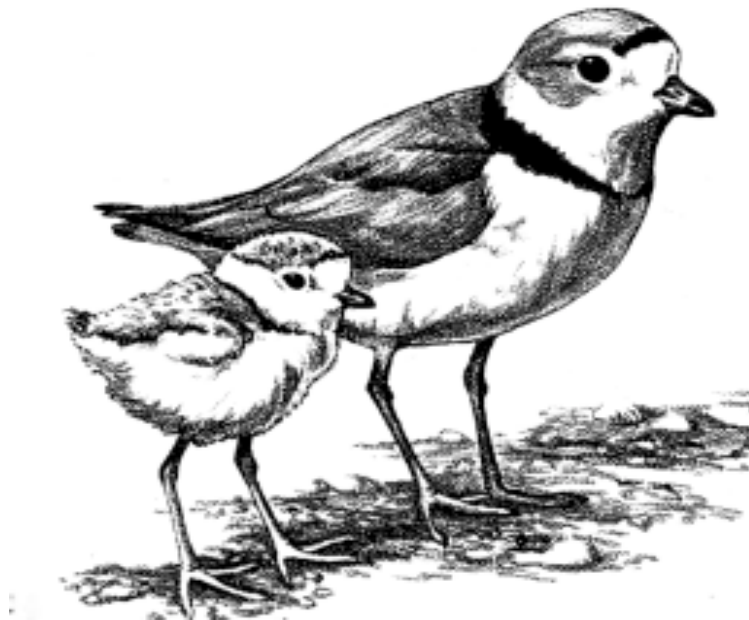


Guide to
Federally Listed
Endangered and
Threatened Species of
North Carolina



Guide to Federally Listed Endangered and Threatened Species of North Carolina

North Carolina Natural Heritage Program

Division of Parks and Recreation

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TABLE OF CONTENTS

Preface	iii
Introduction	
Definition of Legal Status	1
Information Sources for Current Legal Status	1
Guide to Species Accounts	2
Map of North Carolina	3

SECTION 1: ANIMALS

Mammals

Carolina northern flying squirrel, <i>Glaucomys sabrinus coloratus</i>	7
Eastern cougar, <i>Felis concolor cougar</i>	9
Indiana bat, <i>Myotis sodalis</i>	11
Red wolf, <i>Canis rufus</i>	13
Virginia big-eared bat, <i>Corynorhinus (=Plecotus) townsendii virginianus</i>	15
West Indian manatee, <i>Trichechus manatus</i>	17

Birds

Bald eagle, <i>Haliaeetus leucocephalus</i>	21
Piping plover, <i>Charadrius melodus melodus</i>	23
Red-cockaded woodpecker, <i>Picoides borealis</i>	25
Roseate tern, <i>Sterna dougallii dougallii</i>	27
Wood stork, <i>Mycteria americana</i>	29

Reptiles

American alligator, <i>Alligator mississippiensis</i>	33
Bog turtle, <i>Clemmys muhlenbergii</i>	35
General Sea Turtle Information	37
Green sea turtle, <i>Chelonia mydas</i>	39
Loggerhead sea turtle, <i>Caretta caretta</i>	41

Fishes

Cape Fear shiner, <i>Notropis mekistocholas</i>	45
Shortnose sturgeon, <i>Acipenser brevirostrum</i>	47
Spotfin chub, <i>Caprinella (=Hybopsis) monacha</i>	49
Waccamaw silverside, <i>Menidia extensa</i>	51

Invertebrates

Mollusks-Freshwater Bivalves

An Overview of Naiad Mollusks	54
Appalachia elktoe, <i>Alasmidonta raveneliana</i>	57
Carolina heelsplitter, <i>Lasmigona decorata</i>	59
Dwarf wedgemussel, <i>Alasmidonta heterodon</i>	61
Littlewing pearlymussel, <i>Pegias fabula</i>	63
Tar spiny mussel, <i>Elliptio steinstansana</i>	65

Mollusk-Terrestrial Gastropods

Noonday globe snail, <i>Patera clarki nantahala</i>	67
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Arachnids

Spruce-fir moss spider, <i>Microhexura montivaga</i>	69
--	----

SECTION 2: PLANTS

Vascular plants

American chaffseed, <i>Schwalbea americana</i>	73
Blue Ridge goldenrod, <i>Solidago spithamea</i>	75
Bunched arrowhead, <i>Sagittaria fasciculata</i>	77
Canby's dropwort, <i>Oxypolis canbyi</i>	79
Cooley's meadowrue, <i>Thalictrum cooleyi</i>	81
Dwarf-flowered heartleaf, <i>Hexastylis naniflora</i>	83
Green pitcher plant, <i>Sarracenia oreophila</i>	85
Harperella, <i>Ptilimnium nodosum</i>	87
Heller's blazing star, <i>Liatris helleri</i>	89
Michaux's sumac, <i>Rhus michauxii</i>	91
Mountain golden heather, <i>Hudsonia montana</i>	93
Mountain sweet pitcher plant, <i>Sarracenia rubra jonesii</i>	95
Pondberry, <i>Lindera melissifolia</i>	97
Roan Mountain bluet, <i>Houstonia montana</i>	99
Rough-leaved loosestrife, <i>Lysimachia asperulaefolia</i>	101
Schweinitz's sunflower, <i>Helianthus schweinitzii</i>	103
Seabeach amaranth, <i>Amaranthus pumilus</i>	105
Sensitive joint-vetch, <i>Aeschynomene virginica</i>	107
Small-anthered bittercress, <i>Cardamine micranthera</i>	109
Small whorled pogonia, <i>Isotria medeoloides</i>	111
Smooth coneflower, <i>Echinacea laevigata</i>	113
Spreading avens, <i>Geum radiatum</i>	115
Swamp pink, <i>Helonias bullata</i>	117
Virginia spiraea, <i>Spiraea virginiana</i>	119
White irisette, <i>Sisyrinchium dichotomum</i>	121

Non-vascular plants

Rock gnome lichen, <i>Gymnoderma lineare</i>	125
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APPENDICES

Appendix A: Other Federally Listed Species	127
Appendix B: Distribution of Federally Listed Species by County	128
Appendix C: Federal Candidates for Listing and Species of Concern	131
Appendix D: Glossary of Terms	137
Appendix E: References	139
Appendix F: Illustration Credits	142

PREFACE

The term “endangered species” most often evokes a mental picture of exotic animals like the panda or tiger. Rarely do we consider that many species in the United States and especially in North Carolina are in this category. At present, North Carolina is home to 5600 different species of plants, 935 species of vertebrate animals, and 1640 species of invertebrate animals. Of these, 758 species of plants and 644 of animals are presently considered rare, threatened, or endangered according to federal and state agencies and private conservation organizations. Among these rarities are unique and well-known organisms such as the Venus flytrap, which grows only on the Coastal Plain of North and South Carolina, and many lesser-known species of plants, mammals, reptiles and amphibians, insects, and molluscs.

Sixty-nine North Carolina species (animals and plant) are designated by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service as federally endangered or threatened. The purpose of this publication is to provide landowners, environmental consultants, natural resource professionals, and the general public with information on 52 of these federally listed endangered and threatened species (the other 17 are marine species or extirpated species). An attempt has been made to use nontechnical terms whenever possible, though a glossary is provided. Both metric and English units of measure are used. Emphasis has been given to the distribution of the species and to habitat requirements. Recognized causes for species decline are given as well as recommendations for correcting these.

It is hoped that the information within this book will promote knowledge and understanding of the ecology of these species and their place in life’s intricate web. Perhaps this knowledge will lead to awareness of and concern for native flora and fauna, and will encourage the active appreciation and effective conservation of the natural resources of North Carolina—the land, natural habitats, and the species themselves.

The Endangered Species Act of 1973

The Federal Endangered Species Act (ESA) was enacted in 1973 to protect species in danger of extinction and to provide means for their recovery to safe population levels, thus preserving our nation’s wealth of biological diversity. The need for such a law stemmed from the fact that “various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation . . .” and that others were “in danger of or threatened with extinction.” Con-

gress recognized that endangered species “are of aesthetic, ecological, educational, historical, recreational, and scientific value.”

The three primary mechanisms of the ESA are (1) to determine which species should be federally listed as endangered or threatened, (2) to give them protection, and (3) to implement conservation measures to recover them so that they not longer need the protection of the ESA. *Endangered species* are defined as those in danger of extinction throughout all or a significant portion of their range, while *threatened species* are likely to become endangered in the foreseeable future. Subspecies and distinct populations of vertebrate animals can also receive protection under the ESA.

The listing of a species as endangered or threatened is a complex process requiring extensive review by government agencies, scientists, and the public. Once listed, endangered and threatened species are federally protected. Section 9 of the ESA makes it unlawful to trade listed species without a specially obtained permit. It is also illegal to “take” a listed animal species, which means to harass, harm, pursue, hunt, wound, kill, or capture, or to attempt any such activity. Listed plants are protected from removal, malicious damage, and destruction on federal property. The ESA also protects listed plants from the violation of any protective state laws on any other property, including the violation of state or criminal trespass law. (See section below on North Carolina’s endangered species protection laws.)

Under Section 7 of the ESA, federal agencies are prohibited from issuing permits, funding, or carrying out any project if the project will jeopardize the survival of any listed species. Any agency planning a project in an area used by a listed species should first consult with the U.S. Fish and Wildlife Service, which is the regulatory agency for the ESA. (For marine species, consultation is made with the National Marine Fisheries Service.) A biological assessment describing impacts of the proposed project is required for consultation. Any projects that will jeopardize a listed species must be modified to avoid adverse impacts; exceptions are rarely made.

Private landowners are allowed some relief from the prohibitions of Section 9. Incidental take of a listed species may be permitted if the take is incidental to, and not the purpose of, an otherwise legal activity, and if the take will not jeopardize the continued existence of the species. For such a permit, a habitat conservation plan must be submitted to the Fish and Wildlife Service. If the plan is approved, some limited taking is allowed, provided the impact to the species is minimized and mitigated.

North Carolina's Endangered Species Laws

North Carolina has its own laws that protect endangered and threatened species—one for animals and one for plants. These laws apply to species that are locally or regionally rare in the state in addition to those that are federally listed as endangered and threatened.

The N.C. Wildlife Resources Commission administers the N.C. Endangered Species Act (General Statutes 113-331–113-337; enacted in 1987), which protects animals, and maintains the state's list of "protected animal species." Under this law it is illegal to take, possess, transport, sell, barter, trade, or export any animal on the protected list without a permit. Though this law does not prohibit habitat modification, another state law (G.S. 113-291) does make it illegal to intentionally destroy or substantially damage wildlife nesting or breeding areas (for example, cutting down den trees, shooting into nests of animals or birds, etc.). Data on these protected species are tracked by the N.C. Natural Heritage Program.

The North Carolina Plant Protection and Conservation Act was enacted in 1979 (G.S. Chapter 106, Article 19B; 202.12–202.22) to provide protection for the state endangered, threatened, and rare plants. This law is administered by the Plant Conservation Program in the N.C. Department of Agriculture. The Program maintains the list of endangered, threatened and rare plants, and data on these species are tracked by the N.C. Natural Heritage Program. As with the animals statutes, the plant state law prohibits the sale, barter, trade, exchange, or export of any plant on the state's protected list without a permit. However, agricultural, forestry, or development operations on private property are not regulated by this law, even though those actions may incidentally disturb rare plants, "so long as the plants are not collected for sale or commercial use" without a permit.

Why We Should Be Concerned About the Loss of Species

Extinction is a natural process that has been occurring since long before the appearance of humans on the planet. Normally, new species develop through a process known as speciation at about the same rate that other species become extinct. However, because of air and water pollution, forest clearing, loss of wetlands, and other human-induced environmental changes, extinctions are now occurring at a rate that far exceeds the speciation rate. Since the Pilgrims landed at Plymouth Rock in 1620, more than 500 species, subspecies, and varieties of our nation's plants and animals have become extinct. By contrast, during the 3000 years of the Pleistocene Ice Age, all of North America lost only about 90 species.

All living things are part of a complex and interconnected network. The removal of a single species can set off a chain reaction that could affect many other species. For

example, the loss of a single plant species can result in the disappearance of up to 30 other species of animals and plants. Each extinction diminishes the diversity and complexity of life on earth.

Furthermore, wild plants and animals are important to the development of new and improved medicines, agricultural crops, and other industrial products. One-quarter of all the prescriptions written in the United States today contain chemicals that were originally discovered in plants and animals. Industry and agriculture are increasingly making use of wild plants, seeking out the remaining wild strains of many common crops, such as wheat and corn, to produce new hybrids that are more resistant to disease, pests, and marginal climatic conditions. If these organisms had been destroyed before their values were known, their secrets would have died with them. When a species is lost, the benefits it might have provided are gone forever.

Wild lands and the plant and animal life that inhabit unique natural places are now dependent on us for survival. These natural places, with their diversity of life, can be enjoyed by and benefit all of us; with our help, they can be there for future generations.

—U.S. Fish and Wildlife Service Endangered Species Information Series: Mountain Sweet Pitcher Plant, August 1995

What You Can Do To Help

- Visit arboretums, botanical gardens, and parks and learn all you can about plant and animal species, especially rare species, and the causes of their declines. Share what you have learned with others.
- Learn about basic ecological principles. Participate in the protection of our remaining wild lands and the restoration of damaged ecosystems. Encourage and participate in proper land use practices in your community.
- When hiking, tread lightly, and stay on designated trails in parks, gardens, and nature preserves. Take pictures and leave only footprints.
- Do not collect animals or plants from wild areas. Taking them out of their habitat deprives them of natural food sources and other life-sustaining resources.
- Don't collect or buy plants and animals collected from wild populations.
- Recycle as much as you can. As landfills become full, new ones are often placed in uninhabited areas, causing the destruction of hundreds of acres of wild habitat.
- Compost kitchen and garden waste and use as garden supplement and mulch. Reduce use of commercial chemical fertilizers and pesticides on gardens, lawns, farmlands, and golf courses. Practice organic farming and alternative pest control methods.

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- Do not litter or pollute. Take part in stream and land cleanup projects.
 - Conserve natural resources such as water and energy.
 - Obey wildlife laws, especially those protecting rare species and habitat.
 - Support and/or be a member of local, state, national, or international conservation organizations.
 - Use the income tax checkoff to contribute to the NC Wildlife Nongame and Endangered Wildlife Fund.
 - Purchase hunting and fishing licenses and duck stamps yearly even if you don't use them. Many of the revenues go to species and habitat protection.

—Adapted from *A Guide To Endangered and Threatened Species in Virginia* (Terwilliger et al., 1995) and Endangered Species Information Series (USFWS)

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Important sources used to compile the species accounts included the *Official World Wildlife Fund Guide to Endangered Species of North America* (Lowe et al. 1990), *Endangered and Threatened Plants and Animals of North Carolina* (Cooper et al. 1977), the U.S. Fish and Wildlife Service *Red Book of Endangered Species of the Southeastern U.S.*, *Federal Register* (individual species) sections from the U.S. Fish and Wildlife Service, the Web site of the U.S. Fish and Wildlife Service, and the files of the North Carolina Natural Heritage Program. Many other publications and sources were also consulted. These and additional literature are listed in Appendix E.

Many individuals and agencies provided illustrations. These are credited in Appendix F.

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