Heather D. Alexander
Associate Professor, College of Forestry, Wildlife, and Environment, Auburn University

Talk Title: Mesophication of oak landscapes: mechanisms and management

Summary: Across the central and eastern U.S., historically fire-adapted oak savannas and woodlands are shifting to closed-canopied forests with increased dominance of fire-sensitive and/or opportunistic tree species. These changes in forest structure and composition are promoting a positive feedback loop known as mesophication, whereby encroaching species (i.e., mesophytes) create cool, moist understory conditions with low flammability fuels. Dr. Alexander's recent work highlights how mesophytes contribute to declining flammability of oak landscapes. Restoring fire to historically fire-adapted oak landscapes is critical for preserving biodiversity and preventing catastrophic wildfires.

Biosketch: Dr. Alexander is an Associate Professor of forest and fire ecology and the Dwain G. Luce Endowed Professor of Forestry in the College of Forestry, Wildlife, and Environment at Auburn University, where she teaches undergraduate classes in forest ecology and forest fire management. She received her B.S. and M.S. degrees from the University of Texas at Austin, her Ph.D. from the University of Kentucky, and performed her post-doctoral research at the University of Florida. Her research program at Auburn focuses on understanding forest ecosystem vulnerability in the face of changing fire disturbance regimes using observations across natural gradients and field-based experimental manipulations. She has studied fire effects on the composition, structure, and function of oak, mixedwood, and pine forests of the eastern U.S. for 20 years and has a strong interest in understanding the implications of mesophication for carbon dynamics and forest flammability.

Tim Boland
Executive Director, Polly Hill Arboretum

Talk Title: Global overview of oak forests, their importance, and conservation efforts

Summary: Join oak enthusiast Tim Boland as he presents a snapshot of global oak diversity, worldwide cultural connections with oaks, and the pressing need for oak research and conservation. Mr. Boland will also share the mission of the International Oak Society and current programs involving the sustainable uses of oak, propagation, and the protection of endangered species and oak habitats.

Bio: Mr. Boland is the Executive Director of the Polly Hill Arboretum, located on the island of Martha's Vineyard in West Tisbury, Massachusetts. He holds an undergraduate degree in Horticulture and an M.S. in Botany, Plant Ecology, and Systematics from Michigan State University. Tim specializes in oaks from all over the world. He is involved in various plant conservation projects to preserve threatened oaks in North America, Europe, and Asia. He is a member of the Board of the International Oak Society and chair of the Oak Conservation and Research Committee, which manages a grant program that currently funds eleven projects, five of which are in Mexico. In addition, Tim and his conservation partners on the Island are working on a modern flora of Martha's Vineyard and the surrounding islands. He also has expertise in propagating rare North American trees and shrubs and has been involved with seven expeditions, mapping and collecting two species of native North American *Stewartia*.

Dallin Brooks
Executive Director, National Hardwood Lumber Association

Talk Title: International trade and markets

Summary: Wood was probably the most important natural resource in early human economies. This presentation will go over the history of hardwoods in North America from Native Americans leading up to the Industrial Revolution. Mr. Brooks will then discuss hardwoods and white oak today for industrial, consumer, and other uses. As we look to the future, we need to demonstrate to the public and those professionals engaged in building and design that the hardwood industry can be forever innovative and provide an endless future of wood use.

Bio: Mr. Brooks is the Executive Director of the National Hardwood Lumber Association. There he continues to lead the NHLA in its goals to provide education, networking, and lumber services to the hardwood industry. Dallin focuses on research, collaboration and promotion to advance hardwood lumber markets. Prior to joining the NHLA, Dallin worked at the Western Wood Preservers Institute where he promoted and advocated for the use of preserved wood and fire-retardant treated wood. Dallin has a B.S. in Wood Products Processing and a M.S. in Forest and Society from the University of British Columbia. Dallin's other true passions are sitting on a lake and fishing in the summer and moose calling in the fall.

Constança Camilo-Alves
Researcher, Mediterranean Institute for Agriculture, Environment and Development & The Institute for Research and Advanced Training, Universidade de Évora

Talk Title: Cork oak afforestation using innovative techniques to combat climate change

Summary: Cork oak (*Quercus suber*) woodlands are distributed across the western Mediterranean, and are renowned for their cork, which is essential for the wine industry. However, cork oak woodlands face severe threats and an alarming decline in regeneration. Dr. Camilo-Alves's scientific research is focused on the structural-functional responses of trees to water availability during periods of high air temperatures. Results are very promising and highlight cork oaks' remarkable adaptability to tolerate varying environmental conditions. Establishing highly productive cork oak forests within 15 to 20 years from planting may encourage producers to opt for cork oak forests over cover types containing exotic tree species or agropastoral land use.

Bio: Dr. Camilo-Alves is a Researcher at the University of Évora. She holds a degree in Biology from the University of Lisbon and an M.S. in Ecology and Conservation from UFMS, Brazil. Her Ph.D. in Forestry Sciences was focused on Mediterranean oak decline. Her work centers on forest dynamics, ranging from structural-functional development to vitality and growth. Her projects focus on researching efficient irrigation in new cork oak stands, mitigating fire risk in Mediterranean forests, and developing sustainable forest management practices aimed at fostering a resilient forest in the face of climate change.

Daniel C. Dey
Assistant Station Director, Northern Research Station, USDA Forest Service

Talk Title: Fire and the oak regeneration process

Summary: This presentation provides an overview of fire-oak interactions throughout the life cycle of oak as they impact oak regeneration success. Use of frequent fire may be good at increasing oak abundance and competitiveness as advance reproduction, especially when used with stand thinning or shelterwood harvesting. Fire alone is seldom the solution to restoring and sustaining these ecosystems, especially in the early stages of restoration, where novel vegetation conditions and threats posed by invasive species demand the combination of fire with other practices. Combined with other practices, fire and the sequencing of treatments over time are fundamental to prescription design and management success.

Bio: Dr. Dey is Assistant Director of Research for the USDA Forest Service, Northern Research Station. Dan has been a Research Forester from 1987 to the present. His personal research emphasis is focused on the ecology and silviculture of eastern forests, woodlands, and savannas. He supervises research units across the 20-state region of the Midwest, Great Lakes, MidAtlantic, and Northeast. He worked as a research forester for the Ontario Ministry of Natural Resources, the Missouri Dept of Conservation, and the USDA Forest Service Northern Research Station. He has been conducting research for the Forest Service since 1998. Dan began his career as a forester on the Ketchikan Ranger District, Tongass National Forest and the Red River Ranger District, Nez Perce National Forest. He was recently the recipient of the Lifetime Silviculture Excellence award at the National Silviculture Workshop in Tacoma, Washington.

Jason Meyer
Executive Director, White Oak Initiative

Talk Title: Raising awareness and securing support for white oak sustainability

Summary: The White Oak Initiative (WOI) is a diverse coalition of partners dedicated to ensuring the long-term sustainability of America's upland oak forests and the myriad benefits they provide. The WOI brings together stakeholders from various sectors and has advocated for responsible policy that supports forest management, including the introduction of HF 5582, the White Oak Resilience Act and other policy efforts. Looking ahead, the WOI aims to deepen its impact by expanding partnerships, enhancing public awareness, and assisting partners with securing additional resources for research and conservation.

Bio: With a background in conservation, environmental education, and nonprofit management, Mr. Meyer brings a diverse set of skills and experiences to the White Oak Initiative. Prior to leading two nonprofit nature centers, he was a Registered Professional Forester in California, working with the California Dept. of Forestry & Fire Protection (CAL FIRE). A REALLY long time ago, he worked on the Boise National Forest for a summer marking timber sales. He has significant organizational leadership, planning, fundraising, and board development experience and he is excited to use this experience to move the White Oak Initiative forward into its next chapter.

Somidh Saha
Scientist and Group Leader, Institute for Technology Assessment and Systems Analysis (ITAS), Karlsruhe Institute of Technology (KIT)

Talk Title: Cluster planting to create mixed broadleaf forests with high-quality oak trees in Europe

Summary: Creating mixed forests by converting monospecific stands or restoring degraded forests is seen as a climate change adaptation strategy and option for increasing the supply of ecosystem services. Cost-effective low-density tree planting combines enrichment planting of desired tree species with natural regeneration. Dr. Saha compared the silvicultural and ecological attributes between oak cluster and row plantings among 52 stands in Germany, Austria, and Switzerland. Group planting of oaks can be a promising alternative to traditional row planting and should be experimented with other temperate and tropical forest ecosystems where the goal is to create a mixed forest through low intervention.

Bio: Dr. Saha is a Forestry Scientist with experience and interest in restoration silviculture and urban forestry. He studied zoology and forestry in India and Germany. He also worked as a forester before switching to an academic career path. Oak group planting, a cost-effective type of cluster planting, has become well-established among forest owners and foresters in Germany after Somidh's Ph.D. in 2012 demonstrated both the silvicultural and ecological benefits of group planting over conventional row planting. Currently, he leads a research group named "Sylvanus" at the Karlsruhe Institute of Technology, Germany, a research university within the Helmholtz Association."

Scott E. Schlarbaum
Professor, School of Natural Resources, The University of Tennessee

Talk Title: Fifty (plus) years of tree improvement in oak species

Summary: Dr. Schlarbaum will reflect on his personal experience in oak tree improvement research and artificial regeneration in Eastern North America, starting in 1974 and continuing to the present day. Genetic variation in growth, reproductive maturation and capacity, seedling and acorn characteristics, form, seedling quality, acorn production, flood tolerance, and other traits have been detected, and selections for these traits can be made. The most significant problem oak improvement programs face is continuity of effort over time. Changes in laws governing Federal and State programs need to be enacted to ensure continuity of applied oak improvement programs over generations.

Bio: Dr. Schlarbaum joined the School of Natural Resources in 1984 and is currently a Professor of Forest Genetics and Director of the University of Tennessee's Tree Improvement Program, a 64-year-old research and development program. He is the author of numerous articles on forest genetics, tree improvement, forest health, and plant cytogenetics. Professor Schlarbaum has testified as an expert witness on forestry and forest health issues before the U.S. House of Representatives and before Tennessee legislative committees. He was the Science Advisor for Exotic Forest Pests to the National Park Service from 2005-2010 and an Associate Editor for Silvae Genetica.

Callie Schweitzer
Research Forester, Southern Research Station, USDA Forest Service
&
Magnus Löf
Head of Department and Professor, Southern Swedish Forest Research Centre, Swedish University of Agricultural Sciences

Talk Title: Challenges for management of amazing American *Quercus* communities under threat and rich *Quercus* forests in Europe

Summary: Oak-dominated forests are naturally widespread in Eurasia and the Americas. There are approximately 20 species of oaks in Europe and 435 species in the Americas. Many of them are foundational species ranking among the most important tree species for biodiversity. Examples of challenges, implications and possible solutions for management and restoration of oak communities in Europe and the Americas will be presented. A nonmanagement approach will lead to the transformation of these biodiverse habitats to other forest types or land uses. A system of support that allows landowners to receive financial assistance and knowledge along with social and economic drivers will be crucial to sustainability of oak across multiple continents.

Schweitzer Bio: Dr. Schweitzer works for the USDA Forest Service, Southern Research Station. She is a Research Forester in the Upland Hardwood Ecology and Management Research Work Unit and is currently serving as the Acting Project Leader for the Forest Engineering and Forest Utilization Research Work Units. Dr. Schweitzer received her Ph.D. in Forest Resources at Penn State University, where she studied acidification of forested ecosystems. Her current research focuses on forest management and silviculture of upland hardwood forests, with an emphasis on sustaining oak. Her collaborative research has delved into how silviculture can create desired habitat for herpetofauna and avian communities, the impacts of fire on forest vegetation and fuel dynamics and increasing forest resilience to exotic pests. She is a Society of American Foresters Fellow and was recognized with the USDA Forest Service's National Silviculture Award.

Löf Bio: Dr. Löf is Professor of Silviculture at the Southern Swedish Forest Research Centre, Swedish University of Agricultural Sciences in Alnarp, where he teaches "Broadleaves: forest dynamics, biodiversity and management for multiple use". His research interests have been related to forest restoration and adaptation of forest management regimes to global change. Presently his research is directed towards regeneration and management of continuous cover forests and mixed-species stands including effects on growth and yield and resistance and resilience following drought. He has studied European oaks throughout his career, and he is active in the IUFRO unit "Ecology and Silviculture of Oaks".

Ken Smith
Senior Manager, Wood Procurement, Brown-Forman

Talk Title: Oak in the distilling industry

Summary: Mr. Smith's discussion will open with an overview of the cooperage industry with a brief history of the origins of coopering and barrel production and the importance of transporting goods for commerce and trade. The conversation will move to present day coopering and the importance of white oak (*Quercus alba*) in barrel manufacturing from harvesting to production at a stave mill, the seasoning and drying process, and the barrel raising process. Finally, the discussion will conclude with where we are as an industry, the importance of white oak in forest industry, and what we can do as an industry to promote white oak.

Bio: Mr. Smith is the Senior Manager of Wood Procurement for Brown-Forman located in Louisville, Kentucky where bourbon barrels are manufactured for Brown-Forman brands such as Jack Daniels, Woodford Reserve and Old Forester. Prior to working for Brown-Forman, Ken worked within forest industry, the USDA Forest Service, and several milling operations where he primarily purchased logs for veneer, quarter sawn lumber, flooring, and export orders. When not working, Ken enjoys spending time hiking, camping and traveling with family.

Victoria Sork
Distinguished Professor, Department of Ecology and Evolutionary Biology, UCLA

Talk Title: How can oaks survive and thrive in future climates?

Summary: Oaks (*Quercus*) are an amazingly resilient genus of trees. Humans are now exposing oak species to unprecedented rates of climate warming. In this talk, I will explore ways that genomics can provide tools to help oaks persist in future climates. Landscape genomics, assisted gene flow, and genomic methods could all be used for the management of existing oak populations vulnerable to climate warming and the restoration of populations destroyed by prior deforestation or recent fires. Oaks have been a resilient genus throughout their evolutionary history. Active intervention may allow some species to survive and eventually thrive in future climates.

Bio: Dr. Sork is a Plant Biologist, Evolutionary Geneticist, and Conservation Scientist who studies how long-lived trees will survive rapid climate warming, with a special focus on the evolutionary success of oaks. Author of 150 publications, her research has integrated many approaches, including landscape genomics, population and quantitative genetics, epigenetics, ecology and conservation biology. She is an elected member of the American Academy of Arts and Sciences, the American Association for Advancement of Sciences, and the California Academy of Sciences. Victoria has been a Professor at UCLA since 2001, and is now the Director of the UCLA Mathias Botanical Garden. Sork received her B.S. from University of California Irvine and a Ph.D. from the University of Michigan.

Yana Valachovic
County Director and Forest Advisor for Humboldt and Del Norte Counties, Univeristy of California Cooperative Extension

Talk Title: Oak restoration and techniques to manage woody encroachment in western North American oak woodlands

Summary: California's North Coast oak woodlands, dominated by deciduous Oregon white oak (*Quercus garryana*) and California black oak (*Q. kelloggii*), have been central to the ecology and culture of the region, but both types of woodlands are in decline. This talk will coalesce a decade of study on the ecology of these woodlands, the effectiveness of management interventions, and the use of prescribed fire. This work has served to document many of the deleterious effects of encroachment on terrestrial ecosystems. Recent droughts have magnified the connections between forest densification, water availability, and tree health, and prompted questions on the impacts of encroachment on limited water supplies.

Bio: Ms. Valachovic is a Registered Professional Forester and Forest Scientist currently working with the Univeristy of California Cooperative Extension. Her skills and interests cover a broad set of natural resource fields. Her research has addressed the ecology of California conifer and oak ecosystems, management of forest pathogens, effects of forest management on redwood lumber durability, water demands of forest densification, impacts of code changes on wildfire building performance, and sociological aspects of *Cannabis* production. She was raised on the North Coast of California and feels fortunate to have worked at many scales to improve the health of North Coast forests. Yana has been collaborating with many scientists and managers to understand the region's oak ecology, and the team's research has led to a comprehensive set of permitting options to help incentivize and legalize oak restoration in the California Forest Practice Rules.