Broadleaves
- Forest dynamics, biodiversity and management for multiple-use

Course literature - Spring 2021 - SLU Alnarp

Forest history, forest dynamics and biodiversity (Jörg Brunet)

Bakker et al. 2016. Combining paleo-data and modern exclosure experiments to assess the impact of megafauna extinctions on woody vegetation. PNAS 113: 847–855.

Bond 2005. Large parts of the world are brown or black: a different view on the 'Green World' hypothesis. Journal of Vegetation Science 16: 261–266.

Brunet et al. 2014. Pathogen induced disturbance and succession in temperate forests: evidence from a 100-year data set in southern Sweden. Basic and Applied Ecology 15: 114-121.

Brunet et al. 2010. Biodiversity in European beech forests – a review with recommendations for sustainable forest management. Ecological Bulletins 53: 77-94.

Diekmann 999. Chapter 4: Southern deciduous forests. In: Swedish Plant Geography 1999 (Rydin, H. et al. eds). Acta Phytogeographica Suecica 84: 33-53.

Gilliam 2016. Tansley review: Forest ecosystems of temperate climatic regions: from ancient use to climate change. New Phytologist 212, 871–887.

Larsen et al. 2005. Ecology of tree species and species selection. In: Naturnaer skovdrift (edited by Larsen, J.B.)

Malhi et al. 2016. Megafauna and ecosystem function from the Pleistocene to the Anthropocene. PNAS 113: 838-846.

<u>Further optional reading for this part</u>

Corlett 2016. Restoration, reintroduction, and rewilding in a changing world. Trends in Ecology and Evolution 31: 453-462.

Kirby and Watkins (Eds.). 2015. Europe's changing woods and forests: from wildwood to managed landscapes. CAB International. 393 pp.

- Chapter 1 Overview of Europe´s wood and forests
- Chapter 2 Methods and approaches in the study of woodland history
- Chapter 3 The forest landscape before farming

Rackham 2008. Tansley review: Ancient woodlands - modern threats. New Phytologist 180: 571-586.

Ungulate ecology (Annika Felton)

Bergqvist et al. 2018. Forage availability and moose winter browsing in forest landscapes. Forest Ecology and Management 419: 170-178.

Faison et al. 2016. Ungulate browsers promote herbaceous layer diversity in logged temperate forests. Ecology and Evolution 6: 4591-4602.

Kolstad et al. 2018. Pervasive moose browsing in boreal forests alters successional trajectories by severely suppressing keystone species. Ecosphere 9: e02458.

Felton et al. 2020. Varied diets, including broadleaved forage, are important for a large herbivore species inhabiting highly modified landscapes. Scientific Reports 10:1-13.

Forest health (Michelle Cleary)

Allen et al. 2010. A global overview of drought and heat-induced tree mortality reveals emerging climate change risks for forests. Forest Ecology and Management 259, 660-684.

Boyd et al. 2013. The consequence of tree pests and diseases for ecosystem services. Science. 342, 1235773

Prospero and Cleary. 2017. Effects of host variability on the spread of invasive forest diseases. Forests. 8, 80.

Trumbore et al. 2015. Forest health and global change. Science. 349, 814-818.

Forest management and restoration (Magnus Löf)

Dey et al. 2008. Artificial regeneration of major oak (*Quercus*) species in the Eastern United States – a review of the literature. Forest Science 54, 77-106.

Dobson et al. 1997. Hopes for the future: Restoration ecology and conservation biology. Science 277, 515-522.

Gamfeldt 2013. Higher levels of multiple ecosystem services are found in forests with more tree species. Nature Communications 4, 1340.

Kelty 2006. The role of species mixtures in plantation forestry. Forest Ecology and Management 233, 195-204.

Kirby & Watkins (Eds.). 2015. Europe's changing woods and forests: from wildwood to managed landscapes. CAB International. 393 pp.

Chapter 5 Wood pastures in Europe
Chapter 6 Coppice silviculture: From the Mesolithic to the 21st century
Chapter 7 High forest management and the rise of the even-aged stands
Chapter 8 Close-to nature forestry

Löf et al. 2016. Management of oak forests: striking a balance between timber production, biodiversity and cultural services. International Journal of Biodiversity Science, Ecosystem Services and Management 12, 59-73.

Stanturf et al. 2014. Contemporary forest restoration: a review emphasizing function. Forest Ecology and Management 331, 292-323.

Further optional reading for this part
Cernansky 2018. How to rebuild a forest. Nature. 560, 542-544.

Larsen and Nielsen. 2007. Nature-based forest management—Where are we going? Elaborating forest development types in and with practice. Forest Ecology and Management 238, 107-117.

Saha et al. 2017. Lessons learned from oak cluster planting trials in central Europe. Canadian Journal of Forest Research 47, 139-148.

Bialowieza forest (Magnus Löf and Mats Niklasson)
Churski et al. 2017. Brown world forests: increased ungulate browsing keeps temperate trees in recruitment bottlenecks in resource hotspots. New Phytology 214: 158-168.

Kuijper et al. 2013. Landscape of fear in Europe: wolves affect spatial patterns of ungulate browsing in Bialowieza Primeval Forest, Poland. Ecography 36: 1263-1275.

Nowacki GJ, Abrams MC. 2008. The Demise of Fire and "Mesophication" of Forests in the Eastern United States. BioScience 58, 123-138.

Mikusiński G. et al. 2018. Is the impact of loggings in the last primeval lowland forest in Europe underestimated? The conservation issues of Białowieża Forest." Biological Conservation 227: 266-274.

Spînu AP. et al. 2020. Mesophication in temperate Europe. A dendrochronological reconstruction of tree succession and fires in a mixed deciduous stand in Bialowieza forest. Ecology and Evolution 10, 1029-1041.

Fast-growing broadleaves (Henrik Böhlenius)
Böhlenius and Övergaard 2015. Growth response of hybrid poplars to different types and levels of vegetation control. Scandinavian Journal of Forest Research 30, 516-525.

Böhlenius and Övergaard 2015. Exploration of optimal agricultural practices and seedling types for establishing poplar plantations. Forests 6, 2785-2798.

Böhlenius and Övergaard 2016. Impact of seedling type on early growth of poplar plantations on forest and agricultural land. Scandinavian Journal of Forest Research 31, 733-741.

Böhlenius et al. 2016. Growth response of hybrid aspen (populus × wettsteinii) and populus trichocarpa to different ph levels and nutrient availabilities. Canadian Journal of Forest Research 46, 1367-1374.

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Jobling (Ed.) 1990. Poplars for Wood Production and Amenity: The forest commition, Forest Research station, Alice Holt Lodge, UK.

Stanturf et al. 2014. Chapter 5, p 200-257. In Poplars and Willows, Trees for Society and the Environment. Isebrands and Richardson (Eds.), CABI, Oxfordshire, UK.

Tullus et al. 2012. Short-rotation forestry with hybrid aspen (Populus tremula L.×P. tremuloides Michx.) in Northern Europe. Scandinavian Journal of Forest Research 27, 10-29.

McCarthy and Rytter 2015. Productivity and thinning effects in hybrid aspen root sucker stands. Forest Ecology and Management 354, 215-223.