



# Ecology and Management of Forest Soils, 5th Edition

Dan Binkley, Richard F. Fisher

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## DESCRIPTION

### Contemporary soil science and conservation methods of effective forestry

Forests and the soils that serve as their foundation cover almost a third of the world's land area. Soils influenced by forest cover have different properties than soils cultivated for agricultural use. *Ecology and Management of Forest Soils* provides a clear and comprehensive overview of the composition, structure, processes, and management of the largest terrestrial ecosystem. From composition and biogeochemistry to dynamics and management, this essential text enables readers to understand the vital components of sustainable, long-term forest soil fertility. The interaction of trees, animals, microbes, and vegetation alter the biology and chemistry of forest soils—these dynamics are also subject to human management, requiring conservationists to be conversant in the philosophy and methods of soil science.

Now in its fifth edition, this classic text includes new coverage of uptake of organic nitrogen in forests, <sup>15</sup>N retention studies, the effects of N additions on C accumulation, evidence-based examples of the dynamics of soils, and more. Extensive updates and revisions to topics such as spatial implications of megafires, long-term organic matter accumulation, soil characterization, and molecular soil measurement techniques reflect contemporary research and practices in the field.

This informative overview of forest soils integrates clear and accurate descriptions of central concepts and logically organized chapters to provide readers with foundational knowledge of major soil features, processes, measurement techniques, and management methods. This authoritative survey of the management and ecology of forest soils:

- Offers full-color photographs and illustrations, real-world examples and case studies, and clear overviews to each topic

- Presents up-to-date and accessible coverage of contemporary forest science literature and research
- Addresses topical issues relevant to areas such as ecology, forest management, conservation, and government policy
- Provides a comprehensive, global perspective on forest soils, from tropical to temperate to boreal
- Presents balanced coverage of soil science principles and their practical application to forest management

*Ecology and Management of Forest Soils* offers students in areas of soil science and forestry, natural resource and environmental management, ecology, agronomy, and conservation an invaluable overview of the field, while providing forestry professionals an efficient and current work of reference.

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## ABOUT THE AUTHOR

**Dan Binkley** is Adjunct Professor in the School of Forestry, Northern Arizona University.

The late **Richard F. Fisher's** career included professorships at the University of Florida and Texas A&M University. He made many lasting contributions to the field of forest soils, of which this book is just one.

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