

# Florida Land Steward

## 2020 Short Course Webinar Series





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**Chris Demers**

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# 2020 Short Course Webinar Series



## Agenda:

### **Webinar 1: October 15, 2020, 2 pm ET; How to Sell Your Timber**

Scott Sager, Forester, UF/IFAS School of Forest Resources and Conservation

### **Webinar 2: October 22, 2020, 2 pm ET; How to Integrate Wildlife and Forestry**

Joe Vaughn and Megan Ellis, Landowner Assistance Program Biologists, Florida Fish and Wildlife Conservation Commission

### **Webinar 3: November 5, 2020, 2 pm ET; Using Biomass Harvesting for Reforestation & Restoration**

Jib Davidson, Forester, Columbia Timber and Environmental Services

### **Webinar 4: November 12, 2020, 2 pm ET; Prepare for and Recover more quickly from the next Hurricane**

Chris Demers, UF/IFAS School of Forest Resources and Conservation



# 2020 Short Course Webinar Series



**Please use the Q & A function to ask questions, not the Chat. Questions will be answered after all presentations are complete.**



# 2020 Short Course Webinar Series



Please complete **the very short evaluation** at end of the webinar – *Thanks!*

Presentation slides and other reading materials for this series are available online at:

<https://programs.ifas.ufl.edu/florida-land-steward/>



# 2020 Short Course Webinar Series



## SAF Continuing Forestry Education Credits:

1.0 Cat. 1 CFE approved

Verification by registration and Zoom Webinar attendance log



# Florida Land Steward

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### Webinar 2: How to Integrate Wildlife and Forestry

Joe Vaughn and Megan Ellis, Landowner Assistance Biologists,  
Florida Fish and Wildlife Conservation Commission

A diverse groundcover is not easy to establish. Don't lose it if you have it. With some planning and deliberate management you can manage a productive and healthy forest without compromising the habitat value.





# How to Integrate Wildlife and Forestry

Joe Vaughn  
and

Megan Ellis

Florida Fish & Wildlife  
Conservation Commission  
Landowner Assistance  
Program (LAP)

[Joseph.Vaughn@MyFwc.com](mailto:Joseph.Vaughn@MyFwc.com)

**386-586-8472**

[Megan.Ellis@MyFWC.com](mailto:Megan.Ellis@MyFWC.com)

**352-339-3016**





# Aldo Leopold

“If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of eons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering.”





# Aldo Leopold

“A system of conservation based solely on economic self-interest is hopelessly lopsided. It tends to ignore, and thus eventually to eliminate, many elements in the land community that lack commercial value but that are essential to its healthy functioning. It assumes, falsely, I think, that the economic parts of the biotic clock will function without the uneconomic parts.”



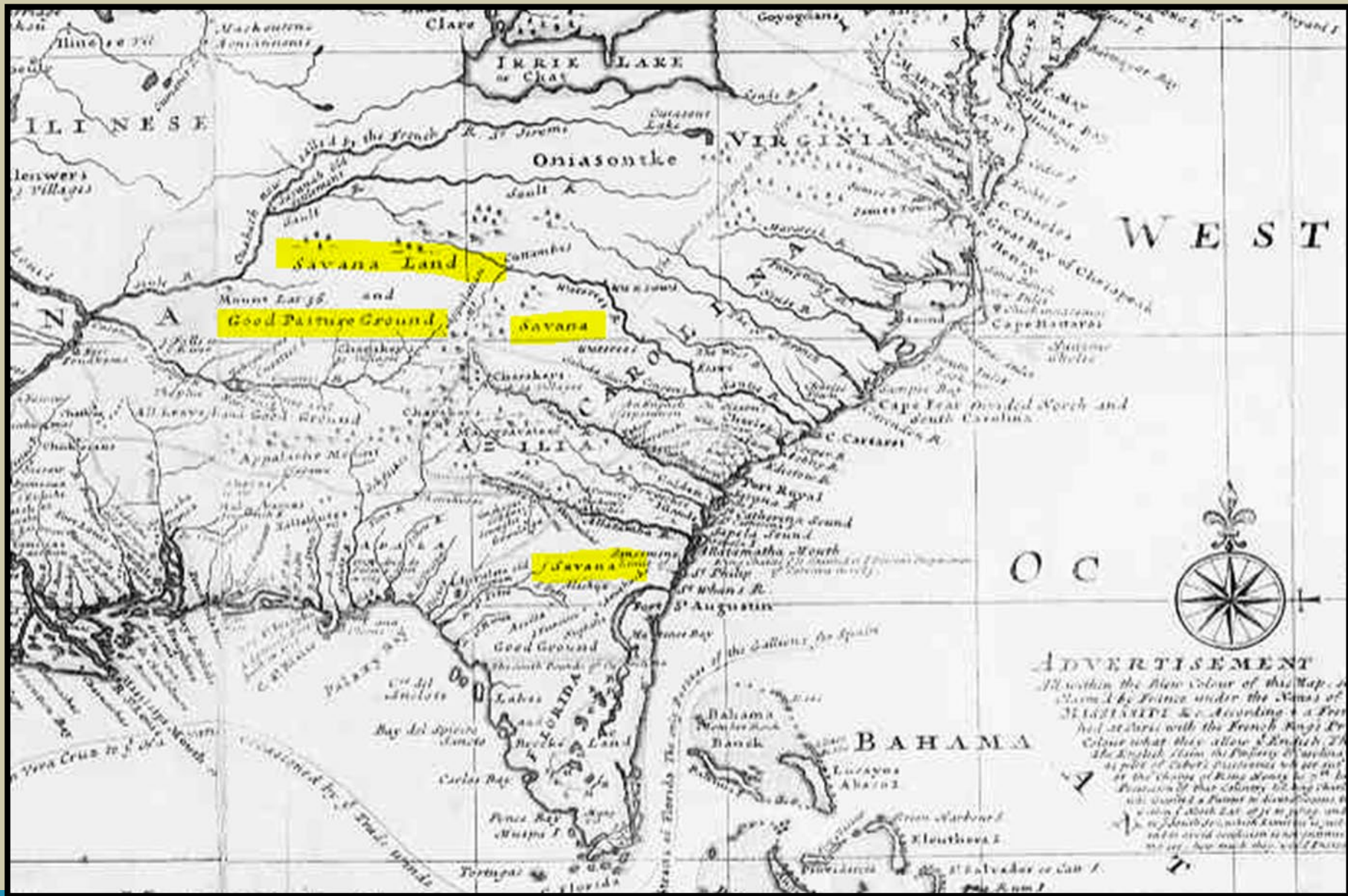
# Aldo Leopold

“A land ethic of course cannot prevent the alteration, management, and use of these resources, but it does affirm their right to continued existence, and at least in spots, their continued existence in a natural state. In short, a land ethic changes the role of Homo Sapiens from conqueror of the land-community to plain member and citizen of it.”





# French Map 1720



# Plant Diversity is Key!!!

“...expansive, airy pine forests...the earth covered with grasses, interspersed with an infinite variety of herbaceous plants, and embellished with extensive savannas, always green...”

**William Bartram 1773-77**





# Pine Savanna

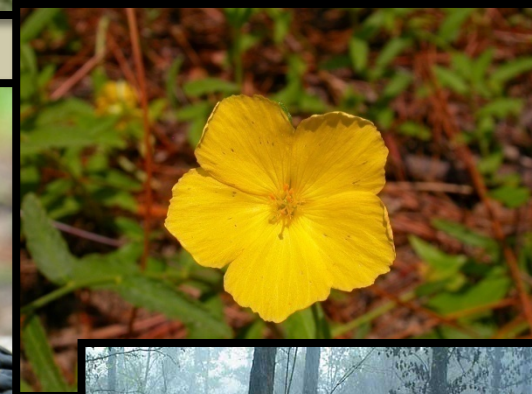


- Tall, majestic, and ancient stands dominated by a single species of tree - the Longleaf Pine.
- Widely spaced pine trees with a sparse midstory of deciduous oaks and a moderate to dense groundcover of grasses, herbs, and low shrubs.
- A well developed ground layer with a high diversity of plant species. 1 square meter has produced 52 species, with an estimated 900 to 1200 species range-wide.
- Numerous wildlife species are or were dependent upon the open pine forest
- Frequent fires that skimmed across the ground's surface keeping the hardwoods in check, stimulating and maintaining the species richness in this ecosystem



# Longleaf Pine Community

- Among the most biologically diverse communities in the U.S.
- 80+ species of birds (excluding migrants) utilize this community to fulfill essential aspects of their life histories





# What are the Issues

Why have we lost so much wildlife in our pine stands?





# Conversion





# Pine Straw Production





# Bedding when not needed





# Not bedded, groundcover retained





# Root Raking





So if you want wildlife, protect the  
groundcover!





If this is  
what your  
stand looks  
like, what  
can you do  
to recover  
and  
maintain  
some of the  
groundcover  
?





# You Can

- Thin your stand at the earliest age possible – Allows sunlight to reach the ground
- Burn stands on a short interval (2 to 4 years) – Keeps hardwoods in check & stimulates groundcover species
- Manage for longer rotation (45 years +) – Allows a robust groundcover to persist
- Favor longleaf pine over slash or loblolly where appropriate – Earlier burning and more often
- Leave snags (Dead Trees) – Homes and food resources for many species of birds/mammals/reptiles





# You Can

- Create openings – Space for wildlife/plants and insects
- Plant at lower densities – 450 to 600 trees/acre – Allows sunlight to stimulate groundcover
- Use carefully selected herbicides that target woody species, NO reason to kill native grasses/forbs and legumes –  
Preserves important food and cover resources for wildlife
- learn to identify and then control or eradicate invasive plant species – Preserves the native groundcover and food resources for wildlife





# Thin

- BA = 40 or below, little to no timber value, excellent wildlife value
- BA = 50 to 60, reduced timber value, high wildlife value
- BA = 60 to 90, good timber revenue, fair wildlife value
- BA = 100+, you lose a lot of species, though some do persist in lower numbers

## Basal Area (BA)

Basal area is the cross-sectional area of trees at breast height. It is a common way to describe stand density. In forest management, basal area usually refers to merchantable timber and is given on a per acre basis.



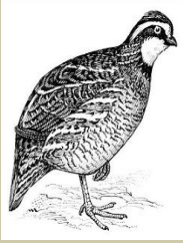


# Prescribe Burn

- Lowers the amount of fuel build-up, thereby, lowering fire intensity
- Reduces competition from oaks and shrubs
- Stimulates native grasses and forbs to synchronize flowering and increase seed production
- Increases the amount, the palatability and the nutritional value of native forage
- Consumes forest litter while recycling nutrients
- Builds in vegetative structural diversity, especially spring/summer burning







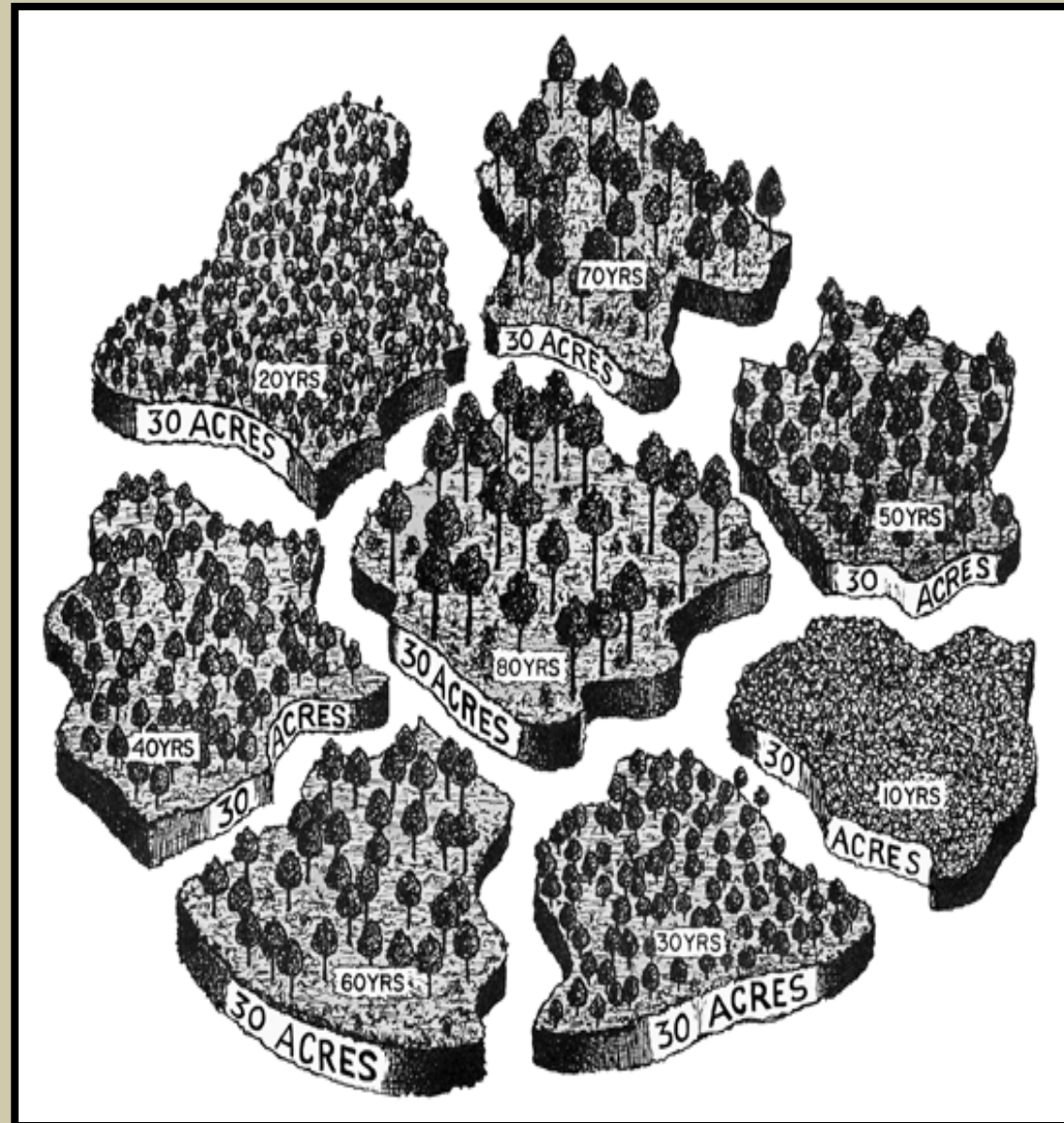
Burned herbaceous understories have proven to have significantly higher insect populations than unburned areas, an invaluable source of protein for young quail and other birds





# Rotation

- In this example, 240 acres are managed in 30-acre plots
- This is an outstanding example of structural diversity across the landscape
- Does not have to be this detailed but this is the idea of providing the various habitat conditions for a wide range of species





# Convert

- Slash pine plantation on right, 20-year-old
- 2 to 3-year-old longleaf pine on left
- Notice the oak control as site prep for the LLP site
- There is diversity in the species planted, in the density and in the age





# Favor LLP over LOB

- 5 to 10-year-old LLP on left
- Same age Loblolly pine on right
- Planted at the same density, 600 tpa
- Note the difference in amount of groundcover and canopy closure





# Snags

(Dead Trees)

- Homes for 30 to 40 + species of cavity nesting birds, mammals and reptiles.
- Absent from most pine plantations
- Serves as habitat while standing and when on the ground





# Snags come in many forms

Homes come  
in many  
forms





# Create Openings

- An important concept in managing for wildlife is the realization that wildlife prefer many different types of vegetation to be present, i.e., **vegetative diversity**
- Transition zones are areas where 2 or more habitats converge, in which the vegetative cover is a mix of the adjacent habitats. Transition zones are also called edges or ecotones.





# Maintain your Openings

- Use old logging decks/ramps
- Burn or Mow every 1 to 3 years
- The larger the better
- Design with irregular borders, if you can





# Planting Density

- 726 tpa = great for silviculture, ok for some species wildlife
  - 600 tpa = good for silviculture, good for many species of wildlife
  - 450 tpa = ok for silviculture, great for most species of wildlife
  - Much less than 450 tpa = not really accepted as silviculture but outstanding for wildlife
- What is the right choice,  
it is your land, it is your goals,  
it is the landowner's decision  
to make!





# Invasive Plants

- Cogongrass
- Chinese tallow Tree
- Tropical soda apple
- Japanese climbing fern
- Hairy indigo
- Any many more



Cogon grass



# Successful Restoration (Sandhill)





# Looks Like This





# Successful Restoration (Flatwoods)





# Looks Like This





# Aldo Leopold

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but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering.”





# Birds





# Longleaf Pine Ecosystem

29 species (27 vertebrates, 2 invertebrates) listed as special concern, rare, threatened or endangered are associated with this ecosystem







*Rudbeckia hirta*  
Photo by Betty Wargo

...at least 4 other  
Coneflowers

...at least 11 other  
milkweeds!



*Asclepias tuberosa*  
Photo by Allen Brumman

Tall Ironweed  
(*Vernonia angustifolia*)



© Shirley Denton



*Liatris tenuifolia*  
Photo by Betty Wargo

...at least 8 other  
blazing stars!



Florida Balm  
(*Dicerandra densiflora*)



© Shirley Denton

Carphephorus





# Grasses



Lop-sided  
Indiangrass

Bristlegrass



Shirley Denton, August 2000

Splitbeard  
bluestem



Toothache grass



© Shirley Denton

Purple lovegrass



Wiregrass

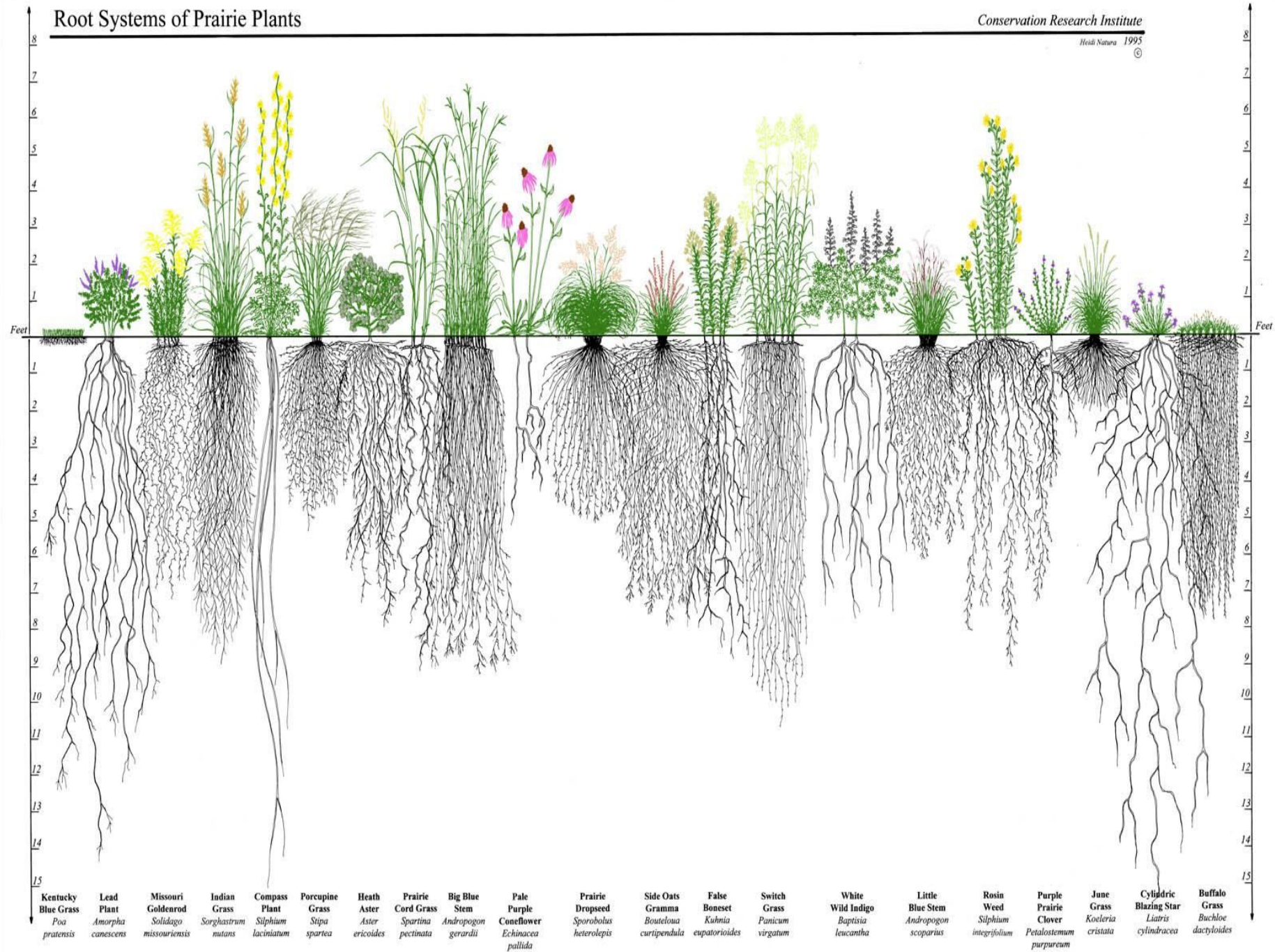




# Root Systems of Prairie Plants

Conservation Research Institute

Heidi Natura 1995  
©





Chinquapin



# Shrubs

Pokeweed



Staggerbush



Shiny blueberry



Beautyberry

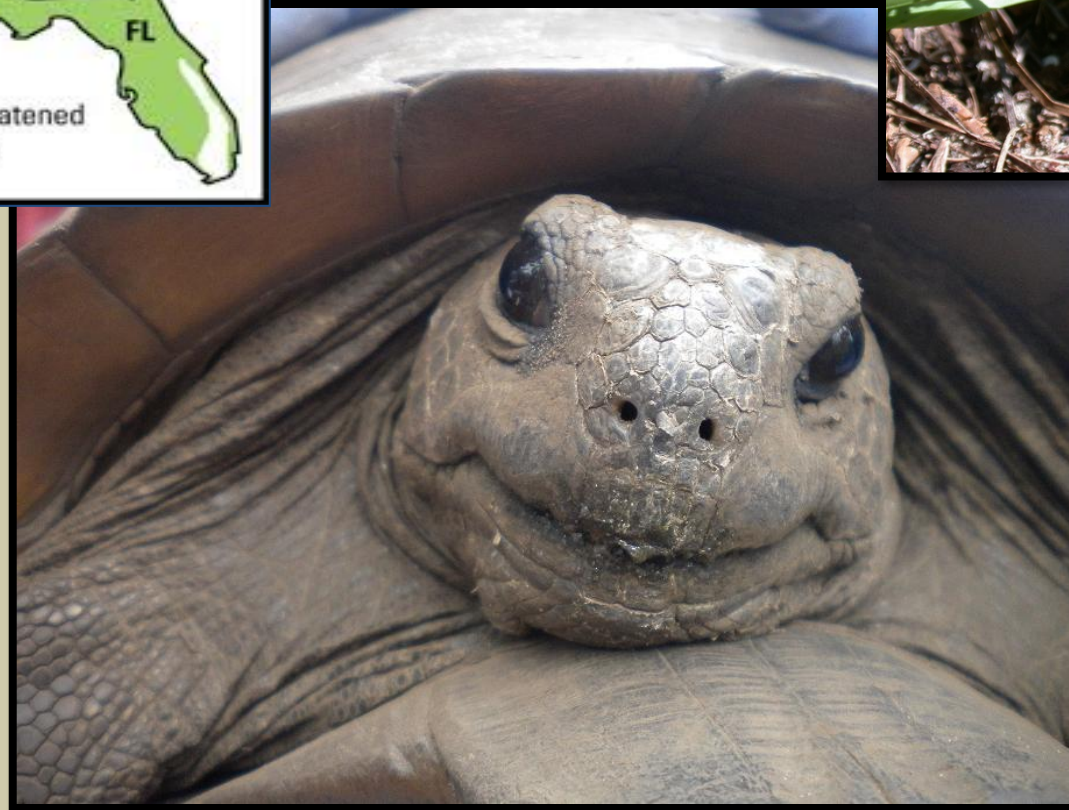


Winged sumac





# Gopher Tortoise





# Tortoise Burrows

- Burrows are used by 350 + species as a refuge from fire, predators and, weather.
- Burrow excavation and maintenance recycles soil nutrients.
- Females usually nest on burrow apron.





# Threats

- Closed canopy forest
- Development
- Roads
- Dogs (especially medium to large breeds)
- Intensive ground disturbance  
(bedding, broad spectrum herbicide use, high density pine planting...)





# Snakes



Eastern indigo snake

Scarlet kingsnake



Eastern diamondback



Coachwhip snake

Hognose snake





# Lizards





# Ephemeral ponds and Wetlands



Fire is critical for maintaining open pond borders needed by amphibians to allow access to breeding sites





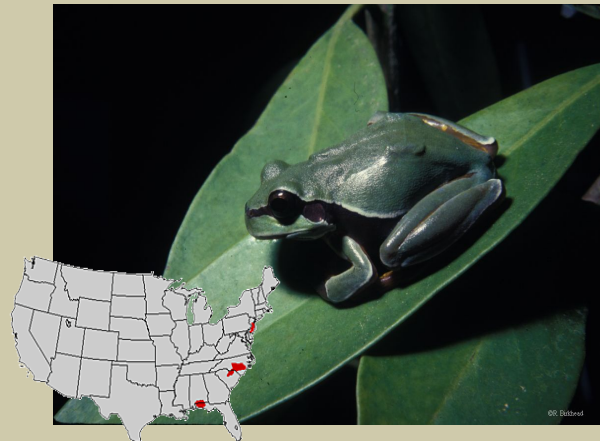
# Frogs



Barking tree frog-  
*Hyla gratiosa*



Pinewoods tree frog-  
*Hyla femoralis*



Pine Barrens tree frog-*Hyla*  
*andersoni*

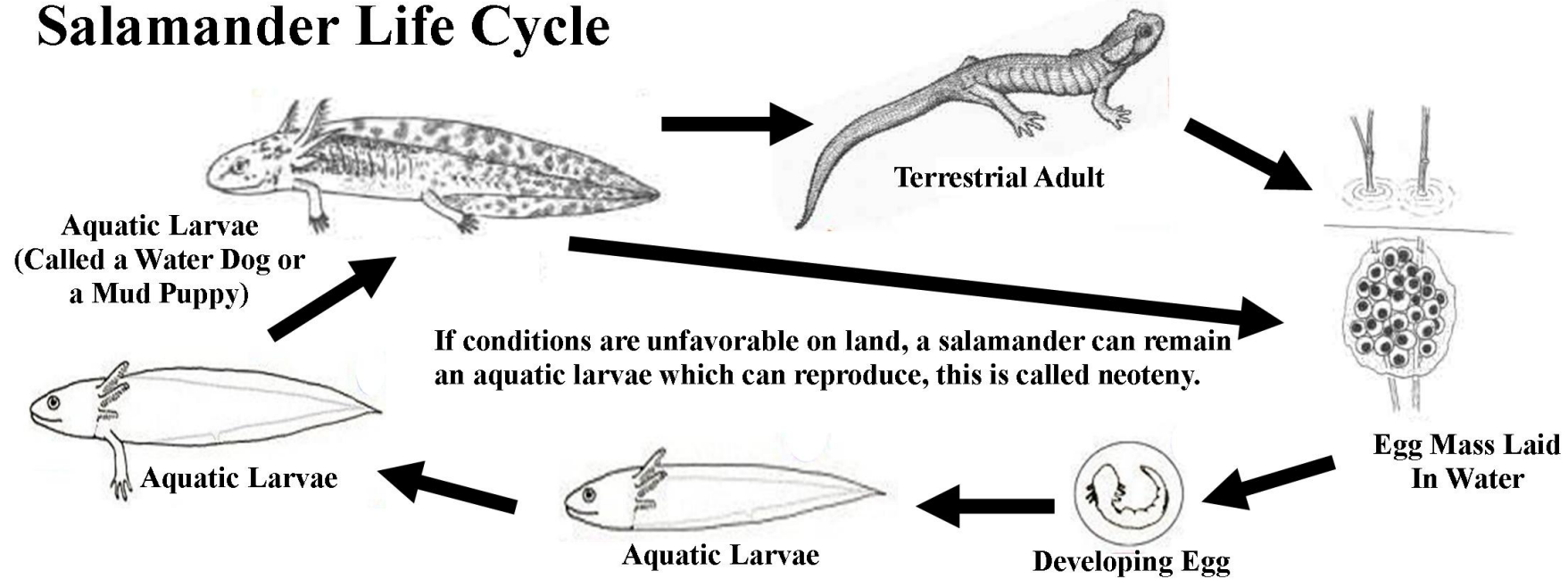


Ornate Chorus frog-  
*Pseudacris ornata*



# Salamanders

## Salamander Life Cycle





# Resources

## State and Federal Government Agencies:

- Florida Forest Service
  - cost-share opportunities
  - property-specific technical assistance and planning services
  - <https://www.fdacs.gov/Divisions-Offices/Florida-Forest-Service>
- Natural Resource Conservation Service
  - cost-share opportunities
  - property-specific planning services
  - <https://www.nrcs.usda.gov/>
- FWC Landowner Assistance Program
  - property-specific technical assistance, planning, and resource connections
  - <https://myfwc.com/conservation/special-initiatives/lap/>





# Resources

## Landowner Associations:

- North Florida Prescribed Burn Association
  - Training, education, resources
  - <http://www.northfloridapba.org/>
- Madison County Landowner Cooperative Group
  - Contact LAP biologist Megan Ellis at [Megan.Ellis@MyFWC.com](mailto:Megan.Ellis@MyFWC.com)
- Baker County Landowner Coop
  - Contact LAP biologist Lanie Carter at [Lanie.Carter@MyFWC.com](mailto:Lanie.Carter@MyFWC.com)





# Resources

## Nonprofits and Other Organizations:

- Florida Native Plant Society
  - create a native plant list for your property
  - learn about native plants in your area
- Longleaf Alliance
  - information on managing longleaf pine ecosystems
  - <https://www.longleafalliance.org/>
- Tall Timbers
  - research station with land management information
  - <https://talitimbers.org/>
- Southern Fire Exchange
  - Informational webinars and trainings
  - <https://southernfireexchange.org/>







May 12<sup>th</sup>, 4 days after burn







October 8th







January 13<sup>th</sup>



# Thank you!



## Questions?





# Forest Recovery Webinar Series



Please fill out the Evaluation for this Webinar  
<https://www.surveymonkey.com/r/BB7HR7T>

Recordings, presentation slides, and other materials  
for all Florida Land Steward Webinars are available at:

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# THANKS PARTNERS AND SUPPORTERS!





# Florida Land Steward 2020 Short Course Webinar Series



**November 5, 2020**

**Webinar 3: Using Biomass Harvesting for Reforestation & Restoration**  
**2:00-3:00 pm ET (1:00-2:00 pm CT)**

Jib Davidson, Forester, Columbia Timber and Environmental Services

Make way for reforestation. Local biomass markets can provide a much-needed market for low value wood that needs to be cleared for regeneration purposes.



# THANKS FOR JOINING US!

