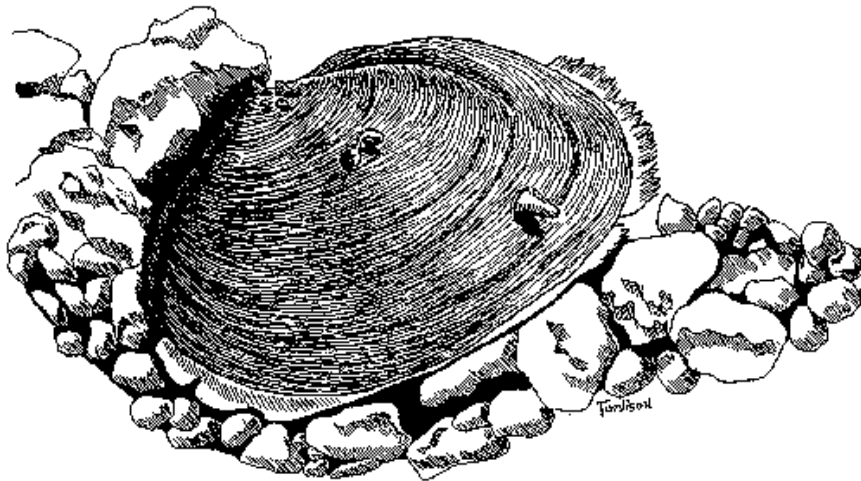


NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMAL SPECIES OF NORTH CAROLINA

2004



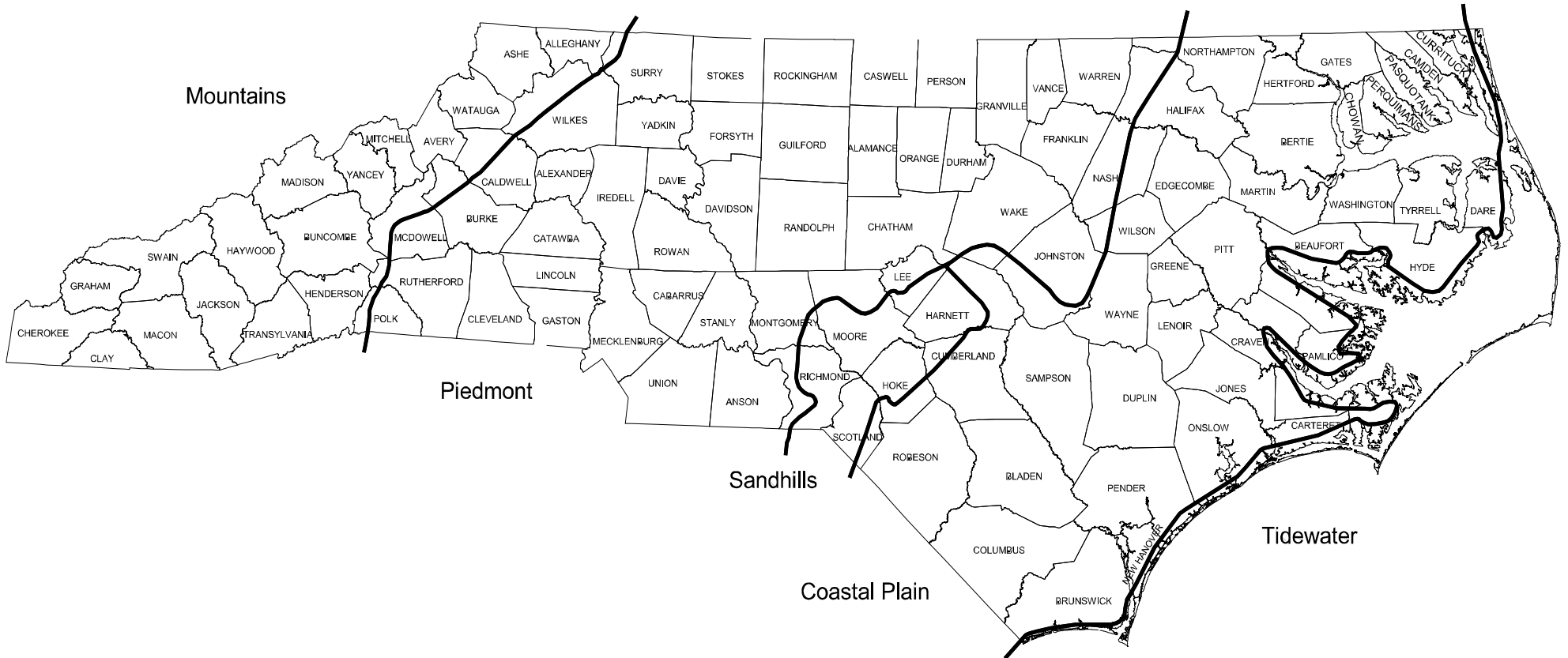
Tar River Spiny mussel (*Elliptio steinstansana*)
drawing by R. Tumilson; courtesy of the U.S. Fish and Wildlife Service

Compiled by
Harry E. LeGrand, Jr., Vertebrate Zoologist
Sarah E. McRae, Freshwater Ecologist
Stephen P. Hall, Invertebrate Zoologist
John T. Finnegan, Information Systems Manager

North Carolina Natural Heritage Program
Office of Conservation and Community Affairs
N.C. Department of Environment and Natural Resources

0056457

THE COUNTIES AND PHYSIOGRAPHIC PROVINCES OF NORTH CAROLINA



THE COUNTIES AND PHYSIOGRAPHIC PROVINCES OF NORTH CAROLINA

**NATURAL HERITAGE PROGRAM LIST
OF THE
RARE ANIMAL SPECIES
OF NORTH CAROLINA**

2004

Compiled by
Harry E. LeGrand, Jr., Vertebrate Zoologist
Sarah E. McRae, Freshwater Ecologist
Stephen P. Hall, Invertebrate Zoologist
John T. Finnegan, Information Systems Manager

North Carolina Natural Heritage Program
Office of Conservation and Community Affairs
N.C. Department of Environment and Natural Resources

This list is dynamic and is revised frequently as further data become available. New species are added to the list, and others are dropped from the list for various reasons. The list is revised periodically, generally every two years. If you are using a copy of this list that is dated 2001 or older, it might be invalid and you should request a new version. Further information on these species may be obtained by contacting the North Carolina Natural Heritage Program, Department of Environment and Natural Resources, 1601 MSC, Raleigh, NC 27699-1601, or by contacting the North Carolina Wildlife Resources Commission, 1724 MSC, Raleigh, NC 27604-1724. Additional information on species can be obtained from the Natural Heritage Program's website at <www.ncsparks.net/nhp>.

0056459

TABLE OF CONTENTS

INTRODUCTION	1
LIST FORMAT	3
STATUS OF ANIMAL TAXA ON NHP RARE ANIMAL LIST	10
MAMMALS	12
BIRDS	15
REPTILES	21
AMPHIBIANS	25
FRESHWATER FISHES	27
MOLLUSKS	32
FRESHWATER BIVALVES	32
FRESHWATER GASTROPODS	37
TERRESTRIAL GASTROPODS	37
ARACHNIDS	40
CRUSTACEANS	41
INSECTS	43
MAYFLIES	43
STONEFLIES	45
CADDISFLIES	45
DRAGONFLIES	47
DAMSELFLIES	49
FLIES	49
MOTHS	49
BUTTERFLIES	53
GRASSHOPPERS AND KATYDIDS	57
BEETLES	58
TRUE BUGS	58
NORTH CAROLINA ANIMAL WATCH LIST	59
MAMMALS	61
BIRDS	61
REPTILES	63
AMPHIBIANS	64
FRESHWATER FISHES	65
MOLLUSKS	66
FRESHWATER BIVALVES	66
FRESHWATER GASTROPODS	66
TERRESTRIAL GASTROPODS	66

ARACHNIDS	66
CRUSTACEANS	67
INSECTS	68
MAYFLIES	68
STONEFLIES	69
CADDISFLIES	70
DRAGONFLIES	72
DAMSELFLIES	73
MOTHS	73
BUTTERFLIES	78
GRASSHOPPERS AND KATYDIDS	79
BEETLES	80
EXTIRPATED ANIMALS IN NORTH CAROLINA	82
MAMMALS	82
BIRDS	82
FRESHWATER FISHES	83
MOLLUSKS	83
FRESHWATER BIVALVES	83
POTENTIAL NEW TO NORTH CAROLINA ANIMALS	84
MAMMALS	84
BIRDS	85
REPTILES	86
AMPHIBIANS	86
FISHES	87
INSECTS	88
BUTTERFLIES	88
SIGNIFICANT 2004 REVISIONS TO THE ANIMAL LIST	90
INDEX OF GENERA	96
NORTH CAROLINA NATURAL HERITAGE PROGRAM	
SPECIAL ANIMAL SURVEY FORM	99

ACKNOWLEDGMENTS

Portions of this list have been developed with the assistance of biologists in North Carolina and elsewhere. Scientific Councils for each vertebrate group and several invertebrates groups compiled the bulk of the rare species lists (for N.C. Endangered, Threatened, and Special Concern species). Members of the current Scientific Councils are:

MAMMALS -- Mary Kay Clark (chair), Mary Bunch, Susan Loeb, Chris McGrath, Nancy Moncrief, Nora Murdock, Roger Powell, Terry Sharpe, David Webster, Peter Weigl. Former members: David Adams, Bill Adams, Carl Betsill, John Funderburg.

BIRDS -- Dave Lee (chair), Dave Allen, John Gerwin, Walker Golder, Herb Hendrickson, Mark Johns, Harry LeGrand, Merrill Lynch, Jim Parnell, Eloise Potter, Matt Rowe, Ted Simons, Haven Wiley. Former members: Allen Boynton, Phil Crutchfield, Tom Howard, Wayne Irvin, Jeff Walters.

AMPHIBIANS AND REPTILES -- Alvin Braswell (chair), Jeff Beane, Ruth Boettcher, Dick Bruce, Julian Harrison, Harold Heatwole, Dennis Herman, Wilson Laney, Nora Murdock, Dave Stephan, Wayne Van Devender, Dave Woodward. Former members: Bill Palmer, Jim Parnell.

FRESHWATER FISHES -- Wayne Starnes (chair), John Alderman, Brooks Burr, David Etnier, Robert Jenkins, David Lindquist, Ed Menhinick, Anthony Mullis, Richard Neves, Richard Noble, Bill Palmer, Gerald Pottern, Fred Rohde, Steve Ross. Former members: Alvin Braswell, Peter Coleman, Jerry West.

MARINE AND ESTUARINE FISHES -- Steve Ross (chair), Fred Rohde, David Lindquist.

FRESHWATER AND TERRESTRIAL MOLLUSKS -- Art Bogan (chair), Bill Adams, John Alderman, Dick Biggins, John Fridell, Eugene Keferl, Hugh Porter, Amy Van Devender. Former member: Andy Gerberich.

FRESHWATER AND TERRESTRIAL CRUSTACEANS -- John Clamp (chair), Bill Adams, John Alderman, John Cooper, David DeMont, Chris McGrath, Bill McLarney, Gabriela Mottes, Janet Reid, Annette Taylor, Jan Williams.

John Cooper (crayfishes), Dale Schweitzer (various groups but especially moths), Bo Sullivan (butterflies and moths), and Duncan Cuyler (dragonflies and damselflies) have been especially helpful in assisting the Natural Heritage Program in the development of many of the invertebrate lists of rare species. Also, the Biological Monitoring group of the N.C. Division of Water Quality (especially Trish MacPherson, Kathy Herring, Dave Lenat, and Dave Penrose) drafted the lists of mayflies, stoneflies, and caddisflies for the previous (2001) publication; and Lenat drafted lists of additional aquatic insects, including beetles, for this 2004 publication. In addition to those above who helped compile the rare species lists, other persons need to be acknowledged for providing data on rare species. Those who have made significant contributions (and not already listed above) include: Janice Allen, Hal Bain, Susan Campbell, Mark Cantrell, Derb Carter, Jay Carter, Therese Conant, Sam Cooper, Bob Currie, Ricky Davis, Bob Dellinger, Phil Doerr, Aimee Fullerton, John Fussell, L.L. Gaddy, Ron Gattelle, Gilbert Grant, Nelson Hairston, Paul Hart, Scott Hartley, Tom Henson, Richard Highton, Erich Hoffman, Cato Holler, Donna Hollingsworth, Joshua Laerm, Kevin Markham, Doug McNair, Jeff Nekola, Tom Padgett, Jesse Perry, Judith Ratcliffe, Bob Rose, Mara Savacool, Tim Savidge, Frank Schwartz, Rowland Shelley, Mark Simpson, Alan Smith, Ann Somers, Bob Soots, Phil Spivey, Simon Thompson, Bryn Tracy, Brian Watson, Logan Williams, Chris Wilson, Randy Wilson.

Biologists who provided input for suggested changes to this 2004 list (in addition to the Natural Heritage Program biologists) are: Jeff Beane, Bryn Tracy, John Cooper, John Gerwin, Mark Johns, Seth Lambiase, Dave Lenat, Trish MacPherson, Chris McGrath, Wayne Starnes, and David Webster.

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

INTRODUCTION

The attached list of animals represents those species of vertebrates and invertebrates for which the N.C. Natural Heritage Program (NC NHP) is collecting data - in files, on computer, and on topographic maps. This is not strictly a list of protected animals; in fact, the majority of these species receive no formal protection whatsoever. Rather, it is a list of species that are endangered, threatened, or otherwise occur in small or unknown numbers in the state. The primary functions of the list are its use: 1) in determining priorities of inventory and protection for these animals - including the proposed listing of species for federal or state protection; 2) in determining priorities for protection of natural areas that contain such listed animals; and 3) in environmental assessments to "flag" rare species and their locations that might be negatively affected by proposed actions.

The majority of the vertebrates on the list are those species currently listed for state protection by the N.C. Wildlife Resources Commission (WRC), based on lists of Endangered (E), Threatened (T), and Special Concern (SC) species developed nearly 15 years ago by Scientific Councils on mammals, birds, reptiles and amphibians, freshwater fishes, and mollusks. All of these species are included on this list, with the corresponding status listed in the "N.C. Status" column. (In addition, NC NHP is tracking other rare vertebrates and mollusks not given a formal state designation. These species are considered to be Significantly Rare [SR] in North Carolina.)

As of March 2004, Endangered, Threatened, and Special Concern species of mammals, birds, reptiles, amphibians, freshwater fishes, freshwater and terrestrial mollusks, and crustaceans are protected by state law, under the jurisdiction of the WRC. Protection for crustaceans (so far, only crayfishes) and certain venomous snakes was enacted in 2002. However, State law does not allow for protection of invertebrate groups other than mollusks and crustaceans.

During 1997 and 1998, the Scientific Councils re-convened, prepared updated lists of species needing State protection, and submitted these lists to the WRC's Nongame Wildlife Advisory Committee. These lists were sent to the WRC for review; and approved in 1999. A recent change in State law requires any proposed legislation (such as lists of Endangered, Threatened, and Special Concern species) must go to the State General Assembly; if there is no action by that body to overturn proposed legislation by a specified date, the legislation becomes law. Fortunately, these lists became law on July 1, 2002. Since that date, a few Scientific Councils have met and made suggestions (though not formally) for changes in state statuses; those statuses are listed in parentheses next to the current status.

The list of rare marine and estuarine fishes was presented in 1988 by the N.C. Museum of Natural Sciences. Except for the federally listed Endangered Shortnose Sturgeon, all other marine and estuarine fishes were listed in 1988 as "Vulnerable, Category 2". Because the Atlantic Sturgeon also occurs in fresh waters, it has been listed by WRC as a Special Concern species, and thus it is listed in this publication under Freshwater Fishes (as is the state Endangered Shortnose Sturgeon). Marine and estuarine fishes are under the jurisdiction of the N.C. Division of Marine Fisheries; however, this agency does not have a list of endangered, threatened, and special concern fishes. **Beginning with this 2004**

2

list, the NC NHP is no longer tracking (nor including on the Watch List) marine and estuarine fishes. This decision is not due to their lack of state listing; rather, we receive few data on such species, survey for such species can be cumbersome, protection of them is difficult if not impossible, and there has no been no recent systematic account of the rarity and distribution of the hundreds of such fishes that occur in our salt and brackish waters.

NC NHP lists of rare invertebrates - other than mollusks and crustaceans - have been derived from multiple sources. These lists have been prepared in consultation with other biologists in North Carolina and in the eastern United States. Because none of the invertebrates -- other than mollusks and crayfishes -- have been given legal state protection by WRC as Endangered, Threatened, or Special Concern, these species are given a status of Significantly Rare by NC NHP. **For the same reasons as for marine and estuarine fishes given above, the NC NHP is no longer keeping marine invertebrates on its Rare or Watch lists. NC NHP has also removed millipedes, scorpionflies, most beetles, ants, and annelids from its Watch List, primarily due to lack of new data on them and the apparent lack or scarcity of biologists working with these groups to provide data or provide updated lists of rare taxa.**

LIST FORMAT

Species are grouped by major taxa. The vertebrates are arranged by class, beginning with the most advanced phylogenetically (mammals). Within a given taxa, species are listed alphabetically by scientific name. The following information is presented for each species on the list. "Status" is a word or phrase that indicates the degree of protection (if any), based on rarity, of a species; "rank" is a numerical scale of the rarity of a species, regardless of legal protection.

Scientific Name.

Common Name. For most groups, these names are not standardized.

North Carolina Status. Endangered, Threatened, and Special Concern species of mammals, birds, reptiles, amphibians, freshwater fishes, freshwater and terrestrial mollusks, and crustaceans have legal protection status in North Carolina (Wildlife Resources Commission). In addition to the above categories, the Natural Heritage Program maintains computer and map files on Significantly Rare species, as well as species considered Extirpated. Paper files only are maintained for a few of the above species; these species are indicated by the phrase "not tracking."

STATUS CODE	STATUS	DEFINITION
E	Endangered	"Any native or once-native species of wild animal whose continued existence as a viable component of the State's fauna is determined by the Wildlife Resources Commission to be in jeopardy or any species of wild animal determined to be an 'endangered species' pursuant to the Endangered Species Act." (Article 25 of Chapter 113 of the General Statutes; 1987).
T	Threatened	"Any native or once-native species of wild animal which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, or one that is designated as a threatened species pursuant to the Endangered Species Act." (Article 25 of Chapter 113 of the General Statutes; 1987).
SC	Special Concern	"Any species of wild animal native or once-native to North Carolina which is determined by the Wildlife Resources Commission to require monitoring but which may be taken under regulations adopted under the provisions of this Article." (Article 25 of Chapter 113 of the General Statutes; 1987).
P_	Proposed	Species has been proposed by a Scientific Council as a status (Endangered, Threatened, Special Concern, Watch List, or for De-listing) that is different from the current status, but the status has not yet been adopted by the General Assembly as law. In the lists of rare species in this book, these proposed statuses are listed in parentheses below the current status. Only those proposed statuses that are different from the current statuses are listed.

4

STATUS CODE	STATUS	DEFINITION
SR	Significantly Rare	Any species which has not been listed by the N.C. Wildlife Resources Commission as an Endangered, Threatened, or Special Concern species, but which exists in the state in small numbers and has been determined by the N.C. Natural Heritage Program to need monitoring. (This is a N.C. Natural Heritage Program designation.) Significantly Rare species include "peripheral" species, whereby North Carolina lies at the periphery of the species' range (such as Hermit Thrush).
EX	Extirpated	A species which is no longer believed to occur in the state. (This is a N.C. Natural Heritage Program designation, though WRC also uses this status; the NHP list includes those on the WRC list.)
W	Watch List	Any other species believed to be of conservation concern in the state because of scarcity, declining populations, threats to populations, or inadequacy of information to assess its rarity (see page 59 for a more complete discussion). (This is a N.C. Natural Heritage Program designation.)
G	----	Species is a game animal, and therefore (by law) cannot be listed for State protection as E, T, or SC.

United States Status. This status is designated by the U.S. Fish and Wildlife Service. Federally listed Endangered and Threatened species are protected under the provisions of the Endangered Species Act of 1973, as amended through the 100th Congress. Unless otherwise noted, definitions are taken from the *Federal Register*, Vol. 56, No. 225, November 21, 1991 (50 CFR Part 17).

STATUS CODE	STATUS	DEFINITION
E	Endangered	A taxon "which is in danger of extinction throughout all or a significant portion of its range" (Endangered Species Act, Section 3).
T	Threatened	A taxon "which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (Endangered Species Act, Section 3).
FSC	(Federal) Species of Concern [also known as Species at Risk]	"... the Service is discontinuing the designation of Category 2 species as candidates in this notice. The Service remains concerned about these species, but further biological research and field study are needed to resolve the conservation status of these taxa. Many species of concern will be found not to warrant listing, either because they are not threatened or endangered or because they do not qualify as species under the definition in the [Endangered Species] Act. Others may be found to be in greater danger of extinction than some present candidate taxa. The Service is working with the States and other private and public interests to assess their need for protection under the Act. Such species are the pool from which future candidates for listing will be drawn." (<i>Federal Register</i> , February 28, 1996). The Service suggests that such taxa be considered as "Species of Concern" or "Species at Risk", neither of which has official status. The N.C. Natural Heritage Program uses "(Federal) Species of Concern" in this document for those taxa formerly considered as Category 2.
P_	Proposed	Species proposed in the <i>Federal Register</i> as a status different from its current Federal status.

STATUS CODE	STATUS	DEFINITION
T (S/A)	Threatened due to Similarity of Appearance	“Section 4 (e) of the [Endangered Species] Act authorizes the treatment of a species (subspecies or population segment) as endangered or threatened even though it is not otherwise listed as endangered or threatened if -- (a) the species so closely resembles in appearance an endangered or threatened species that enforcement personnel would have substantial difficulty in differentiating between the listed and unlisted species; (b) the effect of this substantial difficulty is an additional threat to an endangered or threatened species; and (c) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of the Act.” (<i>Federal Register</i> , November 4, 1997). [The American Alligator is listed as T (S/A) due to Similarity of Appearance with other rare crocodylians, and the southern population of the Bog Turtle is listed as T (S/A) due to Similarity of Appearance with the northern population of the Bog Turtle (which is federally listed as Threatened and which does not occur in North Carolina).]
XN	Nonessential Experimental Population	“Section 10 (j) of the Endangered Species Act of 1973, as amended, provides for the designation of introduced populations of federally listed species as nonessential experimental. This designation allows for greater flexibility in the management of these populations by local, state, and Federal agencies. Specifically, the requirement for Federal agencies to avoid jeopardizing these populations by their actions is eliminated and allowances for taking the species are broadened.” (U.S. Fish and Wildlife Service, 1995).
D	De-listed	Species has been proposed by the U.S. Fish and Wildlife Service for de-listing from the List of Endangered and Threatened Wildlife. However, at the present time, the species is still on the List of Endangered and Threatened Wildlife and is thus protected under the Endangered Species Act. Because such species still have legal Federal protection, the NHP will maintain existing records on the species, though new records might not necessarily be added. If the status becomes law prior to the next publication of the NHP Rare Animal List, the Program will remove the Federal designation from its database (and thus the species will no longer appear on printouts of Federally listed species). NHP may or may not continue to track the species, depending on its legal State status and other factors such as overall abundance and range in the state.

North Carolina Rank. North Carolina ranks are based on The Nature Conservancy's system of measuring rarity and threat status. This system is widely used by other agencies and organizations, as the best available scientific and objective assessment of a species' rarity at the state level. State ranks are assigned by biologists within each Natural Heritage Program.

RANK	NUMBER OF EXTANT POPULATIONS	DESCRIPTION
S1	1-5	Critically imperiled in North Carolina because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from North Carolina.
S2	6-20	Imperiled in North Carolina because of rarity or because of some factor(s) making it very vulnerable to extirpation from North Carolina.
S3	21-100	Rare or uncommon in North Carolina.
S4	100-1000	Apparently secure in North Carolina, with many occurrences.
S5	1000+	Demonstrably secure in North Carolina and essentially ineradicable under present conditions.
SA	1-?	Accidental or casual; one to several records for North Carolina, but the state is outside the normal range of the species.
SH	0?	Of historical occurrence in North Carolina, perhaps not having been verified in the past 20 years, and suspected to be still extant.
SR	--	Reported from North Carolina, but without persuasive documentation which would provide a basis for either accepting or rejecting the report.
SX	0	Apparently extirpated from North Carolina.
SU	--	Possibly in peril in North Carolina but status uncertain; need more information.
S?	--	Unranked, or rank uncertain.
_B	1-?	Rank of the breeding population in the state. Used for migratory species only.
_N	1-?	Rank of the non-breeding population in the state. Used for migratory species only.
Z	1-?	Population is not of significant conservation concern. For example, the status "SZN" indicates that the population in the non-breeding seasons (generally in migration or in winter) is transitory, without any regular locales of occurrence whereby the species can be protected. Where a number is listed with the "B" or "N" modifier, there are definable locales of occurrence that can be identified for protection.

Global Rank. Global ranks are assigned by NatureServe (formerly the science branch of The Nature Conservancy) staff biologists and contract biologists, based on a consensus of scientific experts, the individual natural heritage programs, and the Natural Heritage Network. Global ranks apply to the status of a species throughout its range, and are based on data on the species' status rangewide. This system is widely used by other agencies and organizations, as the best available scientific and objective assessment of a species' rarity throughout its range. NOTE: Global ranks in brackets are those suggested by Scientific Councils in North Carolina, or by the N.C. Natural Heritage Program, and are not NatureServe's assigned ranks. These suggested ranks are listed below the TNC assigned ranks. In some cases, these suggested ranks were made to indicate that the Global Rank perhaps should be changed, with the taxa apparently more common in North Carolina than the Global Rank will allow (i.e., a rank of S3 G2 isn't technically allowed; thus, the global rank is suggested to be G3.)

RANK	NUMBER OF EXTANT POPULATIONS	DESCRIPTION
G1	1-5	Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction.
G2	6-20	Imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction throughout its range.
G3	21-100	Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single physiographic region) or because of other factors making it vulnerable to extinction throughout its range.
G4	100-1000	Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5	1000+	Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
GH	0?	Of historical occurrence throughout its range, i.e., formerly part of the established biota, with the expectation that it may be rediscovered.
GX	0	Believed to be extinct throughout its range (e.g., Passenger Pigeon) with virtually no likelihood that it will be rediscovered.
GU	--	Possibly in peril range-wide, but status uncertain; more information is needed.
G?	--	Unranked, or rank uncertain.
G_Q	--	Questionable taxonomic assignment.
T_	--	The rank of a subspecies or variety. As an example, G4T1 would apply to a subspecies of a species with an overall rank of G4, but the subspecies warranting a rank of G1.

Physiographic Province/Region. The provinces/regions in which the animal is known to occur are indicated. This should not be regarded as the only province(s) or region(s) of the state in which the species could occur; our knowledge of the fauna of North Carolina, especially the invertebrates, is still very imperfect. The provinces are abbreviated as follows:

M	Mountains	All parts of North Carolina west of the foot of the Blue Ridge Escarpment.
P	Piedmont	All parts of North Carolina east of the foot of the Blue Ridge Escarpment and west of the Fall Line, including outlying "foothill" ranges, such as the Brushy, Uwharrie, and Sauratown mountains.
S	Sandhills	The southwestern portion of the Coastal Plain province consisting mostly of deep aeolian sands of the Middendorf and Pinehurst formation (portions of Cumberland, Harnett, Hoke, Lee, Moore, Richmond, Scotland, and Montgomery counties). The Sandhills are actually part of the Coastal Plain but are here distinguished because of their distinctive geomorphology and vegetation.
C	Coastal Plain	All parts of North Carolina east of the Fall Line, but excluding the Sandhills region and those portions associated with tidal water (ocean, sounds, barrier islands, and mainland brackish or salt marshes).
T	Tidewater	That part of the state associated with tidal water, such as the ocean and barrier islands, sounds, estuaries, and mainland brackish or salt marshes.

Habitat. The known, or the most typical, habitats are described briefly; as with provinces, these should not be regarded as the only possible habitats of the species in the state.

Counties of occurrence. Following the description of habitats is a listing, in parentheses, of the known counties of occurrence of the records in the Natural Heritage Program database. For most vertebrate species, this listing of counties is complete or reasonably complete. However, for many invertebrates, and a few vertebrates (generally those newly added to the Rare List), there is no listing of counties, as records have yet to be added to the database. Where county names appear in brackets, records from these counties have not yet been added to the database.) **Counties in which the element was last observed more than 20 years ago are marked with an asterisk (*).** The asterisk does not necessarily mean that the species no longer exists in that county; simply, it means that the date of the last observation available to the Natural Heritage Program from that county is 1983 or earlier. **Counties where no date of occurrence (e.g., data from an atlas/dot map) is available are marked with a plus (+).** Without additional information, the Program has no way of knowing whether such data should be considered as current or historic (marked with *). Records from such references, atlases, and other lists that were published or made available to the Program from 1983 or earlier should be considered as historic, but the Program has not yet updated the database for these obscure date records.

STATUS OF ANIMAL TAXA ON NHP RARE ANIMAL LIST

(as of March, 2004)

For names and definitions of statuses, see pages 3-5. Numbers in the table indicate number of taxa – generally species – for each group and status. Because many taxa have both an N.C. and a U.S. status, totals cannot be added across a complete line.

Group	Total Number of Species (rounded to nearest five)	N.C. Status				U.S. Status		
		E	T	SC	SR	E	T	FSC
Mammals	120	6	2	11	11	7	0	8
Birds	450	5	4	16	30	3	2	13
Reptiles	70	5	4	11	4	3	4	4
Amphibians	90	1	4	12	11	0	0	5
Freshwater Fishes	245	9	13	26	19	2	2	26
Freshwater Bivalves	75	19	10	6	7	7	0	11
Freshwater and Terrestrial Gastropods	250+	4	10	24	9	0	1	10
Arachnids	?	0	0	0	11	1	0	1
Crustaceans [Crayfishes]	? [45]	0 [0]	0 [0]	0 [8]	19	0	0	10
Mayflies	?	0	0	0	16	0	0	1

Stoneflies	?	0	0	0	7	0	0	0
Caddisflies	?	0	0	0	14	0	0	0
Dragonflies and Damselflies	190	0	0	0	37	0	0	8
Flies	?	0	0	0	1	0	0	0
Moths	?	0	0	0	70	0	0	4
Butterflies	170	0	0	0	38	1	0	8
Grasshoppers and Katydid	?	0	0	0	15	0	0	0
Beetles	?	0	0	0	5	1	0	1
True Bugs	?	0	0	0	1	0	0	0
Totals	?	49	47	114	325	25	9	110

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
MAMMALS					
<i>Canis rufus</i> CM: swamps, pocosins, extensive forests (Beaufort+, Dare, Hyde, Tyrrell, Washington)	Red Wolf	SR	E - XN	S1	G1
<i>Condylura cristata pop 1</i> SC: moist meadows, bogs, swamps, bottomlands [mountain population not of concern] (Bladen, Brunswick, Currituck*, Dare, Hoke, Mecklenburg*, Moore*, New Hanover*, Pitt, Randolph, Richmond, Robeson*, Sampson, Scotland*, Wake, Washington*)	Star-nosed Mole - Coastal Plain population	SC	-	S2	G5T2Q
<i>Corynorhinus rafinesquii macrotis</i> CS: roosts in hollow trees, old buildings, and beneath bridges, usually near water (Beaufort*, Bertie, Bladen, Brunswick, Chowan, Columbus*, Dare, Gates, Hoke+, Martin, Pender, Perquimans, Richmond, Robeson, Tyrrell, Washington, Wayne*)	Rafinesque's Big-eared Bat - Coastal Plain subspecies	T	FSC	S3	G3G4T?
<i>Corynorhinus rafinesquii rafinesquii</i> M: roosts in caves, mines, and hollow trees, usually near water (Alexander*, Buncombe*, Burke, Cherokee*, Graham, Macon, Madison*, Swain, Transylvania*)	Rafinesque's Big-eared Bat - Mountain subspecies	T	FSC	S2	G3G4T?
<i>Corynorhinus townsendii virginianus</i> M: roosts in caves (and rarely in mines), especially in limestone areas (Avery, Watauga+, Yancey)	Virginia Big-eared Bat	E	E	S1	G4T2
<i>Glaucomys sabrinus coloratus</i> M: high elevation forests, mainly spruce-fir (Avery, Buncombe, Graham, Haywood, Jackson, McDowell, Mitchell, Swain, Transylvania, Watauga, Yancey)	Carolina Northern Flying Squirrel	E	E	S2	G5T1
<i>Lasionycteris noctivagans</i> MP: roosts near water in tree cavities, clumps of leaves, crevices, etc. [breeding season only] (records not yet entered)	Silver-haired Bat	SR	-	S2?B,S4N	G5
<i>Lasiurus cinereus</i> M: mid- to high elevations [breeding season only] (records not yet entered)	Hoary Bat	SR	-	S1?B,S3?N	G5
<i>Lasiurus intermedius</i> CP: roosts in Spanish moss and other thick vegetation near water, often in longleaf pine habitats (Mecklenburg, New Hanover)	Northern Yellow Bat	SR	-	SU	G4G5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

13

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	Status N.C.	U.S.	Rank N.C.	Global
<i>Microtus chrotorrhinus carolinensis</i> M: rocky areas at high elevations, forests or fields (Avery, Haywood, Jackson*, Macon*, Swain+, Yancey)	Southern Rock Vole	SC	FSC	S3	G4T3
<i>Mustela nivalis</i> M: fields and forests, mostly at high elevations (Avery*, Buncombe, Haywood*, Henderson*, Jackson+, Madison*, Mitchell*, Watauga, Yancey*)	Least Weasel	SR	-	S2	G5
<i>Myotis austroriparius</i> CP: roosts in buildings, hollow trees; forages near water (Bertie, Bladen, Chowan+, Clay, Columbus, Gates, Halifax, Martin, New Hanover, Pender, Robeson, Wake*)	Southeastern Myotis	SC	FSC	S3	G3G4
<i>Myotis grisescens</i> M: roosts in caves; forages mainly over open water (Buncombe*)	Gray Myotis	E	E	SA	G3
<i>Myotis leibii</i> M: roosts in hollow trees (warmer months), in caves and mines (winter) (Alleghany*, Avery, Buncombe*, Graham, Henderson, Macon, Rutherford, Swain, Wilkes, Yancey)	Eastern Small-footed Myotis	SC	FSC	SUB,S2N	G3
<i>Myotis septentrionalis</i> MP: roosts in hollow trees and buildings (warmer months), in caves and mines (winter) (Ashe, Avery, Buncombe*, Burke, Cherokee*, Graham, Henderson, Macon, Polk, Rutherford, Swain, Transylvania, Wake*, Watauga, Wilkes)	Northern Long-eared Myotis	SC	-	S3	G4
<i>Myotis sodalis</i> M: roosts in hollow trees or under loose bark (warmer months), in caves (winter) (Graham, Jackson*, Mitchell*, Rutherford, Swain)	Indiana Myotis	E	E	SUB,SZN	G2
<i>Neotoma floridana floridana</i> C: forests, mainly in moist areas (Brunswick*, Carteret*, New Hanover, Onslow, Pender)	Eastern Woodrat - Coastal Plain population	T	-	S1	G5T5
<i>Neotoma floridana haematoreia</i> MP: rocky places in deciduous or mixed forests, in southern mountains and adjacent Piedmont (Buncombe, Burke, Catawba, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Polk, Rutherford, Swain, Transylvania)	Eastern Woodrat - Southern Appalachian population	SC	FSC	S3	G5T4Q

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Neotoma magister</i> MP: rocky places and abandoned buildings in deciduous or mixed forests in the northern mountains and adjacent Piedmont (Avery, Buncombe, Burke, Caldwell+, Iredell, McDowell, Mitchell+, Watauga, Yancey)	Appalachian Woodrat	SC	FSC	S2	G3G4
<i>Peromyscus leucopus easti</i> T: dunes and maritime thickets along coast south to Corolla (Currituck)	Pungo White-footed Mouse	SC	-	S2	G5T1
<i>Peromyscus leucopus ssp 1</i> T: maritime forests in Cape Hatteras vicinity (Dare+)	Buxton Woods White-footed Mouse	SR	-	S2	G5T?
<i>Peromyscus polionotus</i> P: sandy, fallow fields near South Carolina line (Cleveland+, Rutherford*)	Oldfield Mouse	SR	-	S1?	G5
<i>Puma concolor cougar</i> MPC: extensive forests, remote areas (Brunswick*, Buncombe*, Carteret+, Haywood*, Montgomery*, Onslow*, Swain*, Yancey*)	Eastern Cougar	E	E	SH	G5TH
<i>Sciurus niger</i> MPSC: open forests, mainly longleaf pine/scrub oak (Anson, Avery*, Beaufort, Bertie*, Bladen, Brunswick, Buncombe*, Carteret+, Cherokee*, Clay*, Columbus, Craven+, Cumberland, Duplin+, Edgecombe, Franklin*, Graham*, Guilford*, Halifax, Harnett, Hertford*, Hoke, Johnston, Jones+, Lee*, Lenoir+, Macon*, Martin+, Moore, New Hanover, Onslow, Pamlico+, Pender, Pitt, Richmond, Robeson+, Sampson, Scotland, Swain*, Wake, Wayne, Yadkin*)	Eastern Fox Squirrel	SR - G	-	S3	G5
<i>Sorex dispar</i> M: high elevation forests with talus or rocky slopes (Avery, Buncombe, Haywood, Macon, Swain*, Transylvania*, Yancey)	Long-tailed Shrew	SC	-	S2	G4
<i>Sorex palustris punctulatus</i> M: stream banks in montane forests (Avery, Buncombe, Clay*, Haywood*, Macon, Swain*, Watauga+)	Southern Water Shrew	SC	FSC	S2	G5T3
<i>Sorex sp 1</i> C: early succession fields, possibly low pocosins (endemic to eastern North Carolina) (Dare, Hyde)	an undescribed shrew	SR	-	S2	G1G2Q

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

15

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	Status		Rank	
		N.C.	U.S.	N.C.	Global
<i>Sylvilagus obscurus</i> [formerly <i>S. transitionalis</i>] M: dense cover of montane woods and thickets (Alleghany, Ashe, Avery, Clay, Graham, Haywood, Macon, Mitchell, Swain, Transylvania*, Watauga*, Yancey)	Appalachian Cottontail	SR - G	FSC	S3	G4
<i>Synaptomys cooperi helaletes</i> C: low pocosins, early succession wetlands (Beaufort, Craven, Gates, Jones, Pasquotank, Perquimans*)	Dismal Swamp Southern Bog Lemming	SR	-	S2	G5T3
<i>Trichechus manatus</i> T: warm waters of estuaries and river mouths (Beaufort, Brunswick, Carteret, Craven, Currituck, Dare, Hyde, New Hanover, Onslow, Pamlico*, Pender, Pitt)	West Indian Manatee	E	E	S1N	G2

BIRDS

<i>Accipiter striatus</i> MPS: forests and woodlands (for nesting) [breeding evidence only] (Avery, Mitchell+, Orange*, Watauga*, Yancey*)	Sharp-shinned Hawk	SR	-	S2B,S4N	G5
<i>Aegolius acadicus pop 1</i> M: spruce-fir forests or mixed hardwood/spruce forests (for nesting) [breeding season only] (Avery, Buncombe, Graham, Haywood, Jackson, Macon, Mitchell, Swain, Transylvania, Watauga, Yancey)	Northern Saw-whet Owl - Southern Appalachian population	T	FSC	S2B,S2N	G5T?
<i>Aimophila aestivalis</i> PSC: open longleaf pine forests, old fields [breeding season only] (Bladen, Brunswick, Buncombe*, Carteret, Chatham, Columbus, Craven, Cumberland, Halifax*, Harnett, Hoke, Jones, Macon*, Moore, Onslow, Pender, Richmond, Robeson, Sampson, Scotland, Wake*, Warren)	Bachman's Sparrow	SC	FSC	S3B,S2N	G3
<i>Ammodramus henslowii</i> C: clearcut pocosins and other damp weedy fields [breeding season only] (Beaufort, Bertie, Brunswick, Carteret, Columbus, Edgecombe, Gates, Martin, Onslow, Pender, Pitt, Wilson)	Henslow's Sparrow [the subspecies <i>A. h. susurrans</i> (Eastern Henslow's Sparrow) is FSC, not the entire species]	SR	FSC	S2B,S1N	G4

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Anhinga anhinga</i> C: wooded lakes or ponds, or open swamps (for nesting) [breeding evidence only] (Bertie, Bladen, Brunswick, Carteret*, Columbus*, Craven, Cumberland, Dare, Halifax, Jones, New Hanover, Robeson)	Anhinga	SR	-	S2B,SZN	G5
<i>Botaurus lentiginosus</i> CT: fresh or brackish marshes [breeding season only] (Beaufort*, Carteret, Hyde, Pamlico)	American Bittern	SR	-	S1B,S3N	G4
<i>Catharus guttatus</i> M: spruce-fir forests (for nesting) [breeding season only] (Avery, Haywood, Mitchell, Swain, Yancey)	Hermit Thrush	SR	-	S1B,S5N	G5
<i>Certhia americana</i> M: high elevation forests, favoring spruce-fir mixed with hardwoods (Avery, Buncombe, Haywood, Jackson, Mitchell, Swain, Transylvania, Watauga, Yancey)	Brown Creeper	SC	-	S3B,S5N	G5
<i>Charadrius melodus</i> T: ocean beaches and island-end flats [breeding evidence only] (Brunswick, Carteret, Currituck, Dare, Hyde, New Hanover, Onslow, Pender)	Piping Plover	T	T	S2B,S2N	G3
<i>Charadrius wilsonia</i> T: beaches, island-end flats, estuarine islands [breeding evidence only] (Brunswick, Carteret, Dare, Hyde, New Hanover, Onslow, Pender)	Wilson's Plover	SR	-	S3B,SZN	G5
<i>Chondestes grammacus</i> S: barren, sandy fields with scattered saplings in the sandhills region [breeding season only] (Cumberland, Hoke, Richmond, Scotland)	Lark Sparrow	SR	-	S1B,SZN	G5
<i>Circus cyaneus</i> T: extensive brackish marshes (for nesting) [breeding evidence only] (Carteret, Dare, Hyde)	Northern Harrier	SR	-	S1B,S4N	G5
<i>Coccyzus erythrophthalmus</i> M: deciduous forests, mainly at higher elevations [breeding season and habitat only] (Ashe*, Avery, Buncombe, Burke, Caldwell, Haywood, Henderson, Jackson, McDowell, Mitchell+, Transylvania, Watauga)	Black-billed Cuckoo	SR	-	S2B,SZN	G5
<i>Columbina passerina</i> T: dunes, sandy fields, margins of maritime woods and thickets [breeding season only] (Brunswick, New Hanover, Pender)	Common Ground-Dove	SR	-	SHB,SZN	G5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

17

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Contopus cooperi</i> M: montane conifer forests (mainly spruce-fir) with openings or dead trees [breeding season only] (Haywood, Macon*, McDowell*, Mitchell*, Swain, Yancey)	Olive-sided Flycatcher	SC	FSC	SUB,SZN	G4
<i>Coturnicops noveboracensis</i> TC: brackish or fresh marshes, wet fields [winter season only] (Carteret, Currituck, Dare, Hyde, New Hanover*)	Yellow Rail	SR	-	S2N	G4
<i>Dendroica cerulea</i> MC: mature hardwood forests; steep slopes and coves in mountains, natural levees in Coastal Plain [breeding season only] (Bertie, Buncombe, Clay, Graham, Halifax, Haywood, Johnston, Macon, McDowell, Northampton, Polk, Rutherford, Transylvania, Watauga, Wilkes)	Cerulean Warbler	SR	FSC	S2B,SZN	G4
<i>Dendroica magnolia</i> M: spruce-fir forests, especially in immature stands [breeding season only] (Avery, Buncombe, Graham, Haywood, Jackson*, McDowell, Mitchell, Watauga, Yancey)	Magnolia Warbler	SR	-	S1S2B,SZN	G5
<i>Dendroica virens waynei</i> C: nonriverine wetland forests, especially where white cedar or cypress are mixed with hardwoods [breeding season only] (Beaufort, Bladen, Brunswick, Camden, Carteret, Craven, Cumberland, Dare, Gates, Hyde*, Jones, Pamlico, Tyrrell, Washington)	Black-throated Green Warbler - Coastal Plain population	SR	-	S3B,SZN	G5TU
<i>Egretta caerulea</i> T: forests or thickets on maritime islands [breeding sites only] (Brunswick, Carteret, Columbus*, Cumberland, Currituck, Dare, Hyde, Jones, New Hanover, Robeson)	Little Blue Heron	SC	-	S3B,S3N	G5
<i>Egretta thula</i> T: forests or thickets on maritime islands [breeding sites only] (Brunswick, Carteret, Columbus*, Currituck, Dare, Hyde, New Hanover, Robeson)	Snowy Egret	SC	-	S3B,S3N	G5
<i>Egretta tricolor</i> T: forests or thickets on maritime islands [breeding sites only] (Brunswick, Carteret, Currituck, Dare, Hyde, New Hanover)	Tricolored Heron	SC	-	S3B,S3N	G5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Empidonax alnorum</i> M: high elevation shrub/sapling thicket [breeding season only] (Alleghany, Ashe, Avery, Buncombe, Haywood, Jackson, Mitchell, Watauga, Yancey)	Alder Flycatcher	SR	-	S2B,SZN	G5
<i>Falco peregrinus</i> MT: cliffs (for nesting); coastal ponds and mudflats (for foraging in winter) [nesting evidence; regular wintering sites] (Avery, Brunswick, Buncombe, Burke, Carteret, Dare, Haywood, Hyde*, Jackson, Madison, Rutherford, Stokes, Surry, Transylvania, Wilkes*, Yancey)	Peregrine Falcon	E	-	S1B,S2N	G4
<i>Haematopus palliatus</i> T: estuaries, oyster beds, mudflats [breeding evidence only] (records not yet entered)	American Oystercatcher	SR	-	S3B,S4N	G5
<i>Haliaeetus leucocephalus</i> PCT: mature forests near large bodies of water (for nesting); lakes and sounds [nesting sites; regular non-breeding sites] (Alexander, Anson, Beaufort, Bertie, Bladen, Brunswick, Burke, Camden, Catawba, Chatham, Chowan, Columbus, Craven, Currituck, Dare, Davidson, Durham, Gaston, Granville, Guilford, Halifax, Harnett, Haywood, Hyde, Johnston*, Lenoir, Martin*, Mecklenburg, Montgomery, Nash, Northampton*, Onslow, Orange, Pamlico, Pasquotank, Pitt, Richmond, Rowan, Stanly, Tyrrell, Vance*, Wake, Warren*, Washington, Wilson)	Bald Eagle	T	T (PD)	S3B,S3N	G4
<i>Himantopus mexicanus</i> T: fresh or brackish ponds and impoundments [breeding sites only] (Beaufort, Brunswick, Carteret, Dare, Onslow, Pamlico)	Black-necked Stilt	SR	-	S2B	G5
<i>Ictinia mississippiensis</i> C: mature, extensive bottomland forests [regular summer locations only] (Bladen, Carteret, Columbus, Halifax, Harnett, Johnston, Martin, Nash, Richmond, Scotland, Wayne)	Mississippi Kite	SR	-	S2B	G5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

19

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Lanius ludovicianus ludovicianus</i> PSC: fields and pastures [breeding season only] (Alamance+, Ashe+, Bladen+, Brunswick, Carteret, Catawba, Chatham, Cleveland, Davie, Edgecombe+, Forsyth, Franklin, Gaston, Granville+, Greene+, Guilford, Halifax, Iredell, Johnston+, Lenoir+, Lincoln, Mecklenburg, Montgomery, Moore, New Hanover+, Pitt, Polk, Richmond, Robeson, Rowan, Rutherford, Scotland+, Stanly, Transylvania+, Wake+, Wayne)	Loggerhead Shrike	SC	-	S3B,S3N	G4T4
<i>Lanius ludovicianus migrans</i> M: fields and pastures [breeding season only]	Migrant Loggerhead Shrike	SC	-	SUB,SUN	G4T3Q
<i>Laterallus jamaicensis</i> TCP: brackish marshes, rarely fresh marshes [breeding season only] (Carteret, Craven, Currituck, Dare, Hyde, Onslow, Pamlico)	Black Rail	SR	FSC	S3B,S2N	G4
<i>Loxia curvirostra pop 1</i> M: coniferous forests, preferably spruce-fir (Ashe*, Avery, Buncombe, Burke, Haywood, Jackson, McDowell, Mitchell, Swain, Transylvania, Yancey)	Southern Appalachian Red Crossbill	SC	FSC	S3B,S3N	G5T?
<i>Mycteria americana</i> T: fresh or brackish ponds (for foraging) [regular non-breeding sites] (Brunswick)	Wood Stork	E	E	S1N	G4
<i>Passerculus sandwichensis</i> M: grassy fields and pastures [breeding season only] (Alleghany, Ashe, Watauga)	Savannah Sparrow	SR	-	S2B,S5N	G5
<i>Passerina ciris ciris</i> T: maritime shrub thickets and forest edges [breeding season only] (Brunswick, Carteret, New Hanover, Onslow, Pender)	Eastern Painted Bunting	SR	FSC	S3B,SZN	G5T3T4
<i>Pelecanus occidentalis</i> T: maritime islands [breeding sites only] (Brunswick, Carteret, Dare, New Hanover)	Brown Pelican	SR	-	S3B,S4N	G4
<i>Phalacrocorax auritus</i> CP: lakes with scattered trees for nesting [breeding sites only] (Chatham, Craven)	Double-crested Cormorant	SR	-	S1B,S5N	G5

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Picoides borealis</i> SCP: mature open pine forests, mainly in longleaf pine [breeding evidence only] (Anson, Beaufort, Bertie, Bladen, Brunswick, Camden*, Carteret, Chatham*, Columbus, Craven, Cumberland, Currituck*, Dare, Duplin, Edgecombe*, Forsyth*, Gates, Halifax*, Harnett, Hertford*, Hoke, Hyde, Johnston, Jones, Lee*, Lenoir*, Montgomery, Moore, Nash*, New Hanover, Northampton*, Onslow, Orange*, Pamlico*, Pender, Pitt*, Richmond, Robeson, Sampson, Scotland, Tyrrell, Wake*, Wayne, Wilson*)	Red-cockaded Woodpecker	E	E	S2	G3
<i>Plegadis falcinellus</i> T: forests or thickets on maritime islands [breeding sites only] (Brunswick, Carteret, Currituck, Dare, Hyde, New Hanover)	Glossy Ibis	SC	-	S2B,SZN	G5
<i>Poecile atricapillus praticus</i> M: high elevation forests, mainly spruce-fir [breeding season only] (Avery, Buncombe*, Haywood, Jackson, Swain, Transylvania, Yancey*)	Southern Appalachian Black-capped Chickadee	SC	FSC	S3	G5T?
<i>Poocetes gramineus</i> M: high elevation pastures and grassy fields [breeding season only] (Ashe, Avery, Haywood, Mitchell, Watauga)	Vesper Sparrow	SR	-	S2B,S2N	G5
<i>Porphyryla martinica</i> C: freshwater ponds with floating vegetation [breeding sites only] (Brunswick, Onslow*, Robeson)	Purple Gallinule	SR	-	SHB	G5
<i>Riparia riparia</i> MP: high, vertical banks for nesting [breeding sites only] (Avery, Wilkes*)	Bank Swallow	SR	-	SUB,SZN	G5
<i>Rynchops niger</i> T: sand flats on maritime islands [breeding sites only] (Brunswick, Carteret, Dare, Hyde, New Hanover, Onslow, Pender)	Black Skimmer	SC	-	S3B,S3N	G5
<i>Sphyrapicus varius appalachiensis</i> M: mature, open hardwoods with scattered dead trees [breeding season only] (Avery*, Buncombe, Clay*, Graham, Haywood, Henderson, Jackson, Macon, Mitchell*, Swain, Transylvania, Watauga, Yancey)	Appalachian Yellow-bellied Sapsucker	SC	FSC	S3B,S5N	G5T?
<i>Sterna antillarum</i> T: beaches, sand flats, open dunes (Brunswick, Carteret, Craven, Dare, Hyde, New Hanover, Onslow, Pender)	Least Tern	SC	-	S3B,SZN	G4

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

21

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Sterna caspia</i> T: sand flats on maritime islands [breeding sites only] (Dare, Hyde*)	Caspian Tern	SR	-	S1B,S2N	G5
<i>Sterna dougallii</i> T: sand flats on maritime islands [breeding evidence only] (Carteret*, Dare)	Roseate Tern	E	E	SAB,SZN	G4
<i>Sterna hirundo</i> T: sand flats on maritime islands [breeding sites only] (Carteret, Dare, Hyde, New Hanover, Onslow, Pender)	Common Tern	SC	-	S3B,SZN	G5
<i>Sterna nilotica</i> T: sand flats on maritime islands [breeding sites only] (Brunswick, Carteret, Dare, Hyde, Onslow*)	Gull-billed Tern	T	-	S3B,SZN	G5
<i>Thryomanes bewickii altus</i> M: woodland borders or openings, farmlands or brushy fields, at high elevations [breeding season only] (Ashe*, Avery*, Buncombe*, Haywood*, Jackson*, Macon*, Transylvania*)	Appalachian Bewick's Wren	E	FSC	SHB,SZN	G5T2Q
<i>Vermivora chrysoptera</i> M: old fields and successional hardwoods (Alleghany, Ashe, Watauga; plus many additional counties)	Golden-winged Warbler	SR	FSC	S3B,SZN	G4
<i>Vermivora pinus</i> M: low elevation brushy fields and thickets [breeding season only] (Alleghany, Ashe, Buncombe*, Cherokee*, Graham*, Macon)	Blue-winged Warbler	SR	-	S2B,SZN	G5
<i>Vireo gilvus</i> M: groves of hardwoods along rivers and streams [breeding season only] (Alleghany, Ashe, Avery, Buncombe, Cleveland, Halifax, Henderson, Macon*, Orange, Watauga)	Warbling Vireo	SR	-	S2B,SZN	G5

REPTILES

<i>Alligator mississippiensis</i> CT: fresh to slightly brackish lakes, ponds, rivers, and marshes (Bladen, Brunswick, Camden*, Carteret, Columbus, Craven, Cumberland, Dare, Duplin*, Gates*, Hyde, Jones*, New Hanover, Onslow, Pamlico*, Pender, Robeson, Sampson*, Scotland*, Tyrrell*, Washington)	American Alligator	T	T(S/A)	S3	G5
<i>Apalone spinifera spinifera</i> M: large streams in the French Broad system (Buncombe, Madison)	Eastern Spiny Softshell	SC	-	S1	G5T5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Caretta caretta</i> T: nests on beaches; forages in ocean and sounds (Brunswick, Carteret, Currituck, Dare, Hyde, New Hanover, Onslow, Pender)	Loggerhead	T	T	S3B,S3N	G3
<i>Chelonia mydas</i> T: nests on beaches; forages in ocean and sounds (Brunswick, Carteret, Dare, Hyde+, New Hanover, Onslow, Pender)	Green Turtle	T	T	S1B,SZN	G3
<i>Clemmys</i> (see <i>Glyptemys</i>)					
<i>Crotalus adamanteus</i> C: pine flatwoods, savannas, pine-oak sandhills (Bladen, Brunswick+, Carteret, Columbus+, Craven+, Cumberland*, Duplin+, Jones*, New Hanover*, Onslow, Pender*, Robeson*, Sampson*)	Eastern Diamondback Rattlesnake	E	-	S1?	G4
<i>Crotalus horridus</i> CMP: wetland forests in the Coastal Plain; rocky, upland forests elsewhere (Alexander, Alleghany, Anson+, Ashe, Avery+, Beaufort+, Bertie+, Bladen+, Brunswick+, Buncombe*, Burke, Camden+, Carteret, Catawba+, Cherokee+, Chowan+, Clay*, Cleveland+, Columbus+, Craven+, Cumberland+, Currituck+, Dare+, Davidson, Duplin+, Durham+, Gaston, Graham*, Granville+, Haywood+, Henderson, Hoke+, Hyde+, Jackson, Jones+, Lenoir+, Lincoln+, Macon*, Madison+, McDowell, Mitchell*, Montgomery+, Moore+, New Hanover, Onslow+, Pamlico+, Pasquotank+, Pender, Perquimans+, Pitt+, Polk*, Randolph, Richmond+, Robeson+, Rutherford, Sampson+, Scotland, Stanly, Stokes, Surry*, Swain*, Transylvania*, Tyrrell+, Union+, Washington+, Watauga+, Wayne+, Wilkes, Yancey+)	Timber Rattlesnake	SC	-	S3	G4
<i>Deirochelys reticularia</i> SC: quiet waters of ponds, ditches, and sluggish streams (Bladen, Brunswick, Carteret+, Columbus, Craven+, Cumberland, Dare, Hoke, New Hanover, Onslow+, Pender, Robeson, Sampson, Scotland, Wayne+)	Chicken Turtle	SR	-	S3	G5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

23

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Dermochelys coriacea</i> T: oceans, rarely in sounds (Brunswick*, Carteret, Craven*, Currituck*, Dare, Hyde, Onslow)	Leatherback	E	E	SAB,SZN	G2
<i>Eretmochelys imbricata</i> T: oceans, very rarely in sounds (Carteret*, Dare)	Hawksbill	E	E	SZN	G3
<i>Glyptemys muhlenbergii</i> MP: bogs, wet pastures, wet thickets (Alexander, Alleghany, Ashe, Avery, Buncombe, Burke, Cherokee, Clay, Forsyth, Gaston, Graham, Henderson, Iredell*, Macon, McDowell, Mitchell, Surry, Transylvania, Watauga, Wilkes, Yancey)	Bog Turtle	T	T(S/A)	S2	G3
<i>Heterodon simus</i> SC: sandy woods, particularly pine-oak sandhills (Bladen, Brunswick*, Carteret+, Craven+, Cumberland+, Duplin+, Edgecombe+, Hoke, Jones+, Moore, New Hanover, Onslow, Pender, Pitt+, Richmond+, Robeson, Sampson, Scotland, Wake+, Wayne+)	Southern Hognose Snake	SC	FSC	S2	G2
<i>Lampropeltis getula sticticeps</i> T: maritime forests, thickets, and grasslands on the Outer Banks (Carteret*, Currituck*, Dare*, Hyde*)	Outer Banks Kingsnake	SC	-	S2	G5T2Q
<i>Lepidochelys kempii</i> T: ocean and sounds (Beaufort, Brunswick, Carteret*, Dare, Hyde, Pamlico)	Atlantic Ridley	E	E	SAB,SZN	G1
<i>Liochlorophis vernalis</i> M: fields and grassy meadows (Rutherford*)	Smooth Green Snake	SC	-	SH	G5
<i>Malaclemys terrapin centrata</i> T: salt or brackish marshes, estuaries; southern half of the coast (Beaufort+, Brunswick+, Carteret, Hyde+, New Hanover, Onslow, Pamlico, Pender)	Carolina Diamondback Terrapin	SC	-	S3	G4T4
<i>Malaclemys terrapin terrapin</i> T: salt or brackish marshes, estuaries; northern half of the coast (Dare+)	Northern Diamondback Terrapin	SC	FSC	S3	G4T4
<i>Masticophis flagellum</i> SCTP: dry and sandy woods, mainly in pine/oak sandhills (Anson*, Bladen, Brunswick, Carteret+, Cumberland, Hoke+, Lenoir+, Moore+, New Hanover, Onslow+, Pender, Richmond, Sampson, Scotland, Stanly, Union+, Wayne+)	Coachwhip	SR	-	S3	G5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

Scientific Name	Common Name	Status	U.S.	Rank	Global
Province: Habitat (Counties of occurrence)		N.C.		N.C.	
<i>Micrurus fulvius</i> CS: pine-oak sandhills, sandy flatwoods, maritime forests (Bladen, Brunswick*, Cumberland*, Harnett+, Hoke*, Moore+, New Hanover, Onslow, Pender, Scotland+)	Eastern Coral Snake	E	-	S1	G5
<i>Nerodia sipedon williamengelsi</i> T: salt or brackish marshes (Beaufort, Carteret, Currituck, Dare, Hyde, Pamlico)	Carolina Water Snake	SC	-	S3	G5T3
<i>Opheodrys</i> (see <i>Liochlorophis</i>) <i>Ophisaurus mimicus</i> C: pine flatwoods, savannas, pine/oak sandhills (Bladen*, Brunswick, Carteret, Columbus*, New Hanover*, Onslow, Sampson*)	Mimic Glass Lizard	SC	FSC	S2	G3
<i>Pituophis melanoleucus melanoleucus</i> SCM: dry and sandy woods, mainly in pine/oak sandhills (Brunswick, Cherokee*, Clay+, Cumberland+, Graham*, Harnett+, Hoke, Montgomery, Moore, New Hanover*, Richmond, Rutherford+, Scotland, Swain*)	Northern Pine Snake	SC	FSC	S3	G4T4
<i>Regina rigida</i> C: marshes, cypress ponds, other wetlands (Bladen+, Brunswick*, Carteret+, Craven, Dare, Hoke, Hyde+, Jones+, New Hanover*, Onslow+, Robeson, Tyrrell+)	Glossy Crayfish Snake	SR	-	S2S3	G5
<i>Seminatrix pygaea</i> C: in lush vegetation of ponds, ditches, or sluggish streams (Brunswick, Carteret+, Craven+, Dare, Hyde+, New Hanover*, Onslow+, Pender*, Tyrrell+)	Black Swamp Snake	SR	-	S2	G5
<i>Sistrurus miliarius</i> CSP: pine flatwoods, pine/oak sandhills, other pine/oak forests (Beaufort, Bladen, Brunswick*, Carteret, Cleveland*, Craven, Cumberland+, Gaston, Harnett+, Hoke+, Hyde, Montgomery+, Moore, New Hanover, Onslow, Pender, Pitt, Richmond+, Sampson, Scotland)	Pigmy Rattlesnake	SC	-	S3	G5
<i>Sternotherus minor</i> M: streams and rivers in Mississippi drainage (Cherokee, Madison)	Loggerhead Musk Turtle	SC	-	S1	G5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

25

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
AMPHIBIANS					
<i>Ambystoma mabeei</i> SC: savannas, wet woods, swamps (Bladen*, Columbus*, Hoke, New Hanover*, Pender*, Robeson, Sampson, Scotland)	Mabee's Salamander	SR	-	S3	G4
<i>Ambystoma talpoideum</i> MP: breeds in fish-free semipermanent woodland ponds; forages in adjacent woodlands (Alleghany*, Buncombe, Cherokee, Guilford, Henderson*, Macon*, Montgomery, Person, Polk, Richmond, Rockingham, Rowan, Surry, Transylvania*, Union)	Mole Salamander	SC	-	S2	G5
<i>Ambystoma tigrinum</i> SC: breeds in fish-free semipermanent ponds; forages in adjacent woods, usually sandy pinewoods (Cumberland, Hoke, Richmond, Robeson, Scotland, Wake)	Eastern Tiger Salamander	T	-	S2	G5
<i>Aneides aeneus</i> M: damp, shaded crevices of cliffs or rock outcrops in deciduous forests (southern mountains) (Henderson, Jackson, Macon, Rutherford, Transylvania)	Green Salamander	E	FSC	S2	G3G4
<i>Bufo quercicus</i> CS: pine flatwoods and savannas, pine sandhills where near water (records not yet entered)	Oak Toad	SR	-	S3	G5
<i>Cryptobranchus alleganiensis</i> M: large and clear fast-flowing streams (Alleghany, Ashe, Avery*, Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, Mitchell, Swain+, Transylvania, Watauga, Yancey)	Hellbender	SC	FSC	S3	G3G4
<i>Desmognathus aeneus</i> M: seeps, springs, or streams in forests in extreme southwestern counties (Cherokee, Clay*, Graham, Macon)	Seepage Salamander	SR	FSC	S3	G3G4
<i>Desmognathus imitator pop 1</i> M: forests in the vicinity of Waterrock Knob (Jackson+)	Imitator Salamander - Waterrock Knob population	SR	-	S1	G3T1Q
<i>Desmognathus santeetlah</i> M: stream headwaters and seepage areas; southwestern mountains (Graham, Jackson*, Swain*)	Santeetlah Dusky Salamander	SR	-	S2S3	G3G4Q
<i>Desmognathus wrighti</i> M: spruce-fir and other high elevation forests (records not yet entered)	Pigmy Salamander	SR	-	S3	G3G4

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Eurycea junaluska</i> M: forests near seeps and streams, mainly in the Cheoah River system (Cherokee, Clay, Graham)	Junaluska Salamander	T	FSC	S2	G3
<i>Eurycea longicauda</i> M: moist woods and floodplains; small ponds for breeding (Alleghany*, Clay*, Graham, Haywood*, Macon*, Watauga+)	Longtail Salamander	SC	-	S2	G5
<i>Eurycea quadridigitata pop 1</i> C: pocosins, bay forests, flatwoods, savannas (Hoke, Robeson, Scotland)	Dwarf Salamander - silver morph	SC	-	S2	G5T2Q
<i>Hemidactylium scutatum</i> MPC: pools, bogs, and other wetlands in hardwood forests (Alamance+, Avery, Bladen*, Buncombe*, Chatham, Cherokee+, Cumberland*, Duplin*, Durham, Gates, Graham+, Granville, Henderson*, Macon*, Mitchell*, Montgomery, Moore, Nash, Orange, Person, Polk+, Randolph, Rockingham*, Surry, Wake)	Four-toed Salamander	SC	-	S3	G5
<i>Hyla versicolor</i> PM?: deciduous or mixed forests, often near water; range uncertain in NC (Warren+)	Northern Gray Treefrog	SR	-	S1?	G5
<i>Necturus lewisi</i> PC: rivers and large streams in Neuse and Tar drainages (endemic to North Carolina) (Beaufort*, Craven*, Durham, Edgecombe, Franklin, Granville*, Greene*, Halifax, Johnston, Jones, Lenoir, Nash, Orange, Person*, Pitt*, Vance*, Wake, Warren, Wayne*, Wilson*)	Neuse River Waterdog	SC	-	S3	G3
<i>Necturus maculosus</i> M: rivers and large streams (French Broad drainage) (Buncombe*, Henderson*, Transylvania*)	Common Mudpuppy	SC	-	SH	G5
<i>Plethodon amplus</i> M: mesic forests in the Hickorynut Gorge vicinity (endemic to this area) (Buncombe+, Henderson+, Rutherford+)	Blue Ridge Gray-cheeked Salamander	SR	-	S1S2	G1G2
<i>Plethodon aureolus</i> M: forests in the Unicoi Mountains (Cherokee*, Graham*)	Tellico Salamander	SR	-	S2	G2G3
<i>Plethodon cheoah</i> M: mesic forests on Cheoah Bald (endemic to this area) (Graham+, Swain+)	Cheoah Bald Salamander	SR	-	S2?	G2

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

27

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Plethodon ventralis</i> M: moist areas of talus slopes or rock outcrops in hardwood forests (Buncombe*, Haywood, Henderson*, Madison*, Yancey)	Southern Zigzag Salamander	SC	-	S1	G4
<i>Plethodon wehrlei</i> P: upland forests (low mountains near Virginia border) (Alleghany, Stokes, Surry, Wilkes)	Wehrle's Salamander	T	-	S1	G5
<i>Plethodon welleri</i> M: high elevation forests in northern mountains, mainly in spruce-fir and to a lesser degree, northern hardwood forests (Avery, Mitchell, Watauga, Yancey)	Weller's Salamander	SC	-	S2	G3
<i>Plethodon yonahlossee pop 1</i> M: Hickorynut Gorge area (endemic to this area); crevices in moist shaded rocks (Buncombe*, Henderson+, Rutherford)	Crevice Salamander	SC	-	S1	G4T1Q
<i>Pseudacris brachyphona</i> M: forests near temporary pools or ponds, in extreme southwestern mountains (Cherokee, Haywood*)	Mountain Chorus Frog	SC	-	S1	G5
<i>Pseudacris ornata</i> SC: swamps, savannas, wooded ponds and pools (Bladen*, Brunswick*, Hoke, New Hanover*, Robeson, Sampson*, Scotland)	Ornate Chorus Frog	SR	-	S3	G5
<i>Rana capito</i> SC: breeds in temporary fish-free pools; forages in sandy woods, especially pine-oak sandhills (Beaufort*, Bladen*, Brunswick, Carteret, Hoke, Jones*, New Hanover*, Onslow, Pender, Robeson, Sampson, Scotland)	Carolina Gopher Frog	T	FSC	S2	G3
<i>Rana heckscheri</i> SC: river floodplains, such as pools or borrow pit ponds (Cumberland*, Moore*, Robeson*, Sampson*, Scotland*)	River Frog	SC	-	SH	G5

FRESHWATER FISHES

<i>Acipenser brevirostrum</i> TC: brackish water of large rivers and estuaries; spawns in freshwater areas (Anson, Bertie, Bladen, Brunswick, Camden*, Carteret*, Columbus, Currituck*, Dare, Hyde*, New Hanover, Onslow*, Pamlico*, Pasquotank*, Pender, Richmond)	Shortnose Sturgeon	E	E	S1	G3
--	--------------------	---	---	----	----

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Acipenser oxyrinchus</i> TC: coastal waters, estuaries, large rivers (records not yet entered)	Atlantic Sturgeon	SC	-	S3	G3
<i>Ambloplites cavifrons</i> PC: streams in Neuse and Tar systems, rarely in Cape Fear system (Durham, Edgecombe+, Franklin+, Granville, Halifax, Johnston+, Moore, Nash, Orange, Person, Pitt*, Wake+, Warren)	Roanoke Bass	SR	FSC	S3	G3
<i>Aplodinotus grunniens</i> M: French Broad River (Madison)	Freshwater Drum	T (PSC)	-	S1?	G5
<i>Carpiodes carpio</i> M: French Broad River (Madison*)	River Carpsucker	SC	-	SH	G5
<i>Carpiodes velifer</i> PC: Catawba, Pee Dee, and Cape Fear rivers (Anson, Bladen, Catawba, Gaston, Iredell, Mecklenburg, Richmond)	Highfin Carpsucker	SC	-	S2	G4G5
<i>Clinostomus funduloides ssp 1</i> M: Little Tennessee drainage (Jackson, Macon, Swain)	Little Tennessee River Rosyside Dace	SC	FSC	S2	G5T3Q
<i>Cottus caeruleomentumum</i> P: Dan drainage (Stokes+)	Blue Ridge Sculpin	SR (PSC)	-	S1	G4
<i>Cottus caroliniae</i> M: French Broad and Toe drainages (Avery, Madison)	Banded Sculpin	T	-	S1	G5
<i>Cyprinella monacha</i> M: Little Tennessee River; formerly in French Broad drainage (Buncombe*, Macon, Madison*, Swain)	Spotfin Chub	T	T	S1	G2
<i>Cyprinella sp 1</i> (formerly considered part of <i>C. zanema</i>) SC: Cape Fear, Lumber, and Pee Dee drainages (Anson, Bladen*, Cumberland+, Richmond, Robeson+, Sampson, Scotland+)	Thinlip Chub	SC	-	S2	GUQ
<i>Cyprinella zanema</i> P: Catawba and Broad drainages (Burke, Caldwell, Catawba+, Iredell+, Lincoln, McDowell+, Mecklenburg+, Polk, Rutherford)	Santee Chub	SR	-	S3	G4
<i>Elassoma boehlkei</i> C: streams and canals in Waccamaw drainage (Brunswick, Columbus)	Carolina Pygmy Sunfish	T	FSC	S1	G2
<i>Erimystax insignis</i> M: primarily French Broad drainage (Buncombe+, Cherokee+, Clay+, Henderson+, Madison+, Mitchell+, Yancey+)	Blotched Chub	SR	FSC	S3	G3G4
<i>Etheostoma acuticeps</i> M: streams in Nolichucky system (Toe and Cane rivers) (Mitchell, Yancey)	Sharphead Darter	T	FSC	S1	G3

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

29

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Etheostoma collis pop 1</i> P: streams in the Yadkin - Pee Dee and Catawba drainages (Anson+, Cabarrus, Davidson+, Mecklenburg, Montgomery, Richmond, Stanly, Union)	Carolina Darter - central Piedmont population	SC	FSC	S3	G3T3Q
<i>Etheostoma collis pop 2</i> P: streams in the Roanoke, Tar, Neuse, and Cape Fear drainages (Chatham, Durham+, Granville, Guilford, Moore, Orange*)	Carolina Darter - eastern Piedmont population	SC	FSC	S2	G3T3Q
<i>Etheostoma inscriptum</i> M: streams of Savannah drainage (Jackson, Macon, Transylvania)	Turquoise Darter	SC (PT)	-	S1	G4
<i>Etheostoma jessiae</i> M: streams in Mills River system (Henderson*)	Blueside Darter	SC	-	SH	G4Q
<i>Etheostoma kanawhae</i> M: New drainage (Alleghany, Ashe, Watauga)	Kanawha Darter	SR	-	S3	G4
<i>Etheostoma mariae</i> SC: streams of Lumber drainage, mainly in the sandhills; perhaps in adjacent Pee Dee drainage (Hoke, Montgomery, Moore, Richmond, Robeson+, Scotland)	Pinewoods Darter	SC	FSC	S2	G3
<i>Etheostoma perlongum</i> C: Lake Waccamaw (endemic to North Carolina) (Columbus)	Waccamaw Darter	T	FSC	S1	G1Q
<i>Etheostoma podostemone</i> P: large streams in Dan River system (Caswell, Rockingham, Stokes)	Riverweed Darter	SC	-	S2	G4
<i>Etheostoma simoterum</i> M: streams of French Broad drainage (Madison*)	Snubnose Darter	SC	-	SH	G5
<i>Etheostoma vulneratum</i> M: streams of Little Tennessee system; perhaps extirpated from French Broad system (Jackson, Macon, Madison*, Swain)	Wounded Darter	SC	FSC	S2	G3
<i>Exoglossum laurae</i> M: New drainage (Alleghany, Ashe, Watauga)	Tonguetied Minnow	SR	-	S2	G4
<i>Exoglossum maxillingua</i> P: streams of Dan River system (Stokes)	Cutlips Minnow	E (PSC)	-	S1	G5
<i>Fundulus cf diaphanus</i> (formerly considered part of <i>F. waccamensis</i>) (taxon endemic to North Carolina, but may be a population of <i>F. diaphanus</i>) C: Lake Phelps (Washington)	Lake Phelps Killifish	SR	FSC	S1	GUQ
<i>Fundulus confluentus</i> T: fresh to brackish waters along coast (Carteret*, Dare*, Hyde*, Onslow+)	Marsh Killifish	SR	-	S2	G5

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Fundulus luciae</i> TC: ponds and pools along coast (Brunswick*, Carteret+, New Hanover*, Onslow+)	Spotfin Killifish	SR	-	S2	G4
<i>Fundulus waccamensis</i> C: Lake Waccamaw (endemic to North Carolina) (Columbus)	Waccamaw Killifish	SC	FSC	S1	G1
<i>Heterandria formosa</i> C: streams and lakes near Wilmington (Brunswick, New Hanover)	Least Killifish	SC	-	S2	G5
<i>Hiodon tergisus</i> M: French Broad River (Henderson*, Madison+)	Mooneye	SC	-	SH	G5
<i>Hybopsis rubrifrons</i> M: Savannah drainage (Transylvania)	Rosyface Chub	T	-	S1	G4
<i>Hypentelium roanokense</i> P: Dan drainage (Caswell, Rockingham+, Stokes)	Roanoke Hog Sucker	SR	-	S3	G4
<i>Ichthyomyzon bdellium</i> M: French Broad drainage (Madison)	Ohio Lamprey	SR	-	S1	G3G4
<i>Ictiobus niger</i> M: French Broad River (Madison)	Black Buffalo	SR	-	S1	G5
<i>Lampetra aepyptera</i> CP: Tar and Neuse drainages (Franklin, Halifax, Jones*, Pitt*, Wake, Warren)	Least Brook Lamprey	T	-	S2	G5
<i>Lampetra appendix</i> M: French Broad drainage (Madison)	American Brook Lamprey	T	-	S1	G4
<i>Lucania goodei</i> C: stream in Wilmington area; possibly introduced (New Hanover)	Bluefin Killifish	SC	-	S1	G5
<i>Luxilus chrysocephalus</i> M: Cane drainage; reported in Little Tennessee drainage (Macon, Yancey)	Striped Shiner	T (PSC)	-	S2	G5
<i>Menidia extensa</i> C: Lake Waccamaw (endemic to North Carolina) (Columbus)	Waccamaw Silverside	T	T	S1	G1
<i>Micropterus coosae</i> M: Savannah drainage (Burke*, Jackson*, Transylvania)	Redeye Bass	SR	-	S1	G5
<i>Moxostoma robustum</i> P: Pee Dee River (Anson, Davie*, Richmond, Rowan*, Surry*, Yadkin*)	Robust Redhorse	SR (PE)	FSC	S1	G1
<i>Moxostoma sp 1</i> M: Little Tennessee and Hiwassee rivers (Cherokee, Clay, Jackson, Macon, Swain)	Sicklefin Redhorse	SR (PT)	FSC	S2	G2G3Q
<i>Moxostoma sp 2</i> P: Cape Fear and Pee Dee drainages (Anson, Chatham, Harnett*, Lee, Moore, Richmond)	Carolina Redhorse	SR (PE)	FSC	S1	G1G2Q
<i>Notropis bifrenatus</i> C: stream near lower Neuse River (Craven)	Bridle Shiner	SC (PE)	FSC	S1	G5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

31

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Notropis lutipinnis</i> MP: Savannah, Little Tennessee, and Broad drainages [only the Savannah and Little Tennessee drainages are listed as SC] (Jackson, Macon, Transylvania)	Yellowfin Shiner	SC	-	S3	G4Q
<i>Notropis mekistocholas</i> P: Cape Fear drainage (endemic to North Carolina) (Chatham, Harnett, Lee, Moore, Randolph)	Cape Fear Shiner	E	E	S1	G1
<i>Noturus eleutherus</i> M: French Broad drainage (Madison*)	Mountain Madtom	SC	-	SH	G4
<i>Noturus flavus</i> M: Nolichucky, French Broad, and Little Tennessee drainages (Madison, Swain, Yancey)	Stonecat	E	-	S1	G5
<i>Noturus furiosus</i> CP: Tar and Neuse drainages (endemic to North Carolina) (Craven*, Durham*, Edgecombe, Franklin, Greene*, Halifax, Johnston, Jones, Lenoir, Nash, Pitt*, Vance*, Wake, Wayne, Wilson*)	Carolina Madtom	SC (PT)	FSC	S2	G2
<i>Noturus gilberti</i> P: Dan drainage (Stokes)	Orangefin Madtom	E	FSC	S1	G2
<i>Noturus insignis ssp 1</i> P: Dan River (no county data)	Spotted Madtom	SR	FSC	SR	G5T1T2Q
<i>Noturus sp 1</i> C: Cape Fear, Waccamaw, and Lumber drainages (Bladen+, Brunswick*, Columbus*, Cumberland+, Duplin, Robeson, Sampson+)	Broadtail Madtom	SC	FSC	S1	G2
<i>Percina burtoni</i> M: South Toe River; formerly in French Broad drainage (Buncombe*, Yancey)	Blotchside Logperch	E	FSC	S1	G2
<i>Percina caprodes</i> M: Tennessee drainages (Alleghany, Ashe, Madison)	Logperch	T	-	S2	G5
<i>Percina nigrofasciata</i> M: Savannah drainage (Transylvania)	Blackbanded Darter	SR (PT)	-	S1	G5
<i>Percina oxyrhynchus</i> M: New River drainage (Alleghany, Ashe)	Sharpnose Darter	SC	-	S1	G4
<i>Percina sciera</i> M: French Broad drainage (Madison*)	Dusky Darter	E	-	SH	G5
<i>Percina squamata</i> M: Tennessee drainages (Cherokee, Jackson*, Macon, Madison*, Mitchell, Swain, Yancey)	Olive Darter	SC	FSC	S2	G3
<i>Phenacobius teretulus</i> M: New drainage (Alleghany, Ashe, Watauga)	Kanawha Minnow	SC	FSC	S2	G3G4

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Polyodon spathula</i> M: French Broad River (Buncombe*, Madison*)	Paddlefish	E	-	SH	G4
<i>Sander canadensis</i> M: French Broad and Hiwassee rivers (Cherokee+, Haywood+, Madison)	Sauger	SR	-	S2	G5
<i>Scartomyzon ariommus</i> P: Dan drainage (Forsyth, Rockingham, Stokes)	Bigeye Jumprock	T	-	S2	G4
<i>Semotilus lumbee</i> S: streams in the sandhills (Cumberland, Harnett, Hoke, Montgomery*, Moore, Richmond, Scotland)	Sandhills Chub	SC	FSC	S3	G3
<i>Stizostedion</i> (see <i>Sander</i>) <i>Thoburnia hamiltoni</i> P: Dan drainage (Stokes)	Rustyside Sucker	E	FSC	S1	G3

MOLLUSKS – FRESHWATER BIVALVES

<i>Alasmidonta heterodon</i> PC: Tar and Neuse drainages, mainly near Fall Line (Franklin, Granville, Halifax, Johnston, Nash, Orange, Vance, Wake, Warren, Wilson)	Dwarf Wedgemussel	E	E	S1	G1G2
<i>Alasmidonta raveneliana</i> M: Tennessee drainages (Buncombe*, Graham, Haywood, Henderson, Jackson, Macon, Mitchell, Swain, Transylvania, Yancey)	Appalachian Elktoe	E	E	S1	G1
<i>Alasmidonta robusta</i> P: Uwharrie River drainage; formerly Long Creek in Mecklenburg County (endemic to North Carolina) (Mecklenburg*, Montgomery)	Carolina Elktoe	SR	-	S1	G1
<i>Alasmidonta undulata</i> PC: most river systems in Piedmont and Coastal Plain (Caswell, Chatham, Durham, Edgecombe, Franklin, Gates, Granville, Halifax, Harnett, Hertford, Johnston, Jones, Montgomery, Moore, Nash, Northampton, Orange, Person, Pitt*, Randolph, Vance, Wake, Warren, Wilson)	Triangle Floater	T	-	S2	G4
<i>Alasmidonta varicosa</i> PM: Piedmont systems and along Blue Ridge escarpment of Catawba River system (Anson, Burke, Caldwell, Chatham, Forsyth, Granville, Macon, Montgomery, Moore, Orange, Randolph, Surry, Yadkin)	Brook Floater	E	FSC	S1	G3

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

33

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Alasmidonta viridis</i> M: Little Tennessee and Mills rivers (Henderson, Macon, Swain)	Slippershell Mussel	E	-	S1	G4G5
<i>Anodonta couperiana</i> C: Bladen County; formerly in Greenfield Lake (Bladen*, New Hanover*)	Barrel Floater	E	-	SH	G4
<i>Anodonta implicata</i> C: Chowan, Meherrin, lower Roanoke, and Pee Dee rivers (Anson, Bertie, Chowan, Gates, Halifax, Hertford, Northampton, Richmond, Washington)	Alewife Floater	T	-	S1	G5
<i>Cyclonaias tuberculata</i> M: New River (Alleghany)	Purple Wartyback	E	-	S1	G5
<i>Elliptio dilatata</i> M: Little Tennessee, Hiwassee, and New rivers (Alleghany, Ashe, Cherokee, Macon, Swain, Watauga)	Spike	SC	-	S1	G5
<i>Elliptio folliculata</i> C: Coastal Plain, mainly in Lake Waccamaw (Bladen, Brunswick, Columbus, Cumberland, Duplin, Harnett, Pender, Sampson)	Pod Lance	SC	-	S1	G2G3Q
<i>Elliptio lanceolata</i> PC: Tar and Neuse systems, mainly near the Fall Line (Edgecombe, Franklin, Granville, Halifax, Johnston, Nash, Vance, Wake, Warren, Wayne)	Yellow Lance	E	FSC	S1	G2G3
<i>Elliptio marsupiobesa</i> C: Cape Fear and Neuse basins (endemic to North Carolina) (Bladen, Craven, Cumberland, Duplin, Johnston, Pender, Robeson, Sampson)	Cape Fear Spike	SC	-	S3	G3Q
<i>Elliptio roanokensis</i> PC: Cape Fear north to Roanoke river systems (Anson, Bladen, Craven, Cumberland, Edgecombe, Halifax, Harnett, Johnston, Montgomery, Nash, Northampton, Pitt, Randolph, Richmond, Stanly, Wake, Wayne*)	Roanoke Slabshell	T	-	S1	G2G3
<i>Elliptio steinstansana</i> PC: Tar River drainage, very rare in Neuse drainage (endemic to North Carolina) (Edgecombe, Franklin, Halifax, Johnston, Nash, Pitt*, Warren)	Tar River Spinymussel	E	E	S1	G1
<i>Elliptio waccamawensis</i> C: Lake Waccamaw and vicinity (endemic to North Carolina; possibly in adjacent South Carolina) (Brunswick, Columbus)	Waccamaw Spike	E	FSC	S1	G2Q

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Fusconaia barnesiana</i> M: Little Tennessee River (Macon, Swain)	Tennessee Pigtoe	E	-	S1	G2G3
<i>Fusconaia masoni</i> CP: most Atlantic drainages, in lower Piedmont and upper Coastal Plain; also in Black River in lower Coastal Plain (Bladen, Caswell, Chatham*, Cumberland, Durham, Edgecombe, Franklin, Granville, Halifax, Harnett, Johnston, Montgomery, Moore, Nash, Northampton*, Orange, Pender, Person, Pitt*, Randolph, Union, Wake, Warren, Wayne, Wilson)	Atlantic Pigtoe	E	FSC	S1	G2
<i>Fusconaia subrotunda</i> M: Hiwassee and French Broad systems (Buncombe*, Cherokee, Clay, Transylvania)	Long-solid	SR	-	S1	G3
<i>Lampsilis cariosa</i> PC: a number of river systems; mainly near the Fall Line (Alamance*, Anson, Bladen, Chatham, Columbus, Cumberland, Davie, Durham, Edgecombe, Franklin, Granville, Halifax, Harnett, Johnston, Montgomery, Moore, Nash, Orange, Pender, Person, Pitt*, Randolph, Richmond, Rowan, Vance)	Yellow Lampmussel	E	FSC	S1	G3G4
<i>Lampsilis fasciola</i> M: French Broad, Pigeon, Hiwassee, and Little Tennessee systems (Cherokee, Haywood, Jackson, Macon, Mitchell, Swain, Yancey)	Wavy-rayed Lampmussel	SC	-	S1	G4
<i>Lampsilis fullerkeri</i> C: Lake Waccamaw and vicinity (endemic to North Carolina and adjacent South Carolina) (Columbus)	Waccamaw Fatmucket	T	FSC	S1	G1Q
<i>Lampsilis radiata conspicua</i> P: Neuse and Pee Dee systems (Alamance, Anson, Cabarrus, Davidson, Durham, Granville, Montgomery, Orange, Person, Randolph, Richmond, Stanly)	Carolina Fatmucket	T	-	S1?	G5T2Q
<i>Lampsilis radiata radiata</i> CP: a number of river systems (Bladen, Chowan, Columbus, Craven, Edgecombe, Franklin, Gates, Halifax, Hertford, Johnston, Jones, Nash, Northampton, Pender, Pitt, Sampson, Wake, Warren, Wilson)	Eastern Lampmussel	T	-	S1S2	G5T5
<i>Lampsilis sp 2</i> PC: Neuse and Tar systems (endemic to North Carolina) (records not yet entered)	a bivalve	SR	-	S1	G1

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

35

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Lasmigona decorata</i> P: Catawba and Pee Dee drainages in Union County (endemic to this area and adjacent South Carolina) (Anson*, Cabarrus*, Mecklenburg*, Richmond*, Union)	Carolina Heelsplitter	E	E	S1	G1
<i>Lasmigona holstonia</i> M: Mills River; formerly in Valley Creek in Cherokee County (Cherokee*, Henderson)	Tennessee Heelsplitter	E	FSC	S1	G3
<i>Lasmigona subviridis</i> CPM: Tar, Neuse, and Cape Fear systems downstate; New and Watauga systems in mountains (Alleghany, Ashe, Durham, Edgecombe, Granville, Halifax, Johnston, Nash, Northampton, Orange, Person, Rockingham, Stokes, Wake, Watauga)	Green Floater	E	FSC	S1	G3
<i>Leptodea ochracea</i> CP: a number of systems, primarily in the Coastal Plain; abundant in Lake Waccamaw (Bertie, Chowan, Columbus, Edgecombe*, Gates, Halifax, Hertford, Martin, Northampton, Pitt, Washington)	Tidewater Mucket	T	-	S1	G4
<i>Ligumia nasuta</i> C: Chowan, Roanoke, and Cape Fear systems (Anson, Bertie, Brunswick, Chowan, Gates, Hertford, Nash*, Pitt*, Richmond, Washington)	Eastern Pondmussel	T	-	S1	G4G5
<i>Pegias fabula</i> M: Little Tennessee River; formerly in Valley River in Cherokee County (Cherokee*, Macon, Swain)	Littlewing Pearlymussel	E	E	S1	G1
<i>Pleurobema collina</i> P: Dan and Mayo rivers (Rockingham, Stokes)	James Spiny mussel	SR	E	S1	G1
<i>Pleurobema oviforme</i> M: Little Tennessee and Hiwassee drainages (Cherokee, Transylvania)	Tennessee Clubshell	E	FSC	S1?	G3
<i>Sphaerium simile</i> C: White Oak River (Jones, Onslow)	Grooved Fingernailclam	SR	-	S1?	G5

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Strophitus undulatus</i> PC: Tar, Neuse, Cape Fear, and Pee Dee systems, perhaps other systems in Piedmont (Alamance, Anson, Caswell, Chatham, Davidson, Durham, Edgecombe*, Forsyth, Franklin, Granville, Halifax, Harnett, Henderson, Johnston, Jones, Mecklenburg, Montgomery, Moore, Nash, Orange, Person, Pitt, Polk, Randolph, Richmond, Rockingham, Stanly, Surry, Transylvania, Union, Vance, Wake, Warren, Wilson, Yadkin)	Creeper	T	-	S2	G5
<i>Toxolasma pullus</i> PC: a number of Atlantic drainages (Columbus, Montgomery, Orange, Randolph, Union)	Savannah Lilliput	E	FSC	S1	G2
<i>Villosa constricta</i> PC: most Atlantic drainages, mainly in lower Piedmont (Alamance, Burke, Chatham, Durham, Franklin, Granville, Halifax, Harnett, Johnston, Lee*, Montgomery, Moore, Nash, Orange, Person, Randolph, Rockingham, Stanly, Union, Vance, Wake, Warren, Wilson)	Notched Rainbow	SC	-	S3	G3
<i>Villosa delumbis</i> PC: most Atlantic drainages (Alamance, Anson, Bladen, Brunswick, Burke, Cabarrus, Chatham, Cumberland, Duplin, Granville, Mecklenburg, Montgomery, Person, Randolph, Rockingham, Sampson, Stanly, Union)	Eastern Creekshell	SR	-	S3	G4
<i>Villosa iris</i> M: Hiwassee and Little Tennessee drainages; formerly in French Broad drainage (Cherokee, Clay, Jackson, Macon, Swain)	Rainbow	SC	-	S1	G5
<i>Villosa trabalis</i> M: Hiwassee River (Cherokee)	Cumberland Bean	SR	E	S1	G1
<i>Villosa vanuxemensis</i> M: Hiwassee drainage; formerly French Broad drainage (Cherokee)	Mountain Creekshell	T	-	S1	G4
<i>Villosa vaughaniana</i> P: Pee Dee, Catawba, and Cape Fear systems (endemic to North Carolina and adjacent South Carolina) (Alamance, Anson, Cabarrus, Chatham, Mecklenburg, Montgomery, Moore, Randolph, Richmond, Stanly, Union)	Carolina Creekshell	E	FSC	S2	G2

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global

MOLLUSKS – FRESHWATER GASTROPODS

<i>Ammicola sp 1</i> C: Lake Waccamaw and adjacent Big Creek (endemic to North Carolina) (Columbus*)	Waccamaw Snail	SC	-	S1	G? [G1Q]
<i>Cincinnatia sp 1</i> C: Lake Waccamaw and adjacent Big Creek (endemic to North Carolina) (Columbus)	Waccamaw Siltsnail	SC	-	S1	G? [G1Q]
<i>Elimia interrupta</i> M: Hiwassee River and tributaries (Cherokee*)	Knotty Elimia	E	FSC	S1	G1
<i>Ferrissia hendersoni</i> CP: scattered locales in Coastal Plain and Piedmont, but mainly on margins of Carolina bay lakes (records not yet entered)	Blackwater Ancyloid	SC	-	S1	G5
<i>Helisoma eucosmium</i> C: Greenfield Lake (formerly), creek in Brunswick County (endemic to North Carolina) (Brunswick, New Hanover*)	Greenfield Rams-horn	E	FSC	S1	G1Q
<i>Leptoxis dilatata</i> M: New River drainage in Ashe, Alleghany, and Watauga counties (Alexander*, Alleghany, Ashe, Watauga)	Seep Mudalia	T	-	S1	G2? [G3]
<i>Leptoxis virgata</i> M?: reported from Hiwassee River, possibly in error	Smooth Mudalia	SR	FSC	SU	G2
<i>Planorbella magnifica</i> C: Orton Pond and pond on Sand Hill Creek; formerly Greenfield Lake (endemic to North Carolina) (Brunswick, New Hanover*)	Magnificent Rams-horn	E	FSC	S1	G1
<i>Somatogyrus virginicus</i> P: Eno River (Durham)	Panhandle Pebblesnail	SR	FSC	S1?	G1G2
<i>Viviparus intertextus</i> C: swamps in Lumber and Waccamaw drainages (Columbus, Robeson)	Rotund Mysterysnail	SR	-	S2?	G3G4

MOLLUSKS – TERRESTRIAL GASTROPODS

<i>Appalachina chilhoweensis</i> M: southern half of the mountains (Graham+, Haywood+, Madison+, Swain+)	Queen Crater	SC	-	S2	G2
<i>Catinella waccamawensis</i> C: shoreline of Lake Waccamaw (Columbus)	Waccamaw Ambersnail	T	-	S1	GUQ

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Discus bryanti</i> M: Watauga to Madison counties (Buncombe, Madison, Mitchell)	Sawtooth Disc	SC	-	S2	G2
<i>Fumonelix jonesiana</i> M: Newfound Gap area of Great Smoky Mountains National Park (endemic to this area) (Swain*)	Big-tooth Covert	T	-	S1	G1
<i>Fumonelix orestes</i> M: Plott Balsam mountains (endemic to this area) (Haywood, Jackson)	Engraved Covert	T	-	S1	G1
<i>Fumonelix wheatleyi clingmanicus</i> M: Clingmans Dome region of Great Smoky Mountains National Park (endemic to this area) (Swain)	Clingman Covert	T	FSC	S1	G4T3T4
<i>Glyphyalinia clingmani</i> M: Black Mountains of Yancey County (endemic to North Carolina) (Yancey)	Fragile Glyph	E	FSC	S1	G1
<i>Glyphyalinia junaluskana</i> M: southwestern mountains (Cherokee+, Graham+, Macon+, Swain+)	Dark Glyph	SC	-	S2	G2
<i>Glyphyalinia pentadelphia</i> M: southwestern mountains (Cherokee+, Clay+, Graham+, Macon+, Swain+)	Pink Glyph	SC	-	S2	G2G3
<i>Glyphyalinia vanattai</i> M: Avery, Mitchell, and Yancey counties (Avery+, Mitchell+, Yancey+)	Honey Glyph	SC	-	S1S2	G1G2
<i>Haplotrema kendeighi</i> M: southwestern mountains (Macon+, Swain+)	Blue-footed Lancetooth	SC	-	S1S2	G1G2
<i>Helicodiscus bonamicus</i> M: Nantahala Gorge vicinity (endemic to this area) (Graham+, Macon+, Swain+)	Spiral Coil	SC	-	S1	G1
<i>Helicodiscus fimbriatus</i> M: extreme southwestern corner of the state, in Cherokee and Graham counties (Cherokee+, Graham+)	Fringed Coil	SC	-	S2	G2G3
<i>Helicodiscus triodus</i> M: Madison County (Madison)	Talus Coil	SR	-	S1?	G2
<i>Inflectarius downieanus</i> M: northern mountains (Watauga)	Dwarf Globelet	SR	-	S1	G3
<i>Inflectarius ferrissi</i> M: Great Smoky Mountains and Plott Balsams (endemic to these ranges) (Haywood+, Jackson+, Swain+)	Smoky Mountain Covert	T	-	S2	G2
<i>Inflectarius subpalliatius</i> M: central mountains (Avery to Haywood counties) (Avery, Haywood+, Madison, Mitchell, Watauga)	Velvet Covert	SC	-	S2	G2

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

39

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	Status N.C.	U.S.	Rank N.C.	Global
<i>Pallifera hemphilli</i> M: high elevation forests, mainly spruce-fir (Avery+, Jackson+, Mitchell+, Swain+, Yancey+)	Black Mantleslug	SC	-	S2	G3
<i>Paravitrea andrewsae</i> M: northern half of the mountains (Avery, Buncombe+, Madison, Mitchell, Watauga, Yancey+)	High Mountain Supercoil	SC	-	S2	G2
<i>Paravitrea clappi</i> M: high elevations in Great Smoky Mountains National Park (Swain+)	Mirey Ridge Supercoil	SC	-	S1S2	G1G2
<i>Paravitrea lacteodens</i> M: Graham County, possibly Cherokee County (endemic to this area) (Graham+)	Ramp Cove Supercoil	SC	-	S1	G1
<i>Paravitrea lamellidens</i> M: southern half of the mountains (Cherokee+, Graham+, Haywood+, Macon+, Swain+, Yancey+)	Lamellate Supercoil	SC	-	S2	G2
<i>Paravitrea placentula</i> M: Madison, Mitchell and Swain counties (Madison, Mitchell, Swain+)	Glossy Supercoil	SC	-	S2	G3
<i>Paravitrea ternaria</i> M: found under moist leaf litter on wooded hillsides and slopes (endemic to Madison County and Unicoi County, Tennessee) (Madison)	Sculpted Supercoil	T	FSC	S1	G1
<i>Paravitrea umbilicaris</i> M: extreme southwestern mountains (Cherokee+, Graham+, Macon+)	Open Supercoil	SC	-	S2	G2
<i>Paravitrea varidens</i> M: Mitchell and Yancey counties (endemic to North Carolina and adjacent Tennessee) (Mitchell*, Yancey+)	Roan Supercoil	T	FSC	S1S2	G1G2
<i>Patera clarki</i> M: southwestern mountains (Cherokee+, Clay+, Graham+, Jackson+, Macon+, Swain+)	Dwarf Proud Globe	SC	-	S2	G3
<i>Patera clarki nantahala</i> M: Nantahala Gorge (endemic to this site) (Swain)	Noonday Globe	T	T	S1	G3T1
<i>Stenotrema depilatum</i> M: Great Smoky Mountains National Park (essentially endemic to this area) (Graham+, Swain+)	Great Smoky Slitmouth	SC	-	S2	G2
<i>Triodopsis fulciden</i> P: southwestern Piedmont (endemic to North Carolina) (Burke+, Catawba+, Cleveland+, Lincoln+)	Dwarf Threetooth	SC	-	S1S2	G1G2

40 NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Triodopsis soelneri</i> C: swampy habitats in the extreme southeastern corner of the state (endemic to North Carolina) (Brunswick, Columbus*, New Hanover)	Cape Fear Threetooth	T	FSC	S2	G2
<i>Triodopsis tennesseensis</i> M: Hot Springs vicinity (Madison)	Budded Threetooth	SR	-	S1S3	G3G4
<i>Valvata sincera</i> P: Pee Dee drainage (Richmond)	a valvatid snail	SR	-	S1	GUQ
<i>Ventridens coelaxis</i> M: northern mountains (Alleghany+, Avery+, Madison, Watauga+)	Bidentate Dome	SC	-	S2	G3
<i>Ventridens collisella</i> M: northern mountains (Mitchell, Watauga)	Sculptured Dome	SR	-	S1	G4
<i>Ventridens lasmodon</i> M: Madison County (Madison)	Hollow Dome	SR	-	S1S3	G3
<i>Zonitoides patulooides</i> M: southwestern mountains (Macon+, Swain+)	Appalachian Gloss	SC	-	S2	G2

ARACHNIDS

This arachnid list is a selective one, concentrating on cave and other montane spiders, and is not intended to be a complete list of the rare arachnids in the state.

<i>Hypochilus coylei</i> M: rock outcrops (apparently endemic to southern mountains of North Carolina) (Buncombe, Henderson, Polk, Rutherford)	a lampshade spider	SR	-	S3?	G3?
<i>Hypochilus sheari</i> M: rock outcrops (apparently endemic to Buncombe, McDowell, and Yancey counties, NC) (Buncombe, McDowell, Yancey)	a lampshade spider	SR	-	S2S3	G2G3
<i>Microhexura montivaga</i> M: in moss of spruce-fir forests (endemic to North Carolina and adjacent Tennessee) (Avery, Caldwell, Mitchell, Swain*, Yancey*)	Spruce-fir Moss Spider	SR	E	S1	G1
<i>Nesticus brimleyi</i> M: caves (endemic to the vicinity of Bat Cave)	a nesticid spider	SR	-	S1?	G1G2
<i>Nesticus carolinensis</i> M: caves (apparently endemic to Linville Caverns) (McDowell*)	Linville Caverns Spider	SR	-	S1	G1?
<i>Nesticus cooperi</i> M: caves and along Nantahala River (apparently endemic to Swain County, NC) (Macon, Swain+)	Lost Nantahala Cave Spider	SR	FSC	S1	G1G2

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

41

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Nesticus crosbyi</i> M: spruce-fir forests (apparently endemic to Mount Mitchell)	a nesticid spider	SR	-	S1?	G1?
<i>Nesticus mimus</i> M: rocky areas; known from Grandfather Mountain and Table Rock; also in Virginia	a nesticid spider	SR	-	S2?	G2
<i>Nesticus sheari</i> M: on ground in moist or rich forests (apparently endemic to Graham County, NC)	a nesticid spider	SR	-	S2?	G2?
<i>Nesticus silvanus</i> M: habitat not indicated (apparently endemic to southern mountains of North Carolina)	a nesticid spider	SR	-	S2?	G2?
<i>Nesticus sp 1</i> M: habitat not indicated (known only from Jackson and Transylvania counties, NC, and Oconee County, SC)	a nesticid spider	SR	-	S2?	G2?

CRUSTACEANS

<i>Asctocythere cosmata</i> M: symbiotic on crayfish in sub-surface waters of burrows (Alleghany*, Avery*)	Grayson Crayfish Ostracod	SR	FSC	S2?	G?
<i>Caecidotea carolinensis</i> P: caves; in McDowell County (McDowell*)	Bennett's Mill Cave Water Slater	SR	FSC	S1	G1G2
<i>Cambarus acanthura</i> M: pools and small creeks in the Hiwassee drainage (records not yet entered)	Spinytail Crayfish	SR	-	S1	G4
<i>Cambarus catagius</i> P: Greensboro area to Uwharries (endemic to North Carolina) (Davidson, Guilford, Montgomery, Randolph)	Greensboro Burrowing Crayfish	SC	-	S2	G3 [G2]
<i>Cambarus chaugaensis</i> M: streams in Savannah drainage (endemic to northwest South Carolina and adjacent North Carolina and Georgia) (Jackson, Macon, Transylvania)	Oconee Stream Crayfish	SC	-	S2	G2 [G3]
<i>Cambarus davidi</i> P: Neuse and Cape Fear drainages (endemic to North Carolina) (Alamance, Caswell*, Chatham, Durham, Harnett, Orange, Rockingham, Wake)	Carolina Ladle Crayfish	SR	-	S2S3	G2G3 [G3]

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Cambarus georgiae</i> M: streams in Little Tennessee drainage (Jackson, Macon)	Little Tennessee River Crayfish	SC	-	S2S3	G1 [G2G3]
<i>Cambarus hirticosus</i> S: endemic to streams in the Sandhills (records not yet entered)	Sandhills Spiny Crayfish	SR	-	S2	G2
<i>Cambarus lenati</i> P: streams in the Broad River drainage (endemic to North Carolina) (Cleveland*, Rutherford)	Broad River Stream Crayfish	SR	-	S2	G1G2 [G2]
<i>Cambarus nodosus</i> M: seepages and other mucky areas in Hiwassee drainage (records not yet entered)	Knotty Burrowing Crayfish	SR	-	S2	G4
<i>Cambarus parrishi</i> M: streams in Hiwassee drainage (Cherokee, Clay)	Hiwassee Headwaters Crayfish	SC	FSC	S2S3	G1 [G3G4]
<i>Cambarus reburus</i> M: streams in upper portions of French Broad drainage, and in one stream in Savannah drainage (endemic to North Carolina) (Buncombe, Henderson, Jackson, Madison, Transylvania)	French Broad River Crayfish	SR	FSC	S2S3	G3G4 [G2G3]
<i>Cambarus spicatus</i> P: streams in Broad River drainage (Cleveland, Polk)	Broad River Spiny Crayfish	SC	-	S2	G3
<i>Cambarus tuckasegee</i> M: streams in Tuckasegee River subdrainage of Little Tennessee River drainage (endemic to North Carolina) (Jackson, Swain)	Tuckasegee Stream Crayfish	SR	-	S1	G1
<i>Cymocythere clavata</i> M: symbiotic on crayfish in mountain streams and rivers (Transylvania*)	Oconee Crayfish Ostracod	SR	FSC	S2?	G?
<i>Dactylocythere isabelae</i> P: symbiotic on crayfish in Lyle Creek in Catawba drainage (endemic to North Carolina) (Catawba*)	Catawba Crayfish Ostracod	SR	FSC	S1?	G?
<i>Dactylocythere prinsi</i> M: cold streams of Savannah drainage in Jackson County (endemic to North Carolina, but possible in adjacent South Carolina and Georgia) (Jackson+)	Whitewater Crayfish Ostracod	SR	FSC	S1	G?
<i>Diacyclops jeanneli putei</i> P: dug well, in Orange County (endemic to North Carolina) (Orange*)	Carolina Well Diacyclops	SR	-	SH	G3G4T1T2
<i>Lynceus gracilicornis</i> C: temporary ponds, pools, and ditches (Craven, New Hanover)	Graceful Clam Shrimp	SR	-	S2?	G5

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

43

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Orconectes carolinensis</i> CP: rivers and streams in the Neuse and Tar drainages (Craven*, Edgecombe, Franklin, Granville, Greene*, Halifax*, Johnston, Jones, Lenoir*, Nash*, Pitt*, Vance, Wake*, Warren*, Wilson)	North Carolina Spiny Crayfish	SC	-	S4	G3 [G4]
<i>Orconectes sp 1</i> M: Cheoah River subdrainage of the Little Tennessee River basin (probably endemic to this area) (records not yet entered)	a crayfish	SR	-	S2?	G?
<i>Orconectes virginianus</i> C: streams and rivers in the Chowan and Roanoke drainages (Bertie, Granville+, Halifax, Hertford, Martin*, Northampton)	Chowanoke Crayfish	SC	FSC	S3	G3 [G3G4]
<i>Procambarus braswelli</i> C: Waccamaw River and tributary streams (endemic to North Carolina and adjacent South Carolina) (Brunswick, Columbus, Scotland)	Waccamaw Crayfish	SC	-	S2S3	G2G3
<i>Procambarus plumimanus</i> C: rivers, ponds, ditches, and borrow pits in eastern Coastal Plain (endemic to North Carolina) (Carteret*, Craven+, Duplin*, Jones+, New Hanover*, Onslow*, Pender*)	Croatan Crayfish	SR	-	S3	G4
<i>Skistodiaptomus carolinensis</i> M: Lake Ravenel in Macon County (endemic to North Carolina) (Macon)	Carolina Skistodiaptomus	SR	-	S1?	G?
<i>Stygobromus carolinensis</i> M: seeps at Mount Mitchell (endemic to North Carolina) (Yancey+)	Yancey Sideswimmer	SR	FSC	S1	G1G2
<i>Waltoncythere acuta</i> M: symbiotic on crayfish in high gradient rivers and streams in Transylvania County (endemic to North Carolina, but likely occurs in SC) (Transylvania*)	Transylvania Crayfish Ostracod	SR	FSC	S2?	G?

INSECTS – MAYFLIES

<i>Asioplax dolani</i> P: Neuse River (Wayne, Johnston)	a mayfly	SR	-	S2	G4
<i>Baetisca becki</i> PC: Swift Creek (Nash), Fishing Creek (Edgecombe, Halifax)	a mayfly	SR	-	S1	G2
<i>Baetisca laurentina</i> PC: Lower Jacobs Fork (Catawba), Trent River (Jones)	a mayfly	SR	-	SU	G5

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Baetisca obesa</i> C: known in NC only from the lower Tar River (Edgecombe, Pitt)	a mayfly	SR	-	S1	G5
<i>Baetopus trishae</i> no locality data	a mayfly	SR	-	S1	G1
<i>Barbaetis benfieldi</i> M: Jacob Fork (Burke), French Broad River (Buncombe, Transylvania), Caney Fork (Jackson); may be undersampled -- narrow window of collectibility)	Benfield's Bearded Small Minnow Mayfly	SR	-	S1	G2
<i>Cercobrachys etowah</i> P: known in NC only from the Tar River; taxonomically difficult	a caenid mayfly	SR	-	S2	G2
<i>Choroterpes basalis</i> PSC: Waccamaw River (Columbus, Brunswick), Drowning Creek (Moore, Richmond), Bear Creek (Chatham), Lanes Creek (Union), UT Laurens Creek (Union), Dutchmans Creek (?)	a mayfly	SR	-	S2	G5
<i>Dolania americana</i> C: only known NC occurrence is from the Black River; not seen since 1974 (Sampson*)	American Sand Burrowing Mayfly	SR	FSC	SH	G4
<i>Drunella longicornis</i> M: recorded from nine streams and rivers in the mountains, from Watauga River (Watauga) to Williamson Creek (Transylvania) (Avery, Henderson, McDowell, Transylvania, Yancey)	a mayfly	SR	-	S3	G5
<i>Ephemera beneri</i> PM: probably widespread in clean streams and rivers with <u>Podostemum</u> (Ashe, Buncombe, Burke, Durham, McDowell, Rockingham)	a mayfly	SR	-	S2	G3
<i>Habrophlebiodes spp</i> very small streams; no locality data	Habrophlebiodes mayflies	SR	-	S2	G?
<i>Homooneuria cahabensis</i> P: South Fork Yadkin River (Davie), South Fork Catawba River (Lincoln), Hunting Creek (Iredell), Third Creek (Rowan), Second Broad River (Rutherford)	Cahaba Sand-filtering Mayfly	SR	-	S1S2	G2
<i>Macdunnua brunnea</i> MP: French Broad River (Buncombe), Mills River (Henderson), Hunting Creek (Davie, Iredell), Leepers Creek (Gaston), Yadkin River (Wilkes), Swift Creek (Nash)	a mayfly	SR	-	S2	G3
<i>Serratella spiculosa</i> Reported from the state, but no specimens have been confirmed (Macon)	Spiculose Serratellan Mayfly	SR	-	S1S2	G2

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

45

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global

<i>Tortopus puella</i> P: only one NC specimen known, from Tar River (Franklin*)	a mayfly	SR	-	S1	G4
--	----------	----	---	----	----

INSECTS – STONEFLIES

<i>Attaneuria ruralis</i> MS: Cataloochee Creek (Haywood), West Fork Pigeon River (Haywood), South Fork New River (Ashe), Naked Creek (Richmond)	a stonefly	SR	-	S2	G4
--	------------	----	---	----	----

<i>Bolotoperla rossi</i> M: known from eight streams and rivers in the mountains, from Ashe County to Transylvania County (Alleghany, Ashe, Caldwell, McDowell, Transylvania, Watauga)	a stonefly	SR	-	S3	G4
---	------------	----	---	----	----

<i>Isoperla frisoni</i> MP: known from six streams and rivers in the mountains, from Ashe County to Macon County; also found in the Dan River (Ashe, Macon, Transylvania)	a stonefly	SR	-	S3	G5
--	------------	----	---	----	----

<i>Isoperla lata</i> M: recent state records from Fires Creek (Clay) and Big Creek (Haywood)	a perlid stonefly	SR	-	S3	G5
---	-------------------	----	---	----	----

<i>Megaleuctra williamsae</i> M: UT Cullasaja River (Macon), Cove Creek (Haywood), Mull Creek (Jackson), Beech Flats Prong (Swain); possibly undersampled -- semi-aquatic	Williams' Rare Winter Stonefly	SR	-	S1	G2
---	--------------------------------	----	---	----	----

<i>Perlinella ephyre</i> PSC: known from eight streams and rivers in the Sandhills and inner Coastal Plain; also occurs in Flat River (Person) and Terrible Creek (Wake)	a stonefly	SR	-	S3	G5
---	------------	----	---	----	----

<i>Zapada chila</i> M: small streams – Beech Flats Prong (Swain), also in Ashe County; hard to identify and may be undersampled	a stonefly	SR	-	S1S2	G2
--	------------	----	---	------	----

INSECTS – CADDISFLIES

<i>Ceraclea cancellata</i> PSC: Naked Creek (Richmond*), Roanoke River (Bertie), Ellis and Turnbull creeks (Bladen)	a caddisfly	SR	-	S1S2	G?
--	-------------	----	---	------	----

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Ceraclea mentiea</i> MP: Big Horse Creek (Ashe), North and South Forks of New River (Ashe, Alleghany), Mayo River (Rockingham)	a caddisfly	SR	-	S2	G?
<i>Ceraclea slossonae</i> M: North Fork New River (Ashe), Johns River (Burke); may be more numerous but difficult to identify	a caddisfly	SR	-	S2?	G?
<i>Dibusa angata</i> P: South Yadkin River (Davie, Rowan), Eno River (Durham), Little River (Wake), Little River (Durham), Cane Creek (Orange)	a caddisfly	SR	-	S3	G?
<i>Diplectrona metaqui</i> P: known in NC only from Hanging Rock State Park (Stokes), but has possibly been undersampled -- occurs in small streams	a diplectronan caddisfly	SR	-	S1	G?
<i>Manophylax altus</i> M: recorded only from Mt. Mitchell (Yancey), but probably occurs elsewhere	Mount Mitchell Caddisfly	SR	-	S1	G?
<i>Matrioptila jeanae</i> PM: known from ten streams and rivers in the Mountains and Piedmont; poorly sampled due to occurrence in small streams (Burke, Clay, Henderson, Johnston, Macon, Transylvania)	a caddisfly	SR	-	S3	G?
<i>Micrasema burksi</i> M: known from eleven streams in the Mountains, from Avery County to Clay County (Avery, Buncombe, Caldwell, Clay, Haywood, Jackson, Macon, Swain, Yancey)	a caddisfly	SR	-	S3	G?
<i>Micrasema sprulesi</i> PM: known from eight streams and rivers, primarily in the Mountains but also in the Mayo River (Burke, Henderson, Macon, McDowell, Rockingham, Surry, Yancey)	a caddisfly	SR	-	S3	G?
<i>Palaeagapetus celsus</i> M: Wilson Creek (Avery), Boone Fork (Watuaga); may be undersampled due to occurrence in small streams	a caddisfly	SR	-	S2	G?
<i>Rhyacophila amicis</i> M: Cullasaja River (Macon), Nantahala River (Macon, Clay), Whiterock Creek (Jackson), Spainhour Creek (Caldwell), North Toe River (? County), Deep Creek (? County), Oconoluftee River (Swain)	a caddisfly	SR	-	S2	G?

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

47

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Rhyacophila mainensis</i> M: rivers and streams (Clay, Haywood, Henderson, Macon, McDowell, Swain, Transylvania, Yancey)	a caddisfly	SR	-	S2	G?
<i>Rhyacophila vibox</i> MP: Whiteoak Creek (Macon), Mitchell River (Surry)	a rhyacophilan caddisfly	SR	-	S1S2	G?
<i>Triadenodes marginata</i> PSC: Stewart Creek (Mecklenburg), Long Creek (Gaston), Whiteoak Creek (Polk); Lumber River (Robeson), UT Hitchcock Creek (Richmond), Mill Creek (Moore)	a triadenode caddisfly	SR	-	S3	G?
INSECTS – DRAGONFLIES					
<i>Aeshna tuberculifera</i> M: boggy or marshy ponds (Burke+, Wilkes+)	Black-tipped Darner	SR	-	S1S2	G4
<i>Aeshna verticalis</i> M: marshy ponds (Burke+, Henderson+)	Green-striped Darner	SR	-	S1S2	G5
<i>Cordulia shurtleffii</i> M: ponds, lakes, bogs (Burke+)	American Emerald	SR	-	S1?	G5
<i>Dromogomphus spoliatus</i> M?: rivers, creeks, ponds	Flag-tailed Spinyleg	SR	-	SR	G4G5
<i>Gomphus abbreviatus</i> PC: rivers (Chatham+, Cumberland+, Durham+, Lee+, Mecklenburg+, Montgomery+, Moore+, Person+, Randolph+, Union+)	Spine-crowned Clubtail	SR	-	S3?	G3G4
<i>Gomphus adelphus</i> M: small rivers with rapids (Avery+, Haywood+, Madison+, Yancey+)	Moustached Clubtail	SR	-	S1S2	G4
<i>Gomphus australis</i> C: lakes and ponds (Brunswick+, New Hanover+)	Clearlake Clubtail	SR	-	S2?	G4
<i>Gomphus borealis</i> M: lakes, ponds, streams (Mitchell*)	Beaverpond Clubtail	SR	-	SH	G4
<i>Gomphus cavillaris brinleyi</i> C: sand-bottomed lakes and streams (Bladen+, Brunswick+)	Brimley's Clubtail	SR	-	S1S2	G4T3
<i>Gomphus consanguis</i> MP: small spring-fed streams (Burke+, Davie+)	Cherokee Clubtail	SR	FSC	S1S2	G2G3
<i>Gomphus descriptus</i> M: large streams and rivers (Avery+, Haywood+)	Harpoon Clubtail	SR	-	S1?	G4
<i>Gomphus fraternus</i> P: rocky rivers (Anson+, Stanly+)	Midland Clubtail	SR	-	S1?	G5

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Gomphus lineatifrons</i> MP: rivers (Alleghany+, Ashe+, Avery+, Durham, Haywood+, Orange)	Splendid Clubtail	SR	-	S2S3	G4
<i>Gomphus quadricolor</i> P: rocky rivers (Chatham+, Moore+)	Rapids Clubtail	SR	-	S1S2	G3G4
<i>Gomphus septima</i> P: rivers (Chatham, Durham*, Lee)	Septima's Clubtail	SR	FSC	S1S3	G2
<i>Gomphus ventricosus</i> P: rivers (Caswell+, Franklin+, Vance+)	Skillet Clubtail	SR	-	S1S2	G3
<i>Gomphus viridifrons</i> M: rivers (Alleghany+, Ashe+)	Green-faced Clubtail	SR	-	S1S2	G3
<i>Lanthus parvulus</i> M: small spring-fed streams	Northern Pygmy Clubtail	SR	-	SR	G4
<i>Libellula julia</i> M: bogs, marshes (Jackson)	Chalk-fronted Corporal	SR	-	S1	G5
<i>Macromia margarita</i> PM: rivers (Burke, Caldwell+, Macon+, Transylvania)	Mountain River Cruiser	SR	FSC	S2S3	G3
<i>Neurocordulia molesta</i> C: rivers (Bladen+, Cumberland+, Edgecombe+, Harnett+, Lenoir+, Richmond+, Sampson+, Wayne+)	Smoky Shadowdragon	SR	-	S2S3	G4
<i>Neurocordulia virginensis</i> P: large rivers (Chatham+, Durham+, Halifax+, Harnett+, Nash+)	Cinnamon Shadowdragon	SR	-	S2S3	G4
<i>Neurocordulia yamaskanensis</i> M: rivers (Alleghany+, Madison+)	Stygian Shadowdragon	SR	-	S1S2	G5
<i>Ophiogomphus aspersus</i> M: rapids of rivers and streams (Alleghany+, Ashe, Haywood+)	Brook Snaketail	SR	-	S1S2	G3G4
<i>Ophiogomphus edmundo</i> M: Blue Ridge Escarpment streams (Burke, Caldwell)	Edmund's Snaketail	SR	FSC	S1?	G1G2
<i>Ophiogomphus howei</i> M: rivers (Alleghany, Ashe, Burke)	Pygmy Snaketail	SR	FSC	S1S2	G3
<i>Ophiogomphus mainensis</i> M: rapids of rivers and streams (Burke+, Caldwell+, Haywood+, Mitchell+, Watauga+, Yancey+)	Maine Snaketail	SR	-	S2?	G4
<i>Ophiogomphus rupinsulensis</i> M: streams	Rusty Snaketail	SR	-	SR	G5
<i>Progomphus bellei</i> C: sand-bottomed lakes and streams (Bladen)	Belle's Sanddragon	SR	FSC	S1	G3
<i>Somatochlora elongata</i> M: slow to moderate streams (Avery+, Burke+, Clay+, Jackson+, Macon+)	Ski-tailed Emerald	SR	-	S2S3	G5
<i>Stylurus notatus</i> P: large rivers	Elusive Clubtail	SR	FSC	SR	G3
<i>Stylurus scudderii</i> M: streams and rivers (Ashe+, Avery+, Jackson+, Macon+, Swain+, Wilkes+)	Zebra Clubtail	SR	-	S3?	G4

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

49

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Stylurus townesi</i> C: small rivers (Columbus+, Robeson+)	Townes' Clubtail	SR	FSC	S1?	G3
<i>Sympetrum obtrusum</i> M: boggy or marshy ponds and lakes (Watauga+)	White-faced Meadowhawk	SR	-	S1?	G5
INSECTS – DAMSELFLIES					
<i>Enallagma minusculum</i> C: lakes and ponds (Bladen+)	Little Bluet	SR	-	S1?	G3G4
<i>Enallagma sulcatum</i> C: ? (Columbus+)	Golden Bluet	SR	-	S1?	G4
<i>Lestes congener</i> M: ? (Alleghany+)	Spotted Spreadwing	SR	-	S1?	G5
INSECTS – FLIES					
<i>Eulonchus marialiciae</i> M: high elevation hardwood-hemlock forests (endemic to North Carolina) (Haywood, Jackson, Macon*, Swain, Transylvania)	Mary Alice's Small-headed Fly	SR	-	S1S3	G1G3
INSECTS – MOTHS					
<i>Acronicta albarufa</i> P: oak glades and barrens	Barrens Daggermoth	SR	-	SH	G3G4
<i>Acronicta sinescripta</i> C: savannas and flatwoods (Brunswick+, Pender+)	a dagger moth	SR	-	S1S3	G?
<i>Agrotis sp 1 nr buchholzi</i> SC: flatwoods with pyxie-moss (Bladen+, Brunswick, Craven+, Onslow+, Pender)	a dart moth	SR	FSC	S2S3	G2G3
<i>Amphipyrinae new genus 2 sp 3</i> C: woodland canebrakes	a canebrake moth	SR	-	S2S3	G?
<i>Amphipyrinae new genus 4 sp 1</i> C: woodland canebrakes	a canebrake moth	SR	-	S2S3	G?
<i>Anacamptodes cypressaria</i> C: cypress swamps (Brunswick+, Dare, Martin+)	an inchworm moth	SR	-	SU	G2G4
<i>Apamea inebriata</i> C: sedge meadows	a noctuid moth	SR	-	S1S2	G3G4
<i>Apamea mixta</i> C: savannas	an owlet moth	SR	-	S2?	GU
<i>Apantesis sp. 1 nr. carlotta</i> C: savannas and sandhill seeps	a tiger moth	SR	-	S2?	G4

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Callosamia securifera</i> C: pocosins and other wetlands with sweetbay (Bladen+, Brunswick+, Hoke+, Washington+)	Sweetbay Silkmoth	SR	-	S2S3	G4
<i>Catocala amestris</i> C: sand ridges and flatwoods with leadplant (New Hanover+)	Three-staff Underwing	SR	-	S1S2	G4
<i>Catocala dulciola</i> M: forests with hawthorns (Alleghany*)	Sweet Underwing	SR	-	SU	G3
<i>Catocala grisatra</i> C: sandhills and dry woods with hawthorns (Bladen+)	Grisatra Underwing	SR	-	S1S3	G2G3
<i>Catocala herodias gerhardi</i> M: oak forests, particularly with bear oak (<u>Quercus ilicifolia</u>) (Stokes+)	Herodias Underwing	SR	-	SU	G3T3
<i>Catocala jair</i> SC: xeric pine-oak sandhills (New Hanover+, Richmond+)	Jair Underwing	SR	-	S1S3	G4
<i>Catocala lincolnana</i> C: wooded areas with hawthorns (Brunswick+, Martin+, Pender+)	Lincoln Underwing	SR	-	S2S3	G3
<i>Catocala louiseae</i> C: flatwoods and other habitats with blueberries (Bladen+)	Louise's Underwing	SR	-	S1S3	G4
<i>Catocala marmorata</i> C: swamp forests with swamp cottonwood (Brunswick+, Martin+, New Hanover+)	Marbled Underwing	SR	-	S1S3	G3G4
<i>Catocala messalina</i> T: maritime forests and xeric sandhills (Dare*, New Hanover+)	Messalina Underwing	SR	-	S2?	G4
<i>Cerma cora</i> C: levee forests with hawthorn (Martin+, New Hanover+)	a bird-dropping moth	SR	-	S2S3	G3G4
<i>Chaetagnaea fergusonii</i> C: sandhills? (Brunswick+, New Hanover+)	a bird-dropping moth	SR	-	SU	G4
<i>Cyclophora sp 1 (culicaria of authors)</i> C: flatwoods with sand-myrtle (<u>Leiophyllum</u>) (Brunswick+)	Sand-myrtle Geometer	SR	-	S2S3	G3G4
<i>Doryodes sp 1</i> C: brackish marshes (Brunswick+, Carteret+, New Hanover+, Onslow+)	a new owlet moth	SR	-	S3?	G3G4
<i>Drasteria graphica</i> T: maritime shrub thickets (Brunswick+, New Hanover+)	Graphic Moth	SR	-	S2S3	G4
<i>Dysgonia similis</i> C: pocosins and flatwoods (Brunswick+, Carteret+, Dare, Onslow+, Pender+, Washington+)	an owlet moth	SR	-	S2S3	G3G4
<i>Eubaphe meridiana</i> C: savannas	The Little Beggar	SR	-	S2S3	G4

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

51

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Euchlaena milnei</i> M: unknown	Milne's Euchlaena	SR	-	S1S3	G2G4
<i>Eupithecia peckorum</i> C: sandhills and flatwoods (Brunswick+, New Hanover+, Pender+)	an inchworm moth	SR	-	S2?	G?
<i>Euxoa violaris</i> C: beach dunes	Violet Dart	SR	-	S2S3	G4
<i>Exyra semicrocea</i> C: wetlands with pitcher-plants (Bladen+, Brunswick+, Onslow+, Pender+)	a pitcher-plant moth	SR	-	S2S3	G3G4
<i>Gabara sp 1</i> C: savannas and flatwoods (Brunswick+, Onslow+, Pender+)	an owlet moth	SR	-	SU	GU
<i>Grammia phyllira</i> C: sandhills	Phyllira Tiger Moth	SR	-	S2S3	G4
<i>Grammia placentia</i> SC: sandhills	Placentia Tiger Moth	SR	-	S2S3	G4
<i>Heliomata infulata</i> MPC: unknown habitat	Rare Spring Moth	SR	-	S2S3	G2G4
<i>Hemeroplanis sp 1 nr obliqualis</i> CP: unknown habitat	an owlet moth	SR	-	S2S3	G?
<i>Hempachnobia monochromatea</i> C: cranberry bogs and northern low pocosins (Dare)	Sundew Cutworm Moth	SR	-	S1?	G4
<i>Hempachnobia subporphyrea</i> C: savannas with Venus flytraps (Bladen+, Brunswick+, Carteret+, Pender)	Venus Flytrap Cutworm Moth	SR	FSC	S1?	G1
<i>Hepialus sciophanes</i> M: spruce-fir forests	a ghost moth	SR	-	S1S3	GU
<i>Heterocampa varia</i> SC: xeric pine-oak sandhills	a prominent moth	SR	-	SH	G3G4
<i>Hypagyrtis brendae</i> C: Atlantic white cedar forests (Dare)	Brenda's Hypagyrtis	SR	-	S2S3	G4
<i>Hypomecis buchholzaria</i> C: fire-maintained glades and barrens	Buchholz's Gray	SR	-	SH	G3G4
<i>Itame subcessaria</i> M: high elevation forests with gooseberries	Barred Itame	SR	-	S1S3	G4?
<i>Lagoa pyxidifera</i> C: savannas, flatwoods, and sandhills (Brunswick+, Pender+)	Yellow Flannel Moth	SR	-	S2S3	G?
<i>Lithophane georgii</i> M: spruce-fir forests (Yancey+)	a pinion moth	SR	-	S1?	G5
<i>Lithophane laceyi</i> C: swamp forests (Brunswick+, New Hanover+, Pender+)	a pinion moth	SR	-	S1S3	G4?
<i>Lithophane lemmeri</i> CP: cedar glades and Atlantic white cedar forests (Craven, Wake+)	Lemmer's Pinion	SR	-	S1S3	G3G4

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Macrochilo louisiana</i> C: grassy wetlands (Dare, New Hanover+, Onslow+, Pender+)	Louisiana Owlet Moth	SR	-	S2S3	G4
<i>Macrochilo sp 1 nr absorptalis</i> C: sedge meadows	a noctuid moth	SR	-	S1S2	G3
<i>Meropleon cinnamicolor</i> TC: coastal marshes (Carteret)	an owlet moth	SR	-	S2S3	GU
<i>Meropleon diversicolor sullivanii</i> T: coastal marshes (Brunswick+, Craven+)	an owlet moth	SR	-	S1S3	G4T1T3
<i>Metarranthis lateritaria</i> C: flatwoods and pocosins (Brunswick, Dare+, Onslow+, Pender)	an inchworm moth	SR	-	S1S3	G2G4
<i>Metarranthis sp 1</i> C: pocosins (Brunswick+, Dare, New Hanover+, Washington+)	a new inchworm moth	SR	-	S2S3	G3
<i>Nematocampa baggetaria</i> C: unknown habitat (Brunswick+, Onslow+, Pender+)	Baggett's Nematocampa	SR	-	SU	G2G4
<i>Nemoria tuscarora</i> M: unknown habitat	Tuscarora Emerald	SR	-	S1S3	GU
<i>Papaipema appassionata</i> C: wetlands with pitcher-plants	Pitcher-plant Borer Moth	SR	-	S2?	G4
<i>Papaipema duplicata</i> M: rich woods with <u>Collinsonia canadensis</u>	Dark Stoneroot Borer Moth	SR	-	SH	G2G4
<i>Papaipema eryngii</i> C: savannas (Pender+)	Rattlesnake-master Borer Moth	SR	-	S1	G1G2
<i>Phragmatiphila interrogans</i> C: canebrakes (Carteret+)	an owlet moth	SR	-	S2?	G3G4
<i>Ptichodis bistrigata</i> C: xeric sandhills (Bladen+, Brunswick+, New Hanover+, Onslow+)	Southern Ptichodis	SR	-	S2S3	G3
<i>Pygarctia abdominalis</i> C: flatwoods? (Brunswick+, Onslow+, Pender+)	Yellow-edged Pygarctia	SR	-	S2S3	G3G4
<i>Pyreferra ceromatica</i> C: flatwoods and pocosins with <u>Fothergilla?</u> (Craven+)	Annointed Sallow Moth	SR	FSC	S1S3	GU
<i>Schinia carolinensis</i> C: savannas	Carolina Schinia	SR	-	S2S3	G?
<i>Schinia jaguarina</i> C: savannas and sandhills	Jaguar Flower Moth	SR	-	S1S3	G4
<i>Schizura apicalis</i> C: unknown habitat	Plain Schizura	SR	-	S1S3	G2G4
<i>Schizura sp 1</i> PC: unknown habitat (Brunswick+, Onslow+, Wake+)	a new prominent moth	SR	-	S1S3	G3G4
<i>Semiothisa fraserata</i> M: spruce-fir forests	Fraser Fir Geometrid Moth	SR	-	S1S2	G2Q

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

53

Scientific Name	Common Name	Status	U.S.	Rank	Global
Province: Habitat (Counties of occurrence)		N.C.		N.C.	
<i>Spartiniphaga carterae</i> C: savannas and sandhills with pinebarrens sandreed (<u>Calamovilfa brevipilis</u>) (Bladen+, Brunswick+, Carteret*, Pender)	Carter's Noctuid Moth	SR	FSC	S2S3	G2G3
<i>Tornos cinctarius</i> C: unknown habitat	a gray	SR	-	S2?	G?
<i>Trichosilia manifesta</i> C: sandhills (Brunswick+, New Hanover+, Onslow+, Pender+)	an owlet moth	SR	-	S2S3	G4
<i>Zale declarans</i> T: maritime forests with live oak (Brunswick+, Carteret+, Dare+, New Hanover+)	an owlet moth	SR	-	S2S3	G5

INSECTS – BUTTERFLIES

<i>Amblyscirtes alternata</i> SC: open pine woods, savannas; host plants -- unknown, but presumably grasses (Brunswick, Cumberland, Jones+, Moore, New Hanover+, Onslow, Pender, Richmond, Scotland)	Dusky Roadside-Skipper	SR	-	S2	G3G4
<i>Amblyscirtes reversa</i> CSP: flatwoods, savannas, pocosin borders, near cane; host plant -- cane (<u>Arundinaria</u>) (Beaufort, Bertie+, Brunswick, Carteret, Craven, Cumberland, Dare, Franklin, Gaston+, Hoke, Martin+, Moore, Onslow, Pender, Richmond, Robeson*, Scotland)	Reversed Roadside-Skipper	SR	-	S3	G3G4
<i>Atrytone arogos arogos</i> SC: savannas, open pinewoods, and other relatively undisturbed grasslands; host plants -- grasses, mainly pinebarrens sandreed (<u>Calamovilfa brevipilis</u>) (Brunswick+, Carteret, Moore*, New Hanover+, Richmond+)	Arogos Skipper	SR	FSC	S1	G3G4T1T2
<i>Atrytonopsis loammi</i> CT: grassy areas near the coast; host plants presumed to be <u>Andropogon</u> grasses (Brunswick, New Hanover+)	Loammi Skipper	SR	FSC	S1?	G2G3
<i>Atrytonopsis sp 1</i> T: dunes and sandy flats; host plant -- seaside little bluestem (<u>Schizachyrium littorale</u>) (Carteret, Onslow)	an undescribed skipper	SR	FSC	S1	G1?

Scientific Name	Common Name	Status		Rank	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Autochton cellus</i> MPC: moist woods near streams; host plant -- hog peanut (<u>Amphicarpa bracteata</u>) (Alleghany, Burke+, Caswell, Gaston+, Graham, Haywood, Macon, Madison+, Mitchell, Orange*, Pitt+, Polk+, Swain)	Golden Banded-Skipper	SR	-	S1S2	G4
<i>Calephelis virginiensis</i> C: savannas and pine flatwoods; host plant -- vanilla-plant (<u>Trilisa odoratissima</u>) (Brunswick, Carteret, Craven, Cumberland+, Dare+, Moore+, New Hanover, Onslow, Pender)	Little Metalmark	SR	-	S2	G4
<i>Callophrys hesseli</i> SC: Atlantic white cedar swamps; host plant -- white cedar (<u>Chamaecyparis thyooides</u>) (Bladen, Brunswick, Camden, Columbus, Cumberland*, Dare, Gates+, Hoke*, Moore, Pender, Richmond, Scotland, Tyrrell+, Washington+)	Hessel's Hairstreak	SR	-	S3	G3G4
<i>Callophrys irus</i> SCPM: open woods and borders, usually in dry situations; host plants -- lupines (<u>Lupinus</u>) and wild indigos (<u>Baptisia</u>) (Brunswick, Buncombe+, Cherokee+, Craven+, Cumberland+, Franklin, Gates+, Jones, Moore, Pender, Polk+, Richmond+, Scotland)	Frosted Elfin	SR	-	S2	G3
<i>Celastrina nigra</i> M: rich, moist deciduous forests; host plant -- goat's-beard (<u>Aruncus dioicus</u>) (Buncombe+, Clay, Graham, Haywood, Macon, Mitchell, Polk, Swain*, Transylvania+)	Dusky Azure	SR	-	S2?	G4
<i>Chlosyne gorgone</i> M: woodland openings and borders; host plants -- sunflowers, rosinweeds, and other tall composites (Clay, Macon)	Gorgone Checkerspot	SR	-	S1?	G5
<i>Erora laeta</i> M: deciduous forests, especially along roads or edges at high elevations; host plants -- mainly American beech (<u>Fagus grandifolia</u>) (Alleghany+, Ashe, Avery, Buncombe+, Clay, Haywood, Jackson, Macon, Mitchell, Swain+, Transylvania+)	Early Hairstreak	SR	-	S2S3	G3G4

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

55

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Erynnis martialis</i> MPSC: upland woods and wooded edges; host plant -- New Jersey tea (<i>Ceanothus americanus</i>) (Alleghany, Brunswick+, Buncombe+, Caswell, Craven+, Cumberland, Durham, Franklin, Gaston+, Granville, Henderson, Macon+, Montgomery, Moore+, Polk, Richmond+, Rutherford, Surry, Wake+, Warren, Yadkin)	Mottled Duskywing	SR	-	S3	G3G4
<i>Euchloe olympia</i> M: high elevation openings and glades; host plants -- mainly cresses (<i>Arabis</i>) (Swain)	Olympia Marble	SR	-	S1	G4G5
<i>Euphydryas phaeton</i> M: bogs, marshes, wet meadows; rarely in upland woods; host plants -- turtlehead (<i>Chelone</i>) and false foxglove (<i>Aureolaria</i>) (Alleghany, Ashe, Avery, Buncombe+, Haywood, Henderson, Jackson, Macon, Mitchell, Polk+, Transylvania*, Watauga)	Baltimore Checkerspot	SR	-	S2	G4
<i>Euphyes berryi</i> C: wet areas near ponds, canals, or marshes; host plant -- not known, but probably sedges (Carteret, Craven, Dare, Hyde)	Berry's Skipper	SR	-	S1?	G3G4
<i>Euphyes bimacula</i> CSP: marshes, wet savannas, sedgy areas near wet woods; host plants -- sedges (<i>Carex</i>) (Brunswick, Carteret, Craven, Gates+, Harnett, Johnston, Jones+, Moore+, Pender, Vance)	Two-spotted Skipper	SR	-	S2	G4
<i>Euphyes dukesi dukesi</i> CT: ecotones of brackish or fresh marshes with swamps; host plants -- sedges (<i>Carex</i>) (Beaufort, Brunswick, Craven+, Currituck)	Dukes' Skipper	SR	-	S1S2	G3T3
<i>Fixsenia favonius favonius</i> T: maritime forests along southern coast; host plant -- oaks, especially live oak (<i>Quercus virginiana</i>) (Brunswick+)	Southern Oak Hairstreak	SR	-	S1?	G4T4
<i>Fixsenia favonius ontario</i> MPSC: oak-dominated woods, usually in dry sites; host plants -- oaks (<i>Quercus</i>) (Alleghany, Brunswick, Camden+, Carteret+, Caswell, Cleveland, Cumberland+, Currituck+, Dare*, Hoke, Hyde+, Montgomery, Moore, New Hanover, Orange, Pender+, Richmond, Wilkes)	Northern Oak Hairstreak	SR	-	S3?	G4T4

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Hesperia attalus slossonae</i> SC: pine/oak sandhills, flatwoods, mainly in Sandhills; host plants -- grasses (Brunswick+, Craven+, Cumberland, Hoke, Moore+, Pender+, Richmond, Scotland)	Dotted Skipper	SR	-	S2S3	G3G4T3
<i>Hesperia meskei</i> SC: open pine woods, especially in Sandhills; host plants -- grasses (Bladen, Cumberland*, Hoke, Moore, Onslow+, Richmond, Scotland)	Meske's Skipper	SR	-	S3	G2G4
<i>Megathymus cofaqui cofaqui</i> P: monadnocks with yucca; host plant -- <u>Yucca filamentosa</u> (Alexander, Polk*)	Cofaqui Giant-Skipper	SR	-	S1?	G3G4T3
<i>Neonympha mitchellii francisci</i> S: boggy areas, overgrown beaver ponds, and pocosin margins with sedges in sandhills; host plants -- sedges (taxon endemic to North Carolina) (Cumberland, Hoke)	Saint Francis' Satyr (full species = Mitchell's Satyr)	SR	E	S1	G1G2T1
<i>Papilio cresphontes</i> TCPM: primarily coastal in maritime forests or thickets; host plants -- prickly ash (<u>Zanthoxylum</u>), hoptree (<u>Ptelea</u>) (Alexander, Ashe, Brunswick, Carteret, Cherokee+, Currituck+, Dare, Hyde, New Hanover, Onslow, Orange*, Wake+)	Giant Swallowtail	SR	-	S2	G5
<i>Phyciodes batesii maconensis</i> M: rocky ridges, woodland openings, at higher elevations; host plants -- asters, mainly <u>Aster undulatus</u> (Buncombe*, Clay, Graham, Haywood, Jackson, Macon, Swain)	Tawny Crescent	SR	FSC	S2	G4T1T3
<i>Phyciodes cocyta</i> M: rocky areas (in Appalachians), but habitat poorly known; host plants -- asters (Buncombe+)	Northern Crescent	SR	-	SU	G5
<i>Phyciodes texana seminole</i> C: river floodplains; host plants -- <u>Acanthaceae</u> (Brunswick, Columbus)	Seminole Texan Crescent	SR	-	S1?	G5T3T4
<i>Poanes aaroni aaroni</i> T: brackish marshes along northern coast and sounds; host plants -- grasses, perhaps saltgrass (<u>Distichlis</u> <u>spicata</u>) (Currituck+, Dare, Hyde)	Aaron's Skipper	SR	-	S1S2	G4T4
<i>Polygonia faunus smythi</i> M: spruce, fir, or hemlock forests, where mixed with hardwoods; host plants -- mainly birches (Avery*, Buncombe, Graham, Haywood, Henderson+, Macon, Swain+, Transylvania*, Watauga+, Yancey)	Smyth's Green Comma	SR	-	S2	G5T3T4

NATURAL HERITAGE PROGRAM LIST OF THE RARE ANIMALS OF NORTH CAROLINA

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Polygonia progne</i> M: rich deciduous forests; host plants -- mainly gooseberries (<u>Ribes</u>), but also on wild azalea (<u>Rhododendron nudiflorum</u>) (Avery, Buncombe, Clay, Madison+, Mitchell+, Swain+)	Gray Comma	SR	-	S1	G5
<i>Problema bulenta</i> T: fresh to brackish marshes with tall grasses in Wilmington area; host plant -- wild rice (<u>Zizania aquatica</u>), probably other tall grasses (Brunswick, New Hanover)	Rare Skipper	SR	FSC	S1	G2G3
<i>Pyrgus wyandot</i> M: openings and edges in wooded hilltops; host plants -- Rosaceae, such as cinquefoil (<u>Potentilla</u>) (Polk*, Transylvania*)	Appalachian Checkered-Skipper	SR	FSC	SH	G2
<i>Satyrium caryaevorum</i> M: mid- to high elevation deciduous forests; host plants -- hickories (<u>Carya</u>) (Buncombe, Macon+, McDowell, Watauga)	Hickory Hairstreak	SR	-	S1?	G4
<i>Satyrium edwardsii</i> SM: scrubby or xeric oak woods; host plants -- oaks (<u>Quercus</u>) (Cumberland, Hoke*, Macon, Moore, Polk+, Sampson, Scotland, Transylvania*, Watauga+)	Edwards' Hairstreak	SR	-	S2?	G4
<i>Satyrium kingi</i> SCPM: forests, often moist, usually near sweetleaf; host plant -- sweetleaf (<u>Symplocos</u>) (Brunswick, Carteret+, Craven, Cumberland, Dare*, Gaston, Hoke, Moore, Onslow+, Pender+, Richmond, Scotland, Transylvania+)	King's Hairstreak	SR	-	S2S3	G3G4
<i>Speyeria aphrodite cullasaja</i> M: forest openings and edges west of the Little Tennessee River; host plants -- violets (<u>Viola</u>) (Clay, Macon+)	Cullasaja Aphrodite Fritillary	SR	-	S1?	G5T1
<i>Speyeria idalia</i> M: wet or dry meadows, bogs, open hilltops; host plants -- violets (<u>Viola</u>) (Alleghany*, Ashe*, Avery, Wilkes*)	Regal Fritillary	SR	FSC	SH	G3

INSECTS – GRASSHOPPERS AND KATYDIDS

<i>Eotettix pusillus</i> C: sandhills (wet swales?)	Little Eastern Grasshopper	SR	-	S2?	G2G3
<i>Melanoplus angustipennis impiger</i> C: sandhills	Narrow-winged Melanoplus	SR	-	S1S3	G5T?
<i>Melanoplus attenuatus</i> C: wet swales in pinewoods	Slender-bodied Melanoplus	SR	-	S1S3	G2G3

Scientific Name	Common Name	Status		Rank	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global
<i>Melanoplus cherokee</i> M: woodlands, 1800' - 5100'	Cherokee Melanoplus	SR	-	S1S3	G1G3
<i>Melanoplus decorus</i> C: savannas, flatwoods, low pocosins (Dare)	Decorated Spur-throat Grasshopper	SR	-	S2S3	G3G4
<i>Melanoplus divergens</i> M: glades and balds, 1800' - 4717'	Divergent Melanoplus	SR	-	S1S3	G2G3
<i>Melanoplus mirus</i> PC: open woodlands	a short-winged melanoplus	SR	-	S2S3	G2G3
<i>Melanoplus nigrescens</i> CT: pinewoods and maritime forests	Black-sided Spur-throat Grasshopper	SR	-	S1S3	GU
<i>Melanoplus nubilus</i> C: flatwoods, savannas, sandhills	a short-winged melanoplus	SR	-	S2S3	G2G3
<i>Melanoplus serrulatus</i> M: valleys and lower slopes, Nantahala Mountains	Serrulate Melanoplus	SR	-	S1S3	G1G3
<i>Melanoplus viridipes eurycerus</i> M: woodlands and forest edges	Green-legged Melanoplus	SR	-	S1S3	G4T4
<i>Montezumina modesta</i> C: pinewoods and other habitats	Montezuma Katydid	SR	-	SU	GU
<i>Scudderia septentrionalis</i> M: forests	Northern Bush Katydid	SR	-	SH	G3?
<i>Stethophyma celatum</i> C: bogs, wet tallgrass prairies (Pender)	Broad-winged Sedge Grasshopper	SR	-	S1S2	G4
<i>Trimerotropis saxatilis</i> M: lichen-covered rock outcrops (Transylvania)	Rock-loving Grasshopper	SR	-	S1S2	G3?

INSECTS – BEETLES

<i>Cicindela lepida</i> T: sand dunes along northern coast	Little White Tiger Beetle	SR	-	S1?	G4
<i>Cicindela patruela</i> no location data; sandy soil in open pine or pine oak woods	a tiger beetle	SR	-	S2?	G3
<i>Lordithon niger</i> no location data	Black Lordithon Rove Beetle	SR	-	SH	GU
<i>Nicrophorus americanus</i> M: sites with abundance of small vertebrate carrion	American Burying Beetle	SR	E	SH	G2G3
<i>Stenelmis gammonii</i> M: South Fork New River (Ashe*)	Gammon's Stenelmis Riffle Beetle	SR	FSC	S1	G1G3

INSECTS – TRUE BUGS

<i>Chlorochroa dismalia</i> C: swamps, bottomlands, flatwoods (Craven, Harnett*, Hyde*, Onslow*)	Dismal Swamp Green Stink Bug	SR	-	S1?	GU
---	------------------------------	----	---	-----	----

NORTH CAROLINA ANIMAL WATCH LIST

The *North Carolina Animal Watch List* includes animals that are rare or uncommon, are not well-studied, or are otherwise threatened with serious decline, but that are not placed on the List of Rare Animals of North Carolina by the NC NHP. Watch List species are additional indicators of significant habitats, and their presence should be considered in planning natural area protection efforts, though obviously with less weight than higher priority rare species and natural communities. The NC NHP maintains paper files on these species, but does not include them in its map and computer files. Animals placed on this list fall into a number of categories, as discussed below. The NC NHP requests additional information about these species in order to clarify their status and reclassify them into other appropriate and more specific categories.

Reasons for the current placement of species on the Watch List rather than at a higher rarity status (Endangered, Threatened, Special Concern, Significantly Rare) are varied. For many of them, the Natural Heritage Program lacks adequate documentation of their historic or present occurrence in North Carolina; this is especially true for invertebrates. Others are known to be rare or uncommon in North Carolina, but may or may not be declining. Some others may not be necessarily rare as yet, but they are undergoing significant losses of their habitat, such as animals of the spruce-fir forest, or are undergoing significant disturbances to their habitat, such as human disturbances to beach-nesting birds.

The following five Watch Categories have been devised to indicate the reasons for each species' current placement(s). These categories and the descriptions of them have been developed by the NC NHP.

A number of species have been placed in two Watch Categories, because it is believed they may be "in trouble" for at least two reasons. For example, the Red-breasted Nuthatch has a rather small breeding population in the state, in the higher elevations of the mountains, giving it a W2 status. However, as a portion of the breeding population occurs in the spruce-fir zone, which is undergoing degradation of the canopy, it is also given a W5 status, as well.

Watch Category 1 (W1) includes species that are known to be declining in North Carolina, for one reason or another. The distribution or population sizes of such species in the state are fairly well known; loss of habitat is not necessarily a factor. A large number of species are known to be declining in the state, such as Neotropical migrant birds, but the species in this category must have an N.C. Rank of S3S4 or higher (S3, S2, S1, etc.). Examples: American Black Duck, Slender Glass Lizard.

Watch Category 2 (W2) includes species that are rare to uncommon in North Carolina, but are not necessarily considered to be declining or otherwise in trouble. Generally speaking, the distribution or population sizes of such species in the state are fairly well known. Examples: Baltimore Oriole, Coal Skink, Spotted Sunfish.

Watch Category 3 (W3) includes species that are poorly known in North Carolina, but are not necessarily considered to be declining or otherwise in trouble. The distribution and population sizes of such species are not well known; this is especially true for a large number of invertebrates, as well as secretive or nocturnal vertebrates. Examples: Striped Mud Turtle, Sandhills Salamander, Regal Darner.

Watch Category 4 (W4) includes species reported from North Carolina without adequate documentation. These species should be listed at a higher level, if their reported occurrence in North Carolina is true. This category includes sight records of uncertain validity, old and vague reports for which no documentation has appeared, and, in a few cases, more recent reports for which we have not yet received documentation. Example: Cumberland Crayfish Ostracod.

Watch Category 5 (W5) includes species with increasing amounts of threats to its habitat, whether or not populations are known to be declining. These threats can include loss of habitat (e.g., the dramatic loss of maritime forests), degradation of habitat (e.g., pollution and sedimentation of rivers and streams), and disturbance to the habitat (e.g., humans and their vehicles on beaches), among other types of threats. Threats can also include use of pesticides, acid rain, fire suppression, over-collection by zoologists, and varied other factors. Examples: American Kestrel, Georgia Satyr.

NORTH CAROLINA ANIMAL WATCH LIST

61

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat/Locations		N.C.	U.S.	N.C.	Global

WATCH LIST CODES

W1 = species known to be declining in the state; may need listing in upcoming years

W2 = species rare to uncommon, but probably not in trouble

W3 = species that is poorly known; perhaps needs listing in upcoming years

W4 = species reported from the state without adequate documentation

W5 = species with increasing amount of threats to its habitat, whether populations are known to be declining or not

SC = Special Concern (see Page 3). Though still on the State Protected List, biologists consider the species to no longer need tracking by the N.C. Natural Heritage Program.

MAMMALS

<i>Cervus canadensis</i> M: high elevation meadows, grass balds (released in Great Smoky Mountains NP)	Elk	SC	-	S1	G5
<i>Lasiurus seminolus</i> CP: forages over open areas, often over water (summer)	Seminole Bat	W2	-	S3S4B,SZN	G5
<i>Mustela frenata</i> MPC: forests, brushy areas	Long-tailed Weasel	W3	-	S3S4	G5
<i>Sorex hoyi winnemana</i> MC: montane deciduous forests; old fields and forests in northeastern Coastal Plain	Southern Pygmy Shrew	W2	-	S3	G5T4
<i>Spilogale putorius</i> M: open forests with rocks, cliffs, and other den sites	Eastern Spotted Skunk	W2	-	S3	G5
<i>Synaptomys cooperi stonei</i> M: bogs and wet meadows	Southern Bog Lemming	W2	-	S3	G5T?
<i>Zapus hudsonius</i> MP: open moist fields and brushy places, usually near water	Meadow Jumping Mouse	W2	-	S3	G5

BIRDS

Only the breeding season populations are of concern; provinces and habitats are for these populations only.

<i>Accipiter cooperii</i> MPSC: forests and woodlands	Cooper's Hawk	SC	-	S3S4B,S4N	G5
<i>Accipiter gentilis</i> M: extensive, remote forests, mainly at high elevations	Northern Goshawk	W3	-	SUB,SZN	G5
<i>Ammodramus caudacutus</i> T: tidal marshes	Saltmarsh Sharp-tailed Sparrow	W3	-	SUB,S4N	G4
<i>Ammodramus savannarum</i> PSCM: pastures and other grasslands	Grasshopper Sparrow	W1,W5	-	S3B,S1N	G5
<i>Anas discors</i> TC: fresh to slightly brackish marshes, usually at impoundments	Blue-winged Teal	W2	-	SHB,S2N	G5

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	Status		Rank	
		N.C.	U.S.	N.C.	Global
<i>Anas rubripes</i> TC: fresh or brackish marshes, often at impoundments	American Black Duck	W1	-	S3B,S4N	G5
<i>Asio flammeus</i> TC: coastal marshes	Short-eared Owl	W3	-	SUB,S3N	G5
<i>Asio otus</i> M: high elevation forests in northern mountains	Long-eared Owl	W3	-	SUB,SZN	G5
<i>Carduelis pinus</i> M: spruce-fir forests	Pine Siskin	W3	-	SUB,S4N	G5
<i>Coragyps atratus</i> MPSC: forested areas for nesting; forests or open country for foraging	Black Vulture	SC	-	S3S4	G5
<i>Corvus corax</i> MP: cliffs for nesting; forests or fields (mainly at high elevations) for foraging	Common Raven	W2	-	S3	G5
<i>Dendroica coronata</i> M: spruce-fir forests, especially in immature stands	Yellow-rumped Warbler	W3	-	SUB,S5N	G5
<i>Dolichonyx oryzivorus</i> M: meadows and other grasslands	Bobolink	W3,W5	-	SUB,SZN	G5
<i>Elanoides forficatus</i> C: extensive swamps and bottomlands, often forages over nearby fields or marshes	Swallow-tailed Kite [the subspecies <i>E. f. forficatus</i> (American Swallow-tailed Kite) is FSC, not the entire species]	W3	FSC	SUB,SZN	G5
<i>Empidonax minimus</i> M: open hardwood forests, groves, streamside trees	Least Flycatcher	W2	-	S3B,SZN	G5
<i>Empidonax traillii</i> MP: wet thickets in open country, often along streams in broad valleys	Willow Flycatcher	W2	-	S3B,SZN	G5
<i>Eudocimus albus</i> T: forests or thickets on maritime islands	White Ibis	W2	-	S3B,S3N	G5
<i>Falco sparverius</i> MPSC: open country; nests in cavities, even in buildings or poles in cities	American Kestrel	W1,W5	-	S3B,S5N	G5
<i>Helmitheros vermivorus pop 1</i> C: nonriverine wet hardwoods, pocosins	Worm-eating Warbler - Coastal Plain population	W5	-	S3B,SZN	G5T?
<i>Icterus galbula</i> MP: hardwood groves or streamside trees, in open country	Baltimore Oriole	W2	-	S3B,S3N	G5
<i>Ixobrychus exilis</i> TCSP: fresh or brackish marshes	Least Bittern	W3	-	S3B,SZN	G5
<i>Limothlypis swainsonii</i> CSMP: forests with dense understory, often with cane in Coastal Plain and rhododendron in mountains	Swainson's Warbler	W2,W5	-	S3B,SZN	G4
<i>Lophodytes cucullatus</i> PMC: lakes and ponds, with dead trees for nesting	Hooded Merganser	W3	-	S1B,S4N	G5

NORTH CAROLINA ANIMAL WATCH LIST

63

Scientific Name	Common Name	Status		Rank	
Province: Habitat/Locations		N.C.	U.S.	N.C.	Global
<i>Nyctanassa violacea</i> TCP: swamps; woods or thickets on maritime islands	Yellow-crowned Night-Heron	W2,W3	-	S3B,SZN	G5
<i>Pheucticus ludovicianus</i> M: hardwood forests at mid- to high elevations	Rose-breasted Grosbeak	W1	-	S3B,SZN	G5
<i>Rallus elegans</i> TCPS: fresh to slightly brackish marshes	King Rail	W1,W3	-	S3B,S3N	G4G5
<i>Regulus satrapa</i> M: spruce-fir forests; hardwood forests mixed with spruce or hemlock	Golden-crowned Kinglet	W2	-	S3S4B,S5N	G5
<i>Sitta canadensis</i> M: high-elevation coniferous forests, preferably spruce-fir	Red-breasted Nuthatch	W2,W5	-	S3B,S4N	G5
<i>Spiza americana</i> PC: fallow fields and pastures with tall forbs	Dickcissel	W3,W5	-	S2B,SZN	G5
<i>Sterna forsteri</i> T: salt or brackish marshes, nesting on wrack material or matted grasses	Forster's Tern	W2	-	S3B,S5N	G5
<i>Sterna fuscata</i> T: sand flats on maritime islands; forages over open ocean	Sooty Tern	W2	-	SUB,S3N	G5
<i>Sterna sandvicensis</i> T: sand flats on maritime islands	Sandwich Tern	W2,W5	-	S3B,SZN	G5
<i>Tachycineta bicolor</i> MPC: cavities near ponds or other open water	Tree Swallow	W2	-	S2S3B,S4N	G5
<i>Troglodytes troglodytes</i> M: cool, moist forests at mid- to high elevations	Winter Wren	W2,W5	-	S3B,S5N	G5
<i>Tyto alba</i> MPST: extensive open country, nesting in old buildings, silos, large tree cavities	Barn Owl	W2,W3	-	S3B,S3N	G5

REPTILES

<i>Apalone spinifera aspera</i> PC: large streams, ponds, and lakes with sandy bottoms	Gulf Coast Spiny Softshell	W2	-	S3	G5T5
<i>Cemophora coccinea</i> CSPM: sandhills, sandy woods, and other dry woods	Scarlet Snake	W1,W5	-	S3	G5
<i>Clemmys guttata</i> CTSP: shallow water of pools, marshes, wet pastures and other smaller wetlands	Spotted Turtle	W1	-	S3	G5
<i>Eumeces anthracinus</i> M: rocky slopes, wooded hillsides, roadbanks	Coal Skink	W2	-	S3	G5

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	<u>Status</u> N.C.	U.S.	<u>Rank</u> N.C.	Global
<i>Farancia erythrogramma</i> CS: swamps, lakes, rivers, and other sluggish water	Rainbow Snake	W1	-	S3	G5
<i>Kinosternon baurii</i> C: various shallow wet places; ponds, pools, ditches	Striped Mud Turtle	W3	-	S3?	G5
<i>Lampropeltis triangulum elapsoides</i> CSPM: pine flatwoods, mesic pine-hardwood forests	Scarlet Kingsnake	W1,W5	-	S3	G5T5
<i>Lampropeltis triangulum triangulum</i> MP: wooded slopes, pastures, meadows, especially in rocky areas	Eastern Milk Snake	W3	-	S2S3	G5T5
<i>Ophisaurus attenuatus</i> CPSM: old fields, wooded edges, open woods	Slender Glass Lizard	W1	-	S3	G5
<i>Rhadinaea flavilata</i> C: pine flatwoods and other damp woodlands	Pine Woods Snake	W2	-	S3	G4
<i>Virginia valeriae</i> CSPM: deciduous or mixed woods, usually in mesic soils	Smooth Earth Snake	W2	-	S3	G5

AMPHIBIANS

<i>Desmognathus imitator</i> M: cool, moist high elevation hardwood or spruce-fir forests; nearly confined to Great Smoky Mountains National Park	Imitator Salamander	W2	-	S3	G3
<i>Eurycea sp 1</i> C: small streams in the Sandhills	Sandhills Salamander	W3	-	S3?	G3?Q
<i>Hyla andersonii</i> SC: pocosins, bay forests, boggy areas	Pine Barrens Treefrog	W2	-	S3S4	G4
<i>Plethodon meridianus</i> P: mesic forests of the South Mountains (endemic to this area)	South Mountain Gray-cheeked Salamander	W2	-	S3S4	G1G2 [G3G4]
<i>Plethodon richmondi</i> M: moist, high-elevation forests, usually on slopes; northern mountains	Southern Ravine Salamander	W2	-	S3	G5
<i>Pseudacris brimleyi</i> C: swamps, marshes, and other wetlands	Brimley's Chorus Frog	W1	-	S3S4	G5
<i>Siren lacertina</i> CS: lakes, ponds, and streams, especially where muddy or with weedy vegetation	Greater Siren	W3	-	S3?	G5
<i>Stereochilus marginatus</i> CS: swamps, shallow wooded ponds in savannas	Many-lined Salamander	W3	-	S3?	G5

NORTH CAROLINA ANIMAL WATCH LIST

65

Scientific Name Province: Habitat/Locations	Common Name	<u>Status</u> N.C.	U.S.	<u>Rank</u> N.C.	Global
FRESHWATER FISHES					
<i>Ameiurus brunneus</i> PCMS: many drainages	Snail Bullhead	W1	-	S3	G4
<i>Ameiurus platycephalus</i> PCMS: many drainages	Flat Bullhead	W1	-	S4	G5
<i>Cyprinella labrosa</i> P: Yadkin, Catawba, and Broad drainages	Thicklip Chub	W2	-	S3	G4
<i>Cyprinella spiloptera</i> M: primarily New and French Broad drainages	Spotfin Shiner	W2	-	S2S3	G5
<i>Enneacanthus chaetodon</i> CS: many drainages, particularly Lumber and Waccamaw	Blackbanded Sunfish	W1	-	S3	G4
<i>Etheostoma thalassinum</i> MP: Santee River drainage	Seagreen Darter	W5	-	S3	G4
<i>Etheostoma zonale</i> M: small to medium mountain streams	Banded Darter	W5	-	S3	G5
<i>Lepomis punctatus</i> C: most drainages in southern Coastal Plain	Spotted Sunfish	W2	-	S3	G5
<i>Lythrurus matutinus</i> CP: Tar and Neuse drainages (endemic to North Carolina)	Pinewoods Shiner	W2	FSC	S3S4	G3 [G3G4]
<i>Moxostoma carinatum</i> M: French Broad, Little Tennessee, and Hiwassee drainages	River Redhorse	W2	-	S2	G4
<i>Nocomis platyrhynchus</i> M: New drainage	Bigmouth Chub	W2	-	S2	G4Q
<i>Nocomis raneyi</i> PC: Atlantic slope drainages	Bull Chub	W1	-	S3	G4
<i>Notropis chalybaeus</i> C: Coastal Plain rivers and creeks	Ironcolor Shiner	W5	-	S3?	G4
<i>Notropis maculatus</i> C: southern Coastal Plain drainages	Taillight Shiner	W2	-	S2	G5
<i>Notropis scabriceps</i> M: New drainage	New River Shiner	W2	-	S3	G4
<i>Notropis volucellus</i> MPC: scattered drainages in mountains and near Fall Line	Mimic Shiner	W2,W3	-	S3	G5
<i>Percina aurantiaca</i> M: Tennessee drainages	Tangerine Darter	W2	-	S3	G4
<i>Percina gymnocephala</i> M: New drainage	Appalachia Darter	W2	-	S3	G4
<i>Phenacobius crassilabrum</i> M: Little Tennessee, French Broad, and Toe drainages	Fatlips Minnow	W2	-	S3	G3G4

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name	Common Name	Status		Rank	
Province: Habitat/Locations		N.C.	U.S.	N.C.	Global

MOLLUSKS – FRESHWATER BIVALVES

<i>Elliptio cistellaeformis</i> C: Neuse, Lumber, Pee Dee drainages; Lake Waccamaw	Box Spike	W3,W5	-	SU	G4Q
<i>Elliptio congaraea</i> C: drainages north to the White Oak drainage	Carolina Slabshell	W2,W5	-	S3	G4
<i>Elliptio producta</i> C: Lake Waccamaw, and perhaps elsewhere; very difficult to identify	Atlantic Spike	W3,W5	-	SU	G4Q
<i>Elliptio raveneli</i> PC: most rivers in southern part of state; taxonomic problems	Carolina Spike	W3,W5	-	SU	GU
<i>Elliptio sp 2</i> C: lakes and rivers in southeastern part of state	File Spike	W3	-	SU	GUQ
<i>Lampsilis sp 3</i> no locality data	a bivalve	W3	-	S1?	GU

MOLLUSKS – FRESHWATER GASTROPODS

<i>Gyraulus deflectus</i> C: eastern Coastal Plain	Flexed Gyro	W3	-	S2?	G5
<i>Promenetus exacuouus</i> C: mainly Chowan and Pasquotank basins	Sharp Sprite	W3	-	S2?	G5

MOLLUSKS – TERRESTRIAL GASTROPODS

<i>Stenotrema pilula</i> no locality data	Pygmy Slitmouth	W3	-	SU	G3G4
--	-----------------	----	---	----	------

ARACHNIDS

<i>Nesticus bishopi</i> M: on ground in forests (endemic to North Carolina)	a nesticid spider	W3	-	S3?	G3?
<i>Nesticus gertschi</i> M: caves; Bat Cave, NC, and in Tennessee	a nesticid spider	W4	-	S1?	G1?
<i>Nesticus nasicus</i> M: boulderfields and cove forests (apparently endemic to Jackson County, NC)	a nesticid spider	W3	-	S3?	G3?
<i>Nesticus reclusus</i> M: on ground in forests (apparently in Buncombe, McDowell, and Swain counties, NC, and in Tennessee)	a nesticid spider	W3	-	S3?	G3?

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	<u>Status</u>		<u>Rank</u>	
		N.C.	U.S.	N.C.	Global
<i>Nesticus sp 2</i> M: on ground in forests (only known from Clay County, NC)	a nesticid spider	W3	-	S1S3	G1G3
<i>Vaejovis carolinianus</i> MP: under shelter of rocks, leaves, and buildings, along southern border of state	Carolina Scorpion	W2,W3	-	S2?	G5
CRUSTACEANS					
<i>Cambarus carolinus</i> M: Little Tennessee and Hiwassee drainage	Red Burrowing Crayfish	W3	-	S2	G4 [G3G4]
<i>Cambarus chasmodactylus</i> M: rivers and large streams in New River drainage	New River Crayfish	W5	-	S3	G4 [G4G5]
<i>Cambarus hiwasseeensis</i> M: streams in Hiwassee drainage	Hiwassee Crayfish	W2	-	S3S4	G3G4 [G4]
<i>Cambarus sp A (cf C. howardi)</i> MP: many drainages in mountains and upper Piedmont	a crayfish from western NC	W3	-	S2S3	GU [G4]
<i>Canthocamptus vagus</i> CP: in benthos of lakes and ponds within swampy environments	Swamp Canthocamptus	W2,W3	-	S3?	G?
<i>Cytheridella ilosvayi</i> C: quiet backwaters associated with large coastal rivers	Backwater Ostracod	W3	-	S2?	G?
<i>Dactylocythere chelomata</i> M: symbiotic on crayfish in streams and rivers in southwestern mountains	Cherokee Crayfish Ostracod	W2,W3	-	S2?	G?
<i>Dactylocythere peedeensis</i> P: symbiotic on crayfish in Pee Dee drainage (endemic to North Carolina, but likely occurs in South Carolina)	Pee Dee Crayfish Ostracod	W3	-	S2?	G?
<i>Dactylocythere susanae</i> M: symbiotic on crayfish in Hiwassee and Nolichucky drainages	Hiwassee Crayfish Ostracod	W2,W3	-	S2?	G3G4
<i>Harpagocythere baileyi</i> M: symbiotic on crayfish in Little Tennessee and Savannah drainages (endemic to North Carolina, but likely occurs in SC and GA)	Highlands Crayfish Ostracod	W3	-	S2?	G?
<i>Hesperodiaptomus augustaensis</i> P: ephemeral ponds, such as floodplain pools; near Chapel Hill	Augusta Hesperodiaptomus	W3	-	SH	G?
<i>Lordocythere petersi</i> M: symbiotic on crayfish in the Hiwassee drainage (record based on a sketch only)	Cumberland Crayfish Ostracod	W4	-	SR	G?
<i>Orconectes cristavarius</i> M: New drainage	a crayfish	W3	-	S3	G5
<i>Procambarus ancylus</i> C: ditches, streams, and lakes in southeastern corner of the state	Edisto Crayfish	W2	-	S3	G4G5 [G4]

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	Status		Rank	
		N.C.	U.S.	N.C.	Global
<i>Procambarus blandingii</i> C: Lumber and Waccamaw drainages	Santee Crayfish	W3	-	S3S4	G4 [G4G5]
<i>Procambarus medialis</i> C: sluggish streams and ditches in Tar and Neuse drainages (endemic to North Carolina)	Tar River Crayfish	W3	-	S2	G3 [G2]
<i>Procambarus pearsei</i> C: still-water habitats and burrows in Cape Fear and Pee Dee drainages	Sandhills Crayfish	W2	-	S4	G4
<i>Stygobromus sp 1</i> M: seep below Jones Knob (endemic to North Carolina)	Plott Balsam Sideswimmer	W3	-	S1?	G?

INSECTS – MAYFLIES

<i>Ameletus cryptostimulus</i> M: small mountain streams	a mayfly	W5	-	S2	G4
<i>Anthopotamus myops</i> M: First Broad River (Cleveland)	a mayfly	W3	-	S3	G5
<i>Anthopotamus verticis</i> P: recorded in Yadkin River (Caldwell) and Flat River (Person) but probably is more widespread	Walker's Tusked Sprawler	W3	-	S3	G5
<i>Baetisca lacustris</i> M: Wilson Creek (Caldwell)	a mayfly	W4	-	S3?	G5
<i>Centroptilum sp nov</i> M: Little Ivy Creek (Madison)	a mayfly	W4	-	S1?	G?
<i>Drunella walkeri pop 1</i> P: disjunct population in Sandy/Swift Creek (Nash)	a mayfly	W5	-	S1?	G5
<i>Ephemerella argo</i> SC: Lower Little River (Hoke), Naked Creek (Richmond), Drowning Creek (Richmond), Lumber River (Robeson, Scotland); needs more sampling in the spring (Bertie, Halifax, Martin, Moore, Northampton, Richmond, Robeson, Scotland)	Argo Ephemerellan Mayfly	W3	-	S2S3	G4
<i>Ephemerella crenula</i> no locality data	Smoky Mountains Ephemerellan Mayfly	W3	-	SR	G3
<i>Ephemerella hispida</i> M: recorded from four streams in Alleghany and Haywood counties	a mayfly	W5	-	S1S2	G5
<i>Eurylophella enoensis</i> CMP: wide-ranging but infrequently collected	a mayfly	W5	-	S3	G4
<i>Eurylophella minimella</i> CMP: a widespread species, but rare in North Carolina	a mayfly	W2	-	S3	G4
<i>Heterocloeon sp nov</i> no locality data	a mayfly	W4	-	S2	G?
<i>Leptophlebia bradleyi</i> no locality data	a mayfly	W5	-	S2	G5

NORTH CAROLINA ANIMAL WATCH LIST

69

Scientific Name Province: Habitat/Locations	Common Name	Status N.C.	U.S.	Rank N.C.	Global
<i>Leptophlebia johnsoni</i> no locality data	Johnson's Pronggill Mayfly	W2	-	S2	G4
<i>Nixe sp nr inconspicua</i> M: very rare, collected from upper Johns River, upper Wilson Creek, and Harper Creek	a mayfly	W5	-	S1	G5
<i>Paracloeodes fleeki</i> no locality data	a mayfly	W3	-	S3	G?
<i>Plauditus gloveri</i> no locality data	a mayfly	W3	-	S2	G2
<i>Pseudiron centralis</i> P: no locality data (Iredell)	White Sand-river Mayfly	W2	-	S2S3	G5
<i>Pseudocentropiloides usa</i> no locality data	a mayfly	W3	-	S2	G2
<i>Rhithrogena uhari</i> no locality data	a mayfly	W5	-	S3	G3
<i>Siphloplecton speciosum</i> PS: Lumber River	a mayfly	W5	-	S2	G3
<i>Stenonema lenati</i> often in vulnerable habitats; no locality data	a mayfly	W5	-	S3	G3
<i>Stenonema sp nov</i> M: upper Wilson Creek and lower Linville River (Caldwell, Burke)	a mayfly	W2	-	S1	G?
<i>Tricorythodes robacki</i> P: Uwharrie River and other sites (Chatham, Johnston*, Montgomery)	a mayfly	W3	-	S3	G3

INSECTS – STONEFLIES

<i>Acroneuria evoluta</i> P: central slate belt streams (Randolph, Chatham, Stanly, Montgomery, Moore)	a stonefly	W5	-	S2	G5
<i>Acroneuria lycorias</i> C: Barbecue Swamp (Harnett)	a stonefly	W3	-	SU	G5
<i>Acroneuria mela</i> C: Cape Fear, Neuse, Lumber, Black, South, and Waccamaw rivers	a stonefly	W5	-	S3	G?
<i>Acroneuria perplexa</i> M: Panthertown Creek, Left Prong Stony Fork (Jackson, Wilkes)	a perlid stonefly	W4	-	S2	G4
<i>Agnetina annulipes</i> CMP: recorded from nine streams and rivers from the mountains to the Coastal Plain	a stonefly	W3	-	S3S4	G5
<i>Agnetina flavescens</i> PM: recorded from nine streams and rivers, primarily in the mountains but also from Mayo River	a stonefly	W3	-	S3S4	G5
<i>Alloperla lenati</i> SC: Lumber River at Wagram and Upper Rockfish Creek	a stonefly	W5	-	S1	G?

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name	Common Name	Status		Rank	
Province: Habitat/Locations		N.C.	U.S.	N.C.	Global
<i>Diploperla morgani</i> PM: Ashe, Burke, Caldwell, Clay, Jackson, Macon, McDowell, Surry, Swain	a stonefly	W3	-	S3	G2
<i>Helopicus bogaloosa</i> PC: known from eleven streams and rivers in Piedmont, Sandhills, and Inner Coastal Plain	a stonefly	W3	-	S3	G3
<i>Hydroperla phormidia</i> PSC: Lumber River and Pee Dee River	a stonefly	W4	-	S2	G3
<i>Isogenoides varians</i> P: Yadkin River (Davie)	a stonefly	W2	-	S2	G3
<i>Isoperla burksi</i> P: slate belt streams (Orange, Durham, Chatham)	a spring stonefly	W4	-	S2	G4
<i>Isoperla sp nov 1</i> S: Little Crane Creek (Moore)	a stonefly	W4	-	S2?	G?
<i>Isoperla sp nov 2</i> S: upper Lumber River, Naked Creek (Hoke, Moore, Richmond)	a stonefly	W5	-	S2	G?
<i>Oemopteryx contorta</i> C: Recent record from Suck Creek (Moore)	a stonefly	W3	-	SU	G4
<i>Paragnetina sp nov?</i> M: Wilson Creek (Caldwell)	a stonefly	W4	-	S1?	G?
<i>Perlesta putnami</i> no locality data	a stonefly	W4	-	S2?	G?
<i>Pteronarcys biloba</i> M: streams in Cherokee and Madison counties	a stonefly	W3	-	S3	G5
<i>Shipsa rotunda</i> CPM: known from twelve streams in mountains, Piedmont, and Coastal Plain	a stonefly	W3	-	S2S3	G5
<i>Viehopera ada</i> no locality data	a stonefly	W3	-	S1?	G3
<i>Yugus arinus</i> no locality data	a stonefly	W3	-	S3	G3

INSECTS – CADDISFLIES

<i>Agapetus hessi</i> P: Swift Creek (Nash)	a glossosomatid caddisfly	W5	-	S2	G?
<i>Agapetus pinatus</i> M: mountain streams (Transylvania, Haywood, Graham, Cherokee)	a caddisfly	W3	-	S3	G?
<i>Agapetus tomus</i> M: mountain streams (Cherokee)	a caddisfly	W5	-	S2	G?
<i>Ceraclea cama</i> C: Lake Waccamaw	a caddisfly	W5	-	S1	G?
<i>Ceraclea sp nov 3</i> M: Panthertown Creek (Jackson)	Morman's Ceraclea Caddisfly	W5	-	S1	G?

NORTH CAROLINA ANIMAL WATCH LIST

71

Scientific Name Province: Habitat/Locations	Common Name	<u>Status</u> N.C.	U.S.	<u>Rank</u> N.C.	Global
<i>Ceraclea sp nov 4</i> C: streams in Columbus County	a caddisfly	W5	-	S2	G?
<i>Ceraclea tarsipunctata</i> P: Cane Creek, Yadkin River, Long Creek	a caddisfly	W3	-	S3	G?
<i>Ceratopsyche ventura</i> no locality data	a caddisfly	W5	-	S3	G?
<i>Ceratopsyche walkeri</i> M: Beech Creek (Watauga)	a caddisfly	W4	-	S1?	G?
<i>Culoptila thoracica</i> no locality data	a caddisfly	W2	-	S4?	G?
<i>Goerita betteni</i> M: cold spring runs in mountainous areas	a caddisfly	W4	-	S?	G?
<i>Goerita semata</i> M: cold spring runs in mountainous areas	a caddisfly	W4	-	S?	G?
<i>Helicopsyche paralimnella</i> M: Fires Creek (Clay), Bearwallow Creek (Transylvania) (confined to southwestern mountains in NC)	a caddisfly	W3	-	S2	G?
<i>Homoplectra flinti</i> M: streams in Haywood and Macon counties	a caddisfly	W4	-	S2	G?
<i>Hydroptila coweetensis</i> M: Coweeta Creek (Macon)	a caddisfly	W4	-	S1	G?
<i>Hydroptila lloganae</i> S: Lumber River	Llogan's Vari-colored Microcaddisfly	W4	-	S2	G1G3
<i>Mayatrichia ayama</i> no locality data	a caddisfly	W5	-	S2	G?
<i>Molanna uniophila</i> C: found in larger rivers and lakes from Chowan River (Hertford) to Drowning Creek (Richmond) and Lake Waccamaw (Columbus)	a caddisfly	W3	-	S3	G?
<i>Nectopsyche sp nov</i> C: Lake Waccamaw	a caddisfly	W5	-	S1	G?
<i>Neophylax fuscus</i> MP: Johns River (Caldwell), South Fork New River (Ashe), North Fork New River (Ashe), New River (Alleghany), Alleghany Creek (Alleghany), Swift Creek (Nash), Little Fishing Creek (Halifax)	a caddisfly	W3	-	S3	G?
<i>Neotrichia sp</i> no locality data	a caddisfly	W5	-	S2	G?
<i>Oecetis morsei</i> S: unknown locality	Morse's Long-horn Sedge	W3	-	S3	G2
<i>Oecetis porteri</i> C: White Lake and Lake Waccamaw	Porter's Long-horn Sedge	W5	-	S3	GH
<i>Oecetis sp B</i> C: Lake Mattamuskeet and Perquimans River	a caddisfly	W5	-	S1	G?
<i>Oecetis sp D</i> C: Lake Waccamaw	a caddisfly	W5	-	S1	G?

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	Status N.C.	U.S.	Rank N.C.	Global
<i>Oecetis sp E</i> SC: bay lakes and swamp streams	a caddisfly	W5	-	S2	G?
<i>Oecetis sp F</i> C: unknown locality	a caddisfly	W5	-	S3	G?
<i>Oropsyche howellae</i> M: streams in Haywood, Jackson, and Macon counties	a caddisfly	W4	-	S2	G?
<i>Pseudogoera singularis</i> M: Coweeta Creek, and seep near upper Wilson Creek (Caldwell)	a caddisfly	W5	-	S1	G?
<i>Psilotreta amera</i> M: mountain streams (Haywood, Macon, Swain)	a caddisfly	W5	-	S2	G?
<i>Psilotreta rossi</i> M: seeps and springs (Macon, Transylvania)	a caddisfly	W5	-	S2	G?
<i>Psilotreta rufa</i> M: mountain streams (Macon, Transylvania)	a caddisfly	W2	-	S3?	G?
<i>Rhyacophila accola</i> M: mountain streams	a caddisfly	W5	-	S1	G?
<i>Rhyacophila appalachia</i> M: mountain streams	a rhyacophilan caddisfly	W5	-	S2	G3
<i>Rhyacophila montana</i> M: high elevation seeps (Swain)	a caddisfly	W5	-	S2?	G?
<i>Setodes arenatus</i> C: Lumber River	a caddisfly	W5	-	S2	G?
<i>Setodes stehri</i> M: unknown locality	a caddisfly	W5	-	S3	G?
<i>Triaenodes melacus</i> no locality data	a caddisfly	W3	-	S3?	G?
<i>Triaenodes sp nov C</i> S: bays in Scotland County	a caddisfly	W5	-	S1	G?
<i>Triaenodes sp nov D</i> C: Lake Waccamaw	a caddisfly	W5	-	S1?	G?
<i>Wormaldia thyria</i> ?: Reported from NC, but without occurrence data	a caddisfly	W3	-	S3	G3?

INSECTS – DRAGONFLIES

<i>Aphylla williamsoni</i> C: lakes and rivers	Two-striped Forceptail	W3	-	S3?	G5
<i>Arigomphus pallidus</i> C: ponds, lakes, and streams	Gray-green Clubtail	W3	-	S1?	G5
<i>Arigomphus villosipes</i> MPC: ponds, lakes, slow-flowing streams	Unicorn Clubtail	W3	-	S3?	G5
<i>Boyeria grafiana</i> M: rocky forest streams	Ocellated Darner	W3	-	S3?	G5
<i>Cordulegaster erronea</i> MP: small forested streams	Tiger Spiketail	W2	-	S3?	G4
<i>Coryphaeschna ingens</i> C: lakes and ponds	Regal Darner	W3	-	S3?	G5

NORTH CAROLINA ANIMAL WATCH LIST

73

Scientific Name Province: Habitat/Locations	Common Name	Status		Rank	
		N.C.	U.S.	N.C.	Global
<i>Dromogomphus armatus</i> C: pools in slow-flowing rivers	Southeastern Spinyleg	W3	-	S3?	G4
<i>Epitheca spinosa</i> PC: ponds and lakes	Robust Baskettail	W3	-	S3S4	G4
<i>Erpetogomphus designatus</i> PC: streams and rivers	Eastern Ringtail	W3	-	S3?	G5
<i>Gomphus apomyius</i> PC: spring-fed streams	Banner Clubtail	W3	-	S3?	G4
<i>Gomphus diminutus</i> S: sand-bottomed streams	Diminutive Clubtail	W2	-	S3S4	G3
<i>Gomphus dilatatus</i> PC: rivers	Blackwater Clubtail	W3	-	S3?	G5
<i>Gomphus rogersi</i> M: small spring-fed streams	Sable Clubtail	W2	-	S2S3	G4
<i>Libellula quadrimaculata</i> M: marshy ponds	Four-spotted Skimmer	W3	-	SR	G5
<i>Macrodiplax balteata</i> C: ponds and lakes, usually brackish or near marl	Marl Pennant	W3	-	S2S3	G5
<i>Nannothemis bella</i> S: boggy swales	Elfin Skimmer	W3	-	S3S4	G4
<i>Orthemis ferruginea</i> C: ponds and slow-flowing streams	Roseate Skimmer	W2	-	S2S4	G5
<i>Stylurus amnicola</i> MPC: rivers	Riverine Clubtail	W3	-	S3?	G4
<i>Triacanthagyna trifida</i> C: slow-flowing streams	Phantom Darner	W3	-	S2?	G5

INSECTS – DAMSELFLIES

<i>Calopteryx amata</i> M: cold, shallow, rocky rivers	Superb Jewelwing	W3	-	S3?	G4
<i>Lestes forcipatus</i> P: vegetated ponds	Sweetflag Spreadwing	W3	-	S2S3	G5
<i>Lestes vidua</i> C: ponds and pools	Carolina Spreadwing	W3	-	S2?	G5

INSECTS – MOTHS

<i>Abrostola ovalis</i> M: high elevation forests with nettles	a looper moth	W3	-	SU	G4
<i>Acrapex relictata</i> C: canebrakes	a cane borer	W3	-	S2S3	G4
<i>Acrionicta hamamelis</i> MP: unknown	Puzzling Dagger Moth	W3	-	SU	G4?
<i>Acrionicta lanceolaria</i> C: flatwoods	Lanceolate Daggermoth	W3	-	S3?	G4
<i>Acrionicta perblanda</i> C: cypress swamps	Cypress Daggermoth	W3	-	S1S2	G?
<i>Amphipyrynae, new genus 1 sp 1</i> MC: woodland canebrakes	a canebrake moth	W3	-	S1S2	G?
<i>Amphipyrynae, new genus 2 sp 1</i> C: woodland canebrakes	a canebrake moth	W3	-	S1S2	G?

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	Status		Rank	
		N.C.	U.S.	N.C.	Global
<i>Amphipyriinae</i> , new genus 2 sp 2 C: woodland canebrakes	a canebrake moth	W3	-	S3S4	G?
<i>Anticlea multiferata</i> MPC: unknown	Many-lined Carpet	W3	-	SU	G5
<i>Apantesis carlotta</i> M: unknown	Carlotta's Tiger Moth	W3	-	S3?	G4
<i>Argillophora furcilla</i> C: canebrakes	a cane moth	W3	-	S2S3	G2G4
<i>Argyrostromis carolina</i> no locality data	an owlet moth	W3	-	SH	G?
<i>Argyrostromis quadrifilaris</i> C: pocosins and flatwoods	Four-lined Chocolate	W3	-	S3?	G4
<i>Arugisa watsoni</i> PC: sedgy glades	Watson's Arugisa	W3	-	S3?	G4
<i>Bleptina sangamonica</i> C: sandhills	an owlet moth	W3	-	S2?	G4
<i>Bomolocha appalachiensis</i> M: unknown	Appalachian Bomolocha	W3	-	SU	G3G4
<i>Cabera quadrifasciaria</i> C: unknown	Four-lined Cabera	W3	-	SU	G?
<i>Caripeta aretaria</i> MPC: pine forests	Southern Pine Looper	W3	-	S3?	G4
<i>Catocala blandula</i> ssp 1 C: riparian hawthorns	Southern Charming Underwing	W3	-	S1S3	G5T3
<i>Catocala orba</i> C: levee forests with hawthorn	Orba Underwing	W3	-	SU	G4
<i>Catocala pretiosa texarkana</i> MPC: unknown	Texarkana Underwing	W3	-	SU	G4T4
<i>Catocala sappho</i> P: bottomland hardwoods with hickories	Sappho Underwing	W3	-	SU	G4
<i>Cepphis</i> sp 1 nr <i>decoloraria</i> C: unknown	a new inchworm moth	W3	-	S3?	GUQ
<i>Ceratomyx satanaria</i> C: swamps and bottomlands	an inchworm moth	W3	-	S2?	G4
<i>Chrysanympa formosa</i> MP: heath thickets	Formosa Looper Moth	W3	-	S3S4	G5
<i>Chytonix sensilis</i> C: sandhills and flatwoods	an owlet moth	W3	-	S3?	G4
<i>Cisthene kentuckiensis</i> C: bottomlands?	Kentucky Lichen Moth	W3	-	SU	G4
<i>Cleora projecta</i> C: peatlands and flatwoods	Projecta Gray	W3	-	S3?	G4
<i>Cosmosoma myrodora</i> C: on climbing hempweed	an owlet moth	W3	-	SU	G?
<i>Cryphia cyanympha</i> C: sandhills	an owlet moth	W3	-	SU	G?
<i>Cycnia inopinatus</i> MPC: on milkweeds	Unexpected Cycnia	W3	-	SU	G4
<i>Dasychira atrivenosa</i> C: hardwood forests	a tussock moth	W3	-	S3?	G4
<i>Dasychira leucophaea</i> C: unknown	a tussock moth	W3	-	SU	G4
<i>Datana robusta</i> C: savannas, flatwoods, and sandhills	a prominent moth	W3	-	S2?	G?

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	Status N.C.	U.S.	Rank N.C.	Global
<i>Doryodes bistrialis</i> C: savannas and flatwoods	an owlet moth	W3	-	S3S4	G4
<i>Dysgonia smithii</i> C: flatwoods	Smith's Darkwing	W3	-	S3?	G4
<i>Erastria coloraria</i> no locality data	Broad-lined Catopyrrha	W3	-	SU	G4
<i>Euagrotis lubricans</i> SC: savannas and flatwoods	Slippery Dart Moth	W3	-	S3?	G4
<i>Euagrotis simplicia</i> C: unknown	a noctuid moth	W3	-	SU	G?
<i>Eucrotopcnemis dapsilis</i> C: unknown	an owlet moth	W3	-	S2S3	G4
<i>Euxoa declarata</i> M: unknown	a dart moth	W3	-	SU	G4G5
<i>Exyra fax</i> PC: wetlands with purple pitcher-plants	Purple Pitcher-plant Moth	W3	-	S3?	G4
<i>Exyra ridingsii</i> PC: wetlands with yellow pitcher-plants	a pitcher-plant moth	W3	-	S3?	G3G4
<i>Faronta aleada</i> C: unknown	an owlet moth	W3	-	SU	G?
<i>Faronta rubripennis</i> C: beach grasslands	Pink Streak	W3	-	S2S3	G3G4
<i>Gabara distema humeralis</i> C: savannas	an owlet moth	W3	-	S3?	G4T?
<i>Gabara pulverosalis</i> C: savannas	an owlet moth	W3	-	S3?	G4
<i>Hypocoena enervata</i> C: tidal marshes	an owlet moth	W3	-	SU	G4
<i>Hypomecis longipectinaria</i> C: hardwood stands	a wave	W3	-	SU	G?
<i>Idaea eremiata</i> C: sandhills	a wave	W3	-	SU	G4
<i>Idaea micropterata</i> C: unknown	a wave	W3	-	S3?	G?
<i>Idaea ostentaria</i> C: sandhills	a wave	W3	-	S3?	G?
<i>Idaea productata</i> C: sandhills	a wave	W3	-	S2S3	G4
<i>Idaea scintillularia</i> C: unknown	a wave	W3	-	SU	G?
<i>Idaea violacearia</i> C: sandhills and dunes	Violaceous Wave	W3	-	S3?	G4
<i>Lepipolys perscripta</i> C: on toadflax	an owlet moth	W3	-	SU	G4
<i>Leptostales laeivaria</i> C: unknown	a wave	W3	-	SU	G?
<i>Leucania callidior</i> C: canebrakes	Cane Wainscot	W3	-	SU	GU
<i>Leucania incognita</i> C: savannas	an owlet moth	W3	-	SU	G?
<i>Lithacodia sp 1</i> C: pocosins and other wetlands	a bird-dropping moth	W3	-	S1S3	G4

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	Status		Rank	
		N.C.	U.S.	N.C.	Global
<i>Lithophane lepida adipel</i> C: unknown	a pinion moth	W3	-	SU	G4T4
<i>Litoprosopus futilis</i> C: palmettos	Palmetto Borer	W3	-	SU	G4
<i>Lobocleta peralbata</i> C: unknown	an inchworm moth	W3	-	SU	G?
<i>Macrochilo santerivalis</i> C: brackish marshes	an owlet moth	W3	-	SU	G3G4
<i>Meropleon diversicolor</i> MC: sedge meadows	a noctuid moth	W3	-	SU	G4
<i>Metalectra albilinea</i> C: unknown	White-lined Fungus Moth	W3	-	S3?	G?
<i>Metalepsis fishii</i> C: heath thickets	an owlet moth	W3	-	SU	G4G5
<i>Morrisonia sp 1</i> C: unknown	a new woodgrain moth	W3	-	S3?	G3G4
<i>Nemoria bifilata</i> C: sandhills	an emerald moth	W3	-	S3?	G4
<i>Nemoria bifilata bifilata</i> C: sandhills	an emerald moth	W3	-	S3?	G?T?
<i>Neoplynes eudora</i> C: unknown	a wasp moth	W3	-	SU	G?
<i>New noctuid genus 1</i> C: canebrakes	a new reddish cane borer moth	W3	-	S3	GU
<i>Notodontidae, new genus 1 species 1</i> C: hardwoods?	a new prominent moth	W3	-	S2S3	G3G4
<i>Oligia chlorostigma</i> C: unknown	a brocade moth	W3	-	SU	G4
<i>Orgyia detrita</i> C: maritime forests	a tussock moth	W3	-	S3?	G4
<i>Paonias astylus</i> C: heath thickets	Huckleberry Sphinx	W3	-	S3S4	G4G5
<i>Papaipema baptisiae</i> P: on <u>Baptisia</u> or <u>Apocynum</u>	Wild Indigo Borer Moth	W3	-	SU	G4
<i>Papaipema lysimachiae</i> M: on loosestrife	Loosestrife Borer Moth	W3	-	SU	G4
<i>Papaipema sp 3</i> C: canebrakes	Southeastern Cane Borer Moth	W3	-	S3?	G4
<i>Parahyphenodes quadralis</i> C: unknown	an owlet moth	W3	-	S1S2	G4
<i>Pimaphera percata</i> C: unknown	an inchworm moth	W3	-	S1S2	G?
<i>Properigea tapeta</i> C: bottomlands?	an owlet moth	W3	-	S2S3	G?
<i>Pyreferra pettiti</i> PC: on <u>Ostrya</u>	a sallow moth	W3	-	SU	G?
<i>Schinia inclara</i> C: marshes and sandhills with <u>Heterotheca</u>	a flower moth	W3	-	SU	G?
<i>Schinia nubila</i> C: unknown	a flower moth	W3	-	SU	G?
<i>Schinia obscurata</i> C: sandhills	Obscure Schinia	W3	-	S2S3	G4
<i>Schinia scissoides</i> C: open areas	a flower moth	W3	-	SU	G?

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	Status N.C.	U.S.	Rank N.C.	Global
<i>Schinia siren</i> C: open maritime forests	a flower moth	W3	-	SU	G?
<i>Schinia sordida</i> C: savannas	a flower moth	W3	-	SU	G4?
<i>Scopula aemulata</i> MC: on <u>Trillium</u>	a wave moth	W3	-	SU	G?
<i>Scopula cacuminaria</i> C: sandhills	Frosted Tan Wave	W3	-	S3?	G4
<i>Scopula ordinata</i> CM: mesic hardwoods	a wave	W3	-	S2S3	G5
<i>Scopula purata</i> C: acidic wetlands	Chalky Wave	W3	-	S3?	G4
<i>Semiothisa eremiata</i> C: on <u>Tephrosia</u>	Three-lined Angle	W3	-	S3?	G4
<i>Semiothisa ordinata</i> C: sandhills	Amorpha Angle	W3	-	S2S3	G?
<i>Semiothisa punctolineata</i> C: unknown	an angle	W3	-	SU	G?
<i>Sphingicampa bicolor</i> C?: on honey locust	Honey Locust Moth	W3	-	S3S4	G5
<i>Sphinx franckii</i> P: on <u>Fraxinus</u>	Franck's Sphinx	W3	-	SU	G4
<i>Spilosoma dubia</i> C: acidic wetlands	Dubious Tiger Moth	W3	-	S3S4	G?
<i>Stiria rugifrons</i> C?: sandhills	an owlet moth	W3	-	SU	G4
<i>Syngrapha alias</i> M: spruce-fir forests	a looper moth	W3	-	SU	G5
<i>Tarachidia parvula</i> C: cypress swamps?	a bird-dropping moth	W3	-	SU	G?
<i>Tolyte minta</i> C: longleaf pine stands	Southern Tolyte	W3	-	S2S3	G5
<i>Tornos abjectarius</i> C: unknown	a gray	W3	-	S2S3	G?
<i>Tripudia flavofasciata</i> C: bottomlands	an owlet moth	W3	-	SU	G?
<i>Tripudia quadrifera</i> P: unknown	an owlet moth	W3	-	SU	G?
<i>Ulolonche modesta</i> C: unknown	Modest Quaker Moth	W3	-	SU	G5
<i>Xestia youngii</i> C: peatlands	Young's Xestia	W3	-	S3S4	G?
<i>Zale calycanthata</i> C: oak forests	Double-banded Zale	W3	-	S3?	G4
<i>Zale fictilis</i> C: unknown	a zale	W3	-	SA?	G5
<i>Zale sp 2 nr squamularis</i> C: unknown	a new zale	W3	-	SU	G4Q
<i>Zale sp 3 nr buchholzi</i> C: pine forests	an owlet moth	W3	-	S2S3	G3?
<i>Zanclognatha atrilineella</i> C: unknown	an owlet moth	W3	-	S1?	G4?
<i>Zanclognatha sp 1</i> M: dry pitch pine stands	an owlet moth	W3	-	SU	G3G4

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name Province: Habitat/Locations	Common Name	Status N.C.	U.S.	Rank N.C.	Global
INSECTS – BUTTERFLIES					
<i>Amblyscirtes carolina</i> CSP: wet woods (mainly hardwoods) near cane; host plant -- cane (<u>Arundinaria</u>)	Carolina Roadside-Skipper	W2	-	S3S4	G3G4
<i>Callophrys augustinus</i> MPSC: dry acidic areas with an abundance of ericads, such as pine/oak heaths; host plants -- ericaceous shrubs	Brown Elfin	W2	-	S3S4	G5
<i>Celastrina neglectamajor</i> M: rich deciduous forests; host plant -- black cohosh (<u>Cimicifuga</u>)	Appalachian Azure	W2	-	S3S4	G4
<i>Glaucopsyche lygdamus</i> M: open upland woods, roadbanks, and borders; host plants -- legumes, especially Carolina vetch (<u>Vicia</u> <u>caroliniana</u>)	Silvery Blue	W2	-	S2S3	G5
<i>Hesperia leonardus</i> PM: wooded borders and openings, brushy fields; host plants -- grasses	Leonard's Skipper	W2	-	S3S4	G4
<i>Hesperia metea</i> PSM: dry barren sites, such as pine/oak sandhills and upland wood margins; host plants -- mainly broomsedge (<u>Andropogon</u>)	Cobweb Skipper	W2	-	S3	G4G5
<i>Hesperia sassacus</i> M: old fields, clearings, wood margins, mainly at high elevations; host plants -- grasses	Indian Skipper	W2	-	S3	G5
<i>Megathymus yuccae</i> C: dunes, flatwoods, sandhills, and other places near yuccas; host plants -- <u>Yucca</u> species	Yucca Giant-Skipper	W2	-	S3S4	G5
<i>Neonympha areolata</i> CSP: savannas, wet powerline clearings, other damp grassy areas; host plants -- sedges, perhaps grasses	Georgia Satyr	W5	-	S3	G4
<i>Phyciodes phaon</i> T: open, often dry areas, mainly on barrier islands; host plants -- fogfruit (<u>Lippia</u>)	Phaon Crescent	W5	-	S3	G5
<i>Pontia protodice</i> PCSM: fields, croplands, brushy areas; host plants -- mustard species (Family <u>Brassicaceae</u>)	Checkered White	W1,W5	-	S3	G4
<i>Problema byssus</i> C: wetland ecotones, swamp margins, ditches; host plant -- gamma grass (<u>Tripsacum dactyloides</u>)	Byssus Skipper	W2	-	S3	G3G4

NORTH CAROLINA ANIMAL WATCH LIST

79

Scientific Name Province: Habitat/Locations	Common Name	<u>Status</u> N.C.	U.S.	<u>Rank</u> N.C.	Global
<i>Speyeria diana</i> MP: rich woods and adjacent edges and openings; believed extirpated from the lower Piedmont; host plants -- violets (<i>Viola</i>)	Diana Fritillary	W2	FSC	S3S4	G3 [G3G4]
<i>Thorybes confusus</i> SCP: dry woodland borders and openings, brushy fields; host plants -- legumes	Confused Cloudywing	W3	-	S3S4	G4

INSECTS – GRASSHOPPERS AND KATYDIDS

<i>Arphia granulata</i> C: flatwoods, sandhills	Southern Yellow-winged Grasshopper	W3	-	S2S4	G5
<i>Atlanticus gibbosus</i> C: oak and pine forests	Gibbous Shield-back Katydid	W3	-	SU	G?
<i>Belocephalus subapterus</i> C: flatwoods and other shrubby areas	Half-winged Cone Head Katydid	W3	-	SU	G?
<i>Dendrotettix australis</i> M: forests	Southern Dendrotettix	W3	-	SU	GU
<i>Dendrotettix zimmermanni</i> M: forests	Zimmermann's Dendrotettix	W3	-	SU	GU
<i>Hesperotettix viridis brevipennis</i> C: grasslands, forest edges	Green-striped Grasshopper	W3	-	SU	G5T5
<i>Hubbellia marginifera</i> C: pinewoods	Hubbell's Shield-back Katydid	W3	-	SU	G?
<i>Inscudderia walkeri</i> C: cypress stands	Walker's Cypress Katydid	W3	-	SU	G?
<i>Melanoplus acrophilus acrophilus</i> M: shrubby areas, 3600' - >5000'	a short-winged melanoplus	W3	-	SU	G2G3T2T3
<i>Melanoplus carnegiei</i> M: open pine and oak forests	Carnegie's Melanoplus	W3	-	SU	GU
<i>Melanoplus celatus</i> M: undescribed, 1200' - 4000'	a short-winged melanoplus	W3	-	SU	GU
<i>Melanoplus deceptus</i> M: balds?, 4000' - 5700'	Deceptive Melanoplus	W3	-	SU	G2G4
<i>Melanoplus decoratus</i> M: dry woodlands	Decorated Melanoplus	W3	-	SU	GU
<i>Melanoplus hubbelli</i> M: dry woodlands, including second growth	Hubbell's Melanoplus	W3	-	SU	G4
<i>Melanoplus impudicus</i> M: barrens and glades	Immodest Spur-throat Grasshopper	W3	-	SU	G4G5
<i>Melanoplus propinquus</i> C: savannas and other wooded grasslands	Southern Red-legged Melanoplus	W3	-	SU	G5
<i>Melanoplus similis</i> M: open woodlands	a short-winged melanoplus	W3	-	SU	G5
<i>Melanoplus strumosus</i> C: sandhills	Swollen Spur-throat Grasshopper	W3	-	SU	G4G5
<i>Melanoplus tribulus</i> M: glades and open woodlands	Tribulus Spur-throat Grasshopper	W3	-	SU	G4G5
<i>Mermiria bivittata</i> T: sandhills, wooded grasslands	Two-striped Mermiria	W3	-	SU	G5

NORTH CAROLINA ANIMAL WATCH LIST

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat/Locations		N.C.	U.S.	N.C.	Global
<i>Mermiria intertexta</i> T: marshes	Intertexta Mermiria	W3	-	SU	G4?
<i>Neoconocephalus velox</i> C: shrubby undergrowth in pinewoods	Swift-flying Cone Head Katydid	W3	-	SU	G?
<i>Opshomala vitreipennis</i> C: marshes	Glassy-winged Toothpick Grasshopper	W3	-	SU	G5
<i>Orchelimum superbum</i> C: bogs and tidal marshes	Superb Meadow Katydid	W3	-	SU	G?
<i>Romalea guttatus</i> P: open woods and roadsides	Eastern Lubber Grasshopper	W3	-	SU	G5
<i>Scudderia curvicauda laticauda</i> C: savannas, flatwoods, open pinewoods	Broad-tailed Bush Katydid	W3	-	SU	G?T?

INSECTS – BEETLES

<i>Gonielmis dietrichi</i> S: ten sites in and around Fort Bragg (Hoke, Richmond, Scotland)	a beetle	W4	-	S2	G?
<i>Stenelmis morsei</i> S: Lumber River (Robeson)	a riffle beetle	W5	-	S2	G?
<i>Stenelmis sp nov 1</i> S: Lumber River (Scotland, Hoke)	Harley's Stenelmis Riffle Beetle	W5	-	S1	G?
<i>Stenelmis sp nov 2</i> PS: James Creek, Upper Little River, Deep River (Moore, Harnett, Lee)	William's Stenelmis Riffle Beetle	W2	-	S2	G?
<i>Stenelmis sp nov 3</i> PSC: Little River (Harnett, Cumberland, Moore)	a riffle beetle	W4	-	S2	G?
<i>Trechus balsamensis</i> M: Plott Balsam mountains (endemic to North Carolina) (Jackson*)	a ground beetle	W3	-	S1?	G1?
<i>Trechus carolinae</i> M: Black Mountains (endemic to North Carolina) (Yancey*)	a ground beetle	W3	-	S1?	G1?
<i>Trechus luculentus luculentus</i> M: mountains of southwestern North Carolina (Clay*, Graham*, Macon*, Swain+)	a ground beetle	W3	-	S2?	G2T2?
<i>Trechus luculentus unicoi</i> M: apparently the mountains of Graham County (Graham*)	a ground beetle	W3	-	S2?	G2T2?
<i>Trechus mitchellensis</i> M: Black Mountains (endemic to North Carolina) (Buncombe*, McDowell*, Yancey*)	a ground beetle	W3	-	S1?	G1?
<i>Trechus novaculosus</i> M: Great Smoky Mountains National Park (endemic to the park) (Swain*)	a ground beetle	W3	-	S2?	G2?
<i>Trechus roanicus</i> M: Roan Mountain (endemic to the mountain) (Mitchell*)	a ground beetle	W3	-	S1?	G1?

NORTH CAROLINA ANIMAL WATCH LIST

81

Scientific Name Province: Habitat/Locations	Common Name	<u>Status</u> N.C.	U.S.	<u>Rank</u> N.C.	Global
<i>Trechus rosenbergi</i> M: Plott Balsam and Great Balsam mountains (endemic to North Carolina) (Haywood*, Jackson*)	a ground beetle	W3	-	S1?	G1?
<i>Trechus satanicus</i> M: vicinity of Devils Courthouse and Graveyard Fields (endemic to North Carolina) (Haywood*, Transylvania*)	a ground beetle	W3	-	S1?	G1?
<i>Trechus subtilis</i> M: mountains of Haywood County (endemic to North Carolina) (Haywood*, Jackson*)	a ground beetle	W3	-	S1?	G1?

NORTH CAROLINA EXTIRPATED ANIMAL LIST

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	Status		Rank	
		N.C.	U.S.	N.C.	Global

EXTIRPATED ANIMALS IN NORTH CAROLINA

This is a list of all taxa considered by state biologists and NC NHP to be extirpated (N.C. Rank of SX) in North Carolina. On past NC NHP rare animal lists, some such taxa were included in the Rare List, some were included in the Watch List, and others were not mentioned at all. Some of these taxa are Federally Listed, and some also have a state protected status (SC). However, as none are believed to presently occur in the state, with little or no hope of being re-discovered, we feel that they should be placed in a common section of this publication. For those species that have been tracked in the past, NC NHP will still keep records of their locations and keep other materials on file. (See pages 3-8 for status codes and definitions.)

NOTE: Quite a few species that might be gone from NC are included in the Rare and Watch lists with an SH (= historic) rank, generally indicating that they have not been seen for over 20 years, but because of inadequate survey or other factors may well still exist in the state, or may be absent but expected to be found again in upcoming years.

MAMMALS

<i>Bos bison</i> MP: open woodlands	American Bison	-	-	SX	G4
<i>Canis lupus</i> MPS?C?: extensive forests and other remote areas	Gray Wolf	-	-	SX	G4
<i>Erethizon dorsatum</i> M: high elevation hardwood forests; no positively documented records	North American Porcupine	-	-	SX	G5
<i>Eschrichtius robustus</i> T: offshore waters	Gray Whale	-	-	SX	G3G4
<i>Lepus americanus</i> M: spruce-fir and other high elevation forests; no positively documented records	Snowshoe Hare	-	-	SX	G5
<i>Martes pennanti</i> M: spruce-fir forests; no positively documented records	Fisher	-	-	SX	G5

BIRDS

<i>Campephilus principalis</i> C: extensive swamps and bottomlands with old-growth trees (one NC record)	Ivory-billed Woodpecker	-	E	SX	GH
<i>Conuropsis carolinensis</i> CSPM?: forests, especially swamps and bottomlands	Carolina Parakeet	-	-	SX	GX
<i>Ectopistes migratorius</i> MPSC: forests (winter only)	Passenger Pigeon	-	-	SX	GX

NORTH CAROLINA EXTIRPATED ANIMAL LIST

83

Scientific Name	Common Name	<u>Status</u>		<u>Rank</u>	
Province: Habitat (Counties of occurrence)		N.C.	U.S.	N.C.	Global

FRESHWATER FISHES

<i>Acipenser fulvescens</i> M: large rivers of Tennessee drainages (Madison*)	Lake Sturgeon	SC	FSC	SX	G3G4
<i>Lepomis megalotis</i> M: French Broad drainage (Buncombe*, Haywood*)	Longear Sunfish	EX	-	SX	G5
<i>Percina macrocephala</i> M: French Broad River (Buncombe*)	Longhead Darter	SC	FSC	SX	G3

MOLLUSKS – FRESHWATER BIVALVES

<i>Epioblasma capsaeformis</i> M: French Broad River (Buncombe*, Madison*)	Oyster Mussel	EX	E	SX	G1
<i>Medionidus conradicus</i> M: French Broad River (Buncombe*)	Cumberland Moccasinshell	EX	-	SX	G3G4
<i>Ptychobranhus fasciolaris</i> M: Tennessee drainages	Kidneyshell	EX	-	SX	G4G5
<i>Quadrula pustulosa</i> M: Tennessee drainages	Pimpleback	EX	-	SX	G5
<i>Toxolasma lividus</i> M: French Broad River	Purple Lilliput	EX	-	SX	G2
<i>Tritogonia verrucosa</i> M: New River near the Virginia border (Alleghany+, Ashe+)	Pistolgrip	EX	-	SX	G4

POTENTIAL NEW TO NORTH CAROLINA ANIMALS

The following list contains species of well-known animal groups that are not currently known to occur in North Carolina, or those species not currently known to breed in North Carolina, but which are considered to have some possibility of being found to occur on a regular basis or to breed in the state. The list is based on the species' currently known range and habitat preferences. Nearly all are species that occur in the adjacent states of South Carolina, Georgia, Tennessee, or Virginia, in habitats (or drainages) at least relatively similar to habitats known to exist in North Carolina. The purpose of this list is to encourage and challenge field workers to find new state occurrences and new breeding records. This list should give field investigators an idea of some of the species that may be regular components of North Carolina's fauna. (Species that might occur as single record accidentals, such as Western species of birds or Gulf Coast butterflies, are generally not included.) While some of these species may have relatively remote chances of being found in North Carolina, the likelihood of finding new state records is greatly increased by being aware of the possibilities and by species-directed searching. Our knowledge of many of our animal groups is still quite imperfect, especially invertebrate groups. Many natural areas are being destroyed before they can be investigated, and it can be assumed that a number of native species have been extirpated from North Carolina before they were ever documented as occurring in the state.

Following each species is the North Carolina province in which the species is considered most likely to be found occurring or found breeding. Where possible, a description of the typical habitat of the species in the vicinity of North Carolina is also given. Sometimes, the nearest known occurrence(s) to North Carolina are also listed, with the distance from North Carolina in number of counties in brackets. For instance, [1] indicates that the species has been reported from a county immediately adjacent to North Carolina; [5] indicates that the species has been reported from a county five counties away from the North Carolina border. An average county width in and around North Carolina is about 25 miles, so [5] indicates an approximate distance from North Carolina of 100-125 miles. It should be obvious that a species known to occur south only to the Virginia mountains would be best searched for in North Carolina counties near the Virginia line, such as Ashe, Alleghany, and Watauga. Likewise, Coastal Plain species occurring north to South Carolina are most likely searched for in counties along the southern border, such as Brunswick and Columbus.

The following additional symbols are used:

- * May have occurred in North Carolina (no conclusive records) with the remote possibility of being conclusively found in the state
- + Known to occur in the state on a regular basis (as an Element Occurrence) but not known conclusively to breed, though suspected or assumed to breed; conclusive breeding records lacking

NOTE: Since the last version of this publication in 2001, the following species have been found or reported in North Carolina and have been removed from the lists: Olympia Marble (*Euchloe olympia*) and Texan Crescent (*Phyciodes texana seminole*); plus, breeding evidence has been documented for Hermit Thrush (*Catharus guttatus*).

MAMMALS

There are very few terrestrial mammals that could be discovered for the first time in North Carolina; three of them -- North American Porcupine, Shoeshoe Hare, and Fisher -- may have occurred in the mountains many decades or centuries ago, but reports are fuzzy or second-hand; they are included on the Extirpated List. Nearly all of the potential new-to-North Carolina mammals are cetaceans. A few cetaceans probably occur regularly in the Atlantic off North Carolina, but far offshore; however, most of them are primarily either subtropical or Arctic inhabitants and would be considered accidental in the state.

Balaenoptera edeni -- Bryde's Whale

T: ocean, primarily in subtropical waters; VA (one record), GA

Balaenoptera musculus -- Blue Whale

T: ocean, entire north Atlantic, far offshore; MD (one record)

Peponocephala electra -- Melon-headed Whale

T: ocean, in subtropical waters; MD (one record)

Phoca groenlandica -- Harp Seal

T: ocean, in cold waters north of NC; VA (one record)

BIRDS

The species below are all considered to be potential breeders in North Carolina; some may possibly be breeding already. All have been recorded from the state on numerous occasions; those marked by (+) are known to occur in summer in the state to an extent and probably are nesting, but conclusive evidence is lacking.

Accipiter gentilis -- Northern Goshawk

M: extensive forests, mainly at high elevations; MD, WV, VA ?; a few summer records for the NC mountains [see Watch List]

Ammodramus caudacuta -- Saltmarsh Sharp-tailed Sparrow

T: salt or brackish marshes; VA [3]; some references list NC in the breeding range -- this is erroneous; there have been a few summer reports, but some may be erroneous or of late migrating individuals [see Watch List]

Asio flammeus -- Short-eared Owl

T: extensive brackish marshes; MD ?, VA formerly, and might still nest there; several summer records for the NC coastal marshes [see Watch List]

Asio otus -- Long-eared Owl

M: conifers or mixed woods at high elevations in northern mountains; VA [2]; one or two summer reports from the NC mountains, but without visual confirmation [see Watch List]

Carpodacus purpureus -- Purple Finch

M: spruce-fir forests; VA [1] (Mt. Rogers); one or two summer records for the NC mountains

Catharus ustulatus -- Swainson's Thrush

M: spruce-fir forests, mainly in northern mountains; VA [1] (Mt. Rogers); possibly nested in NC mountains in 19th Century, but no summer records in many decades

Cistothorus platensis -- Sedge Wren

T: brackish marshes; VA [3] (northern portion of Chesapeake Bay); several summer records from NC, mainly in brackish marshes, but these might be of wandering birds or migrants

Contopus cooperi -- Olive-sided Flycatcher +

[breeding records for TN side of Great Smoky Mountains NP]; no active nest has been found in NC [see Rare List]

Dendroica magnolia -- Magnolia Warbler +

[breeding evidence needed]; no active nest yet found, but probably nests [see Rare List]

Elanoides forficatus -- Swallow-tailed Kite

C: swamps, river bottoms; SC [2] (Santee River); numerous summer records, but nearly all believed to be of visitors/postbreeders; up to one-half-dozen birds, possibly including a family group, spent much of the summer 2003 along the Cape Fear River

Empidonax flaviventris -- Yellow-bellied Flycatcher

M: high elevation spruce-fir, usually where stunted or young; VA [1] (Mt. Rogers); two summer reports from NC mountains

Melospiza georgiana -- Swamp Sparrow

M: bogs at high elevation; VA [5-6]; no summer reports for NC

Mycteria americana -- Wood Stork

C: swamps, with open water somewhat nearby; SC [4]; no reports from NC suggestive of breeding in the state [see Rare List]

Oporornis philadelphia -- Mourning Warbler

M: thickets, brushy places, clearings; VA [5]; a pair believed to have nested in mid-1980s near Great Smoky Mountains N.P. in NC, and another territorial male was present at Roan Mountain in the early 2000s

Passerculus sandwichensis -- Savannah Sparrow +

[breeding evidence needed]; VA [1]; believed to be nesting in Alleghany and Ashe counties, but no active nest has yet to be found [see Rare List]

Seiurus noveboracensis -- Northern Waterthrush

M: bogs where spruce-fir is present; VA [5-6], plus two reports from Mt. Rogers; no summer reports for NC

Vermivora pinus -- Blue-winged Warbler +

[breeding evidence needed]; no active nest yet found, but presumed to breed in southwestern counties [see Rare List]

Vermivora ruficapilla -- Nashville Warbler

M: spruce-fir forests, mainly along margins or in young or stunted trees; VA [6], but also a report from Mt. Rogers; no summer reports for NC

REPTILES*Graptemys geographica* -- Map Turtle

M: large rivers in the Tennessee drainage; VA [2], TN [1]

Graptemys pseudogeographica -- False Map Turtle

M: large rivers in the Tennessee drainage; TN [1-2]

Nerodia cyclopion -- Green Water Snake

C: streams, lakes, ponds, marshes; SC [2]

Ophisaurus compressus -- Island Glass Lizard

TC: maritime or other coastal forests, in dry habitats; SC [2]

Trionyx ferox -- Florida Softshell

C: lakes, ponds, rivers; SC [3]

Trionyx muticus -- Smooth Softshell

M: large rivers in the Tennessee drainage; TN [2?]

AMPHIBIANS*Ambystoma cingulatum* -- Flatwoods Salamander

C: flatwoods, bottomlands, swamps; SC [2-3]

Ambystoma jeffersonianum -- Jefferson Salamander

M: low woods, bottomlands; VA [2]

Ambystoma texanum -- Smallmouth Salamander

M: moist forests; TN [6]; ranges east to central TN

Desmognathus welteri -- Black Mountain Salamander

M: along streams in mesic forests; TN [3]

Eurycea lucifuga -- Cave Salamander

M: limestone caves and ledges; TN [1], VA [2]

Gyrinophilus palleucus -- Tennessee Cave Salamander

M: caves, in limestone areas; TN [2]

Plethodon hoffmani -- Valley and Ridge Salamander

M: montane forests; VA [3-4]

Plethodon hubrichti -- Peaks of Otter Salamander

M: cool moist woods; VA [2]; endemic to Peaks of Otter Mountain

Plethodon websteri -- Webster's Salamander

P: moist forests with steep north-facing slopes; SC [4]

Pseudobranchius striatus -- Dwarf Siren

C: swamps, ponds, other sluggish freshwater habitats; SC [2-3]

Rana grylio -- Pig Frog

C: lakes, ponds, marshes; SC [2]

FISHES

The absence in North Carolina of the very large number of Tennessee fishes occurring just over the state line is not an artifact of collecting intensity. Much sampling has occurred in the state near the Tennessee border for such species. The streams where they occur do extend into North Carolina; however, most of the streams where the fishes occur in Tennessee become high gradient near the border, with riffles and rapids preventing the fishes from occurring in North Carolina. A few reservoirs along the state line also block some species from entering the state. On the other hand, there are a number of species that occur within one or two counties of North Carolina that are not listed here; these are fishes in drainages that do not reach North Carolina, particularly the Chattahoochee and the Coosa in Georgia, the Clinch in Tennessee and Virginia, and the James in Virginia.

Alosa chrysochloris -- Skipjack Herring Reported from NC in the past few years, but not confirmed

M: Tennessee drainages; TN [1]

Cottus baileyi -- Black Sculpin

M: Tennessee drainages; TN [1], VA [1-2]

Etheostoma caeruleum -- Rainbow Darter

M: Tennessee drainages; TN [1]

Etheostoma camurum -- Bluebreast Darter Reported from NC in the past few years, but not confirmed

M: Tennessee drainages; TN [1]

Etheostoma cinereum -- Ashy Darter

M: Tennessee drainages; TN [1-2]

Etheostoma hopkinsi -- Christmas Darter

M: Savannah drainage; SC [1-2]

Etheostoma kennicotti -- Stripetail Darter

M: Tennessee drainages; TN [1]

Etheostoma osburni -- Finescale Saddled Darter

M: New drainage; VA [2]

Fundulus catenatus -- Northern Studfish

M: Tennessee drainages; TN [1]

Fundulus notatus -- Blackstripe Topminnow

M: Tennessee drainages; TN [1]

Fundulus olivaceus -- Blackspotted Topminnow

M: Tennessee drainages; TN [1]

Gasterosteus aculeatus -- Threespine Stickleback

T: tidal waters; VA [2?]

Hemitremia flammea -- Flame Chub

M: Tennessee drainages; TN [1]

Hybognathus nuchalis -- Central Silvery Minnow

M: Tennessee drainages; TN [2-3]

Hybopsis aestivalis -- Speckled Chub

M: Tennessee drainages; TN [1-2]

- Hybopsis dissimilis -- Streamline Chub
M: Tennessee drainages; TN [1-2]
- Hybopsis storeriana -- Silver Chub
M: Tennessee drainages; TN [2-3]
- Hypentelium etowanum -- Alabama Hog Sucker
M: Tennessee drainages; TN [1], GA [1]
- Ichthyomyzon castaneus -- Chestnut Lamprey
M: Tennessee drainages; TN [1]
- Ichthyomyzon gagei -- Southern Brook Lamprey
M: Tennessee drainages; TN [1-2]
- Ictalurus furcatus -- Blue Catfish
M: Tennessee drainages; TN [1]
- Lepisosteus oculatus -- Spotted Gar
M: Tennessee drainages; TN [1-2]
- Notropis ariommus -- Popeye Shiner
M: Tennessee drainages; TN [1-2]
- Notropis atherinoides -- Emerald Shiner
M: Tennessee drainages; TN [1]
- Notropis lirus -- Mountain Shiner
M: Tennessee drainages; TN [1]
- Notropis stramineus -- Sand Shiner
M: Tennessee drainages; TN [1]
- Noturus baileyi -- Smoky Madtom
M: Tennessee drainages; TN [1]
- Noturus leptacanthus -- Speckled Madtom
M: Savannah drainage; SC [1]
- Percina rex -- Roanoke Logperch
P: Roanoke and Chowan drainages; VA [1-2]
- Percina shumardi -- River Darter
M: Tennessee drainages; TN [1-2]
- Phenacobius uranops -- Stargazing Minnow
M: Tennessee drainages; TN [1]
- Pimephales promelas -- Fathead Minnow
M: Tennessee drainages; TN [1], VA [1]
- Pimephales vigilax -- Bullhead Minnow
M: Tennessee drainages; TN [1-2]
- Scaphirhynchus platyrhynchus -- Shovelnose Sturgeon
M: Tennessee drainages; TN [1-2]

INSECTS -- BUTTERFLIES

A species marked with the @ symbol is considered to be a Visitor, with breeding occurring elsewhere. Most of these breed to the south of North Carolina and would be expected to occur as a visitor in the warmer months. Otherwise, all other species on this list are presumed to breed in adjacent states.

There are numerous butterfly species whose presently known range extends south in the mountains only to Virginia. Some of these certainly must occur in the northern mountain counties of North Carolina, particularly those not restricted to habitats rare or absent in the state (e.g., shale barrens or limestone outcrops). North Carolina has apparently not had thorough statewide coverage of its Lepidopteran fauna, nor has a book or treatise been published on that fauna of the state. In summary, there is much to be learned about butterfly distribution in the state, including new species to be added to the state list.

Amblyscirtes belli -- Bell's Roadside-Skipper

MP: wooded edges and openings, wooded creeks; host plant -- wild oats (*Uniola latifolia*); SC [1] (Oconee and Pickens counties)

Boloria selene -- Silver-bordered Fritillary

M: wet meadows, bogs, marshes; host plant -- violets (*Viola*) and other species; VA [3]

Brephidium isophthalma -- Eastern Pygmy-Blue

T: tidal flats and marshes; host plant -- glassworts (*Salicornia*), possibly saltwort (*Batis maritima*); SC [2]

Calephelis borealis -- Northern Metalmark

M: rocky areas near shale, serpentine, or limestone, usually near streams; host plant -- ragworts (*Senecio*), possibly fleabanes (*Erigeron*); VA [2]

Callophrys polios -- Hoary Elfin

M: sunny, dry slopes and other barren or rocky habitats; host plant -- heaths, possibly trailing arbutus (*Epigaea repens*) in the Appalachians; VA [3]

Chlosyne harrisii -- Harris' Checkerspot

M: marshes, damp meadows, and other wet brushy places; host plant -- flat-topped white aster (*Aster umbellatus*); WV [6-7].

Colias interior -- Pink-edged Sulphur

M: high elevation areas with acidic soils, such as wood margins, openings, and heath balds; host plant -- blueberries (*Vaccinium*); VA [5-6]

Erynnis lucilius -- Columbine Duskywing

M: rocky woods, ravines, and wooded edges; host plant -- wild columbine (*Aquilegia canadensis*); VA (2); reported from NC in early 2000s, but report retracted, likely an identification error

Erynnis persius -- Persius Duskywing

M: openings in cool forests, fields or bogs near woods; host plant -- lupine (*Lupinus perennis*); VA [3]

Euphyes conspicuus -- Black Dash

CM: marshes, wet meadows, but rarely in bogs; host plant -- sedges, mainly *Carex stricta*; VA [1]

Leptotes cassius -- Cassius Blue @

TC: mainly coastal towns, gardens, and residential areas; SC [3]

Speyeria atlantis -- Atlantis Fritillary

M: cool, open woods, wooded streams, clearings; host plant -- violets (*Viola*); VA [5]

SIGNIFICANT 2004 REVISIONS TO THE ANIMAL LIST

NOTE: Large numbers of mayflies, stoneflies, caddisflies, and moths have been added to, and in some cases deleted from, the Rare List and the Watch List. Because of the numbers of such taxa, they are not listed below.

New Taxa Added to the Rare Animal List

Cambarus histricosus [Sandhills Spiny Crayfish]	[newly described species, endemic to North Carolina?]
Cambarus tuckasegee [Tuckasegee Stream Crayfish]	[newly described species, endemic to North Carolina]
Corynorhinus rafinesquii macrotis [Rafinesque's Big-eared Bat – Coastal Plain subspecies]	[desire to track records by subspecies]
Corynorhinus rafinesquii rafinesquii [Rafinesque's Big-eared Bat – Mountain subspecies]	[desire to track records by subspecies]
Euchloe olympia [Olympia Marble]	[newly discovered in North Carolina]
Ictiobus niger [Black Buffalo]	[newly discovered in North Carolina]
Inflectarius downieanus [Dwarf Globelet]	[newly discovered in North Carolina]
Lasionycteris noctivagans [Silver-haired Bat]	[breeding season records are scarce]
Lasiurus cinereus [Hoary Bat]	[breeding season records are very scarce]
Libellula julia [Chalk-fronted Corporal]	[newly discovered in North Carolina]
Phyciodes texana seminole [Seminole Texan Crescent]	[newly discovered in North Carolina]
Plethodon amplus [Blue Ridge Gray-cheeked Salamander]	[new split; endemic to North Carolina]
Plethodon cheoah [Cheoah Bald Salamander]	[new split; endemic to North Carolina]
Sphaerium simile [Grooved Fingernailclam]	[apparently newly discovered in North Carolina]
Viviparus intertextus [Rotund Mysterysnail]	[apparently newly discovered in North Carolina]

Taxa Added to the Rare Animal List from the Watch List

Bufo quercicus [Oak Toad]	[populations threatened by habitat loss]
Cambarus acanthura [Spinytail Crayfish]	[considered by biologists to be rare enough to track]
Cambarus davidi [Carolina Ladle Crayfish]	[endemic to North Carolina, considered rare enough to track]
Cambarus nodosus [Knotty Burrowing Crayfish]	[considered by biologists to be rare enough to track]
Cambarus reburus [French Broad River Crayfish]	[endemic to North Carolina, considered rare enough to track]
Desmognathus wrighti [Pigmy Salamander]	[concern over further impacts to spruce-fir habitat]
Haematopus palliatus [American Oystercatcher]	[populations threatened by habitat loss and human impacts]
Hyla versicolor [Northern Gray Treefrog]	[conclusive documentation, and populations believed to be resident]
Lasiurus intermedius [Northern Yellow Bat]	[might well be a resident and not a vagrant]
Orconectes sp 1 [a crayfish] (listed as Orconectes cf spinosus on previous list)	[considered by biologists to be rare enough to track]
Procambarus plumimanus [Croatan Crayfish]	[endemic to North Carolina, considered rare enough to track]

New Taxa Added to the Watch List

Cemophora coccinea [Scarlet Snake]	[declining numbers and habitat loss, though not yet rare]
Elanoides forficatus [Swallow-tailed Kite]	[possibly breeding in North Carolina (in 2003)]
Etheostoma thalassinum [Seagreen Darter]	[apparently declining numbers]
Etheostoma zonale [Banded Darter]	[apparently declining numbers]

Farancia erythrogramma [Rainbow Snake]	[declining numbers, though not yet rare]
Gonielmis dietrichi [a beetle]	[apparently present only in a small area of North Carolina]
Gyraulus deflectus [Flexed Gyro]	[status poorly known in North Carolina]
Lampropeltis triangulum triangulum [Eastern Milk Snake]	[poorly known, seemingly more difficult to find]
Lampsilis sp 3 [a bivalve]	[potential new species; needs study]
Lophodytes cucullatus [Hooded Merganser]	[small but erratic breeding population in North Carolina]
Nocomis raneyi [Bull Chub]	[apparently declining numbers and deteriorating habitat]
Notropis chalybaeus [Ironcolor Shiner]	[steep declines south of North Carolina; thus, needs monitoring in the state]
Plethodon meridianus [South Mountain Gray-cheeked Salamander]	[newly split species; endemic to North Carolina, though common within its small range]
Promenetus exacuus [Sharp Sprite]	[status poorly known in North Carolina]
Siren lacertina [Greater Siren]	[seemingly declining numbers, though not yet rare]
Stenelmis morsei [a riffle beetle]	[apparently small range in North Carolina]
Stenelmis sp nov 1 [Harley's Stenelmis Riffle Beetle]	[apparently small range in North Carolina]
Stenelmis sp nov 2 [William's Stenelmis Riffle Beetle]	[apparently small range in North Carolina]
Stenelmis sp nov 3 [a riffle beetle]	[apparently small range in North Carolina]
Stenotrema pilula [Pygmy Slitmouth]	[status poorly known in North Carolina]
Stereochilus marginatus [Many-lined Salamander]	[scarce or difficult to find, despite much seemingly suitable habitat]
Tachycineta bicolor [Tree Swallow]	[small breeding population in North Carolina]
Virginia valeriae [Smooth Earth Snake]	[relatively few recent records, despite seemingly abundant habitat]

Taxa Removed from the Rare Animal List

Apeltes quadracus [Fourspine Stickleback]	[NC NHP no longer tracking marine and estuarine fishes]
Eleotris pisonis [Spinycheek Sleeper]	[NC NHP no longer tracking marine and estuarine fishes]
Epioblasma capsaeformis [Oyster Mussel]	[considered to be extirpated from North Carolina]
Erynnis lucilius [Columbine Duskywing]	[reported occurrence believed to be a mis-identification]
Evorthodus lyricus [Lyre Goby]	[NC NHP no longer tracking marine and estuarine fishes]
Gobionellus stigmaticus [Marked Goby]	[NC NHP no longer tracking marine and estuarine fishes]
Hypsoblennius ionthas [Freckled Blenny]	[NC NHP no longer tracking marine and estuarine fishes]
Leucorrhinia frigida [Frosted Whiteface]	[questionable identification; species far out of range]
Medionidus conradicus [Cumberland Moccasinshell]	[considered to be extirpated from North Carolina]
Microphis brachyurus [Opossum Pipefish]	[NC NHP no longer tracking marine and estuarine fishes]
Percina macrocephala [Longhead Darter]	[considered to be extirpated from North Carolina]
Poecilia latipinna [Sailfin Molly]	[NC NHP no longer tracking marine and estuarine fishes]
Ptychobranhus fasciolaris [Kidneyshell]	[considered to be extirpated from North Carolina]
Quadrula pustulosa [Pimpleback]	[considered to be extirpated from North Carolina]
Toxolasma lividus [Purple Lilliput]	[considered to be extirpated from North Carolina]
Tritogonia verrucosa [Pistolgrip]	[considered to be extirpated from North Carolina]

Taxa Moved from the Rare Animal List to the Watch List

Celastrina neglectamajor [Appalachian Azure]	[more numerous than formerly believed]
Gomphus diminutus [Diminutive Clubtail]	[more numerous than formerly believed]
Hyla andersonii [Pine Barrens Treefrog]	[more widespread than formerly believed, and habitat not overly threatened]
Lythrurus matutinus [Pinewoods Shiner]	[quite common within its rather small range]
Speyeria diana [Diana Fritillary]	[more widespread than formerly believed, and habitat not overly threatened]
Trechus (all species) [ground beetles]	[lack of new data and scarcity or absence of biologists working with this group of animals; however, because most have very small ranges and are endemic to North Carolina, they are retained on the Watch List]

Taxa Removed from the Watch List

Lepus americanus [Snowshoe Hare]	[considered to be extirpated from North Carolina]
Myotis lucifugus [Little Brown Myotis]	[considered to be reasonably common in North Carolina]
Sorex longirostris fisheri [Dismal Swamp Southeastern Shrew]	[considered to be common in North Carolina]
Tadarida brasiliensis [Brazilian Free-tailed Bat]	[considered to be reasonably common in North Carolina]

NOTE: The following animal groups have also been removed from the Watch List: marine bivalves, marine gastropods, millipedes, scorpionflies, most beetles, ants, and annelids. NC NHP has received essentially no data on these groups in over a decade, and there are few if any biologists working with these groups.

Scientific Name Changes to the Rare Animal List

NOTE: Slight spelling changes, whether officially recognized changes or spelling errors from the 2001 edition of this list, are not included below. Only completely new genus or species names are given below.

Changed from:

Changed to:

Catinella vermeta [Suboval Ambersnail]	Catinella waccamawensis [Waccamaw Ambersnail]
Cervus elaphus [Elk]	Cervus canadensis
Clemmys muhlenbergii [Bog Turtle]	Glyptemys muhlenbergii
Cyprinella zanema pop 1 [Santee Chub – Piedmont population]	Cyprinella zanema [Santee Chub]
Cyprinella zanema pop 2 [Santee Chub – Coastal Plain population]	Cyprinella sp 1 [Thinlip Chub] (formerly thought to be part of C. zanema, but might be a separate species)
Desmognathus sp 1 [Waterrock Knob Salamander]	Desmognathus imitator pop 1 [Imitator Salamander - Waterrock Knob population]
Eurycea longicauda longicauda [Long-tailed Salamander]	Eurycea longicauda [Longtail Salamander] (now a full species)
Fundulus waccamensis pop 1 [Waccamaw Killifish – Lake Waccamaw population]	Fundulus waccamensis [Waccamaw Killifish]
Fundulus waccamensis pop 2 [Waccamaw Killifish – Lake Phelps population]	Fundulus cf diaphanus [Lake Phelps Killifish] (population is closer in characters to F. diaphanus than to F. waccamensis in Lake Waccamaw)
Hybopsis monacha [Spotfin Chub]	Cyprinella monacha

Ivesia carolinensis [Linville Caverns Spider]	Nesticus carolinensis
Noturus furiosus pop 1 [Carolina Madtom – Neuse drainage population]	Noturus furiosus [Carolina Madtom]
Noturus furiosus pop 2 [Carolina Madtom – Tar drainage population]	Noturus furiosus [Carolina Madtom] (entire species proposed for State Threatened status, thus no need to track separate populations)
Opheodrys vernalis [Smooth Green Snake]	Liochlorophis vernalis
Orconectes cf spinosus [a crayfish]	Orconectes sp 1
Rana capito capito [Carolina Gopher Frog]	Rana capito (now a full species)
Stizostedion canadensis [Sauger]	Sander canadensis
Sylvilagus transitionalis [New England Cottontail]	Sylvilagus obscurus [Appalachian Cottontail]
Valvata cf sincera [a valvate snail]	Valvata sincera

N.C. Status Changes on the Rare Animal List

All state status (E, T, and SC) changes must be approved by the N.C. Wildlife Resources Commission and published in the State Register for public comment. The changes below became official on July 1, 2002. These taxa are given state protection under the State Endangered Species Act (G.S. 113-331 to 113-337). [SR and W are NC NHP designations only, not affording official state protection.]

	<u>From:</u>	<u>To:</u>
Aegolius acadicus [Northern Saw-whet Owl]	SC	T
Alasmidonta varicosa [Brook Floater]	T	E
Anodonta implicata [Alewife Floater]	SC	T
Cambarus catagius [Greensboro Burrowing Crayfish]	SR	SC
Cambarus chaugaensis [Oconee Stream Crayfish]	SR	SC
Cambarus georgiae [Little Tennessee River Crayfish]	SR	SC
Cambarus parrishi [Hiwassee Headwaters Crayfish]	SR	SC
Cambarus spicatus [Broad River Spiny Crayfish]	SR	SC
Certhia americana [Brown Creeper]	SR	SC
Cervus canadensis [Elk]	W	SC (because this is an experimental release population, NC NHP is not tracking the species, and retains it on its Watch List)
Corynorhinus rafinesquii [Rafinesque's Big-eared Bat]	SC	T
Crotalus adamanteus [Eastern Diamondback Rattlesnake]	SR	E
Crotalus horridus [Timber Rattlesnake]	SR	SC
Cyclonaias tuberculata [Purple Wartyback]	SR	E
Elliptio lanceolata [Yellow Lance]	T	E
Elliptio marsupiobesa [Cape Fear Spike]	T	SC
Eurycea junaluska [Junaluska Salamander]	SC	T
Fusconaia masoni [Atlantic Pigtoe]	T	E
Haliaeetus leucocephalus [Bald Eagle]	E	T
Helisoma eucosmium [Greenfield Rams-horn]	SR	E
Heterodon simus [Southern Hognose Snake]	SR	SC
Lampetra aepyptera [Least Brook Lamprey]	SC	T
Lampsilis cariosa [Yellow Lampmussel]	T	E
Lampsilis radiata conspicua [Carolina Fatmucket]	SR	T
Lampsilis radiata radiata [Eastern Lampmussel]	SC	T
Leptodea ochracea [Tidewater Mucket]	SC	T

	<u>From:</u>	<u>To:</u>
Ligumia nasuta [Eastern Pondmussel]	SC	T
Loxia curvirostris [Red Crossbill]	SR	SC
Micrurus fulvius [Eastern Coral Snake]	SR	E
Moxostoma robustum [Robust Redhorse]	SC	SR (since the downlisting, has been re-discovered and will be proposed for E status)
Orconectes carolinensis [North Carolina Spiny Crayfish]	SR	SC
Orconectes virginienis [Chowanoke Crayfish]	SR	SC
Pelecanus occidentalis [Brown Pelican]	SC	SR
Peromyscus leucopus easti [Pungo White-footed Mouse]	SR	SC
Pleurobema oviforme [Tennessee Clubshell]	SR	E
Procambarus braswelli [Waccamaw Crayfish]	SR	SC
Rana capito [Carolina Gopher Frog]	SC	T
Regulus satrapa [Golden-crowned Kinglet]	SC	W
Scartomyzon ariommus [Bigeye Jumprock]	SC	T
Sistrurus miliarius [Pigmy Rattlesnake]	SR	SC
Sorex hoyi winnemana [Southern Pygmy Shrew]	SC	W
Sorex longirostris fisheri [Dismal Swamp Southeastern Shrew]	T	—
Sphyrapicus varius [Yellow-bellied Sapsucker]	SR	SC
Sterna antillarum [Least Tern]	SR	SC
Sterna hirundo [Common Tern]	SR	SC
Tadarida brasiliensis [Brazilian Free-tailed Bat]	SC	—
Toxolasma pullus [Savannah Lilliput]	T	E
Tritogonia verrucosa [Pistolgrip]	E	EX (extirpated)
Villosa constricta [Notched Rainbow]	SR	SC
Villosa vaughaniana [Carolina Creekshell]	SC	E

U.S. Status Changes on the Rare Animal List

There have been **no** changes to the U.S. Status, in terms of listed taxa (E or T), since the 2001 NC NHP animal list. There have been some changes in the FSC (Federal Species of Concern) status, indicating a species that may or may not be listed in the future, but for which there is insufficient information to support listing at the present time. NC NHP has been working with U.S. Fish and Wildlife Service staff at the Raleigh and Asheville offices to make sure that we have the most up-to-date statuses, and working to suggest future additions to and deletions from the FSC list. Currently, we are working from the FWS list revised on March 16, 2004.

	<u>From:</u>	<u>To:</u>
Acronicta albarufa [Barrens Daggermoth]	FSC	—
Agrotis sp 1 nr buchholzi [a dart moth]	—	FSC (listed by FWS as Agrotis buchholzi [Buchholz's Dart Moth])
Ambloplites cavifrons [Roanoke Bass]	—	FSC
Atrytonopsis loammi [Loammi Skipper]	—	FSC
Clinostomus funduloides ssp 1 [Little Tennessee River Rosyside Dace]	—	FSC
Contopus cooperi [Olive-sided Flycatcher]	—	FSC
Desmognathus wrighti [Pigmy Salamander]	FSC	—

	<u>From:</u>	<u>To:</u>
Elimia interrupta [Knotty Elimia]	—	FSC
Ephemerella argo [Argo Ephemerellan Mayfly]	FSC	—
Etheostoma acuticeps [Sharphead Darter]	—	FSC
Etheostoma perlongum [Waccamaw Darter]	—	FSC
Etheostoma vulneratum [Wounded Darter]	—	FSC
Euchlaena milnei [Milne's Euchlaena]	FSC	—
Lanius ludovicianus migrans [Migrant Loggerhead Shrike]	FSC	—
Lordithon niger [Black Lordithon Rove Beetle]	FSC	—
Notropis bifrenatus [Bridle Shiner]	—	FSC
Noturus furiosus [Carolina Madtom]	—	FSC
Percina burtoni [Blotchside Logperch]	—	FSC
Polyodon spathula [Paddlefish]	FSC	—
Semotilus lumbee [Sandhills Chub]	—	FSC
Skistodiaptomus carolinensis [Carolina Skistodiaptomus]	FSC	—
Thoburnia hamiltoni [Rustyside Sucker]	—	FSC
Toxolasma lividus [Purple Lilliput]	FSC	— (considered extirpated in North Carolina)
Vermivora chrysoptera [Golden-winged Warbler]	—	FSC

NOTE: There are some additional changes to the FWS list of FSC taxa, but only those appearing on the NHP's Rare List and Watch List (and list of extirpated species) are indicated above. A few taxa on the FWS list -- E, T, and FSC -- are not found in this NHP publication; these are primarily taxa that occur only in offshore waters (such as whales or seabirds), are of uncertain occurrence in the state, or are of uncertain taxonomic status.

Rank Changes on the Rare Animal List

Between 2001 and 2004, the N.C. Natural Heritage Program has made numerous changes to the N.C. Ranks, as has NatureServe (formerly the science branch of The Nature Conservancy) to the Global Ranks. Only those changes involving taxa formerly or presently considered extinct, extirpated, or of historical occurrence are listed below. However, taxa changing from SH to SX are not listed.

	<u>From:</u>	<u>To:</u>	
Alasmidonta robusta [Carolina Elktoe]	SX	S1	[recently re-discovered]
Dolania americana [American Sand Burrowing Mayfly]	S1	SH	[no records in 1974]
Hiodon tergisus [Mooneye]	S1	SH	[no records in over 20 years]

INDEX OF GENERA

- | | | | | | |
|---------------|----------------|---------------|--------------------|----------------|------------------------|
| Abrostola | 73 | Bos | 82 | Corynorhinus | 12, 90, 93 |
| Accipiter | 15, 61, 85 | Botaurus | 16 | Coryphaeschna | 72 |
| Acipenser | 27, 28, 83 | Boyeria | 72 | Cosmosoma | 74 |
| Acrapex | 73 | Bufo | 25, 90 | Cottus | 28, 87 |
| Acroneuria | 69 | Cabera | 74 | Coturnicops | 17 |
| Acronicta | 49, 73, 94 | Caecidotea | 41 | Crotalus | 22, 93 |
| Aegolius | 15, 93 | Calephelis | 54, 89 | Cryphia | 74 |
| Aeshna | 47 | Calophrys | 54, 78, 89 | Cryptobranchus | 25 |
| Agapetus | 70 | Callosamia | 50 | Culoptila | 71 |
| Agnetina | 69 | Calopteryx | 73 | Cyclonaias | 33, 93 |
| Agrotis | 49, 94 | Cambarus | 41, 42, 67, 90, 93 | Cyclophora | 50 |
| Aimophila | 15 | Campephilus | 82 | Cyrcia | 74 |
| Alasmidonta | 32, 33, 93, 95 | Canis | 12, 82 | Cymocythere | 42 |
| Alligator | 6, 21 | Canthocamptus | 67 | Cyprinella | 28, 65, 92 |
| Alloperla | 69 | Carduelis | 62 | Cytheridella | 67 |
| Ambloplites | 28, 94 | Caretta | 22 | Dactylocythere | 42, 67 |
| Amblyscirtes | 53, 78, 89 | Caripeta | 74 | Dasychira | 74 |
| Ambystoma | 25, 86 | Carpodes | 28 | Datana | 74 |
| Ameiurus | 65 | Catharus | 16, 84, 85 | Deirochelys | 22 |
| Ameletus | 68 | Catinella | 37, 92 | Dendroica | 17, 62, 85 |
| Ammodramus | 15, 61 | Catocala | 50, 74 | Dendrotettix | 79 |
| Amnicola | 37, 73 | Celastrina | 54, 78, 92 | Dermochelys | 23 |
| Amphipyrrinae | 49, 73, 74 | Cemophora | 63, 90 | Desmognathus | 25, 64, 86, 90, 92, 94 |
| Anacamptodes | 49 | Centropitulum | 68 | Diacyclops | 42 |
| Anas | 61, 62 | Cepphis | 74 | Dibusa | 46 |
| Aneides | 25 | Ceraclea | 45, 46, 70, 71 | Diplectrona | 46 |
| Anhinga | 16 | Ceratonyx | 74 | Diploperla | 70 |
| Anodonta | 33, 93 | Ceratopsyche | 71 | Discus | 38 |
| Anthopotamus | 68 | Cercobrachys | 44 | Dolania | 44, 95 |
| Anticlea | 74 | Cerma | 50 | Dolichonyx | 62 |
| Apalone | 21, 63 | Certhia | 16, 93 | Doryodes | 50, 75 |
| Apamea | 49 | Cervus | 61, 92, 93 | Drasteria | 50 |
| Apantesis | 49, 74 | Chaetagnaea | 50 | Dromogomphus | 47, 73 |
| Aphylla | 72 | Charadrius | 16 | Drunella | 44, 68 |
| Aplodinotus | 28 | Chelonia | 22 | Dysgonia | 50, 75 |
| Appalachina | 37 | Chlorochroa | 58 | Ectopistes | 82 |
| Argillophora | 74 | Chlosyne | 54, 89 | Egretta | 17 |
| Argyrostromis | 74 | Chondestes | 16 | Elanoides | 62, 85, 90 |
| Arigomphus | 72 | Choroterpes | 44 | Elassoma | 28 |
| Arphia | 79 | Chrysanympa | 74 | Elimia | 37, 95 |
| Arugisa | 74 | Chytonix | 74 | Elliptio | 1, 33, 66, 93 |
| Ascetocythere | 41 | Cicindela | 58 | Empidonax | 18, 62, 85 |
| Asio | 62, 85 | Cincinnatia | 37 | Enallagma | 49 |
| Asioplax | 43 | Circus | 16 | Enneacanthus | 65 |
| Atlanticus | 79 | Cisthene | 74 | Eotettix | 57 |
| Atrytone | 53 | Clemmys | 22, 63, 92 | Ephemerella | 44, 68, 95 |
| Atrytonopsis | 53, 94 | Cleora | 74 | Epioblasma | 83, 91 |
| Attaneuria | 45 | Clinostomus | 28, 94 | Epithea | 73 |
| Autochton | 54 | Coccyzus | 16 | Erastria | 75 |
| Baetisca | 43, 44, 68 | Columbina | 16 | Erethizon | 82 |
| Baetopus | 44 | Condylura | 12 | Eretmochelys | 23 |
| Barbaetis | 44 | Contopus | 17, 85, 94 | Erimystax | 28 |
| Belocephalus | 79 | Conuropsis | 82 | Erora | 54 |
| Bleptina | 74 | Cordulegaster | 72 | Erpetogomphus | 73 |
| Bolotoperla | 45 | Cordulia | 47 | Erynnis | 55, 89, 91 |
| Bomolocha | 74 | Corvus | 62 | Eschrichtius | 82 |

Etheostoma .	28, 29, 65, 87, 90, 95	Homooneuria	44	Lythrurus	65, 92
Euagrotis	75	Homoptera	71	Macdunnoa	44
Eubaphe	50	Hubbellia	79	Macrochilo	52, 76
Euchlaena	51, 95	Hybopsis	30, 87, 88, 92	Macrodiplax	73
Euchloe	55, 84, 90	Hydroperla	70	Macromia	48
Eucoptocnemis	75	Hydroptila	71	Malaclemys	23
Eudocimus	62	Hyla	26, 64, 90, 92	Manophylax	46
Eulonchus	49	Hypagyrtis	51	Martes	82
Eumeces	63	Hypentelium	30, 88	Masticophis	23
Euphydryas	55	Hypochilus	40	Matrioptila	46
Euphyes	55, 89	Hypocoena	75	Mayatrichia	71
Eupithecia	51	Hypomecis	51, 75	Medionidus	83, 91
Eurycea	26, 64, 86, 92, 93	Ichthyomyzon	30, 88	Megaleuctra	45
Eurylophella	68	Icterus	62	Megathymus	56, 78
Euxoa	51, 75	Ictinia	18	Melanoplus	57, 58, 79
Exoglossum	29	Ictiobus	30, 90	Menidia	30
Exyra	51, 75	Idaea	75	Mermeria	79, 80
Falco	18, 62	Inflectarius	38, 90	Meropleon	52, 76
Farancia	64, 91	Inscudderia	79	Metalectra	76
Faronta	75	Isogenoides	70	Metalepsis	76
Ferrissia	37	Isoperla	45, 70	Metarranthis	52
Fixsenia	55	Itame	51	Micrasema	46
Fumonelix	38	Ixobrychus	62	Microhexura	40
Fundulus	29, 30, 87, 92	Kinosternon	64	Micropterus	30
Fusconaia	34, 93	Lagoa	51	Microtus	13
Gabara	51, 75	Lampetra	30, 93	Micrurus	24, 94
Glaucomys	12	Lampropeltis	23, 64, 91	Molanna	71
Glaucopsyche	78	Lampsilis	34, 66, 91, 93	Montezumina	58
Glyphyalinia	38	Lanius	19, 95	Morrisonia	76
Glyptemys	22, 23, 92	Lanthus	48	Moxostoma	30, 65, 94
Goerita	71	Lasionycteris	12, 90	Mustela	13, 61
Gomphus	47, 48, 73, 92	Lasiurus	12, 61, 90	Mycteria	19, 86
Gonielmis	80, 91	Lasmigona	35	Myotis	13, 92
Grammia	51	Laterallus	19	Nannothemis	73
Gyraulus	66, 91	Lepidochelys	23	Nectopsyche	71
Habrophlebiodes	44	Lepipolys	75	Necturus	26
Haematopus	18, 90	Lepomis	65, 83	Nematocampa	52
Haliaeetus	18, 93	Leptodea	35, 93	Nemoria	52, 76
Haplotrema	38	Leptophlebia	68, 69	Neoconocephalus	80
Harpagocythere	67	Leptostales	75	Neonympha	56, 78
Helicodiscus	38	Leptoxis	37	Neophylax	71
Helicopsyche	71	Lepus	82, 92	Neoplynes	76
Heliomata	51	Lestes	49, 73	Neotoma	13, 14
Helisoma	37, 93	Leucania	75	Neotrichia	71
Helmitheros	62	Libellula	48, 73, 90	Nerodia	24, 86
Helopicus	70	Ligumia	35, 94	Nesticus	40, 41, 66, 67, 93
Hemeroplanis	51	Limnothlypis	62	Neurocordulia	48
Hemidactylum	26	Liochlorophis	23, 24, 93	Nicrophorus	58
Hemipachnobia	51	Lithacodia	75	Nixe	69
Hepialus	51	Lithophane	51, 76	Nocomis	65, 91
Hesperia	56, 78	Litoprosopus	76	Notodontidae	76
Hesperodiaptomus	67	Lobocleta	76	Notropis	30, 31, 65, 88, 91, 95
Hesperotettix	79	Lophodytes	62, 91	Noturus	31, 88, 93, 95
Heterandria	30	Lordithon	58, 95	Nyctanassa	63
Heterocampa	51	Lordocythere	67	Oecetis	71, 72
Heterocloeon	68	Loxia	19, 94	Oemopteryx	70
Heterodon	23, 32, 93	Lucania	30	Oligia	76
Himantopus	18	Luxilus	30	Ophiogomphus	48
Hiodon	30, 95	Lynceus	42	Ophisaurus	24, 64, 86

Opshomala	80	Pyrgus	57	Tarachidia	77
Orchelimum	80	Quadrula	83, 91	Thoburnia	32, 95
Orconectes	43, 67, 90, 93, 94	Rallus	63	Thorybes	79
Orgyia	76	Rana	27, 87, 93, 94	Thryomanes	21
Oropsyche	72	Regina	24	Tolype	77
Orthemis	73	Regulus	63, 94	Tornos	53, 77
Palaeagapetus	46	Rhadinaea	64	Tortopus	45
Pallifera	39	Rhithrogena	69	Toxolasma	36, 83, 91, 94, 95
Paonias	76	Rhyacophila	46, 47, 72	Trechus	80, 81, 92
Papaipema	52, 76	Riparia	20	Triacanthagyna	73
Papilio	56	Romalea	80	Trianodes	47, 72
Paracloeodes	69	Rynchops	20	Trichechus	15
Paragnetina	70	Sander	32, 93	Trichosilia	53
Parahypenodes	76	Satyrimum	57	Tricorythodes	69
Paravitrea	39	Scartomyzon	32, 94	Trimerotropis	58
Passerculus	19, 86	Schinia	52, 76, 77	Triodopsis	39, 40
Passerina	16, 19	Schizura	52	Tripudia	77
Patera	39	Sciurus	14	Tritogonia	83, 91, 94
Pegias	35	Scopula	77	Troglodytes	63
Pelecanus	19, 94	Scudderia	58, 80	Tyto	63
Percina	31, 65, 83, 88, 91, 95	Seminatrix	24	Ulolonche	77
Perlesta	70	Semiothisa	52, 77	Vaejovis	67
Perlinella	45	Semotilus	32, 95	Valvata	40, 93
Peromyscus	14, 94	Serratella	44	Ventridens	40
Phalacrocorax	19	Setodes	72	Vermivora	21, 86, 95
Phenacobius	31, 65, 88	Shipsa	70	Viehooperla	70
Pheucticus	63	Siphloplecton	69	Villosa	36, 94
Phragmatiphila	52	Siren	64, 77, 87, 91	Vireo	21
Phyciodes	56, 78, 84, 90	Sistrurus	24, 94	Virginia	64, 91
Picoides	20	Sitta	63	Viviparus	37, 90
Pimaphera	76	Skistodiaptomus	43, 95	Waltoncythere	43
Pituophis	24	Somatochlora	48	Wormaldia	72
Planorbella	37	Somatogyrus	37	Xestia	77
Plauditus	69	Sorex	14, 61, 92, 94	Yugus	70
Plegadis	20	Spartiniphaga	53	Zale	53, 77
Plethodon	26, 27, 64, 86, 87, 90, 91	Speyeria	57, 79, 89, 92	Zanclognatha	77
Pleurobema	35, 94	Sphaerium	35, 90	Zapada	45
Poanes	56	Sphingicampa	77	Zapus	61
Poecile	20	Sphinx	76, 77	Zonitoides	40
Polygonia	56, 57	Sphyrpicus	20, 94		
Polyodon	32, 95	Spilogale	61		
Pontia	78	Spilosoma	77		
Poecetes	20	Spiza	63		
Porphyryla	20	Stenelmis	58, 80, 91		
Problema	57, 78	Stenonema	69		
Procambarus	43, 67, 68, 90, 94	Stenotrema	39, 66, 91		
Progomphus	48	Stereochilus	64, 91		
Promenetus	66, 91	Sterna	20, 21, 63, 94		
Properigea	76	Sternotherus	24		
Pseudacris	27, 64	Stethophyma	58		
Pseudiron	69	Stiria	77		
Pseudogoera	72	Strophitus	36		
Psilotreta	72	Stygobromus	43, 68		
Pteronarcys	70	Stylurus	48, 49, 73		
Ptichodis	52	Sylvilagus	15, 93		
Ptychobranchus	83, 91	Sympetrum	49		
Puma	14	Synaptomys	15, 61		
Pygarctia	52	Syngrapha	77		
Pyreferra	52, 76	Tachycineta	63, 91		

**NORTH CAROLINA NATURAL HERITAGE PROGRAM
SPECIAL ANIMAL SURVEY FORM**

Scientific Name:

Common Name:

Observer(s):

Date(s) of Observation:

County:

7.5' Quad Map:

Exact Location **(be specific! - attach copy of map with site marked):**

Number of Animals **(include age and sex, if known):**

Type of Observation **(sight record, vocal record, specimen, photograph, etc.):**

Behavior of Animals **(singing, foraging, at nest, etc.):**

Habitat **(use NC NHP natural community name if known; describe dominant vegetation, maturity of vegetation, slope, aspect, etc.):**

Owner(s) of Land, if known:

Other Comments **(significance of record, disturbance to habitat, etc.):**

Person making this report:

Address:

Date:

Phone:

Return form to: N.C. Natural Heritage Program
1601 MSC; Raleigh, NC 27699-1601