

Rare Species: Terminology, Responsibilities, & Opportunities



John Ann Shearer
U.S. Fish and Wildlife Service
Raleigh, NC
johnann_shearer@fws.gov

1

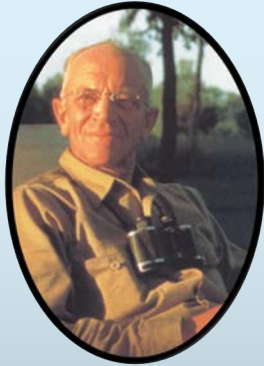
Outline

- Describe Endangered Species Act
- Define Categories of Rarity - Terminology
- General Regulations For Each Term
- Species in 14-County Focus Area
- Description of Species
- Responsibilities vs. Opportunities
- Resources



2

Why Are We Concerned?



“If the biota, in the course of aeons, 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

3

U.S. Fish and Wildlife Service

Mission – Working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.

- Federal agency responsible for listing and protecting endangered and threatened species
- Endangered Species Act



4

Endangered Species Act of 1973

Purpose: To protect species threatened with extinction and the habitat upon which they depend.

Species are listed on the basis of “*the best scientific data available*” regarding biological status and threats.

Listing decisions are based on sound science, peer review, and follow public rule-making process.



5

Endangered Species Act

- Nation's primary tool for conserving declining plants and animals
- Listing
- Recovery Planning
- Prohibitions on “TAKE”
- Cooperation with States & private landowners
- Consultation with Federal Agencies

6



Animals vs. Plants



- Plants considered part of the land, a private resource.
- Animals considered a public resource.
- On private lands protections are different.
- On federal lands or with federal \$, plants and animals are the same.

7

Categories of Rarity (Federal)



Endangered – taxa in danger of extinction throughout all or a significant portion of their range

Threatened – taxa likely to become an endangered species within the foreseeable future throughout all or a significant portion of their range

Candidate – taxa for which the USFWS has substantial information to support listing, but not listed at this point

8

At-Risk Species (Federal)



Common Use

In general, scientists refer to species “at-risk” of extinction or extirpation.

At Risk Species – under consideration for listing.

- Candidate
- Proposed
- Petitioned



9

Categories of Rarity (State)

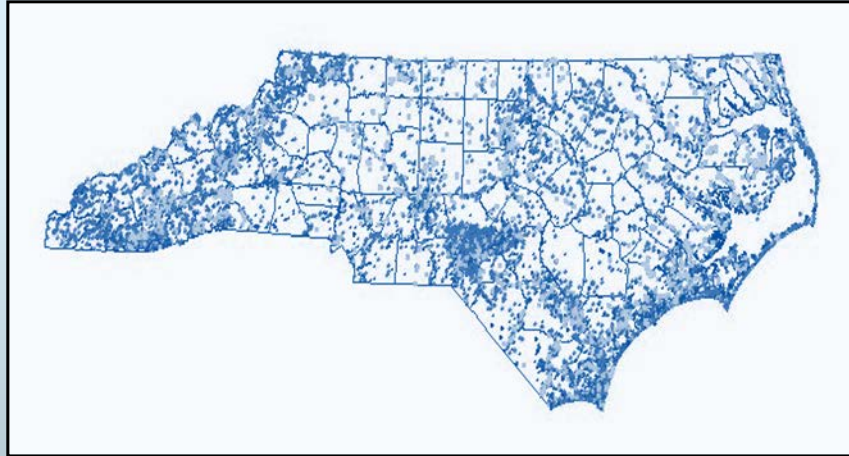
- Endangered
- Threatened
- Special Concern
- Significantly Rare
- Significantly Rare (game)
- Watch List



10

Distribution of Rare Species

State Listed Plants and Animals



11

NC Woods for Wildlife

14-County Focus Area



12

Federally-listed Threatened and Endangered Species

	North Carolina	14 County Focus Area
Plants and Lichens	27	6
Animals	39	6
Mammals	12	1
Birds	5	2
Reptiles	7	0
Insects	3	1
Fish	4	2
Freshwater Mussels	7	0
Snails	1	0



13

Federally Listed Plants

Species	County	Habitat	Need
Golden Sedge	Pender Onslow	Pine hardwood ecotone	Fire, protection
Cooley's Meadowrue	Brunswick Columbus Onslow Pender	Grassy bogs, wet pine savannas, ROW	Fire, protection
Rough-leaf Loosestrife	12 southeast counties	Longleaf pond pine ecotone, shrubs	Habitat restoration, fire, protection
American Chaffseed	Cumberland Hoke (Bragg)	Longleaf	Habitat restoration, fire, protection
Michaux's Sumac	Multiple	Forest openings, grasslands, roadsides, ROW	Habitat restoration, fire, protection
Pondberry	Sampson Cumberland Onslow	Wetlands	Intact wetlands, habitat restoration

14

How to help Federally Listed Plants

- Retain Habitat
- Conduct Prescribed Burns
- Place fire lines outside edge
- Know what you have (surveys)
- Avoid herbicides if rare plants are present



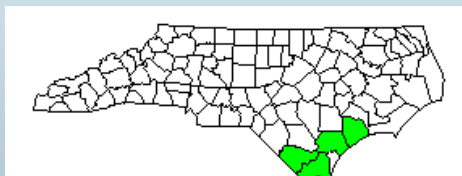
15

Cooley's Meadowrue

Flowers: mid June - early July

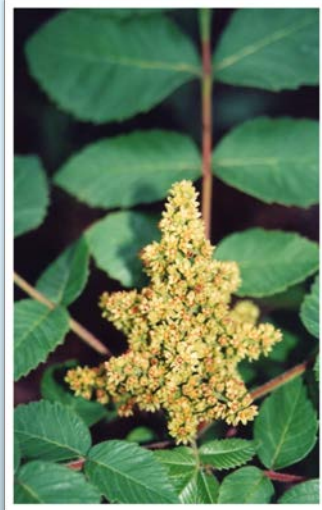
Habitat: Moist to wet open savannas, power lines

Threats: fire suppression, habitat loss



16

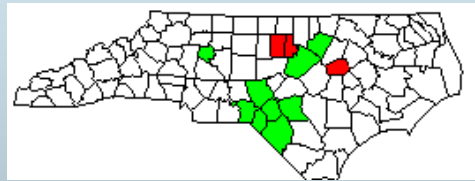
Michaux's Sumac



Flowers/Fruits: May/
October

Habitat: Sandy or rocky
open woods; disturbance
dependent

Threats: Fire suppression,
development



17

Federally Listed Animals

Species	County	Habitat	Need
Red-cockaded Woodpecker	Multiple	Longleaf pine	Habitat restoration/mgt, fire, protection
Northern Long-eared Bat	Multiple	Pine and hardwood forests	Maintain habitat away from WNS
Wood Stork	Columbus, Brunswick	Wetlands, swamps, creeks, impoundments	Habitat restoration/mgt
Cape Fear Shiner	Chatham, Lee, Moore, Randolph, Harnett	Cape Fear, Haw, Deep, Rock	Dam removal, riparian protection/mgt, augmentation
Waccamaw Silverside	Columbus	Lake and Upper Waccamaw	Invasive species mgt, water quality, data
Saint Francis' Satyr	Cumberland, Hoke (Bragg)	Wet meadows	Hydrology, fire, habitat restoration

18

Red-cockaded Woodpecker



Habitat: Mature open longleaf and other pines

Threats: Fire suppression, habitat loss

Protection: take of birds and habitat where present

Programs: Safe Harbor



19

Northern Long-eared Bat



Habitat: Forests, large trees, uplands and bottomlands

Note: Roost in eastern NC. No hibernacula

Protections: 150' around roost trees. Forestry exemptions.

Threats: White-nose syndrome, habitat loss

20

Federal At-Risk Species in 14 county focus area



Spotted Turtle

Plants and Lichens 12
Animals 6



Eastern Diamondback Rattlesnake



Magnificent Ramshorn



Carolina Gopher Frog



Monarch Butterfly

21



At-risk Plants

- Venus flytrap
- Wireleaf dropseed
- Bog spicebush
- Carolina birds-in-a-nest
- Georgia leadplant
- Impressed nerved sedge
- Harpers fimbriatilis
- Thin-wall quillwort
- Boykins lobelia
- Ravens seedbox
- Hairy-peduncled beakrush
- Sun-facing coneflower

- Habitat Restoration
- Habitat Management
- Prescribed Fire
- Land Protection
- Data
- Protection from herbicides, bulldozing, plowing, poaching
- Fire Line Placement

22



23

At-Risk Animals			
Species	County	Habitat	Need
Carolina Gopher Frog	Multiple	Wetlands longleaf	Habitat protection, reintroductions
Monarch Butterfly	All	Grasslands milkweed	Habitat
Black Rail	Coastal counties	Marshes	Habitat, protection, slow climate change?
Eastern Diamondback Rattlesnake	Multiple	Longleaf flatwoods, fallow brushy fields near forests	Habitat, data
Spotted Turtle	Eastern NC	Marshes, wet pastures, bays, streams, canals	Data, protection from collectors
Magnificent Ramshorn Snail	Brunswick	Mill ponds	Reintroduction, protection, data

24

At-Risk Animals to Benefit with Forest Mgt

Species	County	Habitat	Need
Carolina Gopher Frog	Multiple	Wetlands longleaf	Habitat protection, reintroductions
Monarch Butterfly	All	Grasslands milkweed	Habitat
Black Rail	Coastal counties	Marshes	Habitat, protection, slow climate change?
Eastern Diamondback Rattlesnake	Multiple	Longleaf flatwoods, fallow brushy fields near forests	Habitat, data
Spotted Turtle	Eastern NC	Marshes, wet pastures, bays, streams, canals	Data, protection from collectors
Magnificent Ramshorn Snail	Brunswick	Mill ponds	Reintroduction, protection, data

25

Responsibilities Vs. Opportunities



- Know what you have
- Avoid Take
- Keep working forests working
- Place fire lines carefully
- Conduct prescribed burns
- Treat invasive species
- Maintain hydrology



26

Bald Eagle

Bald and Golden Eagle Protection Act



Habitat: Forests near water, Large trees for nesting, Statewide

Diet: Fish, Carrion

Threats: Formerly DDT, Habitat loss

Protection: National Bald Eagle Management Guidelines

Harvest restrictions: 660' from active nest

27

Resources



U.S. Fish and Wildlife Service

www.fws.gov

Raleigh office of USFWS

<http://www.fws.gov/raleigh/>

Fact Sheets for T& E Species

in North Carolina

http://www.fws.gov/raleigh/es_tes.html

28

N.C. Natural Heritage Program

- Department of Natural and Cultural Resources
- Maintains a systematic inventory of all known locations of rare species and natural communities
- Monitors 899 plant species & 667 animal species



29

North Carolina Natural Heritage Data Explorer

- Web Application
- Generate Reports
- Rare Species
- Natural Areas
- Managed Areas
- Subscription Fee
- <https://ncnhde.natureserve.org/>



30

NC Forest Service Preharvest Planning Tool

- Location of Harvest
- Protect Water Quality
- Soils
- Sensitive Areas
- Rare Species
- Summary Report
- https://www.ncforestservice.gov/water_quality/fppt.htm



31



Look for
Opportunities to
Benefit Rare
Species
Through Your
Forest
Management

Seek Out
Resources to
Help

johnann_shearer@fws.gov

32