natural resources.

Fittingly, the final chapter is contributed by Chad Oliver. Here he expresses a hope that increased understanding of forest dynamics will enable us to manage woodlands with greater accuracy and wider use of emerging technical tools. The overall goal is to increase the abundance of forest non-commodity and commodity values at both the stand and landscape levels, and at a time when global change and sustainability are major concerns.

In summary, *Forests as Complex Social and Ecological Systems* is undoubtedly a timely and important new publication. The many prescient and inspirational papers attest to the steady development of silvicultural and forest management science over the past 30 years. The book is available in hardback or eBook. Individual chapters can be downloaded from the publisher's website. Most relevant for students and researchers in forest ecology and silviculture, this new publication deserves to be widely read by practitioners and policy specialists.

Edward Wilson