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SPECIAL STATUS INSECT SURVEY
FORT RALEIGH NATIONAL HISTORIC
SITE
MANTEO (DARE COUNTY)
NORTH CAROLINA

PREPARED FOR

CAPE HATTERAS NATIONAL SEASHORE
(ORDER NO. 1443PX519096174)

PREPARED BY

ENVIRO-SCIENCES, INC.
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SEPTEMBER 1997



INTRODUCTION

This final report is prepared to fulfill an agreement between Cape Hatteras National Seashore and Enviro-Sciences, Inc. (Sanford, North Carolina) for a survey of special status insects in the Fort Raleigh National Historic Site at Manteo, North Carolina. The work was performed in accordance to Work Order No. 1443PX519096174 issued on 08/12/96.

INSECTS SURVEYED/LITERATURE REVIEW

The insects surveyed in this study are limited to one primary group, the Lepidoptera, which is the order containing the butterflies and moths. This limitation was established by the field investigator after reviews of federal and state lists of threatened, endangered, candidate and special concern insect species. The reviews indicated that there is only one special status species (Arogos Skipper) listed for Dare County and the nine (9) surrounding counties with similar habitats (Table 1). The only other status applied to listed insects is "significantly rare" for the 10 county area (refer to the North Carolina Natural Heritage Program [NCNHP] county lists in Appendix A). All species listed in Table 1 are Lepidoptera except for the Decorated Spur-throated Grasshopper.

Pertinent unpublished literature includes "Plant and animal list for Fort Raleigh National Historic Site Manteo, North Carolina", compiled by Clay L. Gifford (no date), and "Butterfly species known to Samuel M. Gifford and Clay L. Gifford to have occurred in the vicinity of Cape Hatteras National Seashore, Dare and Hyde counties, North Carolina, as of November 25, 1981". Neither reference noted the presence of any insect species which are presently listed as special status by federal or state agencies. Several species noted in the latter document are listed as significantly rare by the NCNHP.

METHODS

Two sampling methods were employed:

- 1) active collecting by direct search during daylight hours for day-flying butterflies, other insects, and diurnal moths, and
- 2) passive collecting using UV-lights for night-flying (nocturnal) moths.

UV-lights with white sheeting were setup prior to sunset and observed periodically until 1-2:00 am. Light locations were in the parking area, at the end of the road in the park employee residence area, and on the path to the new acquisition south of U S Highway 64/264. UV-light traps were not used because other insects,

primarily beetles, mutilate the more delicate Lepidoptera. Direct search involved walking trails, roads and water edges within and along the park boundary, searches in the forested areas, and more intense searches in open areas.

The first quarter sampling was conducted from September 24 - 26, 1996. Weather conditions were clear and without rain, daytime temperatures were in the high 70s, and nighttime temperatures reached the high 50s by 2:00 am.

The second sampling event was conducted from May 22 - 24, 1997. Weather conditions were clear and without rain, daytime temperatures were in the 70s and nighttime temperatures reached the high 50s by 2:00 am.

The third sampling event was conducted from August 13 - 15, 1997. Weather conditions were clear except for rain during the afternoon of August 14. Daytime temperatures were in the 80s and nighttime temperatures reached the mid 60s.

Where possible, voucher specimens were collected (North Carolina Wildlife Resources Commission, License Number 0170), properly prepared, and, upon completion of the project, will be deposited in the North Carolina State University Insect Museum, Raleigh, North Carolina.

PHYSICAL SETTING

The 375 acre (approximate) Fort Raleigh National Historic Site is located on the north end of Roanoke Island near the juncture of Roanoke Sound to the east, Croatan Sound to the west, and Albemarle and Currituck sounds to the northwest. The property is irregular-shaped with several outparcel interspersed within the overall property boundary. U S Highway 64/264 bisects the site east to west. Most of the property is forested with conifer and mixed forests being the dominant types. Low marsh is present on the Croatan Sound frontage and riparian habitat parallels a drainage in the southern portion of the site. Open developed areas are used for park office and maintenance buildings, housing for park employees, the visitors center and parking, and the Fort Raleigh outdoor theater. Elevation ranges from sea level to 20 feet above sea level along the Roanoke Sound frontage.

SURVEY RESULTS

A total of 25 butterfly and two (2) moth species were observed or collected and are presented below. The period (Sept., May or Aug.) observed is noted after each species.

Papilio troilus - Spicebush Swallowtail (May)
Papilio glaucus - Tiger Swallowtail (May, Aug., Sept.)
Papilio Palamedes - Palamedes Swallowtail (May, Aug.)

Pieris rapae - European Cabbage Butterfly (Aug., Sept.)
Colias eurytheme - Alfalfa Butterfly (Sept.)
Colias philodice - Clouded Sulphur (Sept.)
Calycopis cecrops - Red-banded Hairstreak (Aug.)
Satyrion calanus - Banded Hairstreak (May)
Strymon melinus - Gray Hairstreak (May, Aug.)
Everes comyntas - Eastern Tailed Blue (May, Aug.)
Celastrina argiolus - Spring Azure (May)
Phycoides tharos - Pearl Crescent (May, Aug., Sept.)
Polygonia interrogationis - Question Mark (May)
Vanessa atalanta - Red Admiral (May)
Vanessa virginiensis - American Painted Lady (May)
Junonia coenia - Buckeye (May, Aug., Sept.)
Limenitis a. astyanax - Red-spotted Purple (Sept.)
Limenitis archippus - Viceroy (Sept.)
Danaus plexippus - Monarch (Aug., Sept.)
Hermeuptychia sosybius - Carolina Satyr (Sept.)
Cercyonis pegale - Common Wood Nymph (Aug.)
Thorybes confusus - Confused Cloudy Wing (Sept.)
Pholisora catullus - Common Sooty Wing (Sept.)
Hylephila phyleus - Fiery Skipper (Sept.)
Euphyes palatka - Palatka Skipper (Aug.)
Spoladea recurvalis - Webworm Moth (Aug.)
Trichoplusia ni - Cabbage Looper (Aug.)

Information on butterfly species observed on the property was provided by J. C. Beane and L. H. Terry during their reptile and amphibian surveys during April, July and September. Additional species observed were *Nymphalis antiopa* (Mourning Cloak) during April and *Epargyreus clarus* (Silver-spotted Skipper) during July. Many of the species noted above were also observed during their studies.

CONCLUSIONS

A total of 27 butterfly species were observed or collected during three field visits. No species listed as threatened, endangered, candidate or special concern were observed or collected during the field survey. The limited number of species observed and collected could have been influenced by weather events (hurricanes Bertha and Fran prior to the September 1996 survey), cooler than average temperatures, and the lack of flowering plants. Locations where the most butterfly activity was observed were in the western portion of the site near a small pond and associated woods edge, a vacant field with flowering plants, and a trail leading to the portion of the site south of Highway 64/264.



TABLE 1
SIGNIFICANTLY RARE INSECTS LISTED FOR SELECT COASTAL NORTH CAROLINA COUNTIES /1

Scientific Name (Common Name)	BEAUFORT	CAMDEN	CARTERET	CURRITUCK	DARE	HYDE	TYRRELL
<i>Acrapex relictus</i> A Cane borer					X		
<i>Amblyscirtes reversa</i> Reversed Roadside Skipper	X						
<i>Anacamptodes nr Cypressaria</i> A New Inchworm Moth					X		
<i>Atrytone arogos arogos</i> Arogos Skipper			X*				
<i>Atrytonopsis loammi</i> Loammi Skipper			X				
<i>Calephelis virgininensis</i> Little Metalmark			X		X		
<i>Catocala messalina</i> Messalina Underwing					X		
<i>Cepphis nr decoloraria</i> A New Inchworm Moth					X		
<i>Dysgonia similis</i> An Owllet Moth					X		
<i>Euphyes berryi</i> Berry's Skipper ***			X		X		
<i>Euphyes bimacula</i> Two-spotted Skipper			X				
<i>Euphyes dukesi</i> Duke's Skipper	X			X			

TABLE 1
(continued)

SCIENTIFIC NAME (COMMON NAME)	BEAUFORT	CAMDEN	CARTERET	CURRITUCK	DARE	HYDE	TYRRELL
<i>Fixsenia favonius ontario</i> Northern Hairstreak **/***		X	X		X	X	
<i>Glena plumosaria</i> Plumose Glens					X		
<i>Henipachnobia subporphyrea</i> monochromatea Sundew Cutworm Moth					X		
<i>Hypagyrtis nr brendae</i> A New Inchworm Moth					X		
<i>Macrochilo louisiana</i> Louisiana Owlet Moth					X		
<i>Melanoplus decorus</i> Decorated Spur-throat Grasshopper					X		
<i>Meropleon cinnamicolor</i> An Owlet Moth			X				
<i>Metarranthus</i> sp 1 A Geometrid Moth					X		
<i>Mitoura hesseli</i> Hessel's Hairstreak		X			X		X
<i>Orgyia detrita</i> A Tussock Moth					X		
<i>Papilio cressphontes</i> Giant Swallowtail ***			X	X	X	X	
<i>Phragmatiphila interrogans</i> An Owlet Moth			X				
<i>Phyciodes phaon</i> *** Phaon Crescent				X		X	X

TABLE 1
(continued)

SCIENTIFIC NAME (COMMON NAME)	BEAUFORT	CAMDEN	CARTERET	CURRITUCK	DARE	HYDE	TYRRELL
Poanes aaroni aaroni				X	X		
Aaron's Skipper ***							
Satyrium kingi			X		X		
King's Hairstreak **/**							

Source: North Carolina Natrual Heritage, July 1996

/1 No significantly rare species are listed for Pamlico, Pasquotank or Perquimans counties (July 1996)

* Listed as Federal Special Concern

** Observed by Clay Gifford in Fort Raleigh National Historic Site

*** Listed by Gifford and Gifford as occurring on Roanoke Island

APPENDIX

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Parks & Recreation

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
Dr. Philip K. McKnelly, Director



July 28, 1997

Alan L. Kyles, Ph.D.
Vice President
General Manager, Southeastern Region
Environ-Sciences, Inc.
P.O. Box 397
Sanford, NC 27330

SUBJECT: County Lists of Threatened/Endangered Species of Ten Counties of Eastern
North Carolina

Dear Mr. Kyles:

Enclosed are county lists of threatened/endangered species for Beaufort, Camden, Carteret, Currituck, Dare, Hyde, Pamlico, Pasquotank, Perquimans, and Tyrrell counties. There is also a cover sheet which explains the various symbols and categories of protection.

You can contact me at the address below or call me at (919) 715-8703 if you need further information.

Sincerely,

Susan Reece Giles
Information Specialist
Natural Heritage Program

/SMRG

Enclosure

NC NATURAL HERITAGE PROGRAM COUNTY SPECIES LIST COVER SHEET

The county species list from the NC Natural Heritage Program is a listing of the elements (rare species, natural communities, geologic features, and special animal habitats) known to occur in a county. The information on this printout is compiled from a variety of sources, including field surveys, museums and herbaria, literature, and personal communications. The Heritage Program's Biological and Conservation Database (BCD) is dynamic, with new records being added and old records being revised as new information is received. The BCD was developed and is being maintained using methodology developed by The Nature Conservancy. The enclosed list cannot be considered a definitive record of natural heritage elements, and it should not be considered a substitute for field surveys. When this information is used in any document, we request that the printout date be given and that the NC Natural Heritage Program be credited.

This cover sheet explains the four columns of status codes that are given on the right-hand side of the county list printout.

STATE PROTECTION

CODE	STATUS	CODE	STATUS
E	Endangered	P	Proposed (E, T, or C)
T	Threatened	SR	Significantly Rare
SC	Special Concern	EX	Extirpated
C	Candidate	WL	Watch List

Plant statuses are determined by the Plant Conservation Program (NC Department of Agriculture) and the Natural Heritage Program (NC Department of Environment, Health, and Natural Resources). E, T, and SC species are protected by state law (Plant Protection and Conservation Act, 1979). C and SR designations indicate rarity and the need for population monitoring and conservation action. WL indicates a species not warranting active monitoring, but believed to of conservation concern.

Animal statuses that indicate state protection (E, T, and SC) are published in *Endangered Wildlife of North Carolina*, March 16, 1992, Nongame and Endangered Wildlife Program (NC Department of Environment, Health, and Natural Resources). SR and EX statuses are Natural Heritage Program designations. SR indicates rarity and the need for population monitoring and conservation action. WL indicates a species not warranting active monitoring, but believed to be of conservation concern.

FEDERAL PROTECTION

This status is designated by the US 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).

CODE	STATUS	DEFINITION
E	Endangered	A taxon "in danger of extinction throughout all or a significant portion of its range."
T	Threatened	A taxon "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."
P	Proposed	A taxon proposed for official listing as endangered or threatened.
L	Listed	A taxon officially listed as endangered or threatened.
C	Candidate	A taxon under consideration for listing for which there is sufficient information to support listing. Prior to February, 1996, this category was designated as Candidate 1 (C1) species.
FSC	Federal Species of Concern	A taxon for which there is insufficient information to support listing. Prior to February, 1996, this category was referred to as Candidate 2 (C2) species. Also called Federal "Species at Risk."
T(S/A)	-	In reference to the American alligator - this species is threatened due to similarity of appearance with other rare crocodilians and is listed for trade purposes. The species is no longer biologically endangered or threatened and is not subject to Section 7 consultation.

Please note that the US Fish and Wildlife Service no longer recognizes the following categories:

3A	Candidate 3A	A taxon for which the US Fish and Wildlife Service has "persuasive evidence of extinction."
3B	Candidate 3B	A taxon formerly under consideration for listing, but which current taxonomic understanding does not support as a distinct entity meeting the Endangered Species Act's definition of "species."
3C	Candidate 3C	A taxon formerly under consideration for listing, but which has been "proven to more abundant or widespread than previously believed and/or [which is] not subject to any identifiable threat."

GLOBAL AND STATE RANKS

These ranks are determined by The Nature Conservancy's system of measuring rarity and threat status. "Global" refers to worldwide ranks and "State" to statewide ranks.

STATE RANK DEFINITIONS

- S1 Critically imperiled in North Carolina because of extreme rarity or otherwise very vulnerable to extirpation in the state.
- S2 Imperiled in North Carolina because of rarity or otherwise vulnerable to extirpation in the state.
- S3 Rare or uncommon in North Carolina.
- S4 Apparently secure in North Carolina, with many occurrences.
- S5 Demonstrably secure in North Carolina and essentially ineradicable under present conditions.
- SA Accidental or casual; one to several records for North Carolina, but the state is outside the normal range of the species.
- SH Of historical occurrence in North Carolina, perhaps not having been verified in the past 25 years, and suspected to be still extant in the state.
- SR Reported from North Carolina, but without persuasive documentation for either accepting or rejecting the report.
- SX Believed to be extirpated from North Carolina.
- SU Possibly in peril in North Carolina, but status uncertain; more information is needed.
- S? Unranked, or rank uncertain.
- _B Rank of breeding population in the state. Used for migratory species only.
- _N Rank of non-breeding population in the state. Used for migratory species only.
- _Z Population is not of significant conservation concern; applies to transitory, migratory species.

GLOBAL RANK DEFINITIONS

- G1 Critically imperiled globally because of extreme rarity or otherwise very vulnerable to extinction throughout its range.
- G2 Imperiled globally because of rarity or otherwise vulnerable to extinction throughout its range.
- G3 Either very rare and local throughout its range, or found locally in a restricted area.
- G4 Apparently secure globally, although it may be quite rare in parts of its range (especially at the periphery).
- G5 Demonstrably secure globally, although it may be quite rare in parts of its range (especially at the periphery).
- GH Of historical occurrence throughout its range.
- GX Believed to be extinct throughout its range.
- GU Possibly in peril, but status uncertain; more information is needed.
- G? Unranked, or rank uncertain.
- G_Q Of questionable taxonomic status.
- T_ Status of subspecies or variety; the G rank refers to the species as a whole.

ADDITIONAL DEFINITIONS

Species names marked with 1, 2, 3, or 4 asterisks indicate historic, obscure, or incidental records.

- * Historic record - the species was last observed in the county over 50 years ago.
- ** Obscure record - the date and/or location of the species observation is uncertain.
- *** Incidental/migrant record - the species was observed outside of its normal range or habitat.
- **** Historic, Obscure, and Incidental record.

Scientific and common names listed in parentheses are synonyms listed in US Fish and Wildlife Service, 1992, Endangered and Threatened Species of the Southeastern United States (The Red Book).

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Perquimans				
Vertebrates				
CORYNORHINUS (=PLECOTUS) RAFINESQUII RAFINESQUE'S BIG-EARED BAT	SC	FSC	S3	G3G4
*SOREX LONGIROSTRIS FISHERI DISMAL SWAMP SOUTHEASTERN SHREW	T	LT	S2S3	G5T2
Vascular plants				
DIDIPLIS DIANDRA WATER PURSLANE	SR	-	SH	G5
*ERIOCAULON AQUATICUM SEVEN-ANGLED PIPEWORT	SR	-	S2	G5
HETERANTHERA MULTIFLORA MULTIFLOWERED MUD-PLANTAIN	SR	-	S1	G4
LILAEOPSIS CAROLINENSIS CAROLINA GRASSWORT	T	-	S3	G3
RANUNCULUS AMBIGENS WATER-PLANTAIN SPEARWORT	C	-	SH	G4G5
Natural communities				
MESIC MIXED HARDWOOD FOREST (COASTAL PLAIN SUBTYPE)	-	-	S4	G5T5
NONRIVERINE WET HARDWOOD FOREST	-	-	S1	G1
SMALL DEPRESSION POND	-	-	S2	G3
TIDAL CYPRESS-GUM SWAMP	-	-	S3	G4
Special animal habitats				
WADING BIRD ROOKERY	-	-		

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Pasquotank				
Vertebrates				
HALIAEETUS LEUCOCEPHALUS BALD EAGLE	E	LT	S1B,S2N	G4
*SOREX LONGIROSTRIS FISHERI DISMAL SWAMP SOUTHEASTERN SHREW	T	LT	S2S3	G5T2
URSUS AMERICANUS BLACK BEAR	SR	-	S3	G5
Vascular plants				
HETERANTHERA MULTIFLORA MULTIFLOWERED MUD-PLANTAIN	SR	-	S1	G4
LILAEOPSIS CAROLINENSIS CAROLINA GRASSWORT	T	-	S3	G3
LUDWIGIA ALATA WINGED SEEDBOX	SR	-	S2	G3G4
Natural communities				
ESTUARINE FRINGE LOBLOLLY PINE FOREST	-	-	S3?	G3?
MESIC MIXED HARDWOOD FOREST (COASTAL PLAIN SUBTYPE)	-	-	S4	G5T5
NONRIVERINE SWAMP FOREST	-	-	S3	G2G3
NONRIVERINE WET HARDWOOD FOREST	-	-	S1	G1
PEATLAND ATLANTIC WHITE CEDAR FOREST	-	-	S2	G2
TIDAL CYPRESS--GUM SWAMP	-	-	S3	G4
TIDAL FRESHWATER MARSH	-	-	S3	G4

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
PINE/SCRUB OAK SANDHILL	-	-	S3	G4
POND PINE WOODLAND	-	-	S4	G4G5
TIDAL CYPRESS-GUM SWAMP	-	-	S3	G4
WET PINE FLATWOODS	-	-	S3	G3G4
Special animal habitats				
GULL*TERN*SKIMMER COLONY	-	-		
COLONIAL WATERBIRDS NESTING SITE				
MARSH BIRD NESTING AREA	-	-		

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Pamlico				
Vertebrates				
ALLIGATOR MISSISSIPPIENSIS	T	T(S/A)	S3	G5
AMERICAN ALLIGATOR				
BOTAURUS LENTIGINOSUS	SR	-	S1B,S3N	G4
AMERICAN BITTERN				
HIMANTOPUS MEXICANUS	SR	-	S2B	G5
BLACK-NECKED STILT				
LATERALLUS JAMAICENSIS	SR	FSC	S3B,S2N	G4?
BLACK RAIL				
LEPIDOCHELYS KEMPII	E	LE	SAB,SZN	G1
ATLANTIC RIDLEY (TURTLE)				
MALACLEMYS TERRAPIN TERRAPIN	SC	FSC	S3	G5T5
NORTHERN DIAMONDBACK TERRAPIN				
NERODIA SIPEDON WILLIAMENGELSI	SC	-	S3	G5T3
CAROLINA SALT MARSH SNAKE				
PICOIDES BOREALIS	E	LE	S2	G3
RED-COCKADED WOODPECKER				
TRICHECHUS MANATUS	E	LE	S1N	G2?
MANATEE				
URSUS AMERICANUS	SR	-	S3	G5
BLACK BEAR				
Vascular plants				
ANDROPOGON ARCTATUS	C	-	SH	G3
PINEWOODS BLUESTEM				
CAREX LUPULIFORMIS	SR	-	S1	G3?
HOP-LIKE SEDGE				
DIONAEA MUSCIPULA	C-SC	FSC	S3	G3
VENUS FLYTRAP				
LYSIMACHIA ASPERULIFOLIA	E	LE	S3	G3
ROUGH-LEAF LOOSESTRIFE				
*PLATANThERA INTEGRA	T	-	S1	G4
YELLOW FRINGELESS ORCHID				
SOLIDAGO Verna	E/PT	FSC	S3	G3
SPRING-FLOWERING GOLDENROD				
Natural communities				
BRACKISH MARSH	-	-	S5	G5
COASTAL FRINGE EVERGREEN FOREST	-	-	S1	G3?
ESTUARINE FRINGE LOBLOLLY PINE FOREST	-	-	S3?	G3?
HIGH POCOSIN	-	-	S4	G4
LOW POCOSIN	-	-	S3	G3
MESIC MIXED HARDWOOD FOREST (COASTAL PLAIN SUBTYPE)	-	-	S4	G5T5
NONRIVERINE SWAMP FOREST	-	-	S3	G2G3
NONRIVERINE WET HARDWOOD FOREST	-	-	S1	G1

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Tyrrell				
Vertebrates				
ALLIGATOR MISSISSIPPIENSIS AMERICAN ALLIGATOR	T	T(S/A)	S3	G5
*CANIS RUFUS RED WOLF	E	LEXN	S1	G1
HALIAEETUS LEUCOCEPHALUS BALD EAGLE	E	LT	S1B,S2N	G4
PICOIDES BOREALIS RED-COCKADED WOODPECKER	E	LE	S2	G3
URSUS AMERICANUS BLACK BEAR	SR	-	S3	G5
Invertebrates				
*MITOURA HESSELI HESSEL'S HAIRSTREAK	SR	-	S2?	G3G4
Vascular plants				
CAREX CANESCENS SSP DISJUNCTA SILVERY SEDGE	C	-	S1	G5T4?
ERIOCAULON AQUATICUM SEVEN-ANGLED PIPEWORT	SR	-	S2	G5
ERIOCAULON PARKERI ESTUARY PIPEWORT	C	-	S1	G3
ISOETES RIPARIA RIVERBANK QUILLWORT	SR	-	S1	G4
LUDWIGIA ALATA WINGED SEEDBOX	SR	-	S2	G3G4
MYRIOPHYLLUM TENELLUM LEAFLESS WATERMILFOIL	C	-	S1	G5
OENOTHERA PERENNIS PERENNIAL SUNDROPS	C	-	S1	G5
RHYNCHOSPORA ALBA NORTHERN WHITE BEAKSEEDGE	C	-	S2	G5
RHYNCHOSPORA SCIRPOIDES LONG-BEAK BALDSEEDGE	SR	-	S2	G4
VACCINIUM MACROCARPON CRANBERRY	C	-	S2	G4
Natural communities				
CYPRESS-GUM SWAMP (BLACKWATER SUBTYPE)	-	-	S5	G5T5
HIGH POCOSIN	-	-	S4	G4
LOW POCOSIN	-	-	S3	G3
NONRIVERINE SWAMP FOREST	-	-	S3	G2G3
PEATLAND ATLANTIC WHITE CEDAR FOREST	-	-	S2	G2
POND PINE WOODLAND	-	-	S4	G4G5
TIDAL CYPRESS-GUM SWAMP	-	-	S3	G4

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
DUNE GRASS	-	-	S3	G3G4
ESTUARINE FRINGE LOBLOLLY PINE FOREST	-	-	S3?	G3?
HIGH POCOSIN	-	-	S4	G4
INTERDUNE POND	-	-	S1	G2?
LOW POCOSIN	-	-	S3	G3
MARITIME DRY GRASSLAND	-	-	S2	G3
MARITIME EVERGREEN FOREST	-	-	S1	G2G3
MARITIME SHRUB	-	-	S3	G4
MARITIME WET GRASSLAND	-	-	S2?	G3?
MESIC PINE FLATWOODS	-	-	S3	G5
NATURAL LAKE SHORELINE	-	-	S2	G2
NONRIVERINE SWAMP FOREST	-	-	S3	G2G3
NONRIVERINE WET HARDWOOD FOREST	-	-	S1	G1
PEATLAND ATLANTIC WHITE CEDAR FOREST	-	-	S2	G2
POND PINE WOODLAND	-	-	S4	G4G5
SALT FLAT	-	-	S4	G5
SALT MARSH	-	-	S5	G5
SALT SHRUB	-	-	S4	G5
TIDAL CYPRESS-GUM SWAMP	-	-	S3	G4
TIDAL FRESHWATER MARSH	-	-	S3	G4
Geologic features				
NATURAL LAKE-UNKNOWN ORIGIN	-	-		
Special animal habitats				
GULL*TERN*SKIMMER COLONY (NESTING SITE)	-	-		
OSPREY NESTING AREA	-	-		
WADING BIRD ROOKERY	-	-		

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Invertebrates				
*FIXSENIA FAVONIUS ONTARIO NORTHERN HAIRSTREAK	SR	-	S3?	G4T4
PAPILIO CRESPHONTES GIANT SWALLOWTAIL	SR	-	S2?	G5
PHYCIODES PHAON PHAON CRESCENT	SR	-	S2?	G5
Vascular plants				
AESCHYNOMENE VIRGINICA VIRGINIA JOINTVETCH	E	LT	S1	G2
AMARANTHUS PUMILUS SEABEACH AMARANTH	T	LT	S2	G2
ELEOCHARIS CELLULOSA GULFCOAST SPIKERUSH	SR	-	S1	G4G5
ELEOCHARIS HALOPHILA SALTMARSH SPIKERUSH	T	-	S1	G4
ELEOCHARIS ROSTELLATA BEAKED SPIKERUSH	SR	-	S2	G5
ERIOCAULON PARKERI ESTUARY PIPEWORT	C	-	S1	G3
HELIANTHEMUM GEORGIANUM GEORGIA SUNROSE	C	-	S1	G4
*HELIOTROPIMUM CURASSAVICUM VAR CURASSAVICUM SEASIDE HELIOTROPE	C	-	SH	G5T5
LEPTOCHLOA FASCICULARIS VAR MARITIMA LONG-AWNED SPANGLETOP	SR	-	S1	G5T3
LILAEOPSIS CAROLINENSIS CAROLINA GRASSWORT	T	-	S3	G3
LUDWIGIA ALATA WINGED SEEDBOX	SR	-	S2	G3G4
POLYGONUM GLAUCUM SEABEACH KNOTWEED	C	-	S1	G3
RHYNCHOSPORA ODORATA FRAGRANT BEAKSEEDGE	SR	-	S1	G4
SCHOENOPECTUS ACUTUS HARDSTEM BULRUSH	SR	-	SH	G5
SCHOENOPECTUS ETUBERCULATUS CANBY'S BULRUSH	SR	-	S3	G3G4
**TRICHOSTEMA SP 1 DUNE BLUECURLS	C	FSC	S2	G2
YUCCA GLORIOSA MOUNDLILY YUCCA	SR	-	S2?	G4?
Nonvascular plants				
CHEILOLEJEUNEA RIGIDULA A LIVERWORT	SR	-	S2	G5
Natural communities				
BRACKISH MARSH	-	-	S5	G5
COASTAL FRINGE EVERGREEN FOREST	-	-	S1	G3?
CYPRESS--GUM SWAMP (BLACKWATER SUBTYPE)	-	-	S5	G5T5

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Hyde				
Vertebrates				
ALLIGATOR MISSISSIPPIENSIS AMERICAN ALLIGATOR	T	T(S/A)	S3	G5
AQUILA CHRYSAETOS GOLDEN EAGLE	SR	-	SXB,SZN	G5
BOTAURUS LENTIGINOSUS AMERICAN BITTERN	SR	-	S1B,S3N	G4
CANIS RUFUS RED WOLF	E	LEXN	S1	G1
CARETTA CARETTA LOGGERHEAD TURTLE	T	LT	S2B,S2N	G3
CHARADRIUS MELODUS PIPING PLOVER	T	LT	S2B,S2N	G3
*CHELONIA MYDAS GREEN TURTLE	T	LT	S1B,SZN	G3
CIRCUS CYANEUS NORTHERN HARRIER	SR	-	S1B,S4N	G5
COTURNICOPS NOVEBORACENSIS YELLOW RAIL	SR	-	S2N	G4
DERMOCHELYS CORIACEA LEATHERBACK TURTLE	E	LE	SZN	G3
EGRETTA CAERULEA LITTLE BLUE HERON	SC	-	S3B,S3N	G5
EGRETTA THULA SNOWY EGRET	SC	-	S3B,S3N	G5
EGRETTA TRICOLOR TRICOLORED HERON	SC	-	S3B,S3N	G5
FALCO PEREGRINUS PEREGRINE FALCON	E	LE	S1B,S2N	G4
HALIAEETUS LEUCOCEPHALUS BALD EAGLE	E	LT	S1B,S2N	G4
LAMPROPELTIS GETULA STICTICEPS OUTER BANKS KING SNAKE	SC	-	S2	G5T2Q
LATERALLUS JAMAICENSIS BLACK RAIL	SR	FSC	S3B,S2N	G4?
LEPIDOCHELYS KEMPI ATLANTIC RIDLEY (TURTLE)	E	LE	SAB,SZNG1	
NERODIA SIPEDON WILLIAMENGELSI CAROLINA SALT MARSH SNAKE	SC	-	S3	G5T3
PICOIDES BOREALIS RED-COCKADED WOODPECKER	E	LE	S2	G3
PLEGADIS FALCINELLUS GLOSSY IBIS	SC	-	S2B,S1N	G5
RYNCHOPS NIGER BLACK SKIMMER	SC	-	S3B,S3N	G5
STERNA CASPIA CASPIAN TERN	SR	-	S1B,S2N	G5
STERNA NILOTICA GULL-BILLED TERN	T	-	S3B,SZN	G5
TRICHECHUS MANATUS MANATEE	E	LE	S1N	G2?
URSUS AMERICANUS BLACK BEAR	SR	-	S3	G5

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
<i>Natural communities</i>				
BAY FOREST	-	-	S3?	G3G4?
BRACKISH MARSH	-	-	S5	G5
DUNE GRASS	-	-	S3	G3G4
HIGH POCOSIN	-	-	S4	G4
INTERDUNE POND	-	-	S1	G2?
LOW POCOSIN	-	-	S3	G3
MARITIME DECIDUOUS FOREST	-	-	S1	G1
MARITIME EVERGREEN FOREST	-	-	S1	G2G3
MARITIME SHRUB	-	-	S3	G4
MARITIME SHRUB SWAMP	-	-	S1	G1
MARITIME SWAMP FOREST	-	-	S1	G1
MARITIME WET GRASSLAND	-	-	S2?	G3?
NATURAL LAKE SHORELINE	-	-	S2	G2
NONRIVERINE SWAMP FOREST	-	-	S3	G2G3
PEATLAND ATLANTIC WHITE CEDAR FOREST	-	-	S2	G2
POND PINE WOODLAND	-	-	S4	G4G5
<i>Geologic features</i>				
BARRIER ISLAND-COMPLEX	-	-		
SAND DUNE	-	-		
TRANSVERSE DUNE	-	-		
<i>Special animal habitats</i>				
GULL*TERN*SKIMMER COLONY	-	-		
COLONIAL WATERBIRDS NESTING SITE				
WADING BIRD ROOKERY	-	-		

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Vascular plants				
AMARANTHUS PUMILUS	T	LT	S2	G2
SEABEACH AMARANTH				
CLADIUM MARISCOIDES	SR	-	S2	G5
TWIG-RUSH				
CYPERUS DENTATUS	C	-	SH	G4
TOOTHED FLATSEDEGE				
CYPERUS TETRAGONUS	SR	-	S2	G4?
FOUR-ANGLED FLATSEDEGE				
*ELEOCHARIS CELLULOSA	SR	-	S1	G4G5
GULFCOAST SPIKERUSH				
ELEOCHARIS HALOPHILA	T	-	S1	G4
SALTMARSH SPIKERUSH				
ELEOCHARIS ROSTELLATA	SR	-	S2	G5
BEAKED SPIKERUSH				
HELIANTHEMUM CORYMBOSUM	SR	-	S1	G4G5
PINEBARREN SUNROSE				
HELIANTHEMUM GEORGIANUM	C	-	S1	G4
GEORGIA SUNROSE				
HUDSONIA TOMENTOSA	SR	-	S2	G5
WOOLLY BEACH HEATHER				
LECHEA MARITIMA VAR VIRGINICA	SR	-	S1	G5T3Q
MARITIME PINWEED				
LEPTOCHLOA FASCICULARIS VAR MARITIMA	SR	-	S1	G5T3
LONG-AWNED SPANGLETOP				
LILAEOPSIS CAROLINENSIS	T	-	S3	G3
CAROLINA GRASSWORT				
LIPARIS LOESELII	C	-	S1	G5
FEN ORCHID				
LIPOCARPHA MICRANTHA	SR	-	S1	G4
SMALL-FLOWERED HEMICARPHA				
LUDWIGIA ALATA	SR	-	S2	G3G4
WINGED SEEDBOX				
LUDWIGIA LANCEOLATA	C	-	S1	G3
LANCELEAF SEEDBOX				
MALAXIS SPICATA	SR	-	S1	G4?
FLORIDA ADDER'S MOUTH				
PELTANDRA SAGITTIFOLIA	SR	-	S2	G3G4
SPOONFLOWER				
PLATANThERA NIVEA	T	-	S1	G5
SNOWY ORCHID				
POLYGONUM GLAUCUM	C	-	S1	G3
SEABEACH KNOTWEED				
RHYNCHOSPORA ALBA	C	-	S2	G5
NORTHERN WHITE BEAKSEDEGE				
SCHOENOPLECTUS ACUTUS	SR	-	SH	G5
HARDSTEM BULRUSH				
*SCLERIA VERTICILLATA	C	-	S1	G5
SAVANNA NUTRUSH				
TRICHOSTEMA SP 1	C	FSC	S2	G2
DUNE BLUECURLS				
VACCINIUM MACROCARPON	C	-	S2	G4
CRANBERRY				
YUCCA GLORIOSA	SR	-	S2?	G4?
MOUNDLILY YUCCA				

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
RYNCHOPS NIGER BLACK SKIMMER	SC	-	S3B,S3N	G5
STERNA CASPIA CASPIAN TERN	SR	-	S1B,S2N	G5
STERNA DOUGALLII ROSEATE TERN	E	LE	SAB,S1N	G5
STERNA NILOTICA GULL-BILLED TERN	T	-	S3B,SZN	G5
TRICHECHUS MANATUS MANATEE	E	LE	S1N	G2?
URSUS AMERICANUS BLACK BEAR	SR	-	S3	G5
Invertebrates				
ACRAPEX RELICTA A CANE BORER	SR	-	S2	GU
ANACAMPTODES NR CYPRESSARIA A NEW INCHWORM MOTH	SR	-	SU	GU
*CALEPHELIS VIRGINIENSIS LITTLE METALMARK	SR	-	S3?	G4
CATOCALA MESSALINA MESSALINA UNDERWING	SR	-	S2?	G4
CEPPHIS NR DECOLORARIA A NEW INCHWORM MOTH	SR	-	SU	GU
DYSGONIA SIMILIS AN OWLET MOTH	SR	-	S2S3	GU
*EUPHYES BERRYI BERRY'S SKIPPER	SR	-	S1?	G3G4
FIXSENIA FAVONIUS ONTARIO NORTHERN HAIRSTREAK	SR	-	S3?	G4T4
GLENA PLUMOSARIA PLUMOSE GLENA	SR	-	S2S3	G4
HEMIPACHNOBIA SUBPORPHYREA MONOCHROMATEA SUNDEW CUTWORM MOTH	SR	-	S1?	G4T4
HYPAGYRTIS NR BRENDIAE A NEW INCHWORM MOTH	SR	-	SU	GU
MACROCHLO LOUISIANA LOUISIANA OWLET MOTH	SR	-	S2S3	G4
MELANOPLUS DECORUS DECORATED SPUR-THROAT GRASSHOPPER	SR	-	S2S3	G3?
METARRANTHIS SP 1 A GEOMETRID MOTH	SR	-	S2S3	G2?
MITOURA HESSELI HESSEL'S HAIRSTREAK	SR	-	S2?	G3G4
ORGYIA DETRITA A TUSsock MOTH	SR	-	S2S3	G4
PAPILIO CRESPHONTES GIANT SWALLOWTAIL	SR	-	S2?	G5
PHYCIODES PHAON PHAON CRESCENT	SR	-	S2?	G5
POANES AARONI AARONI AARON'S SKIPPER	SR	-	S2?	G4T4
*SATYRIUM KINGI KING'S HAIRSTREAK	SR	-	S2S3	G3G4

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Dare				
Vertebrates				
ALLIGATOR MISSISSIPPIENSIS	T	T(S/A)	S3	G5
AMERICAN ALLIGATOR				
ANHINGA ANHINGA	SR	-	S2B,SZN	G5
ANHINGA				
CANIS RUFUS	E	LEXN	S1	G1
RED WOLF				
CARETTA CARETTA	T	LT	S2B,S2N	G3
LOGGERHEAD TURTLE				
CHARADRIUS MELODUS	T	LT	S2B,S2N	G3
PIPING PLOVER				
CHELONIA MYDAS	T	LT	S1B,SZN	G3
GREEN TURTLE				
CIRCUS CYANEUS	SR	-	S1B,S4N	G5
NORTHERN HARRIER				
CONDYLURA CRISTATA POP 1	SC	-	S2	G5T2Q
STAR-NOSED MOLE - EASTERN NC POPULATION				
**CORYNORHINUS (=PLECOTUS) RAFINESQUII	SC	FSC	S3	G3G4
RAFINESQUE'S BIG-EARED BAT				
COTURNICOPS NOVEBORACENSIS	SR	-	S2N	G4
YELLOW RAIL				
*DERMOCHELYS CORIACEA	E	LE	SZN	G3
LEATHERBACK TURTLE				
EGRETTA CAERULEA	SC	-	S3B,S3N	G5
LITTLE BLUE HERON				
EGRETTA THULA	SC	-	S3B,S3N	G5
SNOWY EGRET				
EGRETTA TRICOLOR	SC	-	S3B,S3N	G5
TRICOLORED HERON				
ERETMOCHELYS IMBRICATA	E	LE	SZN	G3
HAWKSBILL TURTLE				
EVORTHODUS LYRICUS	SR	-	S2	GU
LYRE GOBY				
FALCO PEREGRINUS	E	LE	S1B,S2N	G4
PEREGRINE FALCON				
HALIAEETUS LEUCOCEPHALUS	E	LT	S1B,S2N	G4
BALD EAGLE				
HIMANTOPUS MEXICANUS	SR	-	S2B	G5
BLACK-NECKED STILT				
LAMPROPELTIS GETULA STICTICEPS	SC	-	S2	G5T2Q
OUTER BANKS KING SNAKE				
LATERALLUS JAMAICENSIS	SR	FSC	S3B,S2N	G4?
BLACK RAIL				
LEPIDOCHELYS KEMPI	E	LE	SAB,SZN	G1
ATLANTIC RIDLEY (TURTLE)				
NERODIA SIPEDON WILLIAMENGELSI	SC	-	S3	G5T3
CAROLINA SALT MARSH SNAKE				
PELECANUS OCCIDENTALIS	SC	-	S3B,S4N	G4
BROWN PELICAN				
PICOIDES BOREALIS	E	LE	S2	G3
RED-COCKADED WOODPECKER				
LEGADIS FALCINELLUS	SC	-	S2B,S1N	G5
GLOSSY IBIS				

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
TIDAL FRESHWATER MARSH	-	-	S3	G4
Geologic features				
BARRIER ISLAND - COMPLEX	-	-		
Special animal habitats				
WADING BIRD ROOKERY	-	-		

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
ISOETES RIPARIA	SR	-	S1	G4
RIVERBANK QUILLWORT				
LEPTOCHLOA FASCICULARIS VAR MARITIMA	SR	-	S1	G5T3
LONG-AWNED SPANGLETOP				
LILAEOPSIS CAROLINENSIS	T	-	S3	G3
CAROLINA GRASSWORT				
LIMOSELLA AUSTRALIS	C	-	S1	G4G5
AWL-LEAF MUDWORT				
LUDWIGIA ALATA	SR	-	S2	G3G4
WINGED SEEDBOX				
RANUNCULUS HEDERACEUS	C	-	SH	G5
IVY BUTTERCUP				
TORREYCHLOA PALLIDA	SR	-	S1	G5?
PALE MANNAGRASS				
TRILLIUM PUSILLUM VAR VIRGINIANUM	E	FSC	S1	G3T2
VIRGINIA LEAST TRILLIUM				
VACCINIUM MACROCARPON	C	-	S2	G4
CRANBERRY				
 Natural communities				
BAY FOREST	-	-	S3?	G3G4?
COASTAL FRINGE EVERGREEN FOREST	-	-	S1	G3?
COASTAL PLAIN SMALL STREAM SWAMP (BLACKWATER	-	-	S5	G5
DRY OAK--HICKORY FOREST	-	-	S4	G5
DUNE GRASS	-	-	S3	G3G4
ESTUARINE FRINGE LOBLOLLY PINE FOREST	-	-	S3?	G3?
INTERDUNE POND	-	-	S1	G2?
MARITIME DRY GRASSLAND	-	-	S2	G3
MARITIME EVERGREEN FOREST	-	-	S1	G2G3
MARITIME SHRUB	-	-	S3	G4
MARITIME SWAMP FOREST	-	-	S1	G1
MARITIME WET GRASSLAND	-	-	S2?	G3?
MESIC MIXED HARDWOOD FOREST (COASTAL PLAIN SUBTYPE)	-	-	S4	G5T5
NONRIVERINE SWAMP FOREST	-	-	S3	G2G3
NONRIVERINE WET HARDWOOD FOREST	-	-	S1	G1
PEATLAND ATLANTIC WHITE CEDAR FOREST	-	-	S2	G2
POND PINE WOODLAND	-	-	S4	G4G5
TIDAL CYPRESS--GUM SWAMP	-	-	S3	G4

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Currituck				
Vertebrates				
CARETTA CARETTA	T	LT	S2B,S2N	G3
LOGGERHEAD TURTLE				
CHARADRIUS MELODUS	T	LT	S2B,S2N	G3
PIPING PLOVER				
CONDYLURA CRISTATA POP 1	SC	-	S2	G5T2Q
STAR-NOSED MOLE - EASTERN NC POPULATION				
COTURNICOPS NOVEBORACENSIS	SR	-	S2N	G4
YELLOW RAIL				
DERMOCHELYS CORIACEA	E	LE	SZN	G3
LEATHERBACK TURTLE				
EGRETTA CAERULEA	SC	-	S3B,S3N	G5
LITTLE BLUE HERON				
EGRETTA THULA	SC	-	S3B,S3N	G5
SNOWY EGRET				
EGRETTA TRICOLOR	SC	-	S3B,S3N	G5
TRICOLORED HERON				
LAMPROPELTIS GETULA STICTICEPS	SC	-	S2	G5T2Q
OUTER BANKS KING SNAKE				
LATERALLUS JAMAICENSIS	SR	FSC	S3B,S2N	G4?
BLACK RAIL				
NERODIA SIPEDON WILLIAMENGELSI	SC	-	S3	G5T3
CAROLINA SALT MARSH SNAKE				
PICOIDES BOREALIS	E	LE	S2	G3
RED-CKCKADED WOODPECKER				
SOREX LONGIROSTRIS FISHERI	T	LT	S2S3	G5T2
DISMAL SWAMP SOUTHEASTERN SHREW				
***TRICHECHUS MANATUS	E	LE	S1N	G2?
MANATEE				
URSUS AMERICANUS	SR	-	S3	G5
BLACK BEAR				
Invertebrates				
EUPHYES DUKESI	SR	-	S2?	G3
DUKES' SKIPPER				
*PAPILIO CRESPHONTES	SR	-	S2?	G5
GIANT SWALLOWTAIL				
*POANES AARONI AARONI	SR	-	S2?	G4T4
AARON'S SKIPPER				
Vascular plants				
AMARANTHUS PUMILUS	T	LT	S2	G2
SEABEACH AMARANTH				
CLADIUM MARISCOIDES	SR	-	S2	G5
TWIG-RUSH				
CYPERUS DENTATUS	C	-	SH	G4
TOOTHED FLATSEDGE				
ELEOCHARIS MONTEVIDENSIS	SR	-	S1	G5
SAND SPIKERUSH				
ELEOCHARIS ROSTELLATA	SR	-	S2	G5
BEAKED SPIKERUSH				
HUDSONIA TOMENTOSA	SR	-	S2	G5
WOOLLY BEACH HEATHER				

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Special animal habitats				
GULL*TERN*SKIMMER COLONY	-	-		
COLONIAL WATERBIRDS NESTING SITE				
MARSH BIRD NESTING AREA	-	-		
SHOREBIRD FORAGING AREA	-	-		
WADING BIRD ROOKERY	-	-		

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
MARITIME EVERGREEN FOREST	-	-	S1	G2G3
MARITIME SHRUB	-	-	S3	G4
MARITIME SHRUB SWAMP	-	-	S1	G1
MARITIME SWAMP FOREST	-	-	S1	G1
MARITIME WET GRASSLAND	-	-	S2?	G3?
MESIC MIXED HARDWOOD FOREST (COASTAL PLAIN SU -	-	-	S4	G5T5
MESIC PINE FLATWOODS	-	-	S3	G5
NONRIVERINE WET HARDWOOD FOREST	-	-	S1	G1
PINE SAVANNA	-	-	S2	G3
POND PINE WOODLAND	-	-	S4	G4G5
SALT FLAT	-	-	S4	G5
SALT MARSH	-	-	S5	G5
SALT SHRUB	-	-	S4	G5
SMALL DEPRESSION POCOSIN	-	-	S1?	G2?
SMALL DEPRESSION POND	-	-	S2	G3
TIDAL CYPRESS—GUM SWAMP	-	-	S3	G4
UPPER BEACH	-	-	S3	G4
WET PINE FLATWOODS	-	-	S3	G3G4
XERIC SANDHILL SCRUB	-	-	S4	G5
 <i>Geologic features</i>				
BARRIER ISLAND	-	-		
BARRIER ISLAND-COMPLEX	-	-		
BERM	-	-		
IRREGULARLY FLOODED MARSH	-	-		
NATURALLY IMPOUNDED COASTAL PLAIN POND	-	-		
RELICT BEACH RIDGE	-	-		

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
SPIRANTHES LACINIATA LACE-LIP LADIES'-TRESSES	C	-	S1	G4G5
SPIRANTHES LONGILABRIS GIANT SPIRAL ORCHID	C	-	S1	G3
TOFIELDIA GLABRA CAROLINA ASPHODEL	C	FSC	S3	G3
TRICHOSTEMA SP 1 DUNE BLUECURLS	C	FSC	S2	G2
UTRICULARIA OLIVACEA DWARF BLADDERWORT	T	-	S2	G4
XYRIS BREVIFOLIA SHORTLEAF YELLOW-EYED-GRASS	SR	-	S2	G4G5
XYRIS FLABELLIFORMIS SAVANNA YELLOW-EYED-GRASS	C	-	S1	G4
YUCCA GLORIOSA MOUNDLILY YUCCA	SR	-	S2?	G4?
Nonvascular plants				
CAMPYLOPUS CAROLINAE SAVANNA CAMPYLOPUS	C	FSC	S1	G1
LEJEUNEA BERMUDIANA A LIVERWORT	SR	-	SH	G3G4
LEJEUNEA DIMORPHOPHYLLA A LIVERWORT	C	-	S1	G2G3
PLAGIOCHILA MIRADORENSIS VAR MIRADORENSIS A LIVERWORT	SR	-	S1	G4T4
*SPHAGNUM FITZGERALDII FITZGERALD'S PEATMOSS	SR	-	S2S3	G2G3
TELOSCHISTES FLAVICANS SUNRISE LICHEN	SR	-	S1	G3G4
Natural communities				
BASIC MESIC FOREST (COASTAL PLAIN SUBTYPE)	-	-	S1?	G5T3
BRACKISH MARSH	-	-	S5	G5
COASTAL FRINGE EVERGREEN FOREST	-	-	S1	G3?
COASTAL FRINGE SANDHILL	-	-	S1	G3?
COASTAL PLAIN SEMIPERMANENT IMPOUNDMENT	-	-	S4	G5
COASTAL PLAIN SMALL STREAM SWAMP (BLACKWATER	-	-	S5	G5
DUNE GRASS	-	-	S3	G3G4
ESTUARINE FRINGE LOBLOLLY PINE FOREST	-	-	S3?	G3?
HIGH POCOSIN	-	-	S4	G4
INTERDUNE POND	-	-	S1	G2?
LOW POCOSIN	-	-	S3	G3
MARITIME DRY GRASSLAND	-	-	S2	G3

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
FLORIDA ADDER'S MOUTH				
MYRIOPHYLLUM LAXUM	T	FSC	S1	G3
LOOSE WATERMILFOIL				
PANICUM TENERUM	SR	-	S2	G4
SOUTHEASTERN PANIC GRASS				
PELTANDRA SAGITTIFOLIA	SR	-	S2	G3G4
SPOONFLOWER				
PINGUICULA PUMILA	SR	-	S2	G4
SMALL BUTTERWORT				
PLATANThERA INTEGRA	T	-	S1	G4
YELLOW FRINGELESS ORCHID				
POLYGALA HOOKERI	C	-	S2	G3
HOOKEr'S MILKWORT				
POLYGONUM GLAUCUM	C	-	S1	G3
SEABEACH KNOTWEED				
POLYGONUM HIRSUTUM	SR	-	S1	G4G5
HAIRY SMARTWEED				
PONThIEVA RACEMOSA	SR	-	S2	G4G5
SHADOW-WITCH				
RHEXIA CUBENSIS	SR	-	S1	G4G5
WEST INDIES MEADOW-BEAUTY				
RHYNCHOSPORA BREVISETA	C	-	S1	G3G4
SHORT-BRISTLED BEAKSEdGE				
RHYNCHOSPORA GLOBULARIS VAR PINETORUM	SR	-	S1	G5T3?
SMALL'S BEAKSEdGE				
RHYNCHOSPORA HARPERI	C	-	S1	G3
HARPER'S BEAKSEdGE				
RHYNCHOSPORA ODORATA	SR	-	S1	G4
FRAGRANT BEAKSEdGE				
RHYNCHOSPORA OLIGANTHA	C	-	S2S3	G4
FEATHER-BRISTLE BEAKSEdGE				
RHYNCHOSPORA PLEIANTHA	C	-	S1	G3
COASTAL BEAKSEdGE				
RHYNCHOSPORA SCIRPOIDES	SR	-	S2	G4
LONG-BEAK BALDSEdGE				
SABAL PALMETTO	SR	-	S1	G5
CABBAGE PALM				
SAGERETIA MINUTIFLORA	C	-	S1	G4
SMALL-FLOWERED BUCKTHORN				
SAGITTARIA GRAMINEA VAR CHAPMANII	C	-	S1	G5T3
CHAPMAN'S ARROWHEAD				
*SCHOEENOPIECTUS ACUTUS	SR	-	SH	G5
HARDSTEM BULRUSH				
SCLERIA BALDWINII	C	-	S1	G4
BALDWIN'S NUTRUSH				
SCLERIA GEORGIANA	SR	-	S2	G4
GEORGIA NUTRUSH				
SCLERIA VERTICILLATA	C	-	S1	G5
SAVANNA NUTRUSH				
SOLIDAGO LEAVENWORTHII	SR	-	S1	G3G4
LEAVENWORTH'S GOLDENROD				
SOLIDAGO PULCHRA	E	FSC	S3	G3
CAROLINA GOLDENROD				
SOLIDAGO VERNA	E/PT	FSC	S3	G3
SPRING-FLOWERING GOLDENROD				

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
PROCAMBARUS PLUMIMANUS CROATAN CRAYFISH	SR	FSC	S2?	G2
*SATYRIUM KINGI KING'S HAIRSTREAK	SR	-	S2S3	G3G4
SPARTINIPHAGA CARTERAE CARTER'S SPARTINIPHAGA	SR	FSC	S2S3	G2G3
Vascular plants				
AGALINIS APHYLLA SCALE-LEAF GERARDIA	C	-	S2	G3G4
*AGALINIS LINIFOLIA FLAXLEAF GERARDIA	SR	-	S3	G4?
AGALINIS VIRGATA BRANCHED GERARDIA	SR	-	S2	G3G4
AMARANTHUS PUMILUS SEABEACH AMARANTH	T	LT	S2	G2
ASCLEPIAS PEDICELLATA SAVANNA MILKWEED	C	-	S2	G3?
CERATOPHYLLUM MURICATUM SSP AUSTRALE SOUTHERN HORNWORT	SR	-	S1	G4G5T?
CLADIUM MARISCOIDES TWIG-RUSH	SR	-	S2	G5
CYPERUS TETRAGONUS FOUR-ANGLED FLATSEEDGE	SR	-	S2	G4?
DIONAEA MUSCIPULA VENUS FLYTRAP	C-SC	FSC	S3	G3
ELEOCHARIS CELLULOSA GULFCOAST SPIKERUSH	SR	-	S1	G4G5
ELEOCHARIS ROBBINSII ROBBINS'S SPIKERUSH	C	-	S2	G4G5
ELEOCHARIS ROSTELLATA BEAKED SPIKERUSH	SR	-	S2	G5
ERYTHRINA HERBACEA CORALBEAN	SR	-	S1	G5
HELIANTHEMUM CORYMBOSUM PINEBARREN SUNROSE	SR	-	S1	G4G5
HELIANTHEMUM GEORGIANUM GEORGIA SUNROSE	C	-	S1	G4
HIBISCUS ACULEATUS COMFORTROOT	C	-	S1	G4G5
IPOMOEA IMPERATI BEACH MORNING-GLORY	SR	-	S1	G5
LACHNOCAULON BEYRICHIANUM SOUTHERN BOGBUTTON	SR	-	S2S3	G2G3
LITSEA AESTIVALIS PONDSPICE	C	FSC	S2	G3
LUDWIGIA ALATA WINGED SEEDBOX	SR	-	S2	G3G4
LUDWIGIA LANCEOLATA LANCELEAF SEEDBOX	C	-	S1	G3
LUDWIGIA LINIFOLIA FLAXLEAF SEEDBOX	SR	-	S2	G4
LYSIMACHIA ASPERULIFOLIA ROUGH-LEAF LOOSESTRIFE	E	LE	S3	G3
MALAXIS SPICATA	SR	-	S1	G4?

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
MALACLEMYS TERRAPIN TERRAPIN	SC	FSC	S3	G5T5
NORTHERN DIAMONDBACK TERRAPIN				
*NEOTOMA FLORIDANA FLORIDANA	T	-	S1	G5T5
EASTERN WOODRAT				
NERODIA SIPEDON WILLIAMENGELSI	SC	-	S3	G5T3
CAROLINA SALT MARSH SNAKE				
OPHISAURUS MIMICUS	SC	FSC	S2	G3
MIMIC GLASS LIZARD				
*PASSERINA CIRIS CIRIS	SR	FSC	S3B,SZN	G5TU
EASTERN PAINTED BUNTING				
PELECANUS OCCIDENTALIS	SC	-	S3B,S4N	G4
BROWN PELICAN				
PICOIDES BOREALIS	E	LE	S2	G3
RED-COCKADED WOODPECKER				
PLEGADIS FALCINELLUS	SC	-	S2B,S1N	G5
GLOSSY IBIS				
RANA CAPITO CAPITO	SC	FSC	S2	G4T3
CAROLINA GOPHER FROG				
RYNCHOPS NIGER	SC	-	S3B,S3N	G5
BLACK SKIMMER				
SISTRURUS MILLIARIUS	SR	-	S3	G5
PIGMY RATTLESNAKE				
STERNA DOUGALLI	E	LE	SAB,S1N	G5
ROSEATE TERN				
STERNA NILOTICA	T	-	S3B,SZN	G5
GULL-BILLED TERN				
TRICHECHUS MANATUS	E	LE	S1N	G2?
MANATEE				
URSUS AMERICANUS	SR	-	S3	G5
BLACK BEAR				
Invertebrates				
AMBLYSKIRTES REVERSA	SR	-	S3?	G4
REVERSED ROADSIDE SKIPPER				
ATRYTONE AROGOS AROGOS	SR	FSC	S1	G4T1T2
AROGOS SKIPPER				
*ATRYTONOPSIS LOAMMI	SR	-	S1?	G2G4Q
LOAMMI SKIPPER				
CALEPHELIS VIRGINIENSIS	SR	-	S3?	G4
LITTLE METALMARK				
EUPHYES BERRYI	SR	-	S1?	G3G4
BERRY'S SKIPPER				
EUPHYES BIMACULA	SR	-	S2?	G4
TWO-SPOTTED SKIPPER				
*FIXSENIA FAVONIUS ONTARIO	SR	-	S3?	G4T4
NORTHERN HAIRSTREAK				
MEROPLEON CINNAMICOLOR	SR	-	S2S3	GU
AN OWLET MOTH				
PAPILIO CRESPHONTES	SR	-	S2?	G5
GIANT SWALLOWTAIL				
PHRAGMATIPHILA INTERROGANS	SR	-	SU	GU
AN OWLET MOTH				
PHYCIODES PHAON	SR	-	S2?	G5
PHAON CRESCENT				

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Carteret				
Vertebrates				
AIMOPHILA AESTIVALIS	SC	FSC	S3B,S2N	G3
BACHMAN'S SPARROW				
ALLIGATOR MISSISSIPPIENSIS	T	T(S/A)	S3	G5
AMERICAN ALLIGATOR				
AMMODRAMUS HENSLOWII	SR	FSC	S2B,S1N	G3G4
HENSLOW'S SPARROW				
ANHINGA ANHINGA	SR	-	S2B,SZN	G5
ANHINGA				
BOTAURUS LENTIGINOSUS	SR	-	S1B,S3N	G4
AMERICAN BITTERN				
CARETTA CARETTA	T	LT	S2B,S2N	G3
LOGGERHEAD TURTLE				
CHARADRIUS MELODUS	T	LT	S2B,S2N	G3
PIPING PLOVER				
CHELONIA MYDAS	T	LT	S1B,SZN	G3
GREEN TURTLE				
CIRCUS CYANEUS	SR	-	S1B,S4N	G5
NORTHERN HARRIER				
COTURNICOPS NOVEBORACENSIS	SR	-	S2N	G4
YELLOW RAIL				
CROTALUS ADAMANTEUS	SR	-	S1	G5
EASTERN DIAMONDBACK RATTLESNAKE				
DERMOCHELYS CORIACEA	E	LE	SZN	G3
LEATHERBACK TURTLE				
EGRETTA CAERULEA	SC	-	S3B,S3N	G5
LITTLE BLUE HERON				
EGRETTA THULA	SC	-	S3B,S3N	G5
SNOWY EGRET				
EGRETTA TRICOLOR	SC	-	S3B,S3N	G5
TRICOLORED HERON				
*ELEOTRIS PISONIS	SR	-	S2	G5
SPINYCHEEK SLEEPER				
ERETMOCHELYS IMBRICATA	E	LE	SZN	G3
HAWKSBILL TURTLE				
EVORTHODUS LYRICUS	SR	-	S2	GU
LYRE GOBY				
FALCO PEREGRINUS	E	LE	S1B,S2N	G4
PEREGRINE FALCON				
*FELIS CONCOLOR COUGUAR	E	LE	SH	G5TH
EASTERN COUGAR				
*HETERODON SIMUS	SR	FSC	S3	G4G5
SOUTHERN HOGNOSE SNAKE				
HIMANTOPUS MEXICANUS	SR	-	S2B	G5
BLACK-NECKED STILT				
LAMPROPELTIS GETULA STICTICEPS	SC	-	S2	G5T2Q
OUTER BANKS KINGSNAKE				
LANIUS LUDOVICIANUS LUDOVICIANUS	SC	-	S3B,S3N	G5T5
LOGGERHEAD SHRIKE				
LATERALLUS JAMAICENSIS	SR	FSC	S3B,S2N	G4?
BLACK RAIL				
LEPIDOCHELYS KEMPII	E	LE	SAB,SZN	G1
ATLANTIC RIDLEY (TURTLE)				

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Camden				
Vertebrates				
ALLIGATOR MISSISSIPPIENSIS	T	T(S/A)	S3	G5
AMERICAN ALLIGATOR				
CORAGYPS ATRATUS	SC	-	S3	G5
BLACK VULTURE				
PICOIDES BOREALIS	E	LE	S2	G3
RED-COCKADED WOODPECKER				
SOREX HOYI WINNEMANA	SC	-	S2S3	G5T4
SOUTHERN PYGMY SHREW				
SOREX LONGIROSTRIS FISHERI	T	LT	S2S3	G5T2
DISMAL SWAMP SOUTHEASTERN SHREW				
URSUS AMERICANUS	SR	-	S3	G5
BLACK BEAR				
Invertebrates				
*FIXSENIA FAVONTUS ONTARIO	SR	-	S3?	G4T4
NORTHERN HAIRSTREAK				
MITOURA HESSELI	SR	-	S2?	G3G4
HESSEL'S HAIRSTREAK				
Vascular plants				
CLADIUM MARISCOIDES	SR	-	S2	G5
TWIG-RUSH				
ELEOCHARIS ROSTELLATA	SR	-	S2	G5
BEAKED SPIKERUSH				
LILAEOPSIS CAROLINENSIS	T	-	S3	G3
CAROLINA GRASSWORT				
LUDWIGIA ALATA	SR	-	S2	G3G4
WINGED SEEDBOX				
TRILLIUM PUSILLUM VAR VIRGINIANUM	E	FSC	S1	G3T2
VIRGINIA LEAST TRILLIUM				
Natural communities				
ESTUARINE FRINGE LOBLOLLY PINE FOREST	-	-	S3?	G3?
HIGH POCOSIN	-	-	S4	G4
MESIC MIXED HARDWOOD FOREST (COASTAL PLAIN SUBTYPE)	-	-	S4	G5T5
NONRIVERINE SWAMP FOREST	-	-	S3	G2G3
NONRIVERINE WET HARDWOOD FOREST	-	-	S1	G1
PEATLAND ATLANTIC WHITE CEDAR FOREST	-	-	S2	G2
POND PINE WOODLAND	-	-	S4	G4G5
TIDAL CYPRESS-GUM SWAMP	-	-	S3	G4
TIDAL FRESHWATER MARSH	-	-	S3	G4

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
*POLYGONUM GLAUCUM SEABEACH KNOTWEED	C	-	S1	G3
PONTHIEVA RACEMOSA SHADOW-WITCH	SR	-	S2	G4G5
SPIRANTHES LACINIATA LACE-LIP LADIES'-TRESSES	C	-	S1	G4G5
TOFIELDIA GLABRA CAROLINA ASPHODEL	C	FSC	S3	G3
UTRICULARIA GEMINISCAPA TWO-FLOWERED BLADDERWORT	C	-	S1	G4G5
Natural communities				
BRACKISH MARSH	-	-	S5	G5
COASTAL FRINGE EVERGREEN FOREST	-	-	S1	G3?
COASTAL PLAIN BOTTOMLAND HARDWOODS (BLACKWATER -	-	-	S3	G5T5
COASTAL PLAIN SMALL STREAM SWAMP (BLACKWATER	-	-	S5	G5
CYPRESS-GUM SWAMP (BLACKWATER SUBTYPE)	-	-	S5	G5T5
DRY-MESIC OAK-HICKORY FOREST	-	-	S5	G5
ESTUARINE FRINGE LOBLOLLY PINE FOREST	-	-	S3?	G3?
MESIC MIXED HARDWOOD FOREST (COASTAL PLAIN SUBTYPE)	-	-	S4	G5T5
MESIC MIXED HARDWOOD FOREST (PIEDMONT SUBTYPE)	-	-	S4	G5T5
MESIC PINE FLATWOODS	-	-	S3	G5
NONRIVERINE SWAMP FOREST	-	-	S3	G2G3
NONRIVERINE WET HARDWOOD FOREST	-	-	S1	G1
PINE SAVANNA	-	-	S2	G3
PINE/SCRUB OAK SANDHILL	-	-	S3	G4
POND PINE WOODLAND	-	-	S4	G4G5
SANDHILL SEEP	-	-	S2	G2
TIDAL CYPRESS-GUM SWAMP	-	-	S3	G4
TIDAL FRESHWATER MARSH	-	-	S3	G4
WET PINE FLATWOODS	-	-	S3	G3G4
Geologic features				
IRREGULARLY FLOODED MARSH	-	-		

SCIENTIFIC AND COMMON NAME	STATE PROT.	FED. PROT.	STATE RANK	GLOBAL RANK
Beaufort				
Vertebrates				
AMMODRAMUS HENSLOWII HENSLOW'S SPARROW	SR	FSC	S2B,S1N	G3G4
BOTAURUS LENTIGINOSUS AMERICAN BITTERN	SR	-	S1B,S3N	G4
CANIS RUFUS RED WOLF	E	LEXN	S1	G1
CORYNORHINUS (=PLECOTUS) RAFINESQUI RAFINESQUE'S BIG-EARED BAT	SC	FSC	S3	G3G4
HALIAEETUS LEUCOCEPHALUS BALD EAGLE	E	LT	S1B,S2N	G4
HIMANTOPUS MEXICANUS BLACK-NECKED STILT	SR	-	S2B	G5
LEPIDOCHELYS KEMPII ATLANTIC RIDLEY (TURTLE)	E	LE	SAB,SZN	G1
*NECTURUS LEWISI NEUSE RIVER WATERDOG	SC	-	S3	G3
NERODIA SIPEDON WILLIAMENGELSI CAROLINA SALT MARSH SNAKE	SC	-	S3	G5T3
PICOIDES BOREALIS RED-COCKADED WOODPECKER	E	LE	S2	G3
*RANA CAPITO CAPITO CAROLINA GOPHER FROG	SC	FSC	S2	G4T3
SCIURUS NIGER EASTERN FOX SQUIRREL	SR	-	S3	G5
TRICHECHUS MANATUS MANATEE	E	LE	S1N	G2?
URSUS AMERICANUS BLACK BEAR	SR	-	S3	G5
Invertebrates				
AMBLYSKIRTES REVERSA REVERSED ROADSIDE SKIPPER	SR	-	S3?	G4
EUPHYES DUKESI DUKES' SKIPPER	SR	-	S2?	G3
Vascular plants				
AESCHYNOMENE VIRGINICA VIRGINIA JOINTVETCH	E	LT	S1	G2
BIDENS CORONATA CROWNED BEGGARTICKS	SR	-	SH	G5
CAREX VERRUCOSA WARTY SEDGE	SR	-	S1	G3G4
DIONAEA MUSCIPULA VENUS FLYTRAP	C-SC	FSC	S3	G3
ELEOCHARIS CELLULOSA GULFCOAST SPIKERUSH	SR	-	S1	G4G5
*ELEOCHARIS ROSTELLATA BEAKED SPIKERUSH	SR	-	S2	G5
*LYSIMACHIA ASPERULIFOLIA ROUGH-LEAF LOOSESTRIFE	E	LE	S3	G3
*PLATANThERA NIVEA SNOWY ORCHID	T	-	S1	G5