

ATTACHMENT 2. DATABASES

[Home](#) > [Maps, Data, and Images](#) > [Maps](#) > [GIS Map](#)

U.S. National Wilderness Preservation System Map

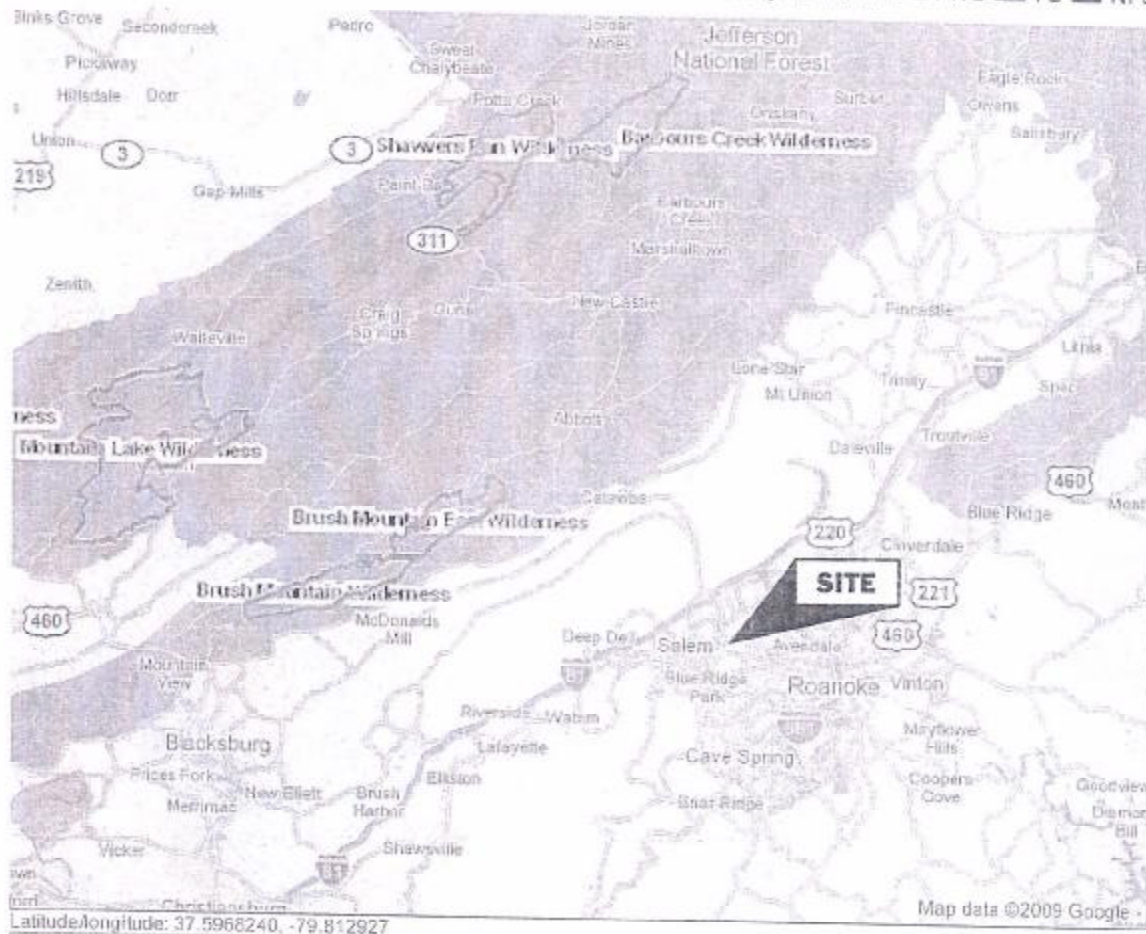
Click inside a wilderness polygon to open an information window (window may take a second to appear). Want to [give us feedback](#) on our map?

Print/View/Download: _____

Zoom: U.S. State Wilderness

On/Off: Wilderness Names ☒

Key: BLM FWS FS NPS



Disclaimer: Wilderness.net's GIS-based map overlays wilderness boundaries on satellite data provided by Google Maps. Boundary updates are obtained from the wilderness management agencies. Different wildernesses treat inholdings differently, so you should consult agency-specific maps to identify the exact location of private inholdings within wilderness. Wilderness.net manages this map as a service to Internet users of digital geographic data. Wilderness.net is in no way condoning or endorsing the application of these data for any given purpose. It is the sole responsibility of the user to determine whether or not the data are suitable for the intended purpose. It is also the obligation of the user to apply those data in an appropriate and conscientious manner. Although Wilderness.net attempts to use the most current and complete geospatial data available, accuracy varies. Wilderness.net provides no warranty, nor accepts any liability occurring from any incorrect, incomplete, or misleading data, or from any incorrect, incomplete, or misleading use of these data.

On 3/30/09 President Obama signed the Omnibus Public Land Management Act of 2009 (Public law 111-11) into law. This law designated 52 new wilderness areas and added

acreage to 26 existing areas, a total addition to the NWPS of over 2 million acres. All but the Cahuilla Mountain Wilderness, South Fork San Jacinto Wilderness and additions to the Santa Rosa Wilderness are now pictured on Wilderness.net's maps. You can [view a list of all areas affected by Public Law 111-11](#) with links to more information about them.

Maps of the National Wilderness Preservation System have been produced for many years. Read about the [history of wilderness mapping](#).

NATIONAL REGISTRY OF NATURAL LANDMARKS



NATIONAL
NATURAL
LANDMARKS
PROGRAM

June 2009



NATIONAL REGISTRY
OF NATURAL LANDMARKS
JUNE 2009

NATIONAL REGISTRY OF NATURAL LANDMARKS

Summary: This publication lists all National Natural Landmarks (NNL) currently included on the National Registry of Natural Landmarks. This listing provides information on each landmark's natural values, designation date, and ownership type.

For Further Information Contact: Natural Resources Stewardship and Science, National Park Service, 1201 I Street N.W., Washington, D.C., 20005.

Supplemental Information: The National Natural Landmarks Program was established by the Secretary of the Interior in 1962, under authority of the Historic Sites Act of 1935 (16 U.S.C. 461 *et seq.*) to identify and encourage the preservation of the full range of geological and biological features that are determined to represent nationally significant examples of the Nation's natural heritage. Potential sites are evaluated by qualified scientists and, if determined nationally significant, recommended to the Secretary of the Interior for designation. Once a landmark is designated it is included on the National Registry of Natural Landmarks, which currently lists 586 NNLs nationwide.

The National Registry of Natural Landmarks includes nationally significant geological and biological features in 48 states, American Samoa, Guam, Puerto Rico, and the Virgin Islands. Of the 586 landmarks currently listed on the Registry approximately one-half are administered solely by public agencies (e.g., Federal, State, county, or municipal governments), nearly one-third are owned entirely by private parties and the remaining are owned or administered by a mixture of public and private owners. Because many natural landmarks are privately owned and/or not managed for public access, owner permission must be obtained prior to visitation. Designation in no way infers any right of public access.

National Natural Landmark designation is not a land withdrawal, does not change the ownership of a site, and does not dictate use or activity. However, Federal agencies should consider the unique properties of these nationally significant areas in completing compliance under the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*), and there may be State or local planning or land use implications.

National Registry of Natural Landmarks

The following list contains all NNLs included on the National Registry of Natural Landmarks as of June 2009. The landmarks are arranged alphabetically by state and county. The number of landmarks in each state is enclosed in parentheses following each state's name. A description of each landmark's natural values, designation date, and ownership type is provided. Ownership categories include Federal, State, county, municipal, Indian Trust, and private. The order does not reflect the relative amount of land owned by any party. The information contained herein can also be found on the NNL website at <http://www.nature.nps.gov/nnl/>.



NATIONAL REGISTRY
OF NATURAL LANDMARKS
JUNE 2009

Page 98

VAGTHUS POINT

Vagthus Point is the best-known locality for Upper Cretaceous fossils in the Virgin Islands. In addition, it is the only known site in the world in which *Barrettia* and *Titanosarcophages* are found together. Designated: 1980. Ownership: Private.

St. John

LAGOON POINT

Lagoon Point is an excellent example of a Caribbean fringing reef and is unique, because unlike Buck Island or Tague Bay, this site represents a protected reef. The site also includes a mangrove area and a salt pond. Designated: 1980. Ownership: Virgin Islands Government, Private.

St. Thomas

COKI POINT CLIFFS

The Coki Point Cliffs are one of the rare localities on St. Thomas Island where fossils are found. There are very few locations where fossiliferous Lower Cretaceous rocks are exposed and this, the only place in the Virgin Islands, is quite rich in *Caprinuloidea rudistids*, a marine bivalve, as well as other fossils. Designated: 1980. Ownership: Private.

WEST END CAYS

The West End Cays are unique in the Virgin Islands region because of the nesting sea birds. Only in the Cordillera, Desecheo, and Mona and Monito Islands in Puerto Rico are there similar nesting sites free of interference from rodents and humans. These isolated islands are one of the few nesting sites for species such as the blue-faced booby, the Bahama duck and the endangered brown pelican. Designated: 1980. Ownership: Virgin Islands Government.

VIRGINIA (10)

Accomack County

VIRGINIA COAST
RESERVE

(extends into Northampton County) The Virginia Coast Reserve is an extensive, relatively undisturbed barrier island-lagoon complex serving as a valuable refuge for migratory shorebirds, waterfowl and colonial nesting birds. Designated: 1979. Ownership: State, private.

Augusta County

GRAND CAVERNS

Grand Caverns contains unique shield formations as well as draperies, flowstone, stalactites and stalagmites. Designated: 1973. Ownership: Regional Park Authority.



NATIONAL REGISTRY
OF NATURAL LANDMARKS
JUNE 2009

Page 99

Bath County

**BUTLER CAVE-
BREATHING CAVE**

Butler Cave-Breathing Cave includes two major cave systems that contain a 40-foot waterfall, a natural bridge, unusually fine "floating" crystalline formations, and an underground lake. Designated: 1973. Ownership: Private.

King George County

**CALEDON NATURAL
AREA**

Caledon Natural Area is one of the best examples of oak-tulip poplar-dominated virgin upland forest in the country. Designated: 1974. Ownership: State.

Northampton County

**VIRGINIA COAST
RESERVE**

(see Accomack County)

Orange County

MONTPELIER FOREST

Montpelier Forest, located within President James Madison's Montpelier, represents the best example of mature forest dominated primarily by tulip poplar and spicebush in the Piedmont biophysiographic province. This very old, mature forest is composed of mainly oak, hickory, and poplar. Designated: 1987. Ownership: Private.

Page County

LURAY CAVERNS

Luray Caverns, discovered in 1878, is ornately decorated with cascades, columns, stalactites, stalagmites and pools. Designated: 1973. Ownership: Private.

Rockbridge County

RICH HOLE

Rich Hole, located within the George Washington National Forest, is an outstanding example of a "cove" hardwood forest. This well-protected watershed contains a virgin forest with remarkably large oak and hickory trees. Designated: 1974. Ownership: Federal, private.



NATIONAL REGISTRY
OF NATURAL LANDMARKS
JUNE 2009

Page 100

Suffolk City

GREAT DISMAL SWAMP

The Great Dismal Swamp site is a remnant of the original Great Dismal Swamp containing geological and ecological elements unique in the nation. The variety of flora and fauna makes it a superb outdoor laboratory for the study of ecological processes. Designated: 1972. Ownership: Federal.

Sussex County

**CHARLES C. STEIRLY
NATURAL AREA**

The Charles C. Steirly Natural Area, is a small essentially virgin stand of climax bald cypress-water tupelo swamp forest. Designated: 1974. Ownership: State.

Virginia Beach

**SEASHORE NATURAL
AREA**

Seashore Natural Area, located within First Landing State Park, contains parallel dunes that are densely wooded with two distinct forest types of semitropical character. The site is also a sanctuary for abundant wildlife. Designated: 1965. Ownership: State.

WASHINGTON (17)

Adams County

**DRUMHELLER
CHANNELS**

(extends into Grant County) Drumheller Channels are the most spectacular example in the Columbia Plateau biophysiological province of "butte-and-basin" scabland; an erosional landscape characterized by hundreds of isolated, steep-sided hills surrounded by a braided network of underfit channels. It illustrates the dramatic modification of the Columbia Plateau volcanic terrain by late Pleistocene catastrophic glacial outburst floods. These floods occurred at a scale remaining unparalleled on earth, either in the geologic record or in historical account. Designated: 1986. Ownership: Federal, State, private.

Asotin County

**GRANDE RONDE FEEDER
DIKES**

The Grande Ronde Feeder Dikes is the best example of basalt dikes, the congealed feeder sources of the Columbia River basalt plateau. The site illustrates how these flows originated by eruption along multiple fissures. Designated: 1980. Ownership: Private.



Wild & Scenic Rivers

A National System

[Rivers & Trails](#)

[WSR Council](#)

[Management](#)

[Information](#)

[Publications](#)

[Contact Us](#)

[Site Index](#)

[Home](#)

Wild & Scenic Rivers By State

-
- [Alabama](#)
 - [Alaska](#)
 - [Arizona](#)
 - [Arkansas](#)
 - [California](#)
 - [Colorado](#)
 - [Connecticut](#)
 - [Delaware / Pennsylvania](#)
 - [Florida](#)
 - [Georgia / North & South Carolina](#)
 - [Idaho](#)
 - [Idaho / Oregon](#)
 - [Illinois](#)
 - [Kentucky](#)
 - [Louisiana](#)
 - [Maine](#)
 - [Massachusetts](#)
 - [Michigan](#)
 - [Minnesota / Wisconsin](#)
 - [Mississippi](#)
 - [Missouri](#)
 - [Montana](#)
 - [Nebraska](#)
 - [Nebraska / South Dakota](#)
 - [New Hampshire](#)
 - [New Jersey](#)
 - [New Jersey / Pennsylvania](#)
 - [New Mexico](#)
 - [New York / Pennsylvania](#)
 - [North Carolina](#)
 - [Ohio](#)
 - [Oregon](#)
 - [Pennsylvania](#)
 - [Puerto Rico](#)
 - [Tennessee](#)
 - [Texas](#)
 - [Washington](#)
 - [West Virginia](#)
 - [Wisconsin](#)
 - [Wyoming](#)
- [Printable table of the National Wild & Scenic Rivers System \(PDF — Print as landscape\).](#)
 - [Instructions for the National Atlas Wild & Scenic Rivers Site \(PDF\).](#)
 - [GIS shape files of the National Wild & Scenic Rivers System \(270 KB Self-Extracting Zipped File\).](#)

Managing Agencies

- ACOE = [Army Corps of Engineers](#)
- BLM = [Bureau of Land Management](#) — [BLM Rivers](#)
- NPS = [National Park Service](#)
- USFS = [U.S. Forest Service](#)
- USFWS = [U.S. Fish & Wildlife Service](#)
- Various states

Multiple listings of some rivers indicate more than one segment of the river is designated. Some rivers also have tributaries designated.

Alabama



U.S. ENVIRONMENTAL PROTECTION AGENCY

American Heritage Rivers

[Recent Additions](#) | [Contact Us](#) | [Print Version](#) | Search: [EPA Home](#) > [Water](#) > [Wetlands, Oceans, & Watersheds](#) > [American Heritage Rivers](#) > Designated Rivers[What Is the Initiative?](#)[Designated Rivers](#)["Navigator News"](#)[AHRI Contacts](#)[Your River and Its Watershed](#)

American Heritage Designated Rivers

AMERICAN HERITAGE RIVERS



- [Blackstone and Woonasquatucket Rivers](#) (MA, RI)
- [Connecticut River](#) (CT, VT, NH, MA)
- [Cuyahoga River](#) (OH)
- [Detroit River](#) (MI)
- [Hanalei River](#) (HI)
- [Hudson River](#) (NY)
- [Lower Mississippi River](#) (LA, TN)
- [New River](#) (NC, VA, WV)
- [Potomac River](#) (DC, MD, PA, VA, WV)
- [Rio Grande River](#) (TX)
- [St. Johns River](#) (FL)
- [Upper Mississippi River](#) (IA, IL, MN, MO)
- [Upper Susquehanna and Lackawanna Rivers](#) (PA)
- [Willamette River](#) (OR)

[EPA Home](#) | [Privacy and Security Notice](#) | [Contact Us](#)

Last updated on Thursday, October 19th, 2006

URL: <http://www.epa.gov/rivers/98rivers/>

Virginia

America's Byways®



Blue Ridge Parkway

The Parkway provides spectacular mountain and valley vistas, quiet pastoral scenes, sparkling waterfalls and colorful flower and foliage displays as it extends through the Blue Ridge Mountains of Virginia and North Carolina.



Local Information

Virginia Tourism

804-371-8174



Colonial Parkway

The Colonial Parkway not only illustrates the English colonial experience in America, but is also an outstanding example of American parkway design. Retaining its original scenic and historic integrity to a remarkable degree, the 23-mile route connects the historic sites of Jamestown, Williamsburg and Yorktown.



George Washington Memorial Parkway

This scenic grand gateway and greenway to our Nation's Capital offers the opportunity to experience the historic story of the birth of our Nation. See Mount Vernon where George Washington lived, sweeping views of our Nation's Capital, and the breathtaking Great Falls of the Potomac.



Journey Through Hallowed Ground Byway

The 180-mile corridor of the Journey Through Hallowed Ground Byway through Maryland, Pennsylvania, and Virginia is "Where America Happened." It is said that

this corridor holds more historic sites than any other in the U.S.

Copyright 2009 National Scenic Byways Online. All rights reserved.



Skyline Drive

During its over seventy year history, Skyline Drive has offered travelers the opportunity to view many of the most scenic vistas in the eastern United States. The experience combines the protected setting of Shenandoah National Park with two visitor centers, miles of hiking trails, and opportunities for wildlife viewing.

Other Byways in Virginia

As a service, we strive to include information on all byways or backways in Virginia on this website. This list may be incomplete or contain byways that overlap.

- [Big Walker Mountain Scenic Byway](#)
- [Coal Heritage Trail - VA](#)
- [Highlands Scenic Byway](#)
- [Lee's Retreat](#)
- [Mount Rogers Scenic Byway](#)
- [Old Georgetown Pike](#)
- [Trail of the Lonesome Pine/ Daniel Boone Heritage Trail](#)

National Park Service Discover Our Shared Heritage Travel Itineraries

- [American Presidents: Discover Our Shared Heritage](#)
- [Aviation](#)
- [James River Plantations](#)
- [Journey Through Hallowed Ground](#)
- [Lewis and Clark Expedition](#)
- [Richmond](#)
- [Virginia Main Street Communities](#)
- [We Shall Overcome](#)

Virginia.gov

Online Services | Commonwealth Sites | Help | Governor

Search Virginia.gov

Sul

VIRGINIA STATE PARKS

Park Locations



Search by amenities

RESERVE
ONLINE NOW

VOLUNTEER

E-NEWSLETTER
READ & SIGN-UPSign up for our weekly
eNewsletter.

Parks

[Bear Creek Lake \(BC\)](#)
[Belle Isle \(BI\)](#)
[Breaks Interstate \(BR\)](#)
[Caledon Natural Area \(CA\)](#)
[Chippokes Plantation \(CP\)](#)
[Claytor Lake \(CL\)](#)
[Douthat \(DO\)](#)
[False Cape \(FC\)](#)
[Fairy Stone \(FS\)](#)
[First Landing \(FL\)](#)
[Grayson Highlands \(GH\)](#)
[High Bridge Trail \(HB\)](#)
[Holliday Lake \(HL\)](#)
[Hungry Mother \(HM\)](#)
[James River \(JR\)](#)
[Kiptopeke \(KP\)](#)
[Lake Anna \(LA\)](#)
[Leesylvania \(LE\)](#)
[Mason Neck \(MN\)](#)
[Natural Tunnel \(NT\)](#)
[New River Trail \(NR\)](#)
[Ocooneechee \(OC\)](#)
[Pocahontas \(PO\)](#)
[Sailor's Creek Battlefield Historic \(SC\)](#)
[Shenandoah River](#)
[Raymond R. "Andy" Guest Jr. \(SH\)](#)
[Shot Tower \(ST\)](#)
[Sky Meadows \(SK\)](#)
[Smith Mountain Lake \(SM\)](#)
[Southwest Virginia Museum Historical \(SW\)](#)
[Staunton River \(SR\)](#)
[Staunton River Battlefield \(SB\)](#)
[Tabb Monument](#)
[Twin Lakes \(TL\)](#)
[Westmoreland \(WE\)](#)
[Wilderness Road \(WR\)](#)
[York River \(YR\)](#)

Click [here](#) to view a map of DCR's natural areas with public access.

Stay Connected

facebook

twitter

OSP Blog

flickr

YouTube

myspace.com
a place for friends

Ning

PRESERVES WITH PUBLIC ACCESS

Virginia Natural Area Preserves



Alphabetical List of Preserves with Access:

- [Goshen Pass NAP](#)
- [Poor Mountain NAP](#)
- [Bull Run Mountains NAP](#)
- [Bethel Beach NAP](#)
- [Bush Mill Stream NAP](#)
- [Dameron Marsh NAP](#)
- [Hickory Hollow NAP](#)
- [Hughlett Point NAP](#)
- [New Point Comfort NAP](#)
- [North Landing River NAP](#)
- [Cumberland Marsh NAP](#)
- [Chub Sandhill NAP](#)
- [Buffalo Mountain NAP](#)
- [Pinnacle NAP](#)
- [Grassy Hill NAP](#)
- [Cape Charles NAP](#)
- [Difficult Creek NAP](#)
- [False Cape NAP](#)
- [Grafton Ponds NAP](#)
- [Savage Neck Dunes NAP](#)
- [Wreck Island NAP](#)

[Click here to view a map of Virginia State Parks.](#)

- Translations -



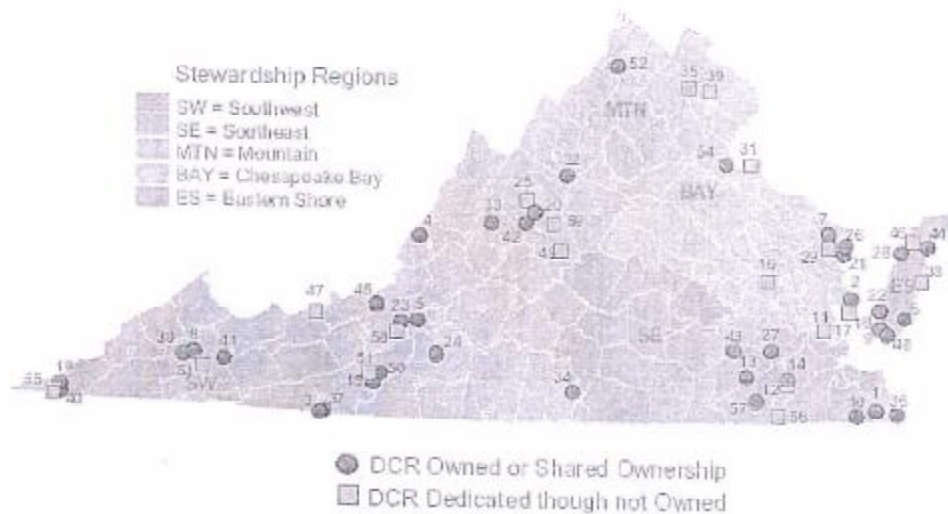
Copyright © 2006, All Rights Reserved

NATURAL HERITAGE

Search Virginia.gov

Sut

Virginia Natural Area Preserves



Alphabetical Listing of Virginia State Natural Area Preserves:

The Preserve System: The Virginia Natural Area Preserves System was established in the late 1980's to protect some of the most significant natural areas in the Commonwealth. A site becomes a component of the preserve system once it is dedicated as a natural area preserve by the Director of the Department of Conservation & Recreation. Natural area dedication works in much the same way as a conservation easement by placing legally binding restrictions on future activities on a property. The Natural Area Preserve System includes examples of some of the rarest natural communities and rare species habitats in Virginia. This system now includes fifty-nine dedicated natural areas totaling 49,531 acres.

Ownership: Most of the preserves are owned by the Department of Conservation and Recreation, but some are lands owned by local governments, universities, private citizens and The Nature Conservancy (a private conservation organization).

Public Access: Each natural area preserve is managed

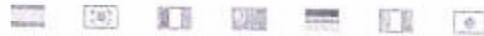
primarily for the benefit of the rare plants, animals and natural communities found there. Some preserves feature low-intensity public access facilities such as trails and parking. These are open year-round during daylight hours but may be subject to [temporary closure](#) to protect sensitive species or during some management activities, such as prescribed burning. Access to other preserves is restricted but generally may be arranged by contacting the site owner or manager.

Regulations: Except for certain specific situations, camping, fires, unleashed pets, hunting, off-road vehicles and removal or destruction of plants, animals, minerals or historic artifacts are prohibited on all Virginia Natural Area Preserves.

Click [here](#) to read and/or download a brochure about Virginia's Natural Area Preserves with public access.

To learn more about DCR's approach for managing Virginia's Natural Area Preserves, see the [NAP Management Guidelines](#). You'll need the [Adobe Acrobat reader](#) to view these files.

- Translations -



Copyright © 2006, All Rights Reserved

**Department of Conservation and Recreation
Natural Heritage Program**
217 Governor Street, Suite 312
Richmond, VA 23219-2094
(804) 786-7951
FAX (804)371-2674

Please send website comments to web@dcr.virginia.gov
Address general inquiries to pro@dcr.virginia.gov

[WAI Level A Compliant](#)

[Internet Privacy Policy Statement](#)



Refuge List by State

[Click Here](#) to see an alphabetical list of refuges broken out by letter.
[Click Here](#) to see a one page alphabetical list of refuges.

AK - AL - AR - AZ - CA - CO - CT - DE - FL - GA - GU - HI - IA - ID - IL - IN - KS - KY - LA -
MA - MD - ME - MI - MN - MO - MS - MT - NC - ND - NE - NH - NJ - NM - NV - NY - OH - OK -
OR - PA - PR - RI - SC - SD - TN - TX - UT - VA - VI - VT - WA - WI - WV - WY

Virginia

[Back Bay National Wildlife Refuge](#)

[Chincoteague National Wildlife
Refuge](#)

[Eastern Shore Of Virginia National
Wildlife Refuge](#)

[Elizabeth Hartwell Mason Neck
National Wildlife Refuge](#)

[Featherstone National Wildlife Refuge](#)

[Fisherman Island National Wildlife
Refuge](#)

[Great Dismal Swamp National
Wildlife Refuge](#)

[James River National Wildlife Refuge](#)

[Nansemond National Wildlife Refuge](#)

[Occoquan Bay National Wildlife
Refuge](#)

[Plum Tree Island National Wildlife
Refuge](#)

[Presquile National Wildlife Refuge](#)

[Rappahannock River Valley National
Wildlife Refuge](#)

[Wallops Island National Wildlife
Refuge](#)

[Return Home](#)



Virginia Department of Game and Inland Fisheries

1/8/2010 11:00:27 AM

Fish and Wildlife Information Service

VaFWIS Search Report Compiled on 1/8/2010, 11:00:27 AM

[Help](#)

Known or likely to occur within a 3 mile radius of 37,18,11.9

80,02,30.9

in 161 Roanoke County, 770 Roanoke City, 775 Salem City, VA

507 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 39) (39 species with Status* or Tier I**)

<u>BOVA Code</u>	<u>Status*</u>	<u>Tier**</u>	<u>Common Name</u>	<u>Scientific Name</u>
010214	FESE	I	<u>Logperch, Roanoke</u>	Percina rex
050023	FESE	I	<u>Bat, Indiana</u>	Myotis sodalis
040267	SE	I	<u>Wren, Bewick's</u>	Thryomanes bewickii
040096	ST	I	<u>Falcon, peregrine</u>	Falco peregrinus
040129	ST	I	<u>Sandpiper, upland</u>	Bartramia longicauda
040293	ST	I	<u>Shrike, loggerhead</u>	Lanius ludovicianus
100155	FSST	I	<u>Skipper, Appalachian grizzled</u>	Pyrgus wyandot
010127	FSST	II	<u>Madtom, orangefin</u>	Noturus gilberti
040093	FSST	II	<u>Eagle, bald</u>	Haliaeetus leucocephalus
040292	ST		<u>Shrike, migrant loggerhead</u>	Lanius ludovicianus migrans
100248	FS	I	<u>Fritillary, regal</u>	Speyeria idalia idalia
100154	FS	II	<u>Butterfly, Persius duskywing</u>	Erynnis persius persius
010110	FS	III	<u>Jumprock, bigeye</u>	Moxostoma valenciennium
100001	FS	IV	<u>fritillary, Diana</u>	Speyeria diana
040372	SS	I	<u>Crossbill, red</u>	Loxia curvirostra
040306	SS	I	<u>Warbler, golden-winged</u>	Vermivora chrysoptera
010174	SS	II	<u>Bass, Roanoke</u>	Ambloplites cavifrons
020020	SS	II	<u>Hellbender, eastern</u>	Cryptobranchus alleganiensis alleganiensis
040213	SS	II	<u>Owl, northern saw-whet</u>	Aegolius acadicus
040304	SS	II	<u>Warbler, Swainson's</u>	Limnethlypis swainsonii
040266	SS	II	<u>Wren, winter</u>	Troglodytes troglodytes
010115	SS	III	<u>Sucker, rustyside</u>	Thoburnia hamiltoni
040094	SS	III	<u>Harrier, northern</u>	Circus cyaneus
040036	SS	III	<u>Night-heron, yellow- crowned</u>	Nyctanassa violacea violacea

040204	SS	III	<u>Owl, barn</u>	Tyto alba pratincola
030012	CC	IV	<u>Rattlesnake, timber</u>	Crotalus horridus
040264	SS	IV	<u>Creeper, brown</u>	Certhia americana
040364	SS		<u>Dickeissel</u>	Spiza americana
040032	SS		<u>Egret, great</u>	Ardea alba egretta
040366	SS		<u>Finch, purple</u>	Carpodacus purpureus
040241	SS		<u>Flycatcher, alder</u>	Empidonax alnorum
040285	SS		<u>Kinglet, golden-crowned</u>	Regulus satrapa
040112	SS		<u>Moorhen, common</u>	Gallinula chloropus cachinnans
040262	SS		<u>Nuthatch, red-breasted</u>	Sitta canadensis
040278	SS		<u>Thrush, hermit</u>	Catharus guttatus
040314	SS		<u>Warbler, magnolia</u>	Dendroica magnolia
050045	SS		<u>Otter, northern river</u>	Lontra canadensis lataxina
040225		I	<u>Sapsucker, yellow-bellied</u>	Sphyrapicus varius
040319		I	<u>Warbler, black-throated green</u>	Dendroica virens

To view All 507 species [View 507](#)

* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; FS=Federal Species of Concern; SC=State Candidate; CC=Collection Concern; SS=State Special Concern

** I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Anadromous Fish Use Streams

N/A

Impediments to Fish Passage

N/A

Threatened and Endangered Waters (1 Reaches)

[View Map of All Threatened and Endangered Waters](#)

Stream Name	T&E Waters Species			View Map
	Highest TE [*]	BOVA Code, Status [*] , Tier ^{**} , Common & Scientific Name		
			<u>Madtom.</u> Noturus	

Roanoke River (03010101)	FESE	010127	FSST	II	orange fin	gilberti	Yes
		010214	FESE	I	Logperch Roanoke	Percina rex	

Cold Water Stream Survey (Trout Streams)
Managed Trout Species

N/A

Virginia Breeding Bird Atlas Blocks (4 records)

[View Map of All Query Results](#)
[Virginia Breeding Bird Atlas Blocks](#)

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE [*]	Highest Tier ^{**}	
30074	Salem, CE	11			Yes
30073	Salem, CW	57		IV	Yes
30072	Salem, NE	21		IV	Yes
30076	Salem, SE	58	SS	III	Yes

USFWS Breeding Bird Survey Routes

N/A

Christmas Bird Count Survey (2 records)

[View Map of All Query Results](#)
[Christmas Bird Count Survey](#)

CBC ID	Survey Name	Christmas Bird Count Species			View Map
		Different Species	Highest TE [*]	Highest Tier ^{**}	
880021	Roanoke	117	FSST	I	Yes
880022	Roanoke	129	FSSE	I	Yes

Public Holdings: (1 names)

Name	Agency	Level
Havens Wildlife Management Area		

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
161	Roanoke	451	FESE	I

770	<u>Roanoke City</u>	433	FESE	I
775	<u>Salem City</u>	417	FESE	I

USGS 7.5' Quadrangles:

Salem

Roanoke

USGS NRCS Watersheds in Virginia:

L05 - TINKER CREEK/CARVIN CREEK/GLADE CREEK

L04 - ROANOKE RIVER/MASON CREEK

L03 - UPPER ROANOKE RIVER

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
RU09	<u>Roanoke River-Sawmill Hallow</u>	69	FESE	I
RU10	<u>Mason Creek</u>	60	FESE	I
RU13	<u>Tinker Creek-Glade Creek</u>	69	FESE	I
RU14	<u>Roanoke River-Peters Creek</u>	65	FESE	I

audit no. 273796 1/8/2010 11:00:27 AM Virginia Fish and Wildlife Information Service

© 1998-2009 Commonwealth of Virginia Department of Game and Inland Fisheries

http://www.vafwis.org/maps/?ln=Visitor&tn=273751&t=2&display_only=1&s=14&overlay... 1/7/2010

<http://www.national-geographic.com/topo>
Color aerial photography acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.
map assembled 2010-01-07 17:10:16 (ga/qc July 27, 2009 10:09 - tn=273751 dist=4828 Visitor)

| [DGIF](#) | [Credits](#) | [Disclaimer](#) | [Contact phill.dressler@dgif.virginia.gov](mailto:phill.dressler@dgif.virginia.gov) | [Please view our privacy policy](#) |
© Copyright 1998-2009 Commonwealth of Virginia Department of Game and Inland Fisheries

Natural Heritage Resources by County

Your Search Criteria:

Roanoke, Roanoke (City), Salem (City)

Taxonomic Group:

Federal Legal Status: All,

State Legal Status: All,

Search run: 12-08-2009

[See Map](#)

On the map page, set page orientation to landscape to print map.

Click highlighted scientific names below to go to NatureServe report.

[Search](#)
[Menu](#)

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	Last Year Observed
Roanoke						
BIRDS						
Lanius ludovicianus	Loggerhead Shrike	G4	S2B,S3N		LT	1982
COLEOPTERA (BEETLES)						
Pseudanophthalmus pusio	A Cave Beetle	G2G3	S1S2	SOC		1995
COLLEMBOLA (SPRINGTAILS)						
Pseudosinella bona	A Cave Springtail	G1G2	S1S2	SOC		1995
FISH						
Noturus gilberti	Orange-fin Madtom	G2	S2	SOC	LT	1991
Percina rex	Roanoke Logperch	G1G2	S1S2	LE	LE	2001
LEPIDOPTERA (BUTTERFLIES & MOTHS)						
Erynnis persius persius	Persius Duskywing	G5T1T3	S1	SOC		1940
Pyrgus wyandoti	Appalachian Grizzled Skipper	G1G2Q	S1S2	SOC	LT	1939
VASCULAR PLANTS						
Buckleya distichophylla	Piratebush	G2	S2	SOC		2008
Clematis addisonii	Addison's Leatherflower	G2	S2	SOC		1993
Echinacea laevigata	Smooth Coneflower	G2G3	S2	LE	LT	1942

Roanoke (City)

BIRDS

<i>Lanius ludovicianus</i>	Loggerhead Shrike	G4	S2B,S3N	LT	1986
<i>Nyctanassa violacea</i>	Yellow-crowned Night-heron	G5	S2S3B,S3N	SC	1986

FISH

<i>Percina rex</i>	Roanoke Logperch	G1G2	S1S2	LE	LE	2001
------------------------------------	------------------	------	------	----	----	------

Salem (City)

FISH

<i>Noturus gilberti</i>	Orangefin Madtom	G2	S2	SOC	LT	1991
<i>Percina rex</i>	Roanoke Logperch	G1G2	S1S2	LE	LE	2001

LEPIDOPTERA (BUTTERFLIES & MOTHS)

<i>Pyrgus wyandot</i>	Appalachian Grizzled Skipper	G1G2Q	S1S2	SOC	LT	1939
---------------------------------------	------------------------------	-------	------	-----	----	------

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

Need Additional Information? For more detailed information on locations of Natural Heritage Resources submit an [information request](#).

Want to Contribute? If you have information on locations of natural heritage resources, please fill out and submit a [rare species sighting form](#)

Copyright VA Natural Heritage Program. 2001-2002.

Return to the [Database Search page](#)



Virginia Department of Game and Inland Fisheries

1/8/2010 10:58:38 AM

Fish and Wildlife Information Service

417 Species Booklets in (775) Salem City

[Help](#)

A Species Booklet Pop-up Window is opened when you click on any common name.

Table is currently ordered by Status importance * - Click another column header to sort by that column.

<u>Species Code</u>	<u>Status *</u>	<u>WAP **</u>	<u>Common Name</u>	<u>Scientific Name</u>
010214	FESE	I	<u>Loggerhead, Roanoke</u>	<i>Percina rex</i>
040096	ST	I	<u>Falcon, peregrine</u>	<i>Falco peregrinus</i>
040129	ST	I	<u>Sandpiper, upland</u>	<i>Bartramia longicauda</i>
040293	ST	I	<u>Shrike, loggerhead</u>	<i>Lanius ludovicianus</i>
100155	FSST	I	<u>Skipper, Appalachian grizzled</u>	<i>Pyrgus wyandot</i>
010127	FSST	II	<u>Madtom, orangefin</u>	<i>Noturus gilberti</i>
040093	FSST	II	<u>Eagle, bald</u>	<i>Haliaeetus leucocephalus</i>
040292	ST		<u>Shrike, migrant loggerhead</u>	<i>Lanius ludovicianus migrans</i>
100248	FS	I	<u>Fritillary, regal</u>	<i>Speyeria idalia idalia</i>
100154	FS	II	<u>Butterfly, Persius duskywing</u>	<i>Erynnis persius persius</i>
010110	FS	III	<u>Jumprock, bigeye</u>	<i>Moxostoma valenciennium</i>
100001	FS	IV	<u>fritillary, Diana</u>	<i>Speyeria diana</i>
040306	SS	I	<u>Warbler, golden-winged</u>	<i>Vermivora chrysoptera</i>
010174	SS	II	<u>Bass, Roanoke</u>	<i>Ambloplites cavifrons</i>
040266	SS	II	<u>Wren, winter</u>	<i>Troglodytes troglodytes</i>
010115	SS	III	<u>Sucker, rustyside</u>	<i>Thoburnia hamiltoni</i>
040094	SS	III	<u>Harrier, northern</u>	<i>Circus cyaneus</i>
040036	SS	III	<u>Night-heron, yellow-crowned</u>	<i>Nyctanassa violacea violacea</i>
040204	SS	III	<u>Owl, barn</u>	<i>Tyto alba pratincola</i>
030012	CC	IV	<u>Rattlesnake, timber</u>	<i>Crotalus horridus</i>
040264	SS	IV	<u>Creeper, brown</u>	<i>Certhia americana</i>
040364	SS		<u>Dickcissel</u>	<i>Spiza americana</i>
040032	SS		<u>Egret, great</u>	<i>Ardea alba egretta</i>

040366	SS		<u>Finch, purple</u>	<i>Carpodacus purpureus</i>
040241	SS		<u>Flycatcher, alder</u>	<i>Empidonax alnorum</i>
040285	SS		<u>Kinglet, golden-crowned</u>	<i>Regulus satrapa</i>
040112	SS		<u>Moorhen, common</u>	<i>Gallinula chloropus cachinnans</i>
040262	SS		<u>Nuthatch, red-breasted</u>	<i>Sitta canadensis</i>
040278	SS		<u>Thrush, hermit</u>	<i>Catharus guttatus</i>
040314	SS		<u>Warbler, magnolia</u>	<i>Dendroica magnolia</i>
050045	SS		<u>Otter, northern river</u>	<i>Lontra canadensis lataxina</i>
040225		I	<u>Sapsucker, yellow-bellied</u>	<i>Sphyrapicus varius</i>
040319		I	<u>Warbler, black-throated green</u>	<i>Dendroica virens</i>
040052		II	<u>Duck, American black</u>	<i>Anas rubripes</i>
040320		II	<u>Warbler, cerulean</u>	<i>Dendroica cerulea</i>
030039		III	<u>Greensnake, smooth</u>	<i>Opheodrys vernalis</i>
030068		III	<u>Turtle, eastern box</u>	<i>Terrapene carolina carolina</i>
050024		III	<u>Myotis, eastern small-footed</u>	<i>Myotis leibii</i>
060145		III	<u>Mussel, notched rainbow</u>	<i>Villosa constricta</i>
010200		IV	<u>Darter, riverweed</u>	<i>Etheostoma podostemone</i>
010131		IV	<u>Eel, American</u>	<i>Anguilla rostrata</i>
010109		IV	<u>Sucker, Roanoke hog</u>	<i>Hypentelium roanokense</i>
020031		IV	<u>Salamander, Jefferson</u>	<i>Ambystoma jeffersonianum</i>
030045		IV	<u>Ribbonsnake, common</u>	<i>Thamnophis sauritus sauritus</i>
030024		IV	<u>Snake, eastern hog-nosed</u>	<i>Heterodon platirhinos</i>
030033		IV	<u>Snake, queen</u>	<i>Regina septemvittata</i>
040100		IV	<u>Bobwhite, northern</u>	<i>Colinus virginianus</i>
040272		IV	<u>Catbird, gray</u>	<i>Dumetella carolinensis</i>
040337		IV	<u>Chat, yellow-breasted</u>	<i>Icteria virens virens</i>
040214		IV	<u>Chuck-will's-widow</u>	<i>Caprimulgus carolinensis</i>
040202		IV	<u>Cuckoo, yellow-billed</u>	<i>Coccyzus americanus</i>
040142		IV	<u>Dowitcher, short-billed</u>	<i>Limnodromus griseus</i>
040240		IV	<u>Flycatcher, willow</u>	<i>Empidonax traillii</i>
040358		IV	<u>Grosbeak, rose-breasted</u>	<i>Pheucticus ludovicianus</i>
040028		IV	<u>Heron, green</u>	<i>Butorides virescens</i>

040229		IV	<u>Kingbird, eastern</u>	<i>Tyrannus tyrannus</i>
040344		IV	<u>Meadowlark, eastern</u>	<i>Sturnella magna</i>
040330		IV	<u>Ovenbird</u>	<i>Seiurus aurocapilla</i>
040312		IV	<u>Parula, northern</u>	<i>Parula americana</i>
040243		IV	<u>Pewee, eastern wood</u>	<i>Contopus virens</i>
040391		IV	<u>Sparrow, field</u>	<i>Spizella pusilla</i>
040378		IV	<u>Sparrow, grasshopper</u>	<i>Ammodramus savannarum pratensis</i>
040248		IV	<u>Swallow, northern rough-winged</u>	<i>Stelgidopteryx serripennis</i>
040217		IV	<u>Swift, chimney</u>	<i>Chaetura pelagica</i>
040355		IV	<u>Tanager, scarlet</u>	<i>Piranga olivacea</i>
040273		IV	<u>Thrasher, brown</u>	<i>Toxostoma rufum</i>
040277		IV	<u>Thrush, wood</u>	<i>Hylocichla mustelina</i>
040375		IV	<u>Towhee, eastern</u>	<i>Pipilo erythrophthalmus</i>
040297		IV	<u>Vireo, yellow-throated</u>	<i>Vireo flavifrons</i>
040302		IV	<u>Warbler, black-and-white</u>	<i>Mniotilta varia</i>
040340		IV	<u>Warbler, Canada</u>	<i>Wilsonia canadensis</i>
040333		IV	<u>Warbler, Kentucky</u>	<i>Oporornis formosus</i>
040328		IV	<u>Warbler, prairie</u>	<i>Dendroica discolor</i>
040303		IV	<u>Warbler, prothonotary</u>	<i>Protonotaria citrea</i>
040305		IV	<u>Warbler, worm-eating</u>	<i>Helmitheros vermivorus</i>
040313		IV	<u>Warbler, yellow</u>	<i>Dendroica petechia</i>
040332		IV	<u>Waterthrush, Louisiana</u>	<i>Seiurus motacilla</i>
040215		IV	<u>Whip-poor-will</u>	<i>Caprimulgus vociferus</i>
040140		IV	<u>Woodcock, American</u>	<i>Scolopax minor</i>
050046		IV	<u>Skunk, eastern spotted</u>	<i>Spilogale putorius putorius</i>
050040		IV	<u>Weasel, least</u>	<i>Mustela nivalis allegheniensis</i>
050081		IV	<u>Woodrat, Allegheny</u>	<i>Neotoma magister</i>
060137		IV	<u>Mussel, creeper</u>	<i>Strophitus undulatus</i>
100223		IV	<u>Butterfly, frosted elfin</u>	<i>Callophrys irus</i>
100138		IV	<u>Butterfly, hoary elfin</u>	<i>Callophrys polius</i>
100170		IV	<u>Butterfly, long dash</u>	<i>Polites mystic</i>

100243		IV	<u>Butterfly, northern metalmark</u>	<i>Calephelis borealis</i>
010188			<u>Bass, largemouth</u>	<i>Micropterus salmoides</i>
010175			<u>Bass, rock</u>	<i>Ambloplites rupestris</i>
010186			<u>Bass, smallmouth</u>	<i>Micropterus dolomieu</i>
010183			<u>Bluegill</u>	<i>Lepomis macrochirus</i>
010123			<u>Bullhead, brown</u>	<i>Ameiurus nebulosus</i>
010066			<u>Chub, bluehead</u>	<i>Nocomis leptocephalus</i>
010101			<u>Dace, blacknose</u>	<i>Rhinichthys atratulus</i>
010060			<u>Dace, mountain redbelly</u>	<i>Phoxinus oreas</i>
010193			<u>Darter, fantail</u>	<i>Etheostoma flabellare</i>
010198			<u>Darter, johnny</u>	<i>Etheostoma nigrum</i>
010112			<u>Jumprock, black</u>	<i>Moxostoma cervinum</i>
010129			<u>Madtom, margined</u>	<i>Noturus insignis</i>
010099			<u>Minnow, bluntnose</u>	<i>Pimephales notatus</i>
010063			<u>Minnow, cutlips</u>	<i>Exoglossum maxillina</i>
010056			<u>Pickereel, chain</u>	<i>Esox niger</i>
010182			<u>Pumpkinseed</u>	<i>Lepomis gibbosus</i>
010114			<u>Redhorse, golden</u>	<i>Moxostoma erythrurum</i>
010387			<u>Redhorse, silver</u>	<i>Moxostoma anisurum</i>
010078			<u>Shiner, crescent</u>	<i>Luxilus cerasinus</i>
010094			<u>Shiner, mimic</u>	<i>Notropis volucellus</i>
010074			<u>Shiner, rosefin</u>	<i>Lythrurus ardens</i>
010073			<u>Shiner, satinfin</u>	<i>Cyprinella analostana</i>
010082			<u>Shiner, spottail</u>	<i>Notropis hudsonius</i>
010086			<u>Shiner, swallowtail</u>	<i>Notropis procne</i>
010069			<u>Shiner, white</u>	<i>Luxilus albeolus</i>
010058			<u>Stoneroller, central</u>	<i>Camptostoma anomalum</i>
010108			<u>Sucker, northern hog</u>	<i>Hypentelium nigricans</i>
010118			<u>Sucker, torrent</u>	<i>Thoburnia rathbunae</i>
010105			<u>Sucker, white</u>	<i>Catostomus commersoni</i>
010180			<u>Sunfish, redbreast</u>	<i>Lepomis auritus</i>
020004			<u>Bullfrog, American</u>	<i>Lithobates catesbeianus</i>

020008		<u>Frog, northern green</u>	<i>Lithobates clamitans melanota</i>
020013		<u>Frog, pickerel</u>	<i>Lithobates palustris</i>
020018		<u>Frog, upland chorus</u>	<i>Pseudacris feriarum feriarum</i>
020019		<u>Frog, wood</u>	<i>Lithobates sylvaticus</i>
020065		<u>Newt, red-spotted</u>	<i>Notophthalmus viridescens viridescens</i>
020071		<u>Peeper, northern spring</u>	<i>Pseudacris crucifer crucifer</i>
020043		<u>Salamander, eastern red-backed</u>	<i>Plethodon cinereus</i>
020029		<u>Salamander, four-toed</u>	<i>Hemidactylium scutatum</i>
020033		<u>Salamander, long-tailed</u>	<i>Eurycea longicauda longicauda</i>
020038		<u>Salamander, northern dusky</u>	<i>Desmognathus fuscus</i>
020070		<u>Salamander, northern red</u>	<i>Pseudotriton ruber ruber</i>
020077		<u>Salamander, northern spring</u>	<i>Gyrinophilus porphyriticus porphyriticus</i>
020075		<u>Salamander, seal</u>	<i>Desmognathus monticola</i>
020050		<u>Salamander, southern two-lined</u>	<i>Eurycea cirrigera</i>
020049		<u>Salamander, spotted</u>	<i>Ambystoma maculatum</i>
020055		<u>Salamander, Wehrle's</u>	<i>Plethodon wehrlei</i>
020080		<u>Salamander, white-spotted slimy</u>	<i>Plethodon cylindraceus</i>
020059		<u>Toad, eastern American</u>	<i>Anaxyrus americanus americanus</i>
020062		<u>Toad, Fowler's</u>	<i>Anaxyrus fowleri</i>
020007		<u>Treefrog, gray</u>	<i>Hyla versicolor</i>
030016		<u>Copperhead, northern</u>	<i>Agkistrodon contortrix mokasen</i>
030022		<u>Cornsnake, red</u>	<i>Pantherophis guttatus</i>
030044		<u>Gartersnake, eastern</u>	<i>Thamnophis sirtalis sirtalis</i>
030038		<u>Greensnake, northern rough</u>	<i>Opheodrys aestivus aestivus</i>
030026		<u>Kingsnake, eastern</u>	<i>Lampropeltis getula getula</i>
030027		<u>Kingsnake, mole</u>	<i>Lampropeltis calligaster rhombomaculata</i>
030002		<u>Lizard, eastern fence</u>	<i>Sceloporus undulatus</i>
030029		<u>Milksnake, eastern</u>	<i>Lampropeltis triangulum triangulum</i>

030018		<u>Racer, northern black</u>	<i>Coluber constrictor constrictor</i>
030008		<u>Racerunner, eastern six-lined</u>	<i>Aspidoscelis sexlineata sexlineata</i>
030023		<u>Ratsnake, eastern</u>	<i>Pantherophis alleghaniensis</i>
030006		<u>Skink, broad-headed</u>	<i>Plestiodon laticeps</i>
030004		<u>Skink, common five-lined</u>	<i>Plestiodon fasciatus</i>
030042		<u>Snake, northern red-bellied</u>	<i>Storeria occipitomaculata occipitomaculata</i>
030020		<u>Snake, northern ring-necked</u>	<i>Diadophis punctatus edwardsii</i>
030052		<u>Stinkpot</u>	<i>Sternotherus odoratus</i>
030060		<u>Turtle, eastern painted</u>	<i>Chrysemys picta picta</i>
030050		<u>Turtle, eastern snapping</u>	<i>Chelydra serpentina serpentina</i>
030034		<u>Watersnake, northern</u>	<i>Nerodia sipedon sipedon</i>
030019		<u>Wormsnake, eastern</u>	<i>Carphophis amoenus amoenus</i>
040346		<u>Blackbird, red-winged</u>	<i>Agelaius phoeniceus</i>
040282		<u>Bluebird, eastern</u>	<i>Sialia sialis</i>
040361		<u>Bunting, indigo</u>	<i>Passerina cyanea</i>
040363		<u>Bunting, painted</u>	<i>Passerina ciris ciris</i>
040357		<u>Cardinal, northern</u>	<i>Cardinalis cardinalis</i>
040257		<u>Chickadee, black-capped</u>	<i>Poecile atricapillus</i>
040258		<u>Chickadee, Carolina</u>	<i>Poecile carolinensis</i>
040113		<u>Coot, American</u>	<i>Fulica americana</i>
040024		<u>Cormorant, double-crested</u>	<i>Phalacrocorax auritus</i>
040353		<u>Cowbird, brown-headed</u>	<i>Molothrus ater</i>
040373		<u>Crossbill, white-winged</u>	<i>Loxia leucoptera</i>
040255		<u>Crow, American</u>	<i>Corvus brachyrhynchos</i>
040203		<u>Cuckoo, black-billed</u>	<i>Coccyzus erythrophthalmus</i>
040198		<u>Dove, mourning</u>	<i>Zenaidura macroura carolinensis</i>
040061		<u>Duck, wood</u>	<i>Aix sponsa</i>
040367		<u>Finch, house</u>	<i>Carpodacus mexicanus</i>
040221		<u>Flicker, northern</u>	<i>Colaptes auratus</i>
040239		<u>Flycatcher, Acadian</u>	<i>Empidonax virens</i>
040234		<u>Flycatcher, great crested</u>	<i>Myiarchus crinitus</i>
040242		<u>Flycatcher, least</u>	<i>Empidonax minimus</i>

040284		<u>Gnatcatcher, blue-gray</u>	<i>Poliophtila caerulea</i>
040371		<u>Goldfinch, American</u>	<i>Carduelis tristis</i>
040045		<u>Goose, Canada</u>	<i>Branta canadensis</i>
040084		<u>Goshawk, northern</u>	<i>Accipiter gentilis</i>
040352		<u>Grackle, common</u>	<i>Quiscalus quiscula</i>
040008		<u>Grebe, pied-billed</u>	<i>Podilymbus podiceps</i>
040360		<u>Grosbeak, blue</u>	<i>Guiraca caerulea caerulea</i>
040365		<u>Grosbeak, evening</u>	<i>Coccothraustes vespertinus</i>
040099		<u>Grouse, ruffed</u>	<i>Bonasa umbellus</i>
040167		<u>Gull, herring</u>	<i>Larus argentatus</i>
040089		<u>Hawk, broad-winged</u>	<i>Buteo platypterus</i>
040086		<u>Hawk, Cooper's</u>	<i>Accipiter cooperii</i>
040088		<u>Hawk, red-shouldered</u>	<i>Buteo lineatus lineatus</i>
040087		<u>Hawk, red-tailed</u>	<i>Buteo jamaicensis</i>
040090		<u>Hawk, rough-legged</u>	<i>Buteo lagopus johannis</i>
040085		<u>Hawk, sharp-shinned</u>	<i>Accipiter striatus velox</i>
040027		<u>Heron, great blue</u>	<i>Ardea herodias herodias</i>
040218		<u>Hummingbird, ruby-throated</u>	<i>Archilochus colubris</i>
040252		<u>Jay, blue</u>	<i>Cyanocitta cristata</i>
040387		<u>Junco, dark-eyed</u>	<i>Junco hyemalis</i>
040098		<u>Kestrel, American</u>	<i>Falco sparverius sparverius</i>
040119		<u>Killdeer</u>	<i>Charadrius vociferus</i>
040220		<u>Kingfisher, belted</u>	<i>Ceryle alcyon</i>
040286		<u>Kinglet, ruby-crowned</u>	<i>Regulus calendula</i>
040082		<u>Kite, swallow-tailed</u>	<i>Elanoides forficatus forficatus</i>
040245		<u>Lark, horned</u>	<i>Eremophila alpestris</i>
040400		<u>Longspur, chestnut-collared</u>	<i>Calcarius ornatus</i>
040253		<u>Magpie, black-billed</u>	<i>Pica hudsonia</i>
040051		<u>Mallard</u>	<i>Anas platyrhynchos</i>
040251		<u>Martin, purple</u>	<i>Progne subis</i>
040271		<u>Mockingbird, northern</u>	<i>Mimus polyglottos</i>
040216		<u>Nighthawk, common</u>	<i>Chordeiles minor</i>
040261			

		<u>Nuthatch, white-breasted</u>	<i>Sitta carolinensis</i>
040348		<u>Oriole, Baltimore</u>	<i>Icterus galbula</i>
040095		<u>Osprey</u>	<i>Pandion haliaetus carolinensis</i>
040209		<u>Owl, barred</u>	<i>Strix varia</i>
040206		<u>Owl, great horned</u>	<i>Bubo virginianus</i>
040211		<u>Owl, short-eared</u>	<i>Asio flammeus</i>
040136		<u>Phalarope, Wilson's</u>	<i>Phalaropus tricolor</i>
040236		<u>Phoebe, eastern</u>	<i>Sayornis phoebe</i>
040197		<u>Pigeon, rock</u>	<i>Columba livia</i>
040254		<u>Raven, common</u>	<i>Corvus corax</i>
040341		<u>Redstart, American</u>	<i>Setophaga ruticilla</i>
040275		<u>Robin, American</u>	<i>Turdus migratorius</i>
040151		<u>Sandpiper, Baird's</u>	<i>Calidris bairdii</i>
040157		<u>Sandpiper, buff-breasted</u>	<i>Tryngites subruficollis</i>
040146		<u>Sandpiper, semipalmated</u>	<i>Calidris pusilla</i>
040132		<u>Sandpiper, solitary</u>	<i>Tringa solitaria</i>
040134		<u>Sandpiper, spotted</u>	<i>Actitis macularia</i>
040150		<u>Sandpiper, white-rumped</u>	<i>Calidris fuscicollis</i>
040205		<u>Screech-owl, eastern</u>	<i>Megascops asio</i>
040370		<u>Siskin, pine</u>	<i>Carduelis pinus</i>
040141		<u>Snipe, common</u>	<i>Gallinago gallinago</i>
040108		<u>Sora</u>	<i>Porzana carolina</i>
040389		<u>Sparrow, chipping</u>	<i>Spizella passerina</i>
040395		<u>Sparrow, fox</u>	<i>Passerella iliaca</i>
040342		<u>Sparrow, house</u>	<i>Passer domesticus</i>
040377		<u>Sparrow, savannah</u>	<i>Passerculus sandwichensis</i>
040398		<u>Sparrow, song</u>	<i>Melospiza melodia</i>
040397		<u>Sparrow, swamp</u>	<i>Melospiza georgiana</i>
040383		<u>Sparrow, vesper</u>	<i>Pooecetes gramineus</i>
040393		<u>Sparrow, white-crowned</u>	<i>Zonotrichia leucophrys</i>
040394		<u>Sparrow, white-throated</u>	<i>Zonotrichia albicollis</i>
040294		<u>Starling, European</u>	<i>Sturnus vulgaris</i>
040347			

		<u>Swallow, bank</u>	<i>Riparia riparia</i>
040249		<u>Swallow, barn</u>	<i>Hirundo rustica</i>
040246		<u>Swallow, tree</u>	<i>Tachycineta bicolor</i>
040356		<u>Tanager, summer</u>	<i>Piranga rubra</i>
040260		<u>Titmouse, tufted</u>	<i>Baeolophus bicolor</i>
040102		<u>Turkey, wild</u>	<i>Meleagris gallopavo silvestris</i>
040281		<u>Veery</u>	<i>Catharus fuscescens</i>
040298		<u>Vireo, blue-headed</u>	<i>Vireo solitarius</i>
040299		<u>Vireo, red-eyed</u>	<i>Vireo olivaceus</i>
040301		<u>Vireo, warbling</u>	<i>Vireo gilvus gilvus</i>
040295		<u>Vireo, white-eyed</u>	<i>Vireo griseus</i>
040081		<u>Vulture, black</u>	<i>Coragyps atratus</i>
040080		<u>Vulture, turkey</u>	<i>Cathartes aura</i>
040316		<u>Warbler, black-throated blue</u>	<i>Dendroica caerulescens</i>
040321		<u>Warbler, blackburnian</u>	<i>Dendroica fusca</i>
040325		<u>Warbler, blackpoll</u>	<i>Dendroica striata</i>
040315		<u>Warbler, Cape May</u>	<i>Dendroica tigrina</i>
040323		<u>Warbler, chestnut-sided</u>	<i>Dendroica pensylvanica</i>
040338		<u>Warbler, hooded</u>	<i>Wilsonia citrina</i>
040311		<u>Warbler, Nashville</u>	<i>Vermivora ruficapilla</i>
040329		<u>Warbler, palm</u>	<i>Dendroica palmarum</i>
040326		<u>Warbler, pine</u>	<i>Dendroica pinus</i>
040317		<u>Warbler, yellow-rumped</u>	<i>Dendroica coronata cornata</i>
040322		<u>Warbler, yellow-throated</u>	<i>Dendroica dominica</i>
040331		<u>Waterthrush, northern</u>	<i>Seiurus noveboracensis</i>
040290		<u>Waxwing, cedar</u>	<i>Bombocilla cedrorum</i>
040227		<u>Woodpecker, downy</u>	<i>Picoides pubescens medianus</i>
040226		<u>Woodpecker, hairy</u>	<i>Picoides villosus</i>
040222		<u>Woodpecker, pileated</u>	<i>Dryocopus pileatus</i>
040223		<u>Woodpecker, red-bellied</u>	<i>Melanerpes carolinus</i>
040224		<u>Woodpecker, red-headed</u>	<i>Melanerpes erythrocephalus</i>
040268		<u>Wren, Carolina</u>	<i>Thryothorus ludovicianus</i>
040265			

		<u>Wren, house</u>	<i>Troglodytes aedon</i>
040336		<u>Yellowthroat, common</u>	<i>Geothlypis trichas</i>
050028		<u>Bat, big brown</u>	<i>Eptesicus fuscus fuscus</i>
050029		<u>Bat, eastern red</u>	<i>Lasiurus borealis borealis</i>
050030		<u>Bat, hoary</u>	<i>Lasiurus cinereus cinereus</i>
050020		<u>Bat, little brown</u>	<i>Myotis lucifugus lucifugus</i>
050025		<u>Bat, silver-haired</u>	<i>Lasionycteris noctivagans</i>
050037		<u>Bear, black</u>	<i>Ursus americanus americanus</i>
050069		<u>Beaver, American</u>	<i>Castor canadensis</i>
050051		<u>Bobcat</u>	<i>Lynx rufus rufus</i>
050055		<u>Chipmunk, Fisher's eastern</u>	<i>Tamias striatus fisheri</i>
050103		<u>Cottontail, eastern</u>	<i>Sylvilagus floridanus mallurus</i>
050125		<u>Covote</u>	<i>Canis latrans</i>
050108		<u>Deer, white-tailed</u>	<i>Odocoileus virginianus</i>
050050		<u>Fox, common gray</u>	<i>Urocyon cinereoargenteus cinereoargenteus</i>
050049		<u>Fox, red</u>	<i>Vulpes vulpes fulva</i>
050085		<u>Lemming, Stone's southern bog</u>	<i>Synaptomys cooperi stonei</i>
050042		<u>Mink, common</u>	<i>Mustela vison mink</i>
050017		<u>Mole, eastern</u>	<i>Scalopus aquaticus aquaticus</i>
050016		<u>Mole, hairy-tailed</u>	<i>Parascalops breweri</i>
050077		<u>Mouse, common golden</u>	<i>Ochrotomys nuttalli aureolus</i>
050072		<u>Mouse, deer</u>	<i>Peromyscus maniculatus nubiterrae</i>
050098		<u>Mouse, house</u>	<i>Mus musculus musculus</i>
050099		<u>Mouse, meadow jumping</u>	<i>Zapus hudsonius americanus</i>
050073		<u>Mouse, northern white-footed</u>	<i>Peromyscus leucopus noveboracensis</i>
050100		<u>Mouse, woodland jumping</u>	<i>Napaeozapus insignis roanensis</i>
050092		<u>Muskrat, common</u>	<i>Ondatra zibethicus zibethicus</i>
050022		<u>Myotis, northern</u>	<i>Myotis septentrionalis septentrionalis</i>
050001		<u>Opossum, Virginia</u>	<i>Didelphis virginiana virginiana</i>

050027		<u>Pipistrelle, eastern</u>	<i>Pipistrellus subflavus subflavus</i>
050038		<u>Raccoon</u>	<i>Procyon lotor lotor</i>
050095		<u>Rat, Norway</u>	<i>Rattus norvegicus norvegicus</i>
050002		<u>Shrew, ashen masked</u>	<i>Sorex cinereus cinereus</i>
050013		<u>Shrew, Kirtland's short-tailed</u>	<i>Blarina brevicauda kirtlandi</i>
050015		<u>Shrew, least</u>	<i>Cryptotis parva parva</i>
050010		<u>Shrew, pygmy</u>	<i>Sorex hoyi winnemana</i>
050004		<u>Shrew, smoky</u>	<i>Sorex fumeus fumeus</i>
050007		<u>Shrew, southeastern</u>	<i>Sorex longirostris longirostris</i>
050048		<u>Skunk, striped</u>	<i>Mephitis mephitis mephitis</i>
050063		<u>Squirrel, eastern fox</u>	<i>Sciurus niger vulpinus</i>
050058		<u>Squirrel, northern gray</u>	<i>Sciurus carolinensis pennsylvanicus</i>
050060		<u>Squirrel, red</u>	<i>Tamiasciurus hudsonicus abieticola</i>
050065		<u>Squirrel, southern flying</u>	<i>Glaucomys volans volans</i>
050087		<u>vole, common Gapper's red-backed</u>	<i>Clethrionomys gapperi gapperi</i>
050091		<u>Vole, pine</u>	<i>Microtus pinetorum scalopsoides</i>
050041		<u>Weasel, long-tailed</u>	<i>Mustela frenata noveboracensis</i>
050054		<u>Woodchuck</u>	<i>Marmota monax monax</i>
060025		<u>Mussel, eastern elliptio</u>	<i>Elliptio complanata</i>
070130		<u>CRAYFISH</u>	<i>Orconectes c. f. spinosus</i>
070102		<u>Crayfish, Appalachian brook</u>	<i>Cambarus bartonii bartonii</i>
070094		<u>Crayfish, no common name</u>	<i>Cambarus acuminatus</i>
100043		<u>Armyworm</u>	<i>Pseudaletia unipuncta</i>
100041		<u>Borer, European corn</u>	<i>Ostrinia nubilalis</i>
100220		<u>Butterfly, American copper</u>	<i>Lycaena phlaeas</i>
100262		<u>Butterfly, American lady</u>	<i>Vanessa virginiensis</i>
100245		<u>Butterfly, American snout</u>	<i>Libytheana carinenta</i>
100250		<u>Butterfly, Aprhodite fritillary</u>	<i>Speyeria aphrodite</i>
100254		<u>Butterfly, Baltimore checkerspot</u>	<i>Euphydryas phaeton</i>

100232		<u>Butterfly, banded hairstreak</u>	<i>Satyrion calanus</i>
100215		<u>Butterfly, barred yellow</u>	<i>Eurema daira</i>
100092		<u>Butterfly, black swallowtail</u>	<i>Papilio polyxenes asterius</i>
100137		<u>Butterfly, brown elfin</u>	<i>Callophrys augustinus</i>
100205		<u>Butterfly, cabbage white</u>	<i>Pieris rapae</i>
100278		<u>Butterfly, Carolina satyr</u>	<i>Hermeuptychia sosybius</i>
100167		<u>Butterfly, carus skipper</u>	<i>Polites carus</i>
100206		<u>Butterfly, checkered white</u>	<i>Pontia protodice</i>
100159		<u>Butterfly, clouded skipper</u>	<i>Lerema accius</i>
100094		<u>Butterfly, clouded sulphur</u>	<i>Colias philodice</i>
100213		<u>Butterfly, cloudless sulphur</u>	<i>Phoebis sennae eubule</i>
100165		<u>Butterfly, cobweb skipper</u>	<i>Hesperia metea</i>
100152		<u>Butterfly, columbine duskywing</u>	<i>Erynnis lucilius</i>
100265		<u>Butterfly, common buckeye</u>	<i>Junonia coenia</i>
100157		<u>Butterfly, common sootwing</u>	<i>Pholisora catullus</i>
100277		<u>Butterfly, common wood- nymph</u>	<i>Cercyonis pegala</i>
100168		<u>Butterfly, crossline skipper</u>	<i>Polites origenes</i>
100218		<u>Butterfly, dainty sulphur</u>	<i>Nathalis iole</i>
100177		<u>Butterfly, Delaware skipper</u>	<i>Anatrytone iogan</i>
100147		<u>Butterfly, dreamy duskywing</u>	<i>Erynnis icelus</i>
100185		<u>Butterfly, Dun skipper</u>	<i>Euphyes vestris</i>
100188		<u>Butterfly, dusted skipper</u>	<i>Atrytonopsis hianna</i>
100258		<u>Butterfly, eastern comma</u>	<i>Polygonia comma</i>
100225		<u>Butterfly, eastern pine elfin</u>	<i>Callophrys niphon</i>
100238		<u>Butterfly, eastern tailed-blue</u>	<i>Everes comyntas</i>
100093		<u>Butterfly, eastern tiger swallowtail</u>	<i>Papilio glaucus</i>
100231		<u>Butterfly, Edwards' hairstreak</u>	<i>Satyrion edwardsii</i>
100195		<u>Butterfly, Eufala skipper</u>	<i>Lerodea eufala</i>
100209		<u>Butterfly, falcate orangetip</u>	<i>Anthocharis midea</i>

100162		<u>Butterfly, fiery skipper</u>	<i>Hylephila phyleus</i>
100139		<u>Butterfly, golden-banded skipper</u>	<i>Autochton cellus</i>
100228		<u>Butterfly, gray hairstreak</u>	<i>Strymon melinus</i>
100249		<u>Butterfly, great spangled fritillary</u>	<i>Speyeria cybele</i>
100270		<u>Butterfly, hackberry emperor</u>	<i>Asterocampa celtis</i>
100219		<u>Butterfly, harvester</u>	<i>Peniseca tarquinius</i>
100224		<u>Butterfly, Henry's elfin</u>	<i>Callophrys henrici</i>
100178		<u>Butterfly, Hobomok skipper</u>	<i>Poanes hobomok</i>
100149		<u>Butterfly, Horace's duskywing</u>	<i>Erynnis horatius</i>
100148		<u>Butterfly, Juvenal's duskywing</u>	<i>Erynnis juvenalis</i>
100160		<u>Butterfly, least skipper</u>	<i>Ancyloxypha numitor</i>
100175		<u>Butterfly, little glassywing</u>	<i>Pompeius verna</i>
100279		<u>Butterfly, little wood-satyr</u>	<i>Megisto cymela</i>
100217		<u>Butterfly, little yellow</u>	<i>Eurema lisa</i>
100252		<u>Butterfly, meadow fritillary</u>	<i>Boloria bellona</i>
100079		<u>Butterfly, monarch</u>	<i>Danaus plexippus</i>
100090		<u>Butterfly, mourning cloak</u>	<i>Nymphalis antiopa</i>
100143		<u>Butterfly, northern cloudwing</u>	<i>Thorybes pylades</i>
100272		<u>Butterfly, northern pearly-eye</u>	<i>Enodia anthedon</i>
100197		<u>Butterfly, Ocola skipper</u>	<i>Panoquina ocola</i>
100236		<u>Butterfly, olive juniper hairstreak</u>	<i>Callophrys gryneus gryneus</i>
100211		<u>Butterfly, orange sulphur</u>	<i>Colias eurytheme</i>
100214		<u>Butterfly, orange-barred sulphur</u>	<i>Phoebis philea</i>
100263		<u>Butterfly, painted lady</u>	<i>Vanessa cardui</i>
100194		<u>Butterfly, pepper and salt road-skipper</u>	<i>Amblyscirtes hegon</i>
100200		<u>Butterfly, pipevine swallowtail</u>	<i>Battus philenor</i>

100259		<u>Butterfly, question mark</u>	<i>Polygonia interrogationis</i>
100264		<u>Butterfly, red admiral</u>	<i>Vanessa atalanta</i>
100235		<u>Butterfly, red-banded hairstreak</u>	<i>Calycopis cecrops</i>
100268		<u>Butterfly, red-spotted purple</u>	<i>Limenitis arthemis astyanax</i>
100174		<u>Butterfly, sagem</u>	<i>Atalopedes campestris</i>
100082		<u>Butterfly, silver-spotted skipper</u>	<i>Epargyreus clarus</i>
100242		<u>Butterfly, silvery blue</u>	<i>Glaucopsyche lygdamus</i>
100255		<u>Butterfly, silvery checkerspot</u>	<i>Chlosyne nycteis</i>
100146		<u>Butterfly, sleepy duskywing</u>	<i>Erynnis brizo</i>
100216		<u>Butterfly, sleepy orange</u>	<i>Eurema nicippe</i>
100142		<u>Butterfly, southern cloudywing</u>	<i>Thorybes bathyllus</i>
100202		<u>Butterfly, spicebush swallowtail</u>	<i>Papilio troilus</i>
100239		<u>Butterfly, spring azure</u>	<i>Celastrina ladon</i>
100234		<u>Butterfly, striped hairstreak</u>	<i>Satyrrium liparops</i>
100269		<u>Butterfly, tawny emperor</u>	<i>Asterocampa clyton</i>
100169		<u>Butterfly, tawny-edged skipper</u>	<i>Polites themistocles</i>
100247		<u>Butterfly, variegated fritillary</u>	<i>Euptoieta claudia</i>
100227		<u>Butterfly, white M hairstreak</u>	<i>Parrhasius m-album</i>
100153		<u>Butterfly, wild indigo duskywing</u>	<i>Erynnis baptisiae</i>
100180		<u>Butterfly, Zabulon skipper</u>	<i>Poanes zabulon</i>
100151		<u>Butterfly, Zarucco duskywing</u>	<i>Erynnis zarucco</i>
100204		<u>Butterfly, zebra swallowtail</u>	<i>Eurytides marcellus</i>
100042		<u>Earworm, corn</u>	<i>Heliathis zea</i>
100040		<u>Moth, codling</u>	<i>Cydia pomonella</i>
100286		<u>Moth, rose maple</u>	<i>Dryocampa rubicunda</i>
100193		<u>Roadside-skipper, common</u>	<i>Amblyscirtes vialis</i>
110230		<u>Tick, American dog</u>	<i>Dermacentor variabilis</i>

110232			<u>Tick, brown dog</u>	<i>Rhipicephalus sanguineus</i>
110231			<u>Tick, rabbit</u>	<i>Haemaphysalis leporispalustris</i>
110229			<u>Tick, winter</u>	<i>Dermacentor albipictus</i>
<p>* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; FS=Federal Species of Concern; SC=State Candidate; CC=Collection Concern; SS=State Special Concern</p> <p>** I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need</p> <p>List completeness is dependent on a search for published scientific records of which there may be many naming counties but few for other area types.</p>				

audit no. 273796 1/8/2010 10:58:38 AM Virginia Fish and Wildlife Information Service

© 1998-2009 Commonwealth of Virginia Department of Game and Inland Fisheries

Critical Habitat

It is important to distinguish between important habitat and Critical Habitat. Critical Habitat is federally designated and carries legal implications under the Endangered Species Act. Important habitat is habitat that a certain species needs for its survival but carries no legal implications.

Only Federal actions that may adversely modify federally designated Critical Habitat require consultation with the Service; private actions are not subject to Critical Habitat consultation. However, it is important to clarify that any Federal involvement is sufficient to federalize a proposed action. Some examples of actions with Federal involvement are as follows:

- actions on Federal land
- actions that require a Federal permit (such as a wetland permit)
- actions that require a Federal license
- actions using Federal funds

In Virginia, there are three fish and four mussel species that have federally designated Critical Habitat. They are as follows:

Fish

Slender chub (*Erimystax cahnii*). Lee and Scott Counties.

- Powell River, main channel from the Tennessee-Virginia State line upstream through Lee County.
- Clinch River, main channel from the Tennessee-Virginia State line upstream through Scott County.

Spotfin chub (*Erimonax monachus*). Scott and Washington Counties.

- North Fork Holston River, main channel from the Virginia-Tennessee State line upstream through Scott and Washington Counties.

Yellowfin madtom (*Noturus flavipinnis*). Lee, Scott, and Russell Counties.

- Powell River, main channel from the Virginia-Tennessee State line upstream through Lee County.
- Copper Creek, main channel from its junction with Clinch River upstream through Scott County and upstream in Russell County to Dickensonville.

Mussels

Cumberlandian combshell (*Epioblasma brevidens*). Lee, Scott, Russell and Tazewell Co.

- Powell River, main channel from the Tennessee-Virginia State line upstream to the vicinity of Rock Island, near Pugh (river mile 159), Lee County, Virginia.
- Clinch River, main channel from the Tennessee-Virginia State line upstream to its confluence with Indian Creek in Cedar Bluff, Tazewell County, Virginia.

Oyster mussel (*Epioblasma capsaeformis*). Lee, Scott, Russell and Tazewell Counties.

- Powell River, main channel from the Tennessee-Virginia State line upstream to the vicinity of Rock Island, near Pugh (river mile 159), Lee County, Virginia.
- Clinch River, main channel from the Tennessee-Virginia State line upstream to its confluence with Indian Creek in Cedar Bluff, Tazewell County, Virginia.
- Copper Creek, main channel from its confluence with the Clinch River upstream to Virginia State Route 72, Scott County, Virginia.

Purple bean (*Villosa perpurpurea*). Lee, Scott, Russell and Tazewell Counties.

- Powell River, main channel from the Tennessee-Virginia State line upstream to the vicinity of Rock Island, near Pugh (river mile 159), Lee County, Virginia.
- Clinch River, main channel from the Tennessee-Virginia State line upstream to its confluence with Indian Creek in Cedar Bluff, Tazewell County, Virginia.
- Indian Creek, main channel from its confluence with the Clinch River upstream to the fourth Norfolk-Southern Railroad crossing at Van Dyke, Tazewell Co., VA.
- Copper Creek, main channel from its confluence with the Clinch River upstream to Virginia State Route 72, Scott County, Virginia.

Rough rabbitsfoot (*Quadrula cylindrica strigillata*). Lee, Scott, Russell & Tazewell Co.

- Powell River, main channel from the Tennessee-Virginia State line upstream to the vicinity of Rock Island, near Pugh (river mile 159), Lee County, Virginia.
- Clinch River, main channel from the Tennessee-Virginia State line upstream to its confluence with Indian Creek in Cedar Bluff, Tazewell County, Virginia.
- Indian Creek, main channel from its confluence with the Clinch River upstream to the fourth Norfolk-Southern Railroad crossing at Van Dyke, Tazewell Co., VA.
- Copper Creek, main channel from its confluence with the Clinch River upstream to Virginia State Route 72, Scott County, Virginia.

**Service Interim Guidelines For Recommendations On
Communications Tower Siting, Construction, Operation, and Decommissioning**

1. Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communication tower or other structure (e.g., billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.
2. If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level, using construction techniques which do not require guy wires (e.g., use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Aviation Administration regulations permit.
3. If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.
4. If at all possible, new towers should be sited within existing "antenna farms" (clusters of towers). Towers should not be sited in or near wetlands, other known bird concentration areas (e.g., State or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.
5. If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid red or pulsating red warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.
6. Tower designs using guy wires for support which are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major diurnal migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species. (For guidance on markers, see *Avian Power Line Interaction Committee (APLIC)*. 1994. *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994*. Edison Electric Institute, Washington, D.C., 78 pp, and *Avian Power Line Interaction Committee (APLIC)*. 1996. *Suggested Practices for Raptor Protection on Power Lines*. Edison Electric Institute/Raptor Research Foundation, Washington, D.C.: 128pp. Copies can be obtained via the Internet at <http://www.eei.org/resources/pubcat/enviro/>, or by calling 1-800/334-5453).

7. Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint." However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.

8. If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.

9. In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.

10. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.

11. If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.

12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

In order to obtain information on the extent to which these guidelines are being implemented, and to identify any recurring problems with their implementation which may necessitate modifications, letters provided in response to requests for evaluation of proposed towers should contain the following request:

"In order to obtain information on the usefulness of these guidelines in preventing bird strikes, and to identify any recurring problems with their implementation which may necessitate modifications, please advise us of the final location and specifications of the proposed tower, and which of the measures recommended for the protection of migratory birds were implemented. If any of the recommended measures can not be implemented, please explain why they were not feasible."

