Hardwood Management for Timber and Wildlife

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NC Wildlife Resources Commission
Responsible Forest Management = Wildlife Management
Poor Forestry Practices Are Common

- High graded timber
- LO paid less than timber is worth
- Logged during wet conditions
- Residual forest damaged
- Poor close out agreements (e.g., fix roads, unplug ditches, stabilize soil, clean up debris piles)
- Poor adherence to FPGs (e.g., equipment in SMZs, pull debris from streams, divert runoff)
- Pollution (e.g., oil, trash)
- Opposite extreme = no cutting or forest disturbance
Responsible Forestry Practices

**Good For:**
- Forest health
- Wildlife
- Water quality
- Timber values
- Recreational goals
- Aesthetics
- Land values
- Safety

**You should always:**
- Define your forest objectives
- Hire a consultant
- Inventory your forest (i.e., timber, sensitive areas, fauna & flora)

**When harvesting:**
- Develop a timber contract
- Shop around for a logger
- Require a performance bond
- Take photos before harvest
- Monitor logging activities
- Inspect job at close out
Common Hardwood Forest Types in North Carolina

- Northern hardwood forest
- Cove hardwood forest
- Dry upland oak-hickory forest
- Dry-mesic oak-hickory forest
- Mesic forest
- Floodplain forest
- Tidal swamp forest and wetlands
- Maritime forest
The most basic principle of wildlife management is to provide and maintain the appropriate successional stages and cover types in a suitable arrangement for the desired wildlife species.

Craig Harper, UT professor
Habitat Diversity is Important

- Edge – where 2 or more habitats meet
- Ecotone – transitional zone between 2 cover types
- Juxtaposition – proximity and position of cover types
- Interspersion – frequency of different cover types

An increase in “edge” usually results in an increase in available resources.
“Edges” contain more species of flora and fauna than adjacent singular habitats.
Many predators take advantage of “edge” habitats.
Hardwood Forests are full of Diversity

- Species rich
- Multi-aged
- Variability in structure
- Layered
  - Canopy
  - Mid-story
  - Forest floor
- Respond well to disturbance
Timber Stand Improvements

- Manage for crop trees (timber vs. wildlife)
- Reduce crowding in the canopy
- Remove damaged, diseased, crooked and forked trees
- Protect and enhance the remaining trees in the stand

Upland Oak-Hickory Stand
High-graded Forests
Forest Openings (Canopy Gaps)
Field and Utility R/W Edges

Persimmon
Red cedar
Wild plum
Dogwood
Holly
Black cherry
Red bud
Blackberry
Sassafras
Sumac
Blueberry
Grape
Greenbrier
Daylighting

Roads

Fire lines
Opinions of Fire in Forests

- Many people consider fire to be bad
- Wildfires are bad!!
- Precursors to devastating wildfires:
  - Lack of understanding fire’s place in the forest
  - Lack of responsible forest management (fuel buildup)
  - Lack of Rx fire (public opinion, regulations)
Fire History in the South

- Fire was common throughout southern forests
- Causes:
  - Lightning strikes
  - Native Americans
  - Later, Europeans clearing land and sparks from trains
- Burned for days, weeks, months
- Burned hot on dry uplands and smoldered through bottomlands
- Today’s forest composition is changing due to suppression
Rx Fire is a Tool

- Primarily used in pines and upland hardwoods
- Promotes plant diversity
- Improves browse quality and abundance
- Restores fire dependent ecosystems
- Maintains natural upland forest community types
- Improves oak regeneration
- Reduces hazardous fuels
- Releases nutrients to the soil
- Improves seed germination
- Exposes soil for seed contact
- Controls “some” invasive plants
Firelines

- Width = at least 10 feet
- Height = at least 10 feet
- Remove or cut stumps to ground level
- Soil stabilization = water diversions and vegetation
- Prepare with tractor and disk
- Maintain annually to discourage saplings
- Linear food plot or natural vegetation
Successful Wildlife Burns in Hardwoods

- Burn only in uplands
- Execute in dormant season
- Remove debris from around trees and snags
d- Plan low intensity flames (12-18 inches)
- Use flanking or backing fires
- Allow islands of unburned habitat in the forest
Rx Fire Effects on Understory Habitat in Pine Forests
Streamside Management Zones

- Follow FPGs
- Protect water quality
- Critical wildlife habitat
- Habitat connectivity
Vernal Pools and Small Wetlands

- Small pool
- Upland depression
- Floodplain wetland
- Salamander eggs
Snags and Den Trees

**Snags**
- Attracts beetles, spiders, ants, bees, moths, etc
- Buffet for insectivores
- Easy excavation for cavity nesters
- Target 1 snag per acre

**Dens**
- Winter cover
- Nesting cover
- Predator cover
- Protect all from harm
Wildlife Nest Boxes

- Bat
- Bluebird
- Wood Duck
- Screech owl
Promote Native Flora

- Wild Grape
- Sumac
- American Beautyberry
- Rough-leaf Viburnum
Encourage Mast Producers

Wild plum

Blackberry

Acorns

Blueberry
Food Plots
Grow it and they will come...

- Plant diversity (species, ages, structure)
- Seed, browse, and bugging opportunities.
- Fawning, nesting and brooding cover.
- Escape cover.
Helpful Websites

- North Carolina Wildlife Resources Commission (www.ncwildlife.org)
- NC Division of Forest Resources (www.dfr.state.nc.us/Managing_your_forest/managing_your_forest.htm)
- NC Cooperative Extension Service (www.ces.ncsu.edu/nreos/wild/wildlife/habitat/index)
- Partners In Flight (www.faculty.ncwc.edu/mbrooks/pif)
- Going Native: Urban Landscaping for Wildlife with Native Plants (www.ncsu.edu/goingnative/)
- University of Tennessee (www.utextension.utk.edu/publications/wildlife/default.asp)
Enjoy the Fruits of your Labor!