

1. Record Nr.	UNINA9910778113603321
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Titolo	Ecology of woodlands and forests : description, dynamics and diversity // Peter A. Thomas and John R. Packham [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2007
ISBN	1-107-17480-5 1-281-04039-8 9786611040390 0-511-80557-8 0-511-33475-3 0-511-33410-9 0-511-33342-0 0-511-56688-3 0-511-33533-4
Descrizione fisica	1 online resource (xiv, 528 pages) : digital, PDF file(s)
Disciplina	577.3
Soggetti	Forest ecology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Half-title; Title; Copyright; Dedication; Epigraph; Contents; Preface; Acknowledgements; Metric equivalents; 1 Introduction: Forest basics; 1.1 Characteristics of woodlands and forests; 1.1.1 Wooded environments; 1.1.2 Differences between woodlands and forests; 1.2 The value of woodlands and forests; 1.3 Tree biology and how it influences woodland ecology; 1.3.1 Fitness of various species for particular uses; 1.3.2 Tree morphology; 1.4 Spatial structure; 1.4.1 Vertical structure above and below ground; 1.4.2 Ecological problems of understorey plants; 1.4.3 Horizontal structure 1.5 The woodland ecosystem: food chains, food webs and the plant, animal and decomposition subsystems 1.6 Forest types and classification; 1.6.1 Distribution in relation to climate: biomes; 1.6.2 Coastally restricted forests; 1.7 Regional classifications of forests and woodlands; 1.7.1 The British National Vegetation Classification; 1.7.2 New England; 2 Forest soils, climate and zonation; 2.1 Soils and trees;

2.2 Features of forest soils; 2.2.1 Soil profiles and properties; 2.2.2 The nature of forest soils and their influence on the ground flora
2.2.3 Influence of trees on the degradation of forest soils
2.2.4 Trees and erosion; 2.3 Roots, foraging and competition; 2.3.1 Variation in root systems; 2.3.2 Root competition and specialist adaptations; 2.3.3 Soil and root aeration; 2.3.4 Vascular plants, soil pH, mineral nutrients and microorganisms; 2.4 Forest zonation and site quality; 2.4.1 Influence of climate and soil type; 2.4.1 Fiby urskog: soils, topography and zonation of a Swedish primitive boreal forest; 2.5 Rain forests: climate, soils and variation; 2.5.1 Tropical rain forests: the changing archetype
2.5.1 Rain-forest history: the Australian story
3 Primary production and forest development; 3.1 Plant life forms and biological spectra; 3.1.1 Variation in vascular plant and bryophyte life form; 3.1.2 Local life form variation within a primitive forest; 3.2 Light and shade; 3.2.1 Influence of shade on tree development; 3.2.2 Light and shade plants: growth analysis; 3.2.3 Seasonal changes and aspect societies; 3.3 Water; 3.3.1 Water yield and quality; 3.3.2 Swamp forests and peatlands; 3.4 Temperature and pollutant influences on tree growth; 3.5 Altitudinal zonation and timberlines
3.5.1 Alpine timberlines
3.5.2 Temperature-moisture gradients below the timberline; 3.5.3 Arctic timberline limits; 3.6 Evergreen and deciduous strategies: aspects of competitive advantage; 3.7 Contrasts between three widespread tree genera: the pines, beeches and oaks; 3.7.1 Persistence, variation and adaptation within the genus Pinus; 3.7.2 Variation in the oaks and beeches; 3.7.3 Influence of soil conditions on pines, oaks and beeches; 3.7.4 Competition between gymnosperm and angiosperm trees; 3.8 Ecology and significance of ageing trees; 4 Reproductive strategies of forest plants
4.1 Plant strategies

Sommario/riassunto

Taking a functional rather than an ecosystem or a utilitarian approach, Thomas and Packham provide a concise account of the structure of woodlands and forests. Using examples from around the world - from polar treelines to savannahs to tropical rain forests - the authors explain the structure of the soil and the hidden world of the roots; how the main groups of organisms which live within them interact both positively and negatively. There is particular emphasis on woodland and forest processes, especially those involving the flow and cycling of nutrients, as well as the dynamics of wooded areas, considering how and why they have changed through geological time and continue to do so. This clear, non-technical, 2007 text will be of interest to undergraduates, foresters, ecologists and land managers.
