Managing Conserved Forest Ecosystems: New Questions & Directions



Shibu Jose

Associate Professor of Forest Ecology and Co-Director, CFEOR School of Forest Resources and Conservation, University of Florida

PLAM Conference, December 4, 2008

http://sfrc.ufl.edu/cfeor

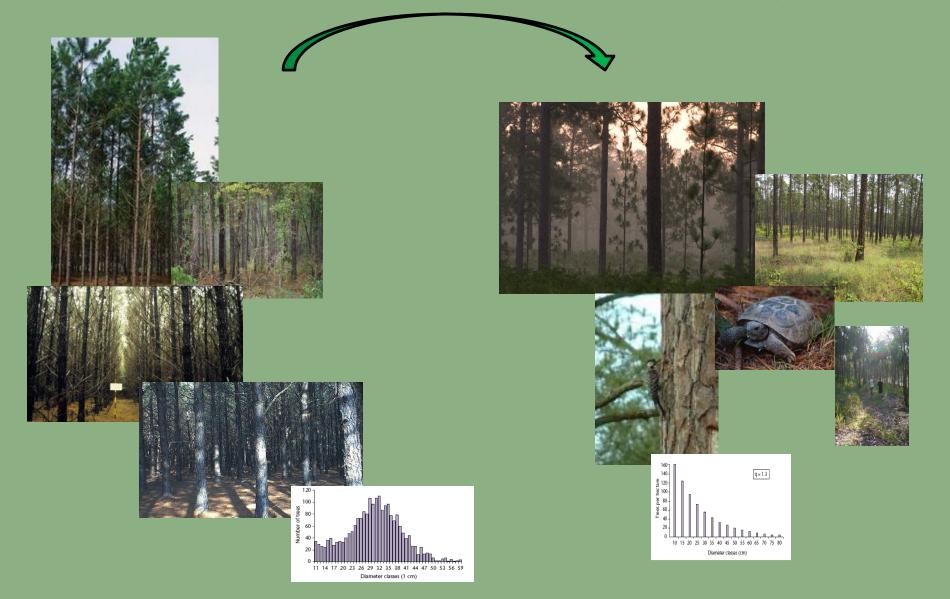
Managing Conserved Forest Ecosystems: The Ecological Challenges

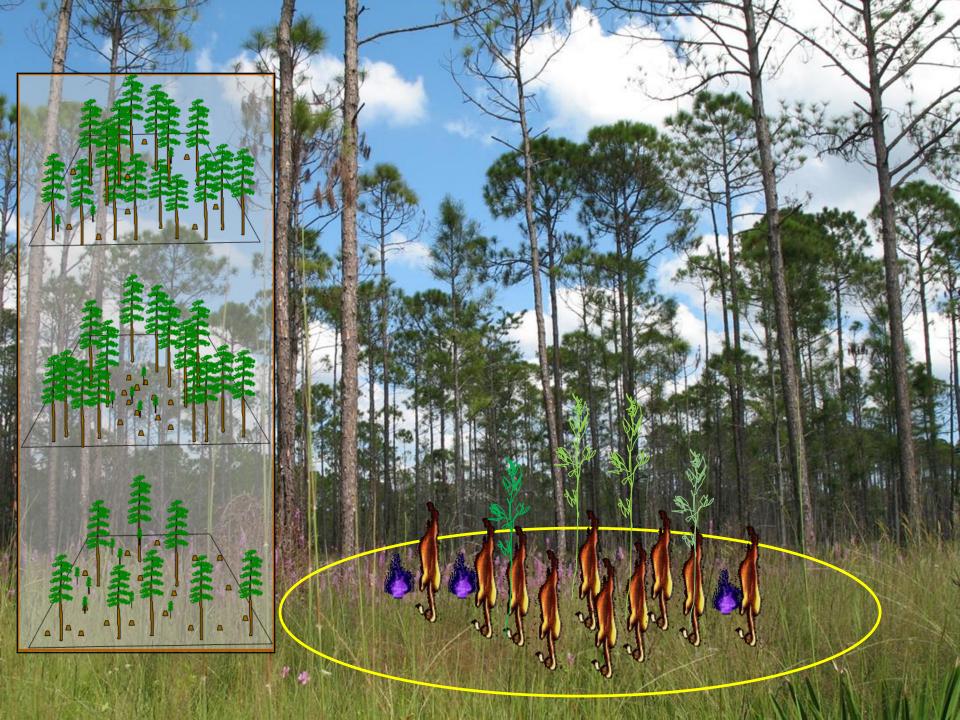
- Scientifically derived management strategies are key to sustainable restoration and management – for the commodities and services that we desire from public lands
- With shrinking budgets, how do you obtain science-based knowledge?
- Ecological questions take decades to find answers Can we even afford to wait?
- Large scale, long-term adaptive management projects are, perhaps, one solution

The Ecological Questions and Challenges

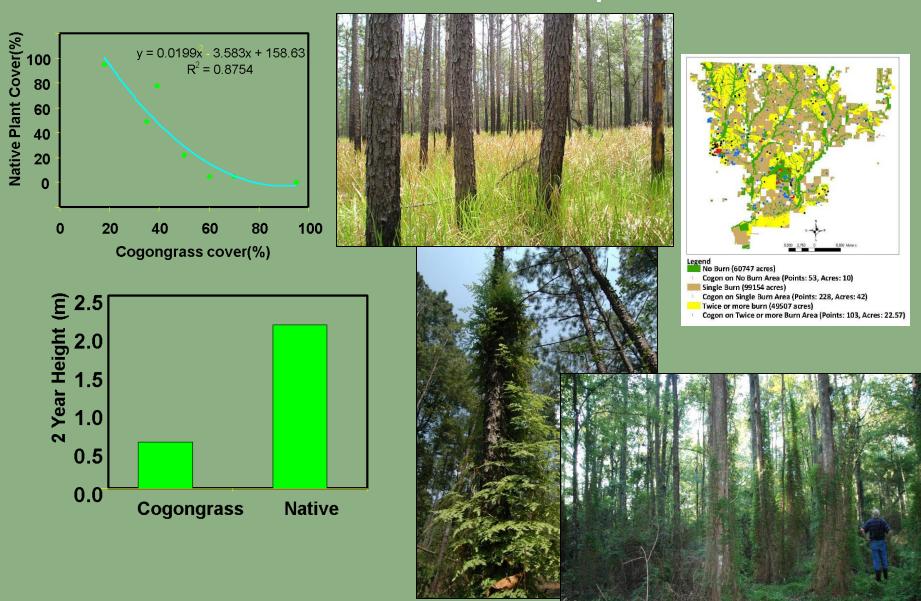
- Conversion/restoration of even-aged plantation forests to uneven-aged ecosystems
- Non-native invasive species impacts on ecosystem health/integrity and management strategies
- Prescribed fire frequency, season, wildland-urban interface issues
- Water quality and quantity watershed management issues
- Biomass and biofuel where do managed conserved forests fit in?
- Emerging carbon credit market opportunities and challenges

Conversion from Even to Uneven-aged

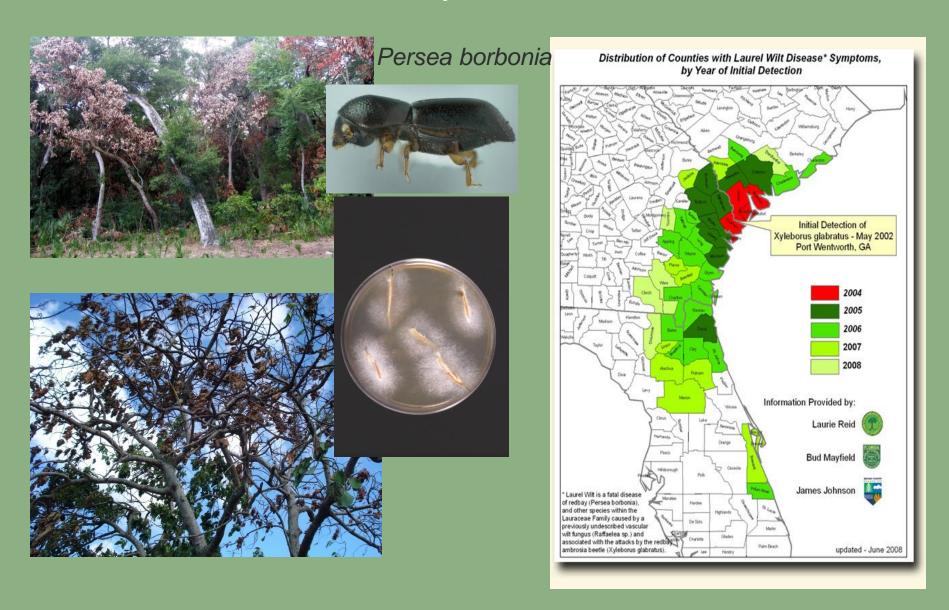




Non-native Invasive Species

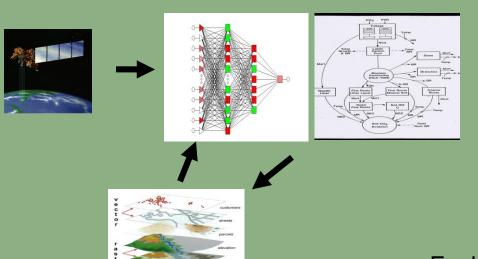


Non-native Invasive Species – The Laurel Wilt





Prescribed fire





Fuels treatment impacts on fire behavior

Development and application of simulation models.

Fire season effects on flowering characteristics and germination of sandhill understory species

Overstory and understory response to prescribed and wildfires in sandpine scrub ecosystems

Fire severity mapping following Scrub fire at the Juniper prairie Wilderness Preserve at the Ocala National Forest

Water Quality and Quantity



Spatial and temporal nutrient loading dynamics to Newnans Lake, a shallow hyper-eutrophic lake in Alachua County

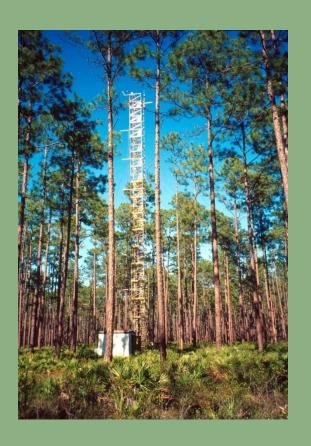
Examine natural and anthropogenuc sources contributing to the pollution



The primary source of phosphorus (P) loading into hyper-eutrophic Newnans Lake comes from naturally occurring geologic sources not from pine silviculture

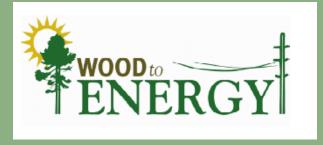
Recovery and regeneration of forested wetlands following harvesting using mat logging techniques

Biomass and Biofuel and Carbon Credits



Quantifying the carbon sequestration potential of forest ecosystems in FL

Southeastern forests contain 12 billion MT of C, i.e. 36% the sequestered C in the conterminous U.S.



Increase awareness and knowledge about using woody biomass for energy production

New project: (1) Examine the potential of forest understory biomass harvestable for bio-energy production and (2) Assess technical and economical feasibility of an understory biomass harvesting operation.



How does the information get to practitioners?

Outreach Activities:

- CFEOR Updates
- CFEOR website
- CFEOR Workshops
- Conference Participation









Questions?

http://sfrc.ufl.edu/cfeor