

Brian Palik

Sustaining Healthy Forests Using Natural Models to Guide Management

Our nation values its forests perhaps more than any other native ecosystem. As such, maintaining healthy forests should have high priority for agencies and institutions that provide forest-derived goods and services to people. Historically, a healthy forest was viewed as one that produced wood products and protected watersheds, with somewhat secondary objectives of producing game species and providing recreation opportunities. For decades, these objectives have been achieved largely using an agricultural model of forest management. While these traditional services are still important today, ecosystem research demonstrates that forests managed to optimize their production can be inherently unhealthy, at least from the standpoint of sustaining the broad array of organisms (biodiversity) that make up a forest. At the heart of this issue is the realization that forests managed for traditional services are very different in structure and composition from their unmanaged counterparts. We also know that this difference, i. e, a simplification of the managed forest, can have important consequences for ecosystem processes, such as carbon sequestration and storage, nutrient cycling, and climate change adaptation. Moreover, simplified forests have heightened susceptibility to a variety of health threats, including severe wildfire, invasive species, and disease and insect outbreaks. A renaissance in forest management is occurring as a result of the discoveries by forest ecosystem scientists. A management paradigm based on natural models of forest dynamics is being discussed broadly and applied, with increasing frequency, across our nation's forests. This model posits that a forest managed for traditional products and services will be inherently healthy, by all measures, if it looks like and functions like its natural counterpart, across all stages of its development, from very young to very old. A national landscape composed of forests managed following natural models will increase opportunities and options for sustaining a broad array of ecosystem services into the future.

Bio

Brian Palik

Brian Palik is research forest ecologist and team leader with the USDA Forest Service- Northern Research Station's, Center for Research on Ecosystem Change. He has Ph.D. and M.S. degrees in forestry and ecology from Michigan State University and a B.S. from Alma College. He is a past recipient of the Forest Service's Chief's Award for Early Career Scientists and the Presidential Early Career Scientist Award. Dr. Palik is an adjunct faculty member at four major research universities, including Iowa State University, University of Minnesota, Michigan Technological University, and Lakehead University.

Dr. Palik has been studying forests, with a distinctly applied perspective, for over 20 years. He and his research team work broadly on questions related to the sustainability of forest management, by studying natural ecosystems and their managed counterparts. He is the author of over 130 research publications on topics of forest ecology and management. Dr. Palik actively works with collaborators across the USA, as well as colleagues in Canada, Finnsocandia, Germany, Australia, and the Czech Republic.