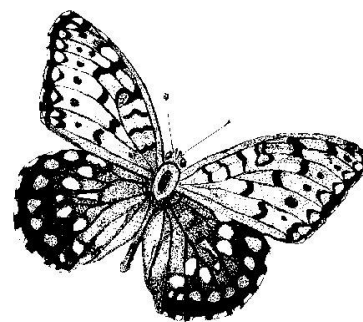

COMMONWEALTH of VIRGINIA

Natural Heritage Resources of Virginia: Rare Animals

Compiled by:
Steven M. Roble, Zoologist



Virginia Department of Conservation and Recreation
Division of Natural Heritage, Richmond, Virginia
Natural Heritage Technical Report 13-05. March 2013



Department of Conservation & Recreation

CONSERVING VIRGINIA'S NATURAL AND RECREATIONAL RESOURCES

**NATURAL HERITAGE RESOURCES OF VIRGINIA:
RARE ANIMAL SPECIES**

MARCH 2013

**VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION
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**Indiana Myotis
Red-cockaded Woodpecker
Regal Fritillary**

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**NATURAL HERITAGE RESOURCES OF VIRGINIA:
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INTRODUCTION

The Virginia Department of Conservation and Recreation's Division of Natural Heritage (DCR-DNH) was established to protect Virginia's biological diversity. DCR-DNH is the state's first comprehensive program for conservation of our natural heritage, and includes an intensive statewide biological inventory, field surveys, electronic and manual database management, environmental review capabilities, and natural area protection and stewardship. Through its actions the Division identifies Natural Heritage Resources that are in need of conservation attention while creating an efficient means of evaluating the impacts of balanced economic growth. Natural Heritage Resources are defined in the Virginia Natural Area Preserves Act of 1989 (Section 10.1-209 through 217, Code of Virginia), as the habitat of rare, threatened, and endangered plant and animal species; exemplary natural communities, habitats, and ecosystems; and other natural features of the Commonwealth.

To achieve this protection, DCR-DNH maintains lists of the most significant elements of our natural diversity. These lists focus the Division's inventory on the Natural Heritage Resources most likely to be lost without conservation action in the near future. Most importantly, these lists are useful not only for DCR-DNH, but can be used by other agencies, organizations, and individuals to assist in the determination of actions in protection and development decision-making. In formulating these lists, the Division uses information from previous studies, museum records, observations and opinions of experts, DCR-DNH staff scientists, and field inventories.

The Virginia Rare Animal List contains information on the legal and biological status of Virginia's rarest known native animals, including vertebrates, insects, and selected other invertebrate groups. This list includes those species that are believed to be sufficiently rare or threatened to merit an inventory of their status and locations. Certain marine species that are listed as federally endangered or threatened are only included in the appendices. Only those species that use discrete habitat patches or can directly benefit from habitat protection are included on the main taxonomic lists.

Natural Heritage Resource lists are necessarily dynamic, with updates occurring as new data become available. Such revisions assure the most current knowledge of the status of Virginia's animals. Animals are added to the list when it is determined that they have become rare or threatened to such an extent that their continued existence in the Commonwealth is in jeopardy. Animals are deleted from the list when additional field surveys or other new data indicate they are more common than previously believed and do not warrant priority conservation efforts.

The watch lists that are included in this report contain information on the biological status of animal species that are uncommon or of uncertain status in Virginia. More information is needed on most of these species, which may or may not be of high conservation concern at this time. Some species included on the watch lists were formerly on the Rare Animal List but have been determined to be more common than previously believed. Other species on the watch lists are declining and may warrant placement on the Rare Animal List in the future if their populations continue to decline.

All animals that are officially protected by federal or state endangered species acts are included in this list (except as noted above). Federally listed species are protected by the Endangered Species Act of 1973, as amended. The U.S. Department of the Interior's Fish and Wildlife Service administers the Act, listing and protecting federally endangered and threatened species. The Virginia Department of Game and Inland Fisheries has the regulatory responsibility for the listing and protection of the state's endangered and threatened animals (excluding the Class Insecta) under the Virginia Endangered Species Act (Section 29.1-564 through 570, Code of Virginia). The Office of Plant Protection within the Virginia Department of Agriculture and Consumer Services has regulatory responsibility for the listing and protection of the state's insects (and plants) under the Virginia Endangered Plant and Insect Act (Section 3.1-1020 through 1030, Code of Virginia). DCR-DNH is a primary source of recommendations to each of the regulatory agencies for species that are in need of listing as endangered or threatened.

The Virginia Department of Conservation and Recreation, the U.S. Fish and Wildlife Service, the Virginia Department of Game and Inland Fisheries, and the Virginia Department of Agriculture and Consumer Services work cooperatively to insure the continued survival of Virginia's diverse fauna and other elements of natural diversity. The Division of Natural Heritage also works closely with many other state and federal agencies, local governments, conservation organizations, and many other organizations and individuals to seek adequate protection of Virginia's natural heritage.

LIST FORMAT

The Rare Animal List is sorted by broad taxonomic groups and then ordered alphabetically by scientific name within each group. The list format consists of six fields: scientific name, common name, global rank, state rank, federal status, and state status. These fields are also used in the lists appearing in Appendices 1-5. To aid in the interpretation of the lists, a brief explanation of each field and a summary of abbreviations follow.

Column 1. Scientific name:

Nomenclature of animals is not contained in any single source. The most recent taxonomic sources are examined by the staff zoologist and, when necessary, direct consultations with experts are used to maintain the most scientifically accepted names for all animal groups. Divergences from these opinions are rare and generally occur only while an ongoing taxonomic study is being conducted. Contact the staff zoologist if you have questions or comments regarding the scientific names used herein.

Column 2. Common name:

A common name is provided for the convenience of the user. Standard common names have been developed and universally adopted for only a few animal groups; therefore, the user is cautioned to use scientific names whenever possible. The common names for most vertebrates and a few selected aquatic invertebrate groups (e.g., mussels) are recognized as stable. Most invertebrate species lack common names and it may not be practical to provide such names. They are usually indicated in the list as “a caddisfly”, “a millipede”, etc. The primary sources of common names applied to species in selected groups included in this list can be found on page 6. Many other common names that appear in the list, especially those of invertebrates, are not widely used or universally accepted.

Column 3. Global rank:

Global ranks are assigned by a consensus of the network of natural heritage programs, scientific experts, and NatureServe (a non-profit conservation organization) to designate the rangewide rarity of a species or subspecies. This system was originally developed by The Nature Conservancy and is widely used by other agencies (e.g., U.S. Fish and Wildlife Service, U.S. Forest Service) and organizations as the best available scientific and objective assessment of an animal's rarity and the level of threat to its existence. The ranks are assigned after considering a suite of factors including the number of occurrences (populations), number of individuals, and severity of threats to the species and its habitats. Global ranks found in the Rare Animal List are explained below:

- G1 Extremely rare and critically imperiled with 5 or fewer occurrences or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.
- G2 Very rare and imperiled with 6 to 20 occurrences or few remaining individuals; or because of some factor(s) making it vulnerable to extinction.
- G3 Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range; or vulnerable to extinction because of other factors. Usually fewer than 100 occurrences are documented.
- G4 Common and apparently secure globally, although it may be rare in parts of its range, especially at the periphery.
- G5 Very common and demonstrably secure globally, although it may be rare in parts of its range, especially at the periphery.
- GH Formerly part of the world's fauna with some expectation that it may be rediscovered; generally applies to species that have not been verified for an extended period (usually >15 years) and for which some inventory has been attempted recently.
- GX Believed to be extinct throughout its range with virtually no likelihood of rediscovery.

- GU Possibly rare, but status uncertain and more data needed.
- G? Unranked, or, if following a numerical ranking, rank uncertain (e.g., G3?).
- G_G_ The rank is uncertain, but considered to be within the indicated range (e.g., G2G4) of ranks (also, T_T_).
- G_Q Taxon has a questionable taxonomic assignment (e.g., G3Q) and may prove to be invalid upon further study.
- G_T_ Signifies the rank of a subspecies (e.g., G5T1 would apply to a subspecies if the species is demonstrably secure globally (G5) but the subspecies warrants a rank of T1, critically imperiled.)

Column 4. State rank:

State ranks are assigned in a manner similar to that described for global ranks, with values that generally range from S1-S5, but consider only factors within the political boundaries of Virginia. For example, an animal that is endemic to Virginia (found nowhere else in the world) will have the same global and state ranks, whereas a species that may be common in the northeastern United States but only known from a few occurrences in Virginia will have global and state ranks that differ. State ranks found in the Rare Animal List are explained below:

- S1 Extremely rare and critically imperiled with 5 or fewer occurrences or very few remaining individuals in Virginia; or because of some factor(s) making it especially vulnerable to extirpation in Virginia.
- S2 Very rare and imperiled with 6 to 20 occurrences or few remaining individuals in Virginia; or because of some factor(s) making it vulnerable to extirpation in Virginia.
- S3 Rare to uncommon in Virginia with between 20 and 100 occurrences; may have fewer occurrences if found to be common or abundant at some of these locations; may be somewhat vulnerable to extirpation in Virginia.
- S4 Common and apparently secure in Virginia, although it may be rare in parts of its range.
- SH Formerly part of Virginia's fauna with some expectation that it may be rediscovered; generally applies to species that have not been verified in the state for an extended period (usually >15 years) and for which some inventory has been attempted recently.
- SX Believed to be extirpated from Virginia with virtually no likelihood of rediscovery.
- SU Possibly rare, but status uncertain and more data needed.
- S_? Rank uncertain. For example the rank S2? denotes a species that may range from S1 to S3.
- S_S_ Rank is uncertain, but considered to be within the indicated range of ranks (e.g., S2S4).
- S_B Breeding status of an animal (primarily used for birds) in Virginia; these species typically inhabit Virginia only during the breeding season.
- S_B/S_N Breeding and nonbreeding status of an animal (primarily used for birds) in Virginia, when they differ.
- SNA A conservation status rank is not applicable because the element is not a suitable target for conservation activities in Virginia (includes accidental species, transients, exotics, etc.).

Column 5. Federal status:

Federal status is determined by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. This status is used for all animals listed as endangered or threatened by the U.S. government and receiving protection under the federal Endangered Species Act. The list also notes those species that have been formally proposed for listing or are currently candidates under consideration for listing. The federal status formerly known as “Category 2, candidate species” was abolished on February 28, 1996; species formerly designated as “Category 1, candidate species” are now referred to simply as “candidate species.”

- LE Listed Endangered. A taxon threatened with extinction throughout all or a significant portion of its range.
- LT Listed Threatened. A taxon likely to become endangered in the foreseeable future.
- LT/SA Listed as Threatened due to Similarity of Appearance. The species so closely resembles an endangered or threatened species or population that enforcement personnel of the U.S. Fish and Wildlife Service cannot readily distinguish between the taxa (e.g., the northern population of the bog turtle is federally listed as endangered, but turtles from the southern population, which includes Virginia, are not readily distinguishable from them).
- LT/PDL Listed as Threatened but proposed for delisting. The U.S. Fish and Wildlife Service has proposed that this species be removed from the list of Endangered and Threatened wildlife. However, at the present time, the species is still listed as Threatened pending further action and is thus protected under the Endangered Species Act.
- PE Proposed Endangered. A taxon proposed for listing as endangered.
- PT Proposed Threatened. A taxon proposed for listing as threatened.
- C Candidate. There is enough available information to propose the species for listing, but listing is “precluded by other pending proposals of higher priority”. (Formerly Candidate, Category 1)

Column 6. State status:

State status is determined by the Virginia Department of Game and Inland Fisheries (all animals except insects) and the Virginia Department of Agriculture and Consumer Services (insects only). The informal category of “Special Concern” species that was previously maintained by the Virginia Department of Game and Inland Fisheries was abolished by that agency on January 1, 2011.

- LE Listed Endangered; defined as a species that is in danger of extinction throughout all or a significant portion of its range.
- LT Listed Threatened; defined as a species that is likely to become endangered within the foreseeable future.

The following table summarizes the ranks and legal status of the rarest animals tracked by the Virginia Department of Conservation and Recreation, Division of Natural Heritage (pages 7-29 of this list).

Rank ^a	Fish	Amphibians	Reptiles	Birds ^b	Mammals	Invertebrates
GH	0	0	0	0	1	5
G1	8	1	1	0	1	180
G2	10	3	0	1	4	125
G3	15	4	4	4	6	138
SX	3	0	0	0	1	4
SH	2	0	0	5	0	58
S1	31	5	9	38	11	368
S2	36	14	5	24	4	350
Totals	72	19	14	67	16	782
Legal Status						
FE	4	1	1	2	7	29
FT	4	0	2	1	0	2
PE	0	0	0	0	0	2
SE	8	2	4	5	11	47
ST	14	2	3	7	1	15

^aRounded ranks (e.g., G1G2 is combined with G1, S2S3 with S2, G2G4 is treated as G3, S1S3 is treated as S2, etc.); also T ranks are treated as equivalent to G ranks for the purposes of this table.

^bBreeding ranks used for S ranks of birds in this table.

Changes in legal status since the June 2010 DCR rare animal list

Delistings:

Bald Eagle – this species is no longer listed as endangered or threatened at either the state or federal level

New Listings:

Black Rail – State Endangered (Virginia Department of Game and Inland Fisheries; effective January 1, 2013)
 Rayed Bean (mussel) – Federally Endangered (U.S. Fish and Wildlife Service; effective February 14, 2012)
 Snuffbox (mussel) – Federally Endangered (U.S. Fish and Wildlife Service; effective February 14, 2012)
 Sheepsnose (mussel) – Federally Endangered (U.S. Fish and Wildlife Service; effective March 13, 2012)
 Spectaclecase (mussel) – Federally Endangered (U.S. Fish and Wildlife Service; effective March 13, 2012)
 Atlantic Sturgeon – Chesapeake Bay population listed as Endangered (National Marine Fisheries Service; effective February 6, 2012)
 Virginia Northern Flying Squirrel – Federally Endangered status was reinstated in June 2011 per court order (previously delisted by the U.S. Fish and Wildlife Service in August 2008)

Taxonomic changes affecting listed species:

Blackside Dace – scientific name changed from *Phoxinus cumberlandensis* to *Chrosomus cumberlandensis*

Tennessee Dace – scientific name changed from *Phoxinus tennesseensis* to *Chrosomus tennesseensis*

Longhead Darter (*Percina macrocephala*) - currently listed as state threatened but Virginia populations are now referable to the newly described Sickie Darter (*Percina williamsi*)

Tan Riffleshell (*Epioblasma florentina walkeri*) - currently listed as federally and state endangered but Virginia populations are now referable to the newly described Golden Riffleshell (*Epioblasma florentina aureola*)

PRIMARY SOURCES OF COMMON NAMES

Fish

Nelson, J.S., E.J. Crossman, H. Espinosa-Pérez, L.T. Findley, C.R. Gilbert, R.N. Lea, and J.D. Williams. 2004. Common and Scientific Names of Fishes from the United States, Canada, and Mexico. Sixth Edition. American Fisheries Society, Special Publication 29, Bethesda, Maryland. 386 pp.

Amphibians and Reptiles

Crother, B.I. (editor). 2008. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding. 6th Edition. Society for the Study of Amphibians and Reptiles, Herpetological Circular Number 37. 84 pp.

Birds

American Ornithologists' Union. 1998. Check-list of North American Birds. Seventh Edition. American Ornithologists' Union, Washington, D.C. 829 pp. [as modified by subsequent supplements and corrections published in *The Auk*].

Mammals

Baker, R.J., L.C. Bradley, R.D. Bradley, J.W. Dragoo, M.D. Engstrom, R.S. Hoffmann, C.A. Jones, F. Reid, D.W. Rice, and C. Jones. 2003. Revised Checklist of North American Mammals North of Mexico, 2003. Texas Tech University Museum, Occasional Paper Number 229. 23 pp.

Gastropoda and Bivalvia

Turgeon, D.D., J.F. Quinn, Jr., A.E. Bogan, E.V. Coan, F.G. Hochberg, W.G. Lyons, P.M. Mikkelsen, R.J. Neves, C.F.E. Roper, G. Rosenberg, B. Roth, A. Scheltema, M.J. Sweeney, F.G. Thompson, M. Vecchione, and J.D. Williams. 1998. Common and Scientific Names of Aquatic Invertebrates from the United States and Canada: Mollusks. 2nd Edition. American Fisheries Society, Special Publication 26, Bethesda, Maryland. 526 pp.

Crustacea

McLaughlin, P.A., D.K. Camp, M.V. Angel, E.L. Bousfield, P. Brunel, R.C. Brusca, D. Cadien, A.C. Cohen, K. Conlan, L.G. Eldredge, D.L. Felder, J.W. Goy, T. Haney, B. Hann, R.W. Heard, E.A. Hendrycks, H.H. Hobbs III, J.R. Holsinger, B. Kensley, D.R. Laubitz, S.E. LeCroy, R. Lemaitre, R.F. Maddocks, J.W. Martin, P. Mikkelsen, E. Nelson, W.A. Newman, R.M. Overstreet, W.J. Poly, W.W. Price, J.W. Reid, A. Robertson, D.C. Rogers, A. Ross, M. Schotte, F. Schram, C. Shih, L. Watling, G.D.F. Wilson, and D.D. Turgeon. 2005. Common and Scientific Names of Aquatic Invertebrates from the United States and Canada: Crustaceans. American Fisheries Society, Special Publication 31, Bethesda, Maryland. 545 pp.

Odonata

Paulson, D.R. and S.W. Dunkle. 1999 (updated 2012). A Checklist of North American Odonata. Slater Museum of Natural History, University of Puget Sound Occasional Paper 56. 86 pp.

Plecoptera

Stark, B.P., K.W. Stewart, S.W. Szczytko, and R.W. Baumann. 1998. Common names of stoneflies (Plecoptera) from the United States and Canada. Ohio Biological Survey Notes 1: 1-18.

Coleoptera

Pearson, D.L. 2004. A list of suggested common English names for species of tiger beetles occurring in Canada and the U.S. *Cicindela* 36(1-2): 31-40.

Lepidoptera

Covell, C.V., Jr. 2005. A Field Guide to Moths of Eastern North America. Virginia Museum of Natural History Special Publication Number 12. Martinsville, VA. 496 pp.

Glassberg, J. 1999. Butterflies Through Binoculars – The East: A Field Guide to the Butterflies of Eastern North America. Oxford University Press, New York, NY. 242 pp.

VA DEPARTMENT OF CONSERVATION & RECREATION
DIVISION OF NATURAL HERITAGE

VIRGINIA RARE ANIMAL LIST

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
VERTEBRATES					
FISH					
<i>Acipenser brevirostrum</i>	Shortnose sturgeon	G3	SHB/S1N	LE	LE
<i>Acipenser oxyrinchus</i> = <i>Acipenser oxyrhynchus</i>	Atlantic sturgeon	G3	S2	LE	LE
<i>Ameiurus brunneus</i>	Snail bullhead	G4	S2		
<i>Ammocrypta clara</i> = <i>Etheostoma clarum</i>	Western sand darter	G3	S1		LT
<i>Aplodinotus grunniens</i>	Freshwater drum	G5	S2		
<i>Chrosomus cumberlandensis</i> = <i>Phoxinus cumberlandensis</i>	Blackside dace	G2	S1	LT	LT
<i>Chrosomus tennesseensis</i> = <i>Phoxinus tennesseensis</i>	Tennessee dace	G3	S1		LE
<i>Chrosomus</i> sp. 1	Clinch dace	G1	S1		
<i>Cottus baileyi</i>	Black sculpin	G4Q	S2		
<i>Cottus cognatus</i>	Slimy sculpin	G5	S2		
<i>Cottus</i> sp. 1	Bluestone sculpin	G2	S2		
<i>Cottus</i> sp. 4	Clinch sculpin	G1G2	S1S2		
<i>Cottus</i> sp. 5	Holston sculpin	G2	S2		
<i>Cyprinella labrosa</i> = <i>Hybopsis labrosa</i>	Thicklip chub	G4	SH		
<i>Cyprinella whipplei</i> = <i>Notropis whipplei</i>	Steelcolor shiner	G5	S1		LT
<i>Enneacanthus chaetodon</i>	Blackbanded sunfish	G4	S1		LE
<i>Erimonax monachus</i> = <i>Cyprinella monacha</i> , <i>Hybopsis monacha</i>	Spotfin chub (= turquoise shiner)	G2	S1	LT	LT
<i>Erimystax cahni</i> = <i>Hybopsis cahni</i>	Slender chub	G1	S1	LT	LT
<i>Erimyzon sucetta</i>	Lake chubsucker	G5	S2		
<i>Etheostoma acuticeps</i>	Sharphead darter	G3	S1		LE
<i>Etheostoma brevispinum</i>	Carolina fantail darter	G4	S1		
<i>Etheostoma caeruleum</i>	Rainbow darter	G5	S2		
<i>Etheostoma camurum</i>	Bluebreast darter	G4	S2		
<i>Etheostoma chlorobranchium</i>	Greenfin darter	G4	S1		LT
<i>Etheostoma cinereum</i>	Ashy darter	G2G3	S1		
<i>Etheostoma collis</i>	Carolina darter	G3	S2		LT
<i>Etheostoma denoncourti</i> = <i>Etheostoma tippecanoe</i> (in part)	Golden darter	G2	S1		LT
<i>Etheostoma jessiae</i> = <i>Etheostoma stigmaeum jessiae</i>	Blueside darter	G4Q	S1		
<i>Etheostoma meadiae</i> = <i>Etheostoma stigmaeum meadiae</i>	Bluespar darter	G4	S2		
<i>Etheostoma osburni</i>	Candy darter	G3	S1		
<i>Etheostoma percunurum</i>	Duskytail darter	G1	S1	LE	LE
<i>Etheostoma swannanoa</i>	Swannanoa darter	G4	S2		
<i>Etheostoma variatum</i>	Variagate darter	G5	S1		LE
<i>Etheostoma vulneratum</i>	Wounded darter	G3	S2S3		
<i>Fundulus rathbuni</i>	Speckled killifish	G4	S2		
<i>Hybopsis hypsinotus</i> = <i>Notropis hypsinotus</i>	Highback chub	G4	S2		
<i>Ichthyomyzon bdellium</i>	Ohio lamprey	G3G4	S2		
<i>Ichthyomyzon greeleyi</i>	Mountain brook lamprey	G3G4	S2		

VA DEPARTMENT OF CONSERVATION & RECREATION
DIVISION OF NATURAL HERITAGE

VIRGINIA RARE ANIMAL LIST

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
FISH (continued)					
<i>Labidesthes sicculus</i>	Brook silverside	G5	S2		
<i>Lythrurus lirus</i> = <i>Notropis lirus</i>	Mountain shiner	G4	S2S3		
<i>Moxostoma carinatum</i>	River redhorse	G4	S2S3		
<i>Notropis alborus</i>	Whitemouth shiner	G4	S1		LT
<i>Notropis ariommus</i>	Popeye shiner	G3	S2S3		
<i>Notropis atherinoides</i>	Emerald shiner	G5	S1S2		LT
<i>Notropis bifrenatus</i>	Bridle shiner	G3	S2		
<i>Notropis semperasper</i>	Roughhead shiner	G2G3	S2S3		
<i>Notropis spectrunculus</i>	Mirror shiner	G4	S2		
<i>Notropis stramineus</i>	Sand shiner	G5	S2		
<i>Noturus eleutherus</i>	Mountain madtom	G4	S2S3		
<i>Noturus flavipinnis</i>	Yellowfin madtom	G1	S1	LT	LT
<i>Noturus flavus</i>	Stonecat	G5	S2		
<i>Noturus gilberti</i>	Orangefin madtom	G2	S2		LT
<i>Noturus insignis</i> ssp. 1	Spotted margined madtom	G5T1Q	S1		
<i>Percina aurantiaca</i>	Tangerine darter	G4	S2S3		
<i>Percina bimaculata</i>	Chesapeake logperch	G1G2	SX		
<i>Percina burtoni</i>	Blotchside logperch	G2G3	S1		
<i>Percina copelandi</i>	Channel darter	G4	S2		
<i>Percina crassa</i>	Piedmont darter	G4	S1		
<i>Percina evides</i>	Gilt darter	G4	S2		
<i>Percina maculata</i>	Blackside darter	G5	SX		
<i>Percina rex</i>	Roanoke logperch	G1G2	S1S2	LE	LE
<i>Percina sciera</i>	Dusky darter	G5	S1S2		
<i>Percina williamsi</i> = <i>Percina macrocephala</i> (in part)	Sickle darter	G2	S1S2		LT*
<i>Percopsis omiscomaycus</i>	Trout-perch	G5	SX		
<i>Phenacobius crassilabrum</i>	Fatlips minnow	G3G4	S2		
<i>Phenacobius mirabilis</i>	Suckermouth minnow	G5	S1S2		
<i>Phenacobius teretulus</i>	Kanawha minnow	G3G4	S2S3		
<i>Pimephales vigilax</i>	Bullhead minnow	G5	S1		
<i>Polyodon spathula</i>	Paddlefish	G4	S1		LT
<i>Sander canadensis</i> = <i>Stizostedion canadense</i>	Sauger	G5	S2S3		
<i>Scartomyzon</i> sp. 1	Brassy jumprock	G4	S1S2		
<i>Thoburnia hamiltoni</i> = <i>Moxostoma hamiltoni</i>	Rustyside sucker	G3	S2		

*Listed as state threatened under the name Longhead darter (*Percina macrocephala*)

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SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
AMPHIBIANS					
<i>Ambystoma mabeei</i>	Mabee's salamander	G4	S1S2		LT
<i>Ambystoma talpoideum</i>	Mole salamander	G5	S2		
<i>Ambystoma tigrinum</i>	Tiger salamander	G5	S1		LE
<i>Anaxyrus quercicus</i> = <i>Bufo quercicus</i>	Oak toad	G5	S2		
<i>Cryptobranchus alleganiensis</i>	Hellbender	G3G4	S2S3		
<i>Desmognathus marmoratus</i> = <i>Leurognathus marmoratus</i>	Shovel-nosed salamander	G4	S2		
<i>Desmognathus organi</i>	Northern Pygmy salamander	G3	S2		
<i>Eurycea wilderae</i>	Blue Ridge two-lined salamander	G5	S2		
<i>Hyla gratiosa</i>	Barking treefrog	G5	S1		LT
<i>Necturus maculosus</i>	Mudpuppy	G5	S2		
<i>Necturus punctatus</i>	Dwarf waterdog	G4	S2S3		
<i>Plethodon hubrichti</i>	Peaks of Otter salamander	G2	S2		
<i>Plethodon punctatus</i>	Cow Knob salamander	G3	S2		
<i>Plethodon shenandoah</i>	Shenandoah salamander	G1	S1	LE	LE
<i>Plethodon sherando</i>	Big Levels salamander	G2	S2		
<i>Plethodon ventralis</i>	Southern zigzag salamander	G4	S1		
<i>Plethodon virginia</i>	Shenandoah Mountain salamander	G2G3	S2		
<i>Plethodon welleri</i>	Weller's salamander	G3	S2		
<i>Siren intermedia</i>	Lesser siren	G5	S2S3		
REPTILES					
<i>Apalone spinifera</i> = <i>Trionyx spiniferus</i>	Spiny softshell	G5	S2		
<i>Caretta caretta</i>	Loggerhead (sea turtle)	G3	S1B/S1N	LT	LT
<i>Crotalus horridus</i> [Coastal Plain population]	Canebrake rattlesnake	G4	S1		LE
<i>Deirochelys reticularia</i>	Chicken turtle	G5	S1		LE
<i>Glyptemys insculpta</i> = <i>Clemmys insculpta</i>	Wood turtle	G3	S2		LT
<i>Glyptemys muhlenbergii</i> = <i>Clemmys muhlenbergii</i>	Bog turtle	G3	S2	LT/SA	LE
<i>Lampropeltis nigra</i> = <i>Lampropeltis getula nigra</i>	Eastern black kingsnake	G5	S2		
<i>Lepidochelys kempii</i>	Kemp's ridley (sea turtle)	G1	S1N	LE	LE
<i>Ophisaurus ventralis</i>	Eastern glass lizard	G5	S1		LT
<i>Pituophis melanoleucus</i>	Pine snake	G4	S1?		
<i>Regina rigida</i>	Glossy crayfish snake	G5	S1		
<i>Sternotherus minor</i>	Loggerhead musk turtle	G5	S2		
<i>Trachemys scripta troostii</i>	Cumberland slider	G5T4	S1		
<i>Virginia valeriae pulchra</i>	Mountain earthsnake	G5T3T4	S1		

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BIRDS					
<i>Actitis macularius</i>	Spotted Sandpiper	G5	S2B		
<i>Aegolius acadicus</i>	Northern Saw-whet Owl	G5	S1B/S2N		
<i>Ammodramus caudacutus</i>	Saltmarsh Sparrow	G4	S2B/S3N		
<i>Ammodramus henslowii</i>	Henslow's Sparrow	G4	S1B		LT
<i>Anas discors</i>	Blue-winged Teal	G5	S1B/S2N		
<i>Anas strepera</i>	Gadwall	G5	S2B/S4N		
<i>Aquila chrysaetos</i>	Golden Eagle	G5	SHB/S1N		
<i>Ardea alba</i> = <i>Casmerodius albus</i>	Great Egret	G5	S2S3B/S3N		
<i>Asio flammeus</i>	Short-eared Owl	G5	S1B/S2N		
<i>Asio otus</i>	Long-eared Owl	G5	S1		
<i>Bartramia longicauda</i>	Upland Sandpiper	G5	S1B		LT
<i>Botaurus lentiginosus</i>	American Bittern	G4	S1B/S2N		
<i>Catharus guttatus</i>	Hermit Thrush	G5	S1B/S5N		
<i>Catharus ustulatus</i>	Swainson's Thrush	G5	S1B		
<i>Charadrius melodus</i>	Piping Plover	G3	S2B/S1N	LT	LT
<i>Charadrius wilsonia</i>	Wilson's Plover	G5	S1B		LE
<i>Chondestes grammacus</i>	Lark Sparrow	G5	SHB		
<i>Circus cyaneus</i>	Northern Harrier	G5	S1S2B/S3N		
<i>Cistothorus platensis</i>	Sedge Wren	G5	S1B/S1S2N		
<i>Contopus cooperi</i> = <i>Nuttallornis borealis</i>	Olive-sided Flycatcher	G4	SHB		
<i>Dolichonyx oryzivorus</i>	Bobolink	G5	S1B		
<i>Egretta caerulea</i>	Little Blue Heron	G5	S2B/S3N		
<i>Egretta thula</i>	Snowy Egret	G5	S2B/S3N		
<i>Egretta tricolor</i>	Tricolored Heron	G5	S2B/S3N		
<i>Empidonax alnorum</i>	Alder Flycatcher	G5	S1S2B		
<i>Empidonax flaviventris</i>	Yellow-bellied Flycatcher	G5	S1B		
<i>Eudocimus albus</i>	White Ibis	G5	S1B		
<i>Falco peregrinus</i>	Peregrine Falcon	G4	S1B/S2N		LT
<i>Fulica americana</i>	American Coot	G5	S1B/S5N		
<i>Gallinula galeata</i> = <i>Gallinula chloropus</i> (in part)	Common Gallinule	G5	S1B/S1N		
<i>Gelochelidon nilotica</i> = <i>Sterna nilotica</i>	Gull-billed Tern	G5	S2B		LT
<i>Geothlypis philadelphia</i> = <i>Oporornis philadelphia</i>	Mourning Warbler	G5	S1B		
<i>Haemorhous purpureus</i> = <i>Carpodacus purpureus</i>	Purple Finch	G5	S1B/S5N		
<i>Himantopus mexicanus</i>	Black-necked Stilt	G5	S1B		
<i>Hydroprogne caspia</i> = <i>Sterna caspia</i>	Caspian Tern	G5	S1B/S2N		
<i>Ictinia mississippiensis</i>	Mississippi Kite	G5	S1B		
<i>Lanius ludovicianus</i>	Loggerhead Shrike	G4	S2B/S3N		LT
<i>Laterallus jamaicensis</i>	Black Rail	G4	S1B/S1N		LE
<i>Limothlypis swainsonii</i>	Swainson's Warbler	G4	S2B		
<i>Loxia curvirostra</i>	Red Crossbill	G5	S1		
<i>Melospiza georgiana georgiana</i>	Swamp Sparrow	G5T5	S1B/S4S5N		
<i>Melospiza georgiana nigrescens</i>	Coastal Plain Swamp Sparrow	G5T3	S1B		
<i>Mergus merganser</i>	Common Merganser	G5	S1B/S4N		
<i>Nyctanassa violacea</i> = <i>Nycticorax violaceus</i>	Yellow-crowned Night-heron	G5	S2S3B/S3N		
<i>Oreothlypis ruficapilla</i> = <i>Vermivora ruficapilla</i>	Nashville Warbler	G5	S1B		

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BIRDS (continued)					
<i>Parkesia noveboracensis</i> = <i>Seiurus noveboracensis</i>	Northern Waterthrush	G5	S1B		
<i>Pelecanus occidentalis</i>	Brown Pelican	G4	S2B/S3N		
<i>Peucaea aestivalis</i> = <i>Aimophila aestivalis</i>	Bachman's Sparrow	G3	S1B		LT
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S1	LE	LE
<i>Plegadis falcinellus</i>	Glossy Ibis	G5	S2B/S1N		
<i>Podilymbus podiceps</i>	Pied-billed Grebe	G5	S1S2B/S4N		
<i>Porzana carolina</i>	Sora	G5	S1B/S2N		
<i>Rallus elegans</i>	King Rail	G4	S2B/S3N		
<i>Rallus limicola</i>	Virginia Rail	G5	S2B/S3N		
<i>Regulus satrapa</i>	Golden-crowned Kinglet	G5	S2B/S5N		
<i>Rynchops niger</i>	Black Skimmer	G5	S2B/S1N		
<i>Setophaga fusca</i> = <i>Dendroica fusca</i>	Blackburnian Warbler	G5	S2B		
<i>Setophaga magnolia</i> = <i>Dendroica magnolia</i>	Magnolia Warbler	G5	S2B		
<i>Setophaga virens waynei</i> = <i>Dendroica virens waynei</i>	Wayne's Black-throated Green Warbler	G5TU	S1B?		
<i>Sitta canadensis</i>	Red-breasted Nuthatch	G5	S2B/S4N		
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	G5	S1B/S4N		
<i>Sterna dougallii</i>	Roseate Tern	G4	SHB	LE	LE
<i>Sternula antillarum</i> = <i>Sterna antillarum</i>	Least Tern	G4	S2B		
<i>Thalasseus maximus</i> = <i>Sterna maxima</i>	Royal Tern	G5	S2B		
<i>Thalasseus sandvicensis</i> = <i>Sterna sandvicensis</i>	Sandwich Tern	G5	S1B		
<i>Thryomanes bewickii altus</i>	Appalachian Bewick's Wren	G5T2Q	SHB/S1N		LE
<i>Troglodytes hiemalis</i> = <i>Troglodytes troglodytes</i> (in part)	Winter Wren	G5	S2B/S4N		
MAMMALS					
<i>Corynorhinus rafinesquii macrotis</i> = <i>Plecotus rafinesquii macrotis</i>	Eastern big-eared bat	G3G4T?	S2		LE
<i>Corynorhinus townsendii virginianus</i> = <i>Plecotus townsendii virginianus</i>	Virginia big-eared bat	G3G4T2	S1	LE	LE
<i>Erethizon dorsatum</i>	North American porcupine	G5	S1		
<i>Glaucomys sabrinus coloratus</i>	Carolina northern flying squirrel	G5T2	S1	LE	LE
<i>Glaucomys sabrinus fuscus</i>	Virginia northern flying squirrel	G5T2	S1	LE*	LE
<i>Lepus americanus</i>	Snowshoe hare	G5	S1		LE
<i>Martes pennanti</i>	Fisher	G5	S1		
<i>Microtus chrotorrhinus carolinensis</i>	Southern rock vole	G4T3	S1		LE
<i>Myotis austroriparius</i>	Southeastern myotis (bat)	G3G4	S2		
<i>Myotis grisescens</i>	Gray myotis (bat)	G3	S1	LE	LE
<i>Myotis leibii</i>	Eastern small-footed myotis (bat)	G1G3	S2		
<i>Myotis sodalis</i>	Indiana bat (= social myotis)	G2	S1	LE	LE
<i>Puma concolor cougar</i> = <i>Felis concolor cougar</i>	Eastern cougar (= mountain lion, puma)	G5THQ	SX	LE	LE
<i>Sciurus niger cinereus</i>	Delmarva fox squirrel	G5T3	S1	LE	LE
<i>Sorex longirostris fisheri</i>	Dismal Swamp southeastern shrew	G5T4	S2		LT
<i>Sorex palustris punctulatus</i>	Southern water shrew	G5T3	S1S2		LE

*Delisted by the U.S. Fish and Wildlife Service in August 2008, but Endangered status was reinstated in June 2011 per court order.

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INVERTEBRATES					
TURBELLARIA (FLATWORMS)					
<i>Geocentrophora cavernicola</i>	A cave planarian	G1G2	S1		
<i>Procotyla typhlops</i>	A groundwater planarian	G1G2	S1S2		
<i>Sphalloplana chandleri</i>	Chandler's planarian	G1G2	S1		
<i>Sphalloplana consimilis</i>	Powell Valley planarian	G2G3	S1		
<i>Sphalloplana holsingeri</i>	Holsinger's groundwater planarian	G1G2	SH		
<i>Sphalloplana hypogea</i>	A groundwater planarian	G1G2	S1S2		
<i>Sphalloplana subtilis</i>	Bigger's groundwater planarian	G1G2	SH		
<i>Sphalloplana virginiana</i>	Rockbridge County cave planarian	G1	S1		
GASTROPODA (SNAILS)					
<i>Anguispira jessica</i>	Mountain disc	G3G4	S1		
= <i>Anguispira alternata jessica</i>					
<i>Discus nigrimontanus</i>	Black Mountain disc	G4	S1S3		
<i>Elimia arachnoidea</i>	Spider Elimia	G2	S2		LE
= <i>Goniobasis arachnoidea</i>					
<i>Euchemotrema leai</i>	Lowland pillsnail	G5	S1S3		
= <i>Stenotrema leai aliciae</i>					
<i>Fontigens bottimeri</i>	Appalachian springsnail	G2G3	S2S3		LE
<i>Fontigens morrisoni</i>	Virginia springsnail	G2	S2		LE
<i>Fontigens tarterea</i>	Organ cavesnail	G2	S1S2		
<i>Fumonelix christyi</i>	Glossy covert	G3	S1S3		
= <i>Mesodon christyi</i>					
<i>Fumonelix wheatleyi clingmanicus</i>	Clingman covert	G4T2T3	S1S2		
= <i>Mesodon clingmanicus</i>					
<i>Gastrocopta clappi</i>	Bluegrass snaggletooth	G4G5	S1S2		
= <i>Gastrocopta armifera clappi</i>					
<i>Gastrocopta pellucida</i>	Slim snaggletooth	G5	S1S3		
<i>Gastrodonta fonticula</i>	Appalachia bellytooth	G3G4	S1S3		
= <i>Gastrocopta interna fonticula</i>					
<i>Glyphyalinia picea</i>	Rust glyph	G3	S1S3		
<i>Glyphyalinia praecox</i>	Brilliant glyph	G4	S1S3		
<i>Glyphyalinia raderi</i>	Maryland glyph	G2	S1S2		
<i>Glyphyalinia sculptilis</i>	Suborb glyph	G4	S1		
<i>Glyphyalinia virginica</i>	Depressed glyph	G3	S2S3		
<i>Helicodiscus diadema</i>	Shaggy coil	G1	S1		LE
<i>Helicodiscus lirellus</i>	Rubble coil	G1	S1		LE
<i>Helicodiscus multidentis</i>	Twilight coil	G3	S2		
<i>Helicodiscus shimiki</i>	Temperate coil	G4G5	S1		
<i>Helicodiscus triodus</i>	Talus coil	G2	S1S2		
<i>Holsingeria unthinksensis</i>	Thankless ghostsnail (= Unthanks Cave snail)	G2	S2		LE
<i>Holsingeria</i> sp. 1	Skyline Caverns snail	G1Q	S1		
<i>Inflectarius kalmianus</i>	Brown globelet	G3	S1S3		
= <i>Mesodon kalmianus</i>					
<i>Io fluvialis</i>	Spiny riversnail	G2	S2		LT
<i>Leptoxis praerosa</i>	Onyx rocksnail	G5	S2		
= <i>Anculosa subglobosa</i>					
<i>Megapallifera wetherbyi</i>	Blotchy mantleslug	G2G3	S1?		
<i>Mesodon andrewsae</i>	Balsam globe	G3	S1		
<i>Mesodon elevatus</i>	Proud globe	G5	S2		
<i>Mesomphix subplanus</i>	Flat button	G3G4	S2		

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Snails (continued)					
<i>Millerelix plicata</i> = <i>Polygyra plicata</i>	Cumberland liptooth	G4	S1S3		
<i>Oxyloma subeffusum</i>	Chesapeake ambersnail	G3	S1		
<i>Pallifera hemphilli</i>	Black mantleslug	G4	S1		
<i>Pallifera varia</i>	Variable mantleslug	G2G4	S2?		
<i>Paravitrea blarina</i>	Shrew supercoil	G3	S1		
<i>Paravitrea dentilla</i>	Comb supercoil	G1	S1		
<i>Paravitrea hera</i>	Spirit supercoil	G1	S1		LE
<i>Paravitrea mira</i>	Funnel supercoil	G2	S2		
<i>Paravitrea placentula</i>	Glossy supercoil	G3	S1S3		
<i>Paravitrea pontis</i>	Natural Bridge supercoil	G3	S2		
<i>Paravitrea reesei</i>	Round supercoil	G3	S2		
<i>Paravitrea septadens</i>	Brown supercoil	G1	S1		LT
<i>Paravitrea seradens</i>	Barred supercoil	G3	S1S3		
<i>Paravitrea subtilis</i>	Slender supercoil	G2	S1S2		
<i>Patera panselenus</i> = <i>Mesodon panselenus</i>	Virginia bladetooth	G3	S2		
<i>Polygyriscus virginianus</i>	Virginia coil (=Virginia fringed mountain snail)	G1	S1	LE	LE
<i>Pomatiopsis cincinnatiensis</i>	Brown walker	G4	S2		
<i>Pupilla muscorum</i>	Widespread column	G5	S1		
<i>Somatogyrus virginicus</i>	Panhandle pebblesnail	G2G3	S1S2		
<i>Stagnicola neopalustris</i>	Piedmont pondsnailed	GH	SH		
<i>Stenotrema altispira</i>	Highland slitmouth	G3	S1		
<i>Stenotrema pilula</i>	Pygmy slitmouth	G3G4	S1		
<i>Stenotrema spinosum</i>	Carinate slitmouth	G4	S2		
<i>Striatura exigua</i>	Ribbed striate	G5	S2		
<i>Striatura milium</i>	Fine-ribbed striate	G5	S1S3		
<i>Triodopsis anteridon</i>	Carter threetooth	G3	S2S3		
<i>Triodopsis messana</i>	Pinhole threetooth	G4	S1S3		
<i>Triodopsis pendula</i>	Hanging Rock threetooth	G3	S1S3		
<i>Triodopsis picea</i>	Spruce Knob threetooth	G3	S1		
<i>Vallonia parvula</i>	Trumpet vallonia	G4	S1		
<i>Ventridens coelaxis</i>	Bidentate dome	G3	S2		
<i>Ventridens decussatus</i>	Crossed dome	G3	S1		
<i>Ventridens lawae</i>	Rounded dome	G4	S1S3		
<i>Ventridens pilsbryi</i>	Yellow dome	G4	S2?		
<i>Vertigo bollesiana</i>	Delicate vertigo	G4	S1S3		
<i>Vertigo clappi</i>	Cupped vertigo	G1G2	S1S2		
<i>Vertigo oralis</i>	Palmetto vertigo	G5	S1S3		
<i>Vertigo teskeyae</i>	Swamp vertigo	G5	S1S3		
<i>Vertigo ventricosa</i>	Five-tooth vertigo	G5	S1S3		
<i>Vitrinizonites latissimus</i>	Glassy grapeskin	G4	S2?		

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BIVALVIA (MUSSELS & CLAMS)					
Mussels					
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	G1G2	S1	LE	LE
<i>Alasmidonta marginata</i>	Elktoe	G4	S1S2		
<i>Alasmidonta varicosa</i>	Brook floater	G3	S1		LE
<i>Alasmidonta viridis</i> = <i>Alasmidonta minor</i>	Slippershell mussel	G4G5	S1		LE
<i>Cumberlandia monodonta</i>	Spectaclecase	G3	S1	LE	LE
<i>Cyprogenia stegaria</i> = <i>Cyprogenia irrorata</i>	Fanshell	G1Q	S1	LE	LE
<i>Dromus dromas</i>	Dromedary pearlymussel	G1	S1	LE	LE
<i>Elliptio crassidens</i>	Elephantear	G5	S1		LE
<i>Elliptio lanceolata</i>	Yellow lance	G2G3	S2S3		
<i>Elliptio roanokensis</i>	Roanoke slabshell	G3	S1		
<i>Epioblasma brevidens</i>	Cumberland combshell	G1	S1	LE	LE
<i>Epioblasma capsaeformis</i>	Oyster mussel	G1	S1	LE	LE
<i>Epioblasma florentina aureola</i> = <i>Epioblasma florentina walkeri</i> (in part)	Golden riffleshell	G1T1	S1	LE*	LE*
<i>Epioblasma torulosa gubernaculum</i>	Green-blossom pearlymussel	G2TX	SX	LE	LE
<i>Epioblasma triquetra</i>	Snuffbox	G3	S1	LE	LE
<i>Fusconaia cor</i> = <i>Fusconaia edgariana</i>	Shiny pigtoe	G1	S1	LE	LE
<i>Fusconaia cuneolus</i>	Fine-rayed pigtoe	G1	S1	LE	LE
<i>Fusconaia masoni</i>	Atlantic pigtoe	G2	S2		LT
<i>Hemistena lata</i> = <i>Lastena lata</i>	Cracking pearlymussel	G1	S1	LE	LE
<i>Lampsilis abrupta</i> = <i>Lampsilis orbiculata</i>	Pink mucket	G2	SX	LE	LE
<i>Lampsilis cariosa</i>	Yellow lampmussel	G3G4	S2		
<i>Lampsilis radiata</i>	Eastern lampmussel	G5	S2S3		
<i>Lasmigona holstonia</i>	Tennessee heelsplitter	G3	S1		LE
<i>Lasmigona subviridis</i>	Green floater	G3	S2		LT
<i>Lemiox rimosus</i> = <i>Conradilla caelata</i>	Birdwing pearlymussel	G1	S1	LE	LE
<i>Leptodea fragilis</i>	Fragile papershell	G5	S1		LT
<i>Lexingtonia subplana</i>	Virginia pigtoe	G1Q	SH		
<i>Ligumia recta</i> = <i>Ligumia recta latissima</i>	Black sandshell	G5	S2		LT
<i>Pegias fabula</i>	Little-winged pearlymussel	G1	S1	LE	LE
<i>Plethobasus cyphus</i>	Sheepnose	G3	S1	LE	LE
<i>Pleurobema collina</i>	James spiny mussel	G1	S1	LE	LE
<i>Pleurobema cordatum</i>	Ohio pigtoe	G4	S1		LE
<i>Pleurobema oviforme</i> = <i>Pleurobema maculatum</i>	Tennessee clubshell	G2G3	S2S3		
<i>Pleurobema plenum</i>	Rough pigtoe	G1	SH	LE	LE
<i>Pleurobema rubrum</i> = <i>Pleurobema pyramidatum</i>	Pyramid pigtoe	G2G3	SH		LE
<i>Pleuironaia dolabelloides</i> = <i>Lexingtonia dolabelloides</i>	Slabside pearlymussel	G2	S2	PE	LT
<i>Pleuironaia gibberum</i> = <i>Fusconaia barnesiana</i>	Tennessee pigtoe	G2G3	S2		
<i>Ptychobranchus subtentum</i>	Fluted Kidneyshell	G2	S2	PE	

*Virginia populations listed as federally and state endangered under the name Tan Riffleshell (*Epioblasma florentina walkeri*)

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Mussels (continued)					
<i>Quadrula cylindrica strigillata</i>	Rough rabbits foot	G3G4T2	S2	LE	LE
<i>Quadrula intermedia</i>	Cumberland monkeyface	G1	S1	LE	LE
<i>Quadrula pustulosa</i>	Pimple back	G5	S2		LT
<i>Quadrula sparsa</i>	Appalachian monkeyface	G1	S1	LE	LE
<i>Toxolasma lividum</i> = <i>Carunculina lividus</i> , <i>Carunculina glans</i>	Purple liliput	G3Q	SH		LE
<i>Tritogonia verrucosa</i>	Pistolgrip	G4G5	S2	LT	
<i>Truncilla truncata</i>	Deertoe	G5	S1		LE
<i>Villosa fabalis</i>	Rayed bean	G2	SX	LE	LE
<i>Villosa perpurpurea</i>	Purple bean	G1	S1	LE	LE
<i>Villosa trabalis</i>	Cumberland bean	G1	SX	LE	LE
Clams					
<i>Pisidium equilaterale</i>	Round peaclam	G3G5	S2		
ANNELIDA (SEGMENTED WORMS)					
<i>Spelaedrilus multiporus</i>	A cave lumbricolid worm	G1	S1		
<i>Stylodrilus beattiei</i>	A cave lumbricolid worm	G2G3	S1		
ARACHNIDA (SPIDERS, PSEUDOSCORPIONS & RELATIVES)					
Spiders					
<i>Amaurobius borealis</i>	An amaurobiid spider	G5	S1S3		
<i>Anahita punctulata</i>	Southeastern wandering spider	G4	S2		
<i>Anthrobia coylei</i>	Coyle's cave spider	G2?	S1		
<i>Anthrobia monmouthia</i> = <i>Anthrobia mammothia</i>	Mammoth Cave spider	G5	S1		
<i>Antrodiaetus robustus</i>	Robust trapdoor spider	G3?	S2		
<i>Barronopsis jeffersi</i>	A funnel-web spider	G3	S1S3		
<i>Bathyphantes weyeri</i>	A cave spider	G4	S1		
<i>Castianeira trilineata</i>	A two-clawed hunting spider	G4?	S1S3		
<i>Clubiona spiralis</i>	A two-clawed hunting spider	G4	S1S3		
<i>Drassyllus</i> sp. 1	A gnaphosid spider	G1G3	S1S3		
<i>Hypochilus pococki</i>	Pocock's lampshade-web spider	G4G5	S2S3		
<i>Hypochilus thorelli</i>	Thorell's lampshade-web spider	G4	S1		
<i>Islandiana muma</i>	A cave spider	G1G2	S1		
<i>Microhexura montivaga</i>	Spruce-fir moss spider	G1	S1	LE	LE
<i>Nesticus mimus</i>	A cave spider	G2	S1		
<i>Nesticus paynei</i>	A cave spider	G3G4	S1		
<i>Pisaurina dubia</i>	A nursery-web spider	G4	S1S3		
<i>Xysticus emertoni</i>	Emerton's crab spider	G5	S1S3		
Mites					
<i>Traegaardia paralleloseta</i> = <i>Foveacheles paralleloseta</i>	A cave mite	G1	S1		

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Pseudoscorpions					
<i>Apochthonius coecus</i>	A cave pseudoscorpion	G1G2	S1		
<i>Apochthonius holsingeri</i>	A cave pseudoscorpion	G1G2	S1		
<i>Chitrella superba</i>	A cave pseudoscorpion	G1	S1		
<i>Chitrella</i> sp. 1	A cave pseudoscorpion	G1	S1		
<i>Kleptochthonius anophthalmus</i>	A cave pseudoscorpion	G1	S1		
<i>Kleptochthonius binoculatus</i>	A cave pseudoscorpion	G1G2	S1S2		
<i>Kleptochthonius gertschi</i>	Gertsch's cave pseudoscorpion	G1	S1		
<i>Kleptochthonius lutzii</i>	Lutz's cave pseudoscorpion	G1	S1		
<i>Kleptochthonius polychaetus</i>	Shenandoah pseudoscorpion	G1G3	S1S3		
<i>Kleptochthonius proximisetus</i>	A cave pseudoscorpion	G1	S1		
<i>Kleptochthonius regulus</i>	A cave pseudoscorpion	G1G2	S1		
<i>Kleptochthonius similis</i>	A cave pseudoscorpion	G1	S1		
<i>Kleptochthonius</i> sp. 1	A cave pseudoscorpion	G1	S1		
= <i>Kleptochthonius</i> sp. B					
<i>Lissocreagris valentinei</i>	Valentine's cave pseudoscorpion	G1	S1		
= <i>Microcreagris valentinei</i>					
<i>Mundochthonius holsingeri</i>	A cave pseudoscorpion	G1	S1		

Scorpions

<i>Vaejovis carolinianus</i>	Carolina scorpion	G5	S1		
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CRUSTACEA (AMPHIPODS, ISOPODS & DECAPODS)

Amphipods

<i>Bactrurus angulus</i>	Cumberland Gap cave amphipod	G1	S1		
<i>Crangonyx acicularis</i>	A freshwater amphipod	G1G3	S1S3		
<i>Crangonyx baculispina</i>	Lancaster County amphipod	G1?	S1?		
<i>Crangonyx fontinalis</i>	Bland County amphipod	G1?	S1?		
<i>Crangonyx gracilis</i>	A freshwater amphipod	G4	S1S3		
<i>Crangonyx montanus</i>	A freshwater amphipod	G2	S2		
<i>Styobromus abditus</i>	James Cave amphipod	G2G3	S2S3		
<i>Styobromus baroodyi</i>	Rockbridge County cave amphipod	G2G3	S1S2		
<i>Styobromus biggersi</i>	Bigger's cave amphipod	G2G4	S1S2		
<i>Styobromus conradi</i>	Burnsville Cove cave amphipod	G2G3	S1S2		
<i>Styobromus cumberlandus</i>	Cumberland cave amphipod	G3G4	S1S2		
<i>Styobromus ephemerus</i>	Ephemeral cave amphipod	G1G2	S1		
<i>Styobromus fergusonii</i>	Montgomery County cave amphipod	G2G3	S1		
<i>Styobromus finleyi</i>	Finley's cave amphipod	G3G4	S1		
<i>Styobromus foliatus</i>	A groundwater amphipod	G2	S2		
<i>Styobromus gracilipes</i>	Shenandoah Valley cave amphipod	G3G4	S2S3		
<i>Styobromus hoffmani</i>	Alleghany County cave amphipod	G2	S2		
<i>Styobromus hubbardi</i>	Hupp's Hill cave amphipod	G1	S1		
<i>Styobromus interitus</i>	New Castle Murder Hole amphipod	G1G2	SH		
<i>Styobromus leensis</i>	Lee County cave amphipod	G1G2	S1S2		
<i>Styobromus mausi</i>	Round Hill cave amphipod	G1	S1		
<i>Styobromus morrisoni</i>	Morrison's cave amphipod	G2G3	S1S2		
<i>Styobromus mundus</i>	Bath County cave amphipod	G2G3	S1S2		
<i>Styobromus obrutus</i>	Pittsylvania well amphipod	G1G2	SH		
<i>Styobromus phreaticus</i>	Northern Virginia well amphipod	G1	S1		
<i>Styobromus pizzinii</i>	Pizzini's amphipod	G3G4	S1S2		
<i>Styobromus pseudospinosus</i>	Luray Caverns amphipod	G1	S1		
<i>Styobromus sextarius</i>	Capital area groundwater amphipod	G1	S1		
<i>Styobromus stegerorum</i>	Madison Cave amphipod	G1	S1		LT

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Amphipods (continued)					
<i>Stygobromus</i> sp. 7	Sherando spinosoid amphipod	G2	S2		
<i>Stygobromus</i> sp. 8	A groundwater amphipod	G2G3	S2S3		
<i>Stygobromus</i> sp. 10	A cave amphipod (Botetourt Co.)	G1	S1		
<i>Stygobromus</i> sp. 11	A cave amphipod (Nelson Co.)	G1	S1		
<i>Stygobromus</i> sp. 12	A cave amphipod (Rockbridge Co.)	G1	S1		
<i>Stygobromus</i> sp. 16	Helsley's Cave amphipod	G1	S1		
<i>Stygobromus</i> sp. 17	Massanutten spring amphipod	G2	S2		
<i>Stygobromus</i> sp. 18	Big Levels spring amphipod	G1?	S1?		
<i>Stygobromus</i> sp. 19	A cave amphipod (Scott Co.)	G1	S1		
<i>Stygobromus</i> sp. 20	A cave amphipod (Bath, Highland Co.)	G1	S1		
<i>Stygobromus</i> sp. 23	Shenandoah Mountain spring amphipod	G1?	S1?		
Isopods					
<i>Amerigoniscus henroti</i>	Powell Valley terrestrial cave isopod	G1G2	S1S2		
<i>Antrolana lira</i>	Madison Cave isopod	G2G4	S2	LT	LT
<i>Caecidotea attenuata</i>	Dismal Swamp isopod	G1G3	S1S3		
<i>Caecidotea bowmani</i>	Natural Bridge cave isopod	G1G2	S1S2		
<i>Caecidotea cumberlandensis</i>	Cumberland Gap cave isopod	G1G2	S1		
<i>Caecidotea henroti</i>	Henrot's cave isopod	G2	S2		
<i>Caecidotea incurva</i>	Incurved cave isopod	G2G4	S2		
<i>Caecidotea mausi</i>	Maus' cave isopod	G2	S2		
<i>Caecidotea phreatica</i>	Phreatic isopod	G2G3	S1S3		
<i>Caecidotea vandeli</i>	Vandel's cave isopod	G3G4	S2S3		
<i>Ligidium elrodii leensis</i>	Lee County terrestrial cave isopod	G4G5T1T2	S1S2		
<i>Ligidium elrodii scottensis</i>	Scott County terrestrial cave isopod	G4G5T1T2	S1S2		
<i>Lirceus culveri</i>	Rye Cove isopod	G1	S1		
<i>Lirceus usdagalun</i>	Lee County cave isopod	G2G3	S1	LE	LE
<i>Miktoniscus racovitza</i>	Racovitza's terrestrial cave isopod	G3G4	S2		
Decapods					
<i>Cambarus buntingi</i>	Longclaw crayfish	G4Q	S2		
<i>Cambarus jezerinaci</i>	Spiny scale crayfish	G3	S2		
<i>Cambarus monongalensis</i>	Blue crawfish	G5	S1?		
<i>Cambarus sciotensis</i>	Teays River crayfish	G5	S2S3		
<i>Cambarus veteranus</i>	Big Sandy Crayfish	G2	S1S2		LE
<i>Macrobrachium ohione</i>	Ohio river shrimp	G4	S1		
<i>Orconectes erichsonianus</i>	Reticulate crayfish	G5	S2		
<i>Orconectes virginienensis</i>	Chowanoke crayfish	G3	S2S3		
DIPLOPODA (MILLIPEDES)					
<i>Auturus erythrogygos</i>	A millipede	G3	S1		
<i>Boraria infesta</i>	A millipede	G4	S2		
<i>Brachoria cedra</i>	Cedar millipede	G2G3	S2S3		
<i>Brachoria dentata</i>	A millipede	G1	S1		
<i>Brachoria falcifera</i>	Big Cedar Creek millipede	G1	S1		
<i>Brachoria hoffmani</i>	Hoffman's xystodesmid millipede	G2G3	S2S3		
<i>Brachoria insolita</i>	A millipede	G1	S1		
<i>Brachoria laminata</i>	Keeton's millipede	G1	S1		
<i>Brachoria mendota</i>	Collinwood millipede	G1	S1		
<i>Brachoria separanda hamata</i>	A millipede	G3T2	S2		
<i>Brachoria separanda versicolor</i>	A millipede	G3T2	S2		
<i>Brachoria turneri</i>	Turner's millipede	G1	S1		

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Millipedes (continued)					
<i>Brachoria</i> sp. 1	Powell Mountain millipede sp 1	G1?	S1?		
<i>Brachoria</i> sp. 2	Powell Mountain millipede sp 2	G1?	S1?		
<i>Chaetaspis albus</i>	A millipede	G4	S2		
<i>Cherokia georgiana latassa</i>	A millipede	G4T?	S1		
<i>Cleidogona hoffmani</i>	Hoffman's cleidogonid millipede	G3	S2S3		
<i>Cleidogona lachesis</i>	A millipede	G2	S1		
<i>Cleidogona medialis</i>	Blowing Rock millipede	G3G4	S2		
<i>Conotyla aeto</i>	Aeto millipede	G1	S1		
<i>Conotyla celeno</i>	Celeno millipede	G1	S1		
<i>Conotyla venetia</i>	Venetia millipede	G2	S2		
<i>Desmonus earlei</i>	Earle's millipede	G5	S1		
<i>Dixioria brooksi</i>	Brooks millipede	G1	S1		
<i>Dixioria fowleri</i>	Fowler's millipede	G2	S2		
<i>Dixioria pela coronata</i> = <i>Dixioria coronata</i>	A millipede	G2T2	S2		
<i>Euryurus leachii fraternus</i>	A millipede	G4T?	S2S3		
<i>Gyalostethus monticolens</i>	A millipede	G4	S2		
<i>Nannaria shenandoa</i>	Shenandoah Mountain xystodesmid millipede	G1	S1		
<i>Nannaria simplex</i>	A millipede	G1	S1		
<i>Nannaria</i> sp. 1	Roaring Branch <i>Nannaria</i> millipede	G1?	S1?		
<i>Okeanobates americanus</i>	A millipede	G4	S1		
<i>Onomeris underwoodi</i>	A millipede	G5	S2		
<i>Orinisobates nigrior</i>	A millipede	G4	S1		
<i>Petaserpes rosalbus</i> = <i>Polyzonium rosalbum</i>	A millipede	G5	S2		
<i>Pseudopolydesmus paludicolus</i>	A millipede	G2G4	S2?		
<i>Pseudotremia armesi</i>	A millipede	G2	S2		
<i>Pseudotremia cavernarum</i>	Ellett Valley <i>Pseudotremia</i> millipede	G2G3	S1		LT
<i>Pseudotremia cerberus</i>	A cave millipede	G1	S1		
<i>Pseudotremia contorta</i>	A millipede	G1	S1		
<i>Pseudotremia culveri</i>	A cave millipede	G1	S1		
<i>Pseudotremia deprehendor</i>	A cave millipede	G2G3	S1S3		
<i>Pseudotremia fergusonii</i>	A cave millipede	G1	S1		
<i>Pseudotremia hubbardi</i>	Powell Valley cave millipede	G1	S1		
<i>Pseudotremia inexpectata</i>	A cave millipede	G1	S1		
<i>Pseudotremia jaculohamatum</i>	A cave millipede	G1	S1		
<i>Pseudotremia johnholsingeri</i>	A cave millipede	G1	S1		
<i>Pseudotremia loomisi</i>	A millipede	G1	S1		
<i>Pseudotremia momus</i>	A millipede	G2	S2		
<i>Pseudotremia orndorffi</i>	A cave millipede	G2	S2		
<i>Pseudotremia peponocranium</i>	A cave millipede	G1	S1		
<i>Pseudotremia piscator</i>	A cave millipede	G1	S1		
<i>Pseudotremia princeps</i>	South Branch Valley cave millipede	G1	S1		
<i>Pseudotremia ryensis</i>	Rye Cove cave millipede	G1	S1		
<i>Pseudotremia salifodina</i>	A millipede	G1	S1		
<i>Pseudotremia sublevis</i>	A millipede	G2G3	S2S3		
<i>Pseudotremia tuberculata</i>	A millipede	G2G3	S2		
<i>Pseudotremia valga</i>	A millipede	G1G2	S1S2		
<i>Pseudotremia</i> sp. 2	Roaring Branch <i>Pseudotremia</i> millipede	G1?	S1?		
<i>Rhysodesmus restans</i>	Relictual Appalachian millipede	G1G2	S1		
<i>Rudiloria trimaculata tortua</i>	A millipede	G5T2	S2		
<i>Semionellus placidus</i>	A millipede	G3	S2		
<i>Sigmoria whiteheadi</i>	Laurel Creek xystodesmid millipede	G1	S1		LT
<i>Striaria columbiana</i>	A millipede	G2	S2		
<i>Striaria</i> sp. 1	A millipede	G1	S1		

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Millipedes (continued)					
<i>Trichopetalum lunatum</i>	A millipede	G5	S2		
<i>Zygonopus weyeriensis</i> = <i>Trichopetalum weyeriensis</i>	Grand Caverns blind cave millipede	G3G4	S2		
<i>Zygonopus whitei</i> = <i>Trichopetalum whitei</i>	Luray Caverns blind cave millipede	G3G4	S2		
CHILOPODA (CENTIPEDES)					
<i>Escaryus cryptorobius</i>	Montane centipede	G2	S2		
<i>Escaryus ethopus</i>	A centipede	G?	S1S2		
<i>Escaryus orestes</i>	Whitewall Mountain centipede	G1G2	S1S2		
<i>Nampabius turbator</i>	A cave centipede	G1G2	S1		
INSECTS					
COLLEMBOLA (SPRINGTAILS)					
<i>Oncopodura hubbardi</i>	A cave springtail	G1G2	S1S2		
<i>Paleonura petebellingeri</i>	A cave springtail	G1	S1		
<i>Pseudosinella bona</i>	A cave springtail	G2	S2		
<i>Pseudosinella erehwon</i>	A cave springtail	G2	S2		
<i>Pseudosinella extra</i>	A cave springtail	G1G2	S1		
<i>Pseudosinella flatua</i>	A cave springtail	G1G2	S1S2		
<i>Pseudosinella gisini virginia</i>	A cave springtail	G3G4T2	S2		
<i>Pseudosinella hirsuta</i>	A cave springtail	G5	S1		
<i>Pseudosinella testa</i>	Shelled Cave springtail	G2G3	S1		
<i>Pseudosinella vespera</i>	A cave springtail	G2	S1S2		
<i>Pygmarrhopalites caedus</i>	A cave springtail	G1G2	S1S2		
<i>Pygmarrhopalites commorus</i>	A cave springtail	G2G3	S2S3		
<i>Pygmarrhopalites lacuna</i>	A cave springtail	G1G2	S1S2		
<i>Pygmarrhopalites obtusus</i>	A cave springtail	G1	S1		
<i>Pygmarrhopalites sacer</i>	A cave springtail	G2	S2		
<i>Pygmarrhopalites sextus</i>	A cave springtail	G1	S1		
<i>Pygmarrhopalites silvus</i>	A cave springtail	G1G2	S1S2		
<i>Schaefferia hubbardi</i>	A cave springtail	G2G3	S2S3		
<i>Speleonura kenchristianseni</i>	A cave springtail	G1	S1		
<i>Typhlogastrura valentini</i>	A cave springtail	G1	S1		
DIPLURA (DIPLURANS)					
<i>Litocampa cookei</i>	Cooke's cave dipluran	G5	S2S3		
<i>Litocampa fieldingi</i>	Fielding's cave dipluran	G2G3	S1S3		
<i>Litocampa pucketti</i>	Puckett's cave dipluran	G1G2	S1S2		
<i>Litocampa</i> sp. 1	A cave dipluran (Salamander Cave)	G1	S1		
<i>Litocampa</i> sp. 2	A cave dipluran (Ward Cove)	G1	S1		
<i>Litocampa</i> sp. 3	A cave dipluran (Pulaski/Wythe)	G2	S2		
<i>Litocampa</i> sp. 4	A cave dipluran (Rye Cove)	G2	S1S2		
<i>Litocampa</i> sp. 10	A cave dipluran (Smyth)	G1	S1		
<i>Litocampa</i> sp. 11 (near <i>cookei</i>)	A cave dipluran (Lee/Scott/Wise)	G2	S2		

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EPHEMEROPTERA (MAYFLIES)					
<i>Ameletus cryptostimulus</i>	Allegheny mayfly	G4	S1S3		
<i>Ameletus tarteri</i>	Tarter's Ameletus mayfly	G2G4	S1		
<i>Baetisca rubescens</i>	A mayfly	G3G4	S1		
<i>Barbaetis benfieldi</i>	Benfield's bearded small minnow mayfly	G2G4	S1		
<i>Ephemerella beneri</i>	Berner's Ephemerella mayfly	G4	S1S3		
<i>Habrophlebiodes celeteria</i>	A mayfly	G2G4	S2		
<i>Isonychia arida</i>	A mayfly	G5	S2		
<i>Isonychia georgiae</i>	Georgia Isonychia mayfly	G4	S1S3		
<i>Isonychia hoffmani</i>	Hoffman's Isonychia mayfly	G1G3	S1		
<i>Isonychia serrata</i>	A mayfly	G4	S1S3		
<i>Isonychia tusculanensis</i>	A mayfly	G4	S2		
<i>Iswoeon rubrolaterale</i> = <i>Heterocloeon rubrolaterale</i> , <i>Plauditus rubrolateralis</i>		G2	S1?		
<i>Leptophlebia johnsoni</i>	Johnson's prongbill mayfly	G4	S1		
<i>Neoephemera compressa</i>	A mayfly	G1S3	S1?		
<i>Paraleptophlebia assimilis</i>	A mayfly	G4	S1S3		
<i>Paraleptophlebia jeanae</i>	A mayfly	G3G4	S1S3		
<i>Pseudiron centralis</i>	White sand-river mayfly	G5	S1		
<i>Rhithrogena anomala</i>	A mayfly	G3G4	S1?		
<i>Siphloplecton costalense</i>	Spieth's great speckled olive mayfly	G2G4	SH		
ODONATA (DAMSELFLIES & DRAGONFLIES)					
Damselflies					
<i>Calopteryx aequabilis</i>	River jewelwing	G5	S2?		
<i>Calopteryx amata</i>	Superb jewelwing	G4	S1		
<i>Enallagma annexum</i> = <i>Enallagma cyathigerum</i> (in part)	Northern bluet	G5	S1		
<i>Enallagma carunculatum</i>	Tule bluet	G5	S1		
<i>Enallagma ebrium</i>	Marsh bluet	G5	S1		
<i>Enallagma pallidum</i>	Pale bluet	G4	S1S2		
<i>Lestes disjunctus</i>	Northern spreadwing	G5	S2		
<i>Lestes dryas</i>	Emerald spreadwing	G5	SH		
<i>Lestes vidua</i>	Carolina spreadwing	G5	SH		
<i>Nehalennia gracilis</i>	Sphagnum sprite	G5	S2		
<i>Nehalennia irene</i>	Sedge sprite	G5	S1S2		
Dragonflies					
<i>Aeshna canadensis</i>	Canada darner	G5	S1		
<i>Aeshna constricta</i>	Lance-tipped darner	G5	S1		
<i>Aeshna tuberculifera</i>	Black-tipped darner	G4	S2S3		
<i>Aeshna verticalis</i>	Green-striped darner	G5	S1		
<i>Aphylla williamsoni</i>	Two-striped forceptail	G5	S2		
<i>Arigomphus furcifer</i>	Lilypad clubtail	G5	SH		
<i>Celithemis martha</i>	Martha's pennant	G4	S2		
<i>Celithemis ornata</i>	Faded pennant	G5	SH		
<i>Cordulegaster diastatops</i>	Delta-spotted spiketail	G5	S1		
<i>Coryphaeschna ingens</i>	Regal darner	G5	S1		
<i>Epitheca canis</i> = <i>Tetragoneuria canis</i>	Beaverpond baskettail	G5	S1		
<i>Epitheca semiaquea</i> = <i>Tetragoneuria semiaquea</i>	Mantled baskettail	G5	S1		

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Dragonflies (continued)					
<i>Epithea spinosa</i> = <i>Tetragoneuria spinosa</i>	Robust baskettail	G4	S2S3		
<i>Gomphus adelphus</i> = <i>Gomphus brevis</i>	Moustached clubtail	G4	S1		
<i>Gomphus apomyius</i>	Banner clubtail	G3G4	SH		
<i>Gomphus borealis</i>	Beaverpond clubtail	G4	SH		
<i>Gomphus consanguis</i>	Cherokee clubtail	G3	S2		
<i>Gomphus descriptus</i>	Harpoon clubtail	G4	S1		
<i>Gomphus fraternus</i>	Midland clubtail	G5	S2		
<i>Gomphus parvidens</i>	Piedmont clubtail	G4	S1		
<i>Gomphus quadricolor</i>	Rapids clubtail	G3G4	S2S3		
<i>Gomphus septima</i>	Septima's clubtail	G2	S1		
<i>Gomphus ventricosus</i>	Skillet clubtail	G3	S1		
<i>Gomphus viridifrons</i>	Green-faced clubtail	G3G4	S2		
<i>Ladona exusta</i> = <i>Libellula exusta</i>	White corporal skimmer	G4	SH		
<i>Ladona julia</i> = <i>Libellula julia</i>	Chalk-fronted corporal skimmer	G5	S2		
<i>Lanthus parvulus</i>	Northern pygmy clubtail	G4	S2		
<i>Leucorrhinia frigida</i>	Frosted whiteface	G5	SH		
<i>Leucorrhinia hudsonica</i>	Hudsonian whiteface	G5	S1		
<i>Leucorrhinia proxima</i>	Red-waisted whiteface	G5	SH		
<i>Macrodiplax balteata</i>	Marl pennant	G5	S1		
<i>Macromia alleghaniensis</i>	Allegheny river cruiser	G4	S2		
<i>Macromia margarita</i>	Mountain river cruiser	G3	S1		
<i>Nannothemis bella</i>	Elfin skimmer	G4	S1		
<i>Neurocordulia virginienensis</i>	Cinnamon shadowdragon	G4	S2		
<i>Neurocordulia yamaskanensis</i>	Stygian shadowdragon	G5	S2		
<i>Ophiogomphus aspersus</i>	Brook snaketail	G4	S2		
<i>Ophiogomphus carolus</i>	Riffle snaketail	G5	S1		
<i>Ophiogomphus howei</i>	Pygmy snaketail	G3	S1S2		
<i>Ophiogomphus incurvatus alleghaniensis</i> = <i>Ophiogomphus alleghaniensis</i>	Allegheny snaketail	G3T2T3	S1		
<i>Ophiogomphus incurvatus incurvatus</i>	Appalachian snaketail	G3T2T3	S2		
<i>Ophiogomphus mainensis</i>	Maine snaketail	G4	S1		
<i>Ophiogomphus susbehcha</i>	St. Croix snaketail	G2	S1S2		
<i>Rhionaeschna mutata</i> = <i>Aeshna mutata</i>	Spatterdock darner	G4	S2		
<i>Somatochlora elongata</i>	Ski-tipped emerald	G5	S1S2		
<i>Somatochlora filosa</i>	Fine-lined emerald	G5	S2		
<i>Somatochlora georgiana</i>	Coppery emerald	G3G4	SH		
<i>Somatochlora provocans</i>	Treetop emerald	G4	S2		
<i>Somatochlora williamsoni</i>	Williamson's emerald	G5	SH		
<i>Stylogomphus sigmastylus</i>	Interior least clubtail	G5	S1		
<i>Stylurus amnicola</i>	Riverine clubtail	G4	S1		
<i>Stylurus laurae</i>	Laura's clubtail	G4	S2		
<i>Stylurus notatus</i>	Elusive clubtail	G3	S1		
<i>Stylurus scudderi</i>	Zebra clubtail	G4	S1S2		
<i>Sympetrum internum</i> = <i>Sympetrum janeae</i>	Cherry-faced meadowhawk	G5	S1		
<i>Sympetrum obtrusum</i>	White-faced meadowhawk	G5	S2		

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PLECOPTERA (STONEFLIES)					
<i>Acroneuria flinti</i>	Manassas stonefly	GH	SH		
<i>Acroneuria kirchneri</i>	A stonefly	G3G4	S1S3		
<i>Acroneuria kosztarabi</i>	Virginia stonefly	G1G2	S1S2		
<i>Acroneuria yuchi</i>	Yuchi stonefly	G1G3	S1S3		
<i>Allocapnia fumosa</i>	Smokies snowfly	G2	S1S2		
<i>Allocapnia illinoensis</i>	Illinois snowfly	G3	S1S3		
<i>Allocapnia simmonsii</i>	Spatulate snowfly	G3	S1S2		
<i>Allocapnia stannardi</i>	Blue Ridge snowfly	G3	S1S3		
<i>Alloperla banksi</i>	Tufted sallfly	G4	S1S3		
<i>Alloperla biserrata</i>	Dusky sallfly	G3	S2S3		
<i>Alloperla ideii</i>	Vernal sallfly	G3	S1S3		
<i>Alloperla nanina</i>	Swannanoa sallfly	G4	S1S3		
<i>Alloperla neglecta</i>	Tennessee sallfly	G3	S1S2		
<i>Alloperla stipitata</i>	Blue Ridge sallfly	G2G3	S1S3		
<i>Bolotoperla rossi</i>	Smoky willowfly	G4	S1S3		
<i>Cultus decisus isolatus</i>	Southern springfly	G4T2	S1S2		
<i>Diploperla kanawholesis</i>	Kanawhole springfly	G3	S1S3		
<i>Diploperla morgani</i>	Virginia springfly	G3	S2		
<i>Hansonoperla appalachia</i>	Appalachian stonefly	G3	S1S3		
<i>Isogenoides varians</i>	Rock Island springfly	G3G4	S1S3		
<i>Isoperla major</i>	Big stripetail stonefly	G1	S1		
<i>Leuctra mitchellensis</i>	Mitchell needelfly	G3	S1S2		
<i>Leuctra monticola</i>	Montane needelfly	G1Q	S1		
<i>Megaleuctra flinti</i>	Shenandoah needelfly	G2	S2		
<i>Megaleuctra williamsae</i>	Smokies needelfly	G2	S1S2		
<i>Ostrocerca complexa</i>	Notched forestfly	G4	S1S3		
<i>Ostrocerca prolongata</i>	Bent forestfly	G3	S1S3		
<i>Paragnetina ichusa</i>	Widencollar stonefly	G3	S1S3		
<i>Perlesta cranshawi</i>	A stonefly	G1	S1?		
<i>Perlesta durfeeii</i>	A stonefly	G1G3	S1S3		
<i>Perlesta frisoni</i>	Blue Ridge stonefly	G3	S1S2		
<i>Perlesta roblei</i>	Dragon Run stonefly	G3	S1S3		
<i>Perlesta shawnee</i>	Shawnee stonefly	G3	S1S3		
<i>Perlesta teaysia</i>	Teays stonefly	G4	S1S3		
<i>Prostoia hallasi</i>	Swamp forestfly	G3	S1S3		
<i>Pteronarcys comstocki</i>	Spiny salmonfly	G3	S1S3		
<i>Pteronarcys scotti</i>	Carolina salmonfly	G4	S1S3		
<i>Remenus kirchneri</i>	Blue Ridge springfly	G2	S2		
<i>Strophopteryx limata</i>	Newfound willowfly	G3	S1S2		
<i>Sweltsa holstonensis</i>	Holston sallfly	G1	S1		
<i>Sweltsa palearata</i>	Shenandoah sallfly	G2G3	S1S3		
<i>Sweltsa voshelli</i>	Virginia sallfly	G3	S2		
<i>Taeniopteryx nelsoni</i>	Cryptic willowfly	G1	S1		
<i>Tallaperla cornelia</i>	Southeastern roachfly	G4	S1S3		
<i>Tallaperla lobata</i>	Lobed roachfly	G2	S1S2		
<i>Yugus arinus</i>	Highlands springfly	G3	S1S3		
<i>Yugus kondratieffi</i>	A stonefly	G2G3	S1S3		
ORTHOPTERA (GRASSHOPPERS, KATYDIDS, CRICKETS & RELATIVES)					
<i>Appalachia hebardii</i>	Appalachian grasshopper	GH	SH		
<i>Melanoplus pachycercus</i>	A spur-throat grasshopper	G2G3	S1S3		

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HETEROPTERA (TRUE BUGS)					
<i>Acantholomidea denticulata</i>	A shield bug	G?	SH		
<i>Allopodops mississippiensis</i>	Mississippi turtle bug	G2G3	SH		
<i>Bothynotus johnstoni</i>	A mirid bug	G3	S1S3		
<i>Botocudo modestus</i>	A seed bug	G5	S1S3		
<i>Chelinidea vittiger</i>	Opuntia squash bug	G3G5	S1		
<i>Chlorochroa dismala</i>	Dismal Swamp green stink bug	GU	S1S3		
<i>Ctenotrachelus shermani</i>	Combneck assassin bug	G3	S1S3		
<i>Elasmostethus atricornis</i>	Hercules club stink bug	G3?	S1S3		
<i>Eurygaster alternata</i>	A shield bug	G5	SH		
<i>Galgupha denudata</i>	A shield bug	G3	S1S3		
<i>Gnathobleda litigiosa</i>	An assassin bug	G5	S1		
<i>Isthmocorius piceus</i>	Black stalk-eyed bug	G5	S1S2		
<i>Limnopus dissortis</i>	A water strider	G5	S1		
<i>Melanaethus cavicollis</i>	A burrower bug	G4	S1S3		
<i>Oncozygia clavicornis</i>	A turtle bug	G3	SH		
<i>Ploiaria carolina</i>	Carolina thread-legged bug	G4?	S1S3		
<i>Ploiaria hirticornis</i>	An assassin bug	G3?	S1S3		
<i>Pnirontis brimleyi</i>	Brimley's assassin bug	G2	S1S3		
<i>Pycnoderiella virginiana</i>	Seashore plant bug	GU	SU		
<i>Ramphocorixa acuminata</i>	Acuminate water boatman	G4	S1		
<i>Ranatra drakei</i>	Drake's water scorpion	G4	S1S3		
<i>Sigara depressa</i>	Virginia Piedmont water boatman	G1G2	S1S2		LE
<i>Stenocoris tipuloides</i>	Neotropical rice bug	G5	S1S3		
HOMOPTERA (CICADAS, LEAFHOPPERS & RELATIVES)					
<i>Puto kosztarabi</i>	Buffalo Mountain mealybug	G1	S1		LE
COLEOPTERA (BEETLES)					
<i>Arianops jeanneli</i>	A cave pselaphid beetle	G1	S1		
<i>Atheta annexa</i>	A rove beetle	G4	S2		
<i>Atheta troglaphila</i>	A rove beetle	G1	S1		
<i>Cicindela abdominalis</i>	Eastern pine barrens tiger beetle	G3G4	S1		
<i>Cicindela ancocisconensis</i>	Appalachian tiger beetle	G3	S2		
<i>Cicindela dorsalis dorsalis</i> = <i>Habroscelimorpha dorsalis dorsalis</i>	Northeastern beach tiger beetle	G4T2	S2	LT	LT
<i>Cicindela formosa generosa</i>	Big sand tiger beetle	G5T5	SH		
<i>Cicindela gratiosa</i> = <i>Ellipsoptera gratiosa</i>	Whitish tiger beetle	G3G4	S1		
<i>Cicindela lepida</i> = <i>Ellipsoptera lepida</i>	Ghost tiger beetle	G3G4	S1		
<i>Cicindela limbalis</i>	Common claybank tiger beetle	G5	S1		
<i>Cicindela patruela</i>	Northern barrens tiger beetle	G3	S2		
<i>Cicindela trifasciata</i>	S-banded tiger beetle	G5	S1		
<i>Copris howdeni</i>	Howden's Copris scarab beetle	G3?	S1		
<i>Cyclotrachelus incisus</i>	A ground beetle	G4	S1		
<i>Dicranopselaphus variegatus</i>	Variegated false water penny beetle	G1G3	S1S3		
<i>Dryobius sexnotatus</i>	Six-banded longhorn beetle	G?	S2?		
<i>Eucaerus varicornis</i>	A ground beetle	G4?	S1S3		
<i>Hemipeplus microphthalmus</i>	A flat bark beetle	G4?	S1		
<i>Hydraena maureenae</i>	Maureen's shale stream beetle	G2?	S2?		
<i>Laccophilus schwarzi</i>	Schwarz' diving beetle	G?	S1S3		
<i>Lordithon niger</i>	Black Lordithon rove beetle	GU	SH		

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Beetles (continued)					
<i>Nicrophorus americanus</i>	American burying beetle	G2G3	SH		LE
<i>Nicrophorus carolinus</i>	Carolina burying beetle	G4?	S1S3		
<i>Phanaeus igneus</i>	A scarab beetle	G5	S1		
<i>Pseudanophthalmus avernus</i>	Avernus cave beetle	G1	S1		
<i>Pseudanophthalmus cordicollis</i>	Little Kennedy Cave beetle	G1	S1		
<i>Pseudanophthalmus deceptivus</i>	Deceptive cave beetle	G1	S1		
<i>Pseudanophthalmus delicatus</i>	Delicate cave beetle	G3G4	S2		
<i>Pseudanophthalmus egberti</i>	New River Valley cave beetle	G1G2	S1		
<i>Pseudanophthalmus gracilis</i>	Clover Hollow cave beetle	G1G2	S1S2		
<i>Pseudanophthalmus hirsutus</i>	Cumberland Gap cave beetle	G1G2	S1		
<i>Pseudanophthalmus hoffmani</i>	Hoffman's cave beetle	G2G3	S1S2		
<i>Pseudanophthalmus holsingeri</i>	Holsinger's cave beetle	G1	S1		LE
<i>Pseudanophthalmus hortulanus</i>	Burkes Garden cave beetle	G1	S1		
<i>Pseudanophthalmus hubbardi</i>	Hubbard's cave beetle	G1	S1		
<i>Pseudanophthalmus hubrichti</i>	Hubricht's cave beetle	G1	S1		
<i>Pseudanophthalmus intersectus</i>	Crossroads Cave beetle	G1G2	S1		
<i>Pseudanophthalmus limicola</i>	Maddens Cave beetle	G1G2	S1		
<i>Pseudanophthalmus longiceps</i>	Long-headed cave beetle	G1G2	S1		
<i>Pseudanophthalmus nelsoni</i>	Nelson's cave beetle	G1G2	S1		
<i>Pseudanophthalmus parvicollis</i>	Hupp's Hill cave beetle	G1	S1		
<i>Pseudanophthalmus petrunkevitchi</i>	Petrunkevitch's cave beetle	G1G2	S1		
<i>Pseudanophthalmus pontis</i>	Natural Bridge cave beetle	G1	SH		
<i>Pseudanophthalmus potomaca</i>	South Branch Valley cave beetle	G3G4	S2		
<i>Pseudanophthalmus praetermissus</i>	Overlooked cave beetle	G1	S1		
<i>Pseudanophthalmus punctatus</i>	Spotted cave beetle	G2G3	S1		
<i>Pseudanophthalmus pusio</i>	Ellett Valley cave beetle	G2G3	S1S2		
<i>Pseudanophthalmus quadratus</i>	Straley's Cave beetle	G1	S1		
<i>Pseudanophthalmus rotundatus</i>	Rotund cave beetle	G2	S1		
<i>Pseudanophthalmus sanctipauli</i>	Saint Paul cave beetle	G1G2	S1		
<i>Pseudanophthalmus seclusus</i>	Rye Cove cave beetle	G2G3	S2		
<i>Pseudanophthalmus sericus</i>	Silken cave beetle	G1	S1		
<i>Pseudanophthalmus thomasi</i>	Thomas' cave beetle	G1G2	S1		
<i>Pseudanophthalmus vicarius</i>	Vicariant cave beetle	G2G3	S1S2		
<i>Pseudanophthalmus virginicus</i>	Maiden Spring cave beetle	G1	SH		
<i>Pseudanophthalmus</i> sp. 4	Greears cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 5	Rhea Valley cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 6	Wytheville cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 7	Dublin cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 8	Burnsville Cove cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 9	Banner Cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 10	Indian Cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 11	Showalters Cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 12	Catawba Cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 13	McMullin Cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 14	Karl's Pit cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 42	Elk Garden cave beetle	G1	S1		
<i>Pseudanophthalmus</i> sp. 43	Rose Hill cave beetle	G1	S1		
<i>Sosylus costatus</i>	A beetle	G?	S1S3		
<i>Sphaeroderus schaumii</i>	Schaum's false snail-eating beetle	G4	S2		
= <i>Sphaeroderus nitidicollis schaumii</i>					
<i>Stenelmis gammoni</i>	Gammon's riffle beetle	G1G3	S1		
<i>Thalpius pygmaeus</i>	A ground beetle	G?	S1		
= <i>Pseudaptinus pygmaeus</i>					

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MECOPTERA (SCORPIONFLIES)					
<i>Boreus nivoriundus</i>	A snow scorpionfly	G4	S1S2		
<i>Brachypanorpa jeffersoni</i>	Jefferson's short-nosed scorpionfly	G2	S1S2		
TRICHOPTERA (CADDISFLIES)					
<i>Adicropheps hitchcocki</i>	A brachycentrid caddisfly	G4G5	S1S3		
<i>Agapetus minutus</i>	A glossosomatid caddisfly	G4G5	S1S3		
<i>Agapetus tomus</i>	A glossosomatid caddisfly	G5	S1S3		
<i>Agarodes libalis</i>	Spring-loving psiloneuran caddisfly	G3	S1S3		
<i>Agraylea costello</i>	A microcaddisfly	G3	S1S2		
<i>Agraylea multipunctata</i>	A microcaddisfly	G5	SH		
<i>Anabolia apora</i>	A limnephilid caddisfly	G1G3	S1S3		
<i>Arctopsyche irrorata</i>	A hydropsycheid caddisfly	G4	S1		
<i>Brachycentrus incanus</i>	A brachycentrid caddisfly	G5	SH		
<i>Ceraclea neffi</i>	A leptocerid caddisfly	G5	S1S3		
<i>Ceraclea punctata</i>	A leptocerid caddisfly	G5	S1S3		
<i>Ceraclea ruthae</i>	A leptocerid caddisfly	G4	S1		
<i>Ceraclea spongillovorax</i>	A leptocerid caddisfly	G3G4	S1S3		
<i>Ceraclea uvalo</i>	A leptocerid caddisfly	G2G4	S1S3		
<i>Ceratopsyche etnieri</i>	Buffalo Springs caddisfly	G2	S1S2		
<i>Ceratopsyche macleodi</i>	A hydropsycheid caddisfly	G3G4	S1S2		
<i>Cernotina calcea</i>	A polycentropodid caddisfly	G5	S1		
<i>Cernotina pallida</i>	A polycentropodid caddisfly	G3G4	SH		
<i>Cernotina truncona</i>	A polycentropodid caddisfly	G4	S1		
<i>Cheumatopsyche etrona</i>	A hydropsycheid caddisfly	G4G5	S1		
<i>Cheumatopsyche speciosa</i>	A hydropsycheid caddisfly	G5	SH		
<i>Cheumatopsyche virginica</i>	A hydropsycheid caddisfly	G5	S1		
<i>Goerita semata</i>	A caddisfly	G3	S1		
<i>Glossosoma lividum</i>	A glossosomatid caddisfly	G5	S1S2		
<i>Heteroplectron americanum</i>	A caddisfly	G5	S2		
<i>Homoplectra monticola</i>	A hydropsycheid caddisfly	G2G3	S2S3		
<i>Hydropsyche bassi</i>	A hydropsycheid caddisfly	G2	S2		
<i>Hydropsyche brunneipennis</i>	A hydropsycheid caddisfly	G3G4	S1S3		
<i>Hydropsyche frisoni</i>	A hydropsycheid caddisfly	G5	S1S3		
<i>Hydropsyche potomacensis</i>	A hydropsycheid caddisfly	G2G3	S2S3		
<i>Hydropsyche rotosa</i>	A hydropsycheid caddisfly	G2G3	S2S3		
<i>Hydroptila acadia</i>	A microcaddisfly	GU	S1?		
<i>Hydroptila anisoforicata</i>	A microcaddisfly	G1G2	S1S2		
<i>Hydroptila artesa</i>	A microcaddisfly	G2G3	S1?		
<i>Hydroptila coweetensis</i>	A microcaddisfly	G1G2	S1S2		
<i>Hydroptila dentata</i>	A microcaddisfly	G3G4	S1S3		
<i>Hydroptila eramosa</i>	A microcaddisfly	G1G3	S1S3		
<i>Hydroptila lennoxii</i>	A microcaddisfly	G2G4	S1S3		
<i>Hydroptila lonchera</i>	A microcaddisfly	G2G3	S1S3		
<i>Hydroptila maculata</i>	A microcaddisfly	G3G4	SH		
<i>Hydroptila spinata</i>	A microcaddisfly	G4	S1S2		
<i>Hydroptila tortosa</i>	A microcaddisfly	G4G5	SH		
<i>Ironoquia lyrata</i>	A limnephilid caddisfly	G5	S1S3		
<i>Lepidostoma bryanti</i>	A lepidostomatid caddisfly	G5	S1S3		
<i>Lepidostoma carrolli</i>	A lepidostomatid caddisfly	G5	S1S3		
<i>Lepidostoma mitchelli</i>	A lepidostomatid caddisfly	G3	S1S3		
<i>Lepidostoma modestum</i>	A lepidostomatid caddisfly	G3G4	S2		
<i>Lepidostoma ontario</i>	A lepidostomatid caddisfly	G5	S1S3		
<i>Lepidostoma serratum</i>	A lepidostomatid caddisfly	G4	S1S3		
<i>Micrasema sprulesi</i>	A brachycentrid caddisfly	G5	S1S3		

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SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
Caddisflies (continued)					
<i>Molanna tryphena</i>	A molannid caddisfly	G5	S1S2		
<i>Molanna uniophila</i>	A molannid caddisfly	G5	S1S2		
<i>Nemotaulius hostilis</i>	A limnephilid caddisfly	G5	S1		
<i>Neophylax acutus</i>	A uenoid caddisfly	G2G3	S1S3		
<i>Neophylax atlanta</i>	A uenoid caddisfly	G2G4	SH		
<i>Neophylax etnieri</i>	A uenoid caddisfly	G3	S1S3		
<i>Neophylax toshioi</i>	A uenoid caddisfly	G1G2	S1S2		
<i>Ochrotrichia denningi</i>	A microcaddisfly	G2G4	S1S3		
<i>Ochrotrichia graysoni</i>	A microcaddisfly	G3G4	S1S3		
<i>Oligostomis pardalis</i>	A phryganeid caddisfly	G5	S1S2		
<i>Oxyethira dualis</i>	A microcaddisfly	G5	SH		
<i>Oxyethira pescadori</i>	Pescador's bottle-cased caddisfly	G3G4	S1S2		
<i>Parapsyche cardis</i>	A hydropsychid caddisfly	G4	S2		
<i>Phylocentropus auriceps</i>	A caddisfly	G3G4	S2		
<i>Phylocentropus carolinus</i>	A caddisfly	G5	S2		
<i>Polycentropus centralis</i>	A polycentropodid caddisfly	G5	S1S2		
<i>Polycentropus pixi</i>	A polycentropodid caddisfly	G4	S1S2		
<i>Polycentropus rickeri</i>	A polycentropodid caddisfly	G3G4	SH		
<i>Potamyia flava</i>	A hydropsychid caddisfly	G5	SH		
<i>Psilotreta rossi</i>	An odontocerid caddisfly	G3	S2		
<i>Rhyacophila appalachia</i>	Appalachian rhyacophilid caddisfly	G3	S2		
<i>Rhyacophila atrata</i>	A rhyacophilid caddisfly	G5	S2		
<i>Rhyacophila kondratieffi</i>	A rhyacophilid caddisfly	G2G3	S2S3		
<i>Rhyacophila mainensis</i>	A rhyacophilid caddisfly	G5	S1S2		
<i>Rhyacophila mycta</i>	A rhyacophilid caddisfly	G3	S1S2		
<i>Rhyacophila teddyi</i>	A rhyacophilid caddisfly	G2G3	S2		
<i>Rhyacophila simmonsii</i>	A rhyacophilid caddisfly	G1G3	S1S3		
<i>Rhyacophila tricornuta</i>	A rhyacophilid caddisfly	G1G3	S1S3		
<i>Setodes guttatus</i>	A leptocerid caddisfly	G5	S1S3		
<i>Theliopsyche grisea</i>	A lepidostomatid caddisfly	G4	S1S3		
<i>Theliopsyche melas</i>	A lepidostomatid caddisfly	G4G5	S1S3		
<i>Triaenodes dipsius</i>	A leptocerid caddisfly	G5	S1S3		
<i>Triaenodes taenia</i>	A leptocerid caddisfly	G3G4	S1S3		
<i>Wormaldia mohri</i>	A philopotamid caddisfly	G2G3	S1		
<i>Wormaldia thyria</i>	A philopotamid caddisfly	G3	S2		

LEPIDOPTERA (BUTTERFLIES, SKIPPERS & MOTHS)

Butterflies

<i>Anaea andria</i>	Goatweed leafwing	G4G5	S1		
<i>Boloria selene</i>	Silver-bordered fritillary	G5	S2		
<i>Calephelis borealis</i>	Northern metalmark	G3G4	S2S3		
<i>Calephelis virginiensis</i>	Little metalmark	G4	S1		
<i>Callophrys hesseli</i> = <i>Mitoura hesseli</i>	Hessel's hairstreak	G3G4	S1		
<i>Callophrys irus</i> = <i>Incisalia irus</i> , <i>Deciduphagus irus</i>	Frosted elfin	G3	S2?		
<i>Callophrys polios</i> = <i>Incisalia polios</i> , <i>Deciduphagus polios</i>	Hoary elfin	G5	S1S3		
<i>Chlosyne harrisii</i>	Harris's checkerspot	G4	S1		
<i>Colias interior</i>	Pink-edged sulphur	G5	S1S2		
<i>Erora laeta</i>	Early hairstreak	GU	S2		
<i>Euchloe olympia</i>	Olympia marble	G4G5	S2		
<i>Lycaena hyllus</i>	Bronze copper	G4G5	S1		

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Butterflies (continued)					
<i>Neonympha helicta</i> = <i>Neonympha areolatus septentrionalis</i>	Helicta satyr	G3G4	S2		
<i>Neonympha mitchellii</i>	Mitchell's satyr	G2	S1	LE	LE
<i>Phyciodes batesii batesii</i>	Tawny crescent	G4T1	SH		
<i>Phyciodes cocyta</i> = <i>Phyciodes pascoensis</i> , <i>Phyciodes selenis</i>	Northern crescent	G5	S1S3		
<i>Polygonia faunus smythi</i>	Smyth's green comma	G5T3	S1S3		
<i>Satyrrium kingi</i>	King's hairstreak	G3G4	S2		
<i>Speyeria atlantis</i>	Atlantis fritillary	G5	S2		
<i>Speyeria idalia</i>	Regal fritillary	G3	S1		
Skippers					
<i>Amblyscirtes alternata</i>	Dusky roadside skipper	G2G3	S1		
<i>Atrytone arogos arogos</i>	Arogos skipper	G3T1T2	SH		
<i>Erynnis lucilius</i>	Columbine duskywing	G4	S1S3		
<i>Erynnis martialis</i>	Mottled duskywing	G3	S1S3		
<i>Erynnis persius persius</i>	Persius duskywing	G5T1T3	S1		
<i>Euphyes bimacula</i>	Two-spotted skipper	G4	S2		
<i>Euphyes conspicua</i>	Black dash	G4	S1S3		
<i>Euphyes dukesi</i>	Dukes' skipper	G3	S2		
<i>Euphyes pilatka</i>	Palatka skipper (= sawgrass skipper)	G3G4	S1		
<i>Hesperia attalus slossonae</i>	Seminole skipper (= dotted skipper)	G3G4T3	SH		
<i>Megathymus yuccae</i>	Yucca giant skipper	G5	SH		
<i>Polites mystic</i>	Long dash	G5	S2S3		
<i>Problema bulenta</i>	Rare skipper	G2G3	S1S2		
<i>Pyrgus centaureae wyandot</i> = <i>Pyrgus wyandot</i>	Appalachian grizzled skipper	G5T1T2	S1		LT
Moths					
<i>Acherdoa ferraria</i>	Chocolate moth	G5	S2		
<i>Acrapex relictia</i>	Cane-boring moth	G4	S2S3		
<i>Acronicta albarufa</i>	Barrens dagger moth	G3G4	S1S3		
<i>Acronicta brumosa</i>	A dagger moth	G4?	S1		
<i>Acronicta dollii</i> = <i>Merolonche dollii</i>	Doll's dagger moth	G3G4	S1S3		
<i>Amolita roseola</i>	Roseate grass moth	G5	S1S3		
<i>Anaplectoides brunneomedia</i>	Brown-lined dart moth	G4	S2		
<i>Apamea smythi</i>	Smyth's Apamea moth	GH	SH		
<i>Aplectoides condita</i>	A noctuid moth	G4	S1S3		
<i>Apodrepanulatrix liberaria</i>	New Jersey tea inchworm moth	G3	S2		
<i>Argillophora furcilla</i>	A cane moth	G3G4	S1S3		
<i>Argyrostromis deleta</i>	A noctuid moth	G4G5	S1S3		
<i>Argyrostromis sylvorum</i>	A noctuid moth	G4	S1S3		
<i>Arugisa latiorella</i> = <i>Arugisa watsoni</i>	A noctuid moth	G4	S1S3		
<i>Brachionycha borealis</i>	Boreal fan moth	G4	S1S3		
<i>Callosamia securifera</i>	Sweetbay silkmoth	G4	S1S2		
<i>Catocala consors</i>	Consort underwing	G4	SH		
<i>Catocala dulciola</i>	Sweet underwing	G3	S1S3		
<i>Catocala herodias gerhardi</i>	Pine barrens underwing	G3T3	S2S3		
<i>Catocala marmorata</i>	Marbled underwing	G3G4	S2		
<i>Catocala messalina</i>	Messalina underwing	G4	SH		
<i>Catocala pretiosa pretiosa</i>	Precious underwing	G4T2	SH		
<i>Catocala relictia</i>	White underwing	G5	S2		
<i>Catocala ulalume</i>	Ulalume underwing	G4	S1S3		

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Moths (continued)					
<i>Cerma cora</i>	Owl-eyed Bird Dropping Moth	G3G4	S1S3		
<i>Crambidia cephalica</i>	Yellow-headed lichen moth	G5	S1S2		
<i>Ctenucha virginica</i>	Virginia Ctenucha moth	G5	S2		
<i>Cycnia inopinatus</i>	Unexpected Cycnia moth	G4	S1S3		
<i>Cymatophora approximaria</i>	A geometrid moth	G4G5	S1S3		
<i>Dichagyris grotei</i> = <i>Loxagrotis apicalis</i> , <i>Richia grotei</i>	A noctuid moth	G4	S1S3		
<i>Drasteria graphica</i>	Graphic moth	G4	S2S3		
<i>Eilema bicolor</i>	Bicolored moth	G5	S1		
<i>Erastria coloraria</i>	Broad-lined Erastria moth	G3G4	S2?		
<i>Euchlaena milnei</i>	Milne's Euchlaena moth	G2G4	S2		
<i>Eulithis propulsata</i>	A geometrid moth	G?	S1S3		
<i>Euxoa fumalis</i>	A dart moth	G?	S1S3		
<i>Euxoa immixta</i>	Mixed dart moth	G4	S1S3		
<i>Exyra ridingsii</i>	Green pitcher plant moth	G2G4	SH		
<i>Faronta rubripennis</i>	Pink-streak moth	G3G4	S1S3		
<i>Franclemontia interrogans</i>	A cane moth	G3G4	S1S3		
<i>Givira francesca</i>	A carpenterworm moth	G4?	S1		
<i>Gondysia telma</i> = <i>Neadysgonia telma</i>	Telma darkwing moth	G?	S1S2		
<i>Hadena ectypa</i>	Catchfly moth	G3G4	S2		
<i>Heterocampa astarte</i>	A prominent moth	G4G5	S1S2		
<i>Hyppa contrasta</i>	Summer Hyppa moth	G3G4	S1S3		
<i>Idaea taturata</i>	A geometrid moth	G4	S1S2		
<i>Leucania calidior</i>	A cane moth	G2G4	S2		
<i>Lithophane adipel</i> = <i>Lithophane lepida adipel</i>	A pinion moth	G4	S1S3		
<i>Lithophane lemmeri</i>	Lemmer's pinion moth	G3G4	S1S3		
<i>Loscopia roblei</i>	A cane moth	G3G4	S1S2		
<i>Lytrosis permagnaria</i>	A geometrid moth	G3G4	S2		
<i>Macaria distribuaria</i> = <i>Semiothisa distribuaria</i>	A geometrid moth	G4	S1S2		
<i>Meropleon cosmion</i>	A noctuid moth	G4	S2S3		
<i>Meropleon titan</i>	A noctuid moth	G2G4	S1S3		
<i>Metarranthis</i> sp. 1	A geometrid moth	G3G4	S1S3		
<i>Metria amella</i>	A noctuid moth	G5	S1S2		
<i>Nemoria tuscarora</i>	Tuscarora emerald	GU	S1S3		
<i>Odontosia elegans</i>	Elegant prominent	G5	S1S3		
<i>Oligia bridghamii</i>	Bridgham's brocade moth	G4	S1		
<i>Oxycilla mitographa</i>	A noctuid moth	G4	SH		
<i>Paectes abrostolella</i>	A noctuid moth	G4	S1S2		
<i>Papaipema araliae</i>	Aralia shoot borer moth	G3G4	S2S3		
<i>Papaipema astuta</i>	Yellow stoneroot borer moth	G2G3	S1S3		
<i>Papaipema duovata</i>	Seaside goldenrod borer moth	G4	S2S3		
<i>Papaipema duplicata</i>	Dark stoneroot borer moth	G2G4	S2		
<i>Papaipema necopina</i>	Sunflower borer moth	G4?	S1S3		
<i>Papaipema stenocelis</i>	Chain fern borer moth	G4	S1S3		
<i>Papaipema</i> sp. 3	Southeastern cane borer moth	G4	S2S3		
<i>Platypolia anceps</i>	A noctuid moth	G?	S1S2		
<i>Polia purpurissata</i>	Purple arches moth	G?	SH		
<i>Properigea costa</i>	A noctuid moth	G4	S2		
<i>Protodeltote</i> sp. 1	A noctuid moth	G1G3	S1S2		
<i>Psectrotarsia hebaridi</i> = <i>Erythroecia hebaridi</i>	Hebard's noctuid moth	GU	SH		
<i>Ptichodis bistrigata</i>	Southern Ptichodis moth	G3	S1S3		
<i>Pygarctia abdominalis</i>	Yellow-edged Pygarctia moth	G3	S1S2		

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Moths (continued)					
<i>Pyrrhia aurantiago</i> = <i>Rhodoecia aurantiago</i>	Aureolaria seed borer moth	G3G4	S1S3		
<i>Rheumaptera hastata</i>	Spear-marked black moth	G5	S2		
<i>Schinia siren</i> = <i>Schinia inclarata</i>	A flower moth	G?	S1S2		
<i>Schizura apicalis</i>	Plain Schizura moth	G3G4	S1S3		
<i>Speranza exonerata</i>	Barrens Speranza moth	G3G4	S1S3		
<i>Speranza ribearia</i> = <i>Itame ribearia</i>	Currant spanworm moth	G4	S2S3		
<i>Sphinx franckii</i>	Franck's sphinx	G4	S2S3		
<i>Symphistis perscripta</i> = <i>Lepipolys perscripta</i>	Scribbled sallow moth	G4	S1S3		
<i>Synanthedon castaneae</i>	Chestnut clearwing moth	G3G5	SH		
<i>Syngrapha alias</i>	Hooked silver Y moth	G5	S1S2		
<i>Syngrapha rectangula</i>	Salt-and-pepper looper moth	G5	S2		
<i>Tischeria perplexa</i>	Chestnut leaf-mining moth	GHQ	SH		
<i>Tricholita notata</i>	Marked Tricholita moth	G5	SH		
<i>Virbia nigricans</i> = <i>Holomelina nigricans</i>	A tiger moth	G?	SU		
<i>Xanthorhoe iduata</i>	A geometrid moth	G4	S1S3		
<i>Zale curema</i>	A noctuid moth	G3G4	S1S3		
<i>Zale lunifera</i>	Pine barrens Zale moth	G3G4	S2		
<i>Zale</i> sp. 2 near <i>squamularis</i>	A Zale moth	G4Q	S1S3		
<i>Zale</i> sp. 3 near <i>buchholzi</i>	Maritime Zale moth	G3G4	S2		
<i>Zanclognatha theralis</i> = <i>Zanclognatha gypsalis</i>	A noctuid moth	G4	S1S3		
DIPTERA (TRUE FLIES)					
<i>Basilica boardmani</i>	Southeastern myotis bat fly	G3	S1S2		
<i>Fletcherimyia fletcheri</i>	Pitcher plant fly	G5	S1S2		
<i>Metriocnemus knabi</i>	Pitcher plant midge	G5	S2		
<i>Spelobia tenebrarum</i>	A cave fly	G5	S1		
<i>Wyeomyia smithii</i> = <i>Wyeomyia haynei</i>	Pitcher plant mosquito	G5	S2		
HYMENOPTERA (BEES, WASPS, ANTS, & RELATIVES)					
<i>Bombus affinis</i>	Rusty-patched bumble bee	G1	SH		

APPENDIX 1. FEDERALLY ENDANGERED AND THREATENED VERTEBRATE ANIMALS OF VIRGINIA

(exclusive of extirpated species, see Appendix 3)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
VERTEBRATES					
FISH					
<i>Acipenser brevirostrum</i>	Shortnose sturgeon	G3	SHB/S1N	LE	LE
<i>Acipenser oxyrinchus</i>	Atlantic sturgeon	G3	S2	LE	LE
<i>Chrosomus cumberlandensis</i> = <i>Phoxinus cumberlandensis</i>	Blackside dace	G2	S1	LT	
<i>Erimonax monachus</i> = <i>Cyprinella monacha</i> , <i>Hybopsis monacha</i>	Spotfin chub (= turquoise shiner)	G2	S1	LT	LT
<i>Erimystax cahni</i> = <i>Hybopsis cahni</i>	Slender chub	G1	S1	LT	LT
<i>Etheostoma percnurum</i>	Duskytail darter	G1	S1	LE	LE
<i>Noturus flavipinnis</i>	Yellowfin madtom	G1	S1	LT	LT
<i>Percina rex</i>	Roanoke logperch	G1G2	S1S2	LE	LE
AMPHIBIANS					
<i>Plethodon shenandoah</i>	Shenandoah salamander	G1	S1	LE	LE
REPTILES					
<i>Caretta caretta</i>	Loggerhead (sea turtle)	G3	S1B/S1N	LT	LT
<i>Chelonia mydas</i>	Green turtle	G3	SNA	LT	LT
<i>Dermochelys coriacea</i>	Leatherback (sea turtle)	G2	SNA	LE	LE
<i>Eretmochelys imbricata</i>	Atlantic hawksbill (sea turtle)	G3	SNA	LE	LE
<i>Glyptemys muhlenbergii</i> = <i>Clemmys muhlenbergii</i>	Bog turtle	G3	S2	LT/SA	LE
<i>Lepidochelys kempii</i>	Kemp's ridley (sea turtle)	G1	S1N	LE	LE
BIRDS					
<i>Charadrius melodus</i>	Piping Plover	G3	S2B/S1N	LT	LT
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S1	LE	LE
<i>Setophaga kirtlandii</i> = <i>Dendroica kirtlandii</i>	Kirtland's Warbler	G1	SNA	LE	LE
<i>Sterna dougallii</i>	Roseate Tern	G4	SHB	LE	LE
MAMMALS					
<i>Balaenoptera borealis</i>	Sei whale	G3	SNA	LE	LE
<i>Balaenoptera musculus</i>	Blue whale	G3G4	SNA	LE	LE
<i>Balaenoptera physalus</i>	Fin whale	G3G4	SNA	LE	LE
<i>Corynorhinus townsendii virginianus</i> = <i>Plecotus townsendii virginianus</i>	Virginia big-eared bat	G3G4T2	S1	LE	LE
<i>Eubalaena glacialis</i> = <i>Balaena glacialis</i>	Northern right whale	G1	SNA	LE	LE
<i>Glaucmys sabrinus coloratus</i>	Carolina northern flying squirrel	G5T2	S1	LE	LE
<i>Glaucmys sabrinus fuscus</i>	Virginia northern flying squirrel	G5T2	S1	LE	LE
<i>Megaptera novaeangliae</i>	Humpback whale	G4	S1N	LE	LE
<i>Myotis grisescens</i>	Gray myotis (bat)	G3	S1	LE	LE
<i>Myotis sodalis</i>	Indiana bat (= social myotis)	G2	S1	LE	LE
<i>Physeter macrocephalus</i> = <i>Physeter catodon</i>	Sperm whale	G3G4	SNA	LE	LE
<i>Sciurus niger cinereus</i>	Delmarva Peninsula fox squirrel	G5T3	S1	LE	LE
<i>Trichechus manatus</i>	West Indian manatee	G2	SNA	LE	LE

APPENDIX 2. FEDERALLY ENDANGERED AND THREATENED INVERTEBRATE ANIMALS OF VIRGINIA

(exclusive of extirpated species, see Appendix 3)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
INVERTEBRATES					
GASTROPODA (SNAILS)					
<i>Polygyriscus virginianus</i>	Virginia coil (= Virginia fringed mountain snail)	G1	S1	LE	LE
BIVALVIA (MUSSELS)					
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	G1G2	S1	LE	LE
<i>Cumberlandia monodonta</i>	Spectaclecase	G3	S1	LE	LE
<i>Cyprogenia stegaria</i>	Fanshell	G1Q	S1	LE	LE
<i>Dromus dromas</i>	Dromedary pearlymussel	G1	S1	LE	LE
<i>Epioblasma brevidens</i>	Cumberland combshell	G1	S1	LE	LE
<i>Epioblasma capsaeformis</i>	Oyster mussel	G1	S1	LE	LE
<i>Epioblasma florentina walkeri*</i>	Tan riffleshell	G1T1	S1	LE	LE
<i>Epioblasma triquetra</i>	Snuffbox	G3	S1	LE	LE
<i>Fusconaia cor</i>	Shiny pigtoe	G1	S1	LE	LE
<i>Fusconaia cuneolus</i>	Fine-rayed pigtoe	G1	S1	LE	LE
<i>Hemistena lata</i>	Cracking pearlymussel	G1	S1	LE	LE
<i>Lemiox rimosus</i>	Birdwing pearlymussel	G1	S1	LE	LE
<i>Pegias fabula</i>	Little-winged pearlymussel	G1	S1	LE	LE
<i>Plethobasus cyphus</i>	Sheepnose	G3	S1	LE	LE
<i>Pleurobema collina</i>	James spinymussel	G1	S1	LE	LE
<i>Pleurobema plenum</i>	Rough pigtoe	G1	SH	LE	LE
<i>Quadrula cylindrica strigillata</i>	Rough rabbits foot	G3G4T2	S2	LE	LE
<i>Quadrula intermedia</i>	Cumberland monkeyface	G1	S1	LE	LE
<i>Quadrula sparsa</i>	Appalachian monkeyface	G1	S1	LE	LE
<i>Villosa perpurpurea</i>	Purple bean	G1	S1	LE	LE
CRUSTRACEA (AMPHIPODS, ISOPODS & DECAPODS)					
<i>Antrolana lira</i>	Madison Cave isopod	G2G4	S2	LT	LT
<i>Lirceus usdagalun</i>	Lee County cave isopod	G2G3	S1	LE	LE
ARACHNIDA (SPIDERS, PSEUDOSCORPIONS & RELATIVES)					
<i>Microhexura montivaga</i>	Spruce-fir moss spider	G1	S1	LE	LE
INSECTA (INSECTS)					
Beetles					
<i>Cicindela dorsalis dorsalis</i>	Northeastern beach tiger beetle	G4T2	S2	LT	LT
<i>Nicrophorus americanus</i>	American burying beetle	G2G3	SH	LE	
Butterflies					
<i>Neonympha mitchellii</i>	Mitchell's satyr	G2	S1	LE	LE

*Virginia populations were recently described as a new subspecies, *Epioblasma florentina aureola* (golden riffleshell).

APPENDIX 3. EXTINCT AND EXTIRPATED ANIMALS OF VIRGINIA

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
VERTEBRATES					
FISH					
<i>Moxostoma lacerum</i> = <i>Lagochila lacera</i>	Harelip sucker	GX	SX		
<i>Percina bimaculata</i>	Chesapeake darter	G1G2	SX		
<i>Percina maculata</i>	Blackside darter	G5	SX		
<i>Percopsis omiscomaycus</i>	Trout-perch	G5	SX		
BIRDS					
<i>Conuropsis carolinensis</i>	Carolina parakeet	GX	SX		
<i>Cygnus buccinator</i>	Trumpeter swan	G4	SXN		
<i>Ectopistes migratorius</i>	Passenger pigeon	GX	SX		
<i>Vermivora bachmanii</i>	Bachman's warbler	GH	SX	LE	LE
MAMMALS					
<i>Bos bison</i> = <i>Bison bison</i>	American bison	G4	SX		
<i>Canis lupus</i> = <i>Canis lycaon</i>	Gray (= eastern timber) wolf	G4G5	SX	LE	LE
<i>Canis rufus</i>	Red wolf	G1Q	SX	LE	
<i>Cervus elaphus</i> = <i>Cervus canadensis</i>	Wapiti or elk	G5	SX*		
<i>Puma concolor cougar</i> = <i>Felis concolor cougar</i>	Eastern cougar (= mountain lion, puma)	G5THQ	SX	LE	LE
INVERTEBRATES					
BIVALVIA (MUSSELS)					
<i>Epioblasma haysiana</i>	Acornshell	GX	SX		
<i>Epioblasma lenior</i>	Narrow catspaw	GX	SX		
<i>Epioblasma torulosa gubernaculum</i>	Green-blossom pearlymussel	G2TX	SX	LE	LE
<i>Lampsilis abrupta</i>	Pink mucket	G2	SX	LE	LE
<i>Villosa fabalis</i>	Rayed bean	G2	SX	LE	LE
<i>Villosa trabalis</i>	Cumberland bean	G1	SX	LE	LE

*The last record of a native elk in Virginia was from 1855. Small numbers of reintroduced elk from eastern Kentucky have moved into far southwestern Virginia in recent years and are currently considered a game species by the Virginia Department of Game and Inland Fisheries, which has initiated plans to translocate additional elk to that portion of the state in the near future.

APPENDIX 4. NATURAL HERITAGE VERTEBRATE WATCH LIST

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
FISH					
<i>Ambloplites cavifrons</i>	Roanoke bass	G3	S3		
<i>Chologaster cornuta</i>	Swampfish	G5	S3		
<i>Enneacanthus obesus</i>	Banded sunfish	G5	S3		
<i>Erimystax dissimilis</i>	Streamline chub	G4	S3		
= <i>Hybopsis dissimilis</i>					
<i>Erimystax insignis</i>	Blotched chub	G4	S3		
= <i>Hybopsis insignis</i>					
<i>Etheostoma kanawhae</i>	Kanawha darter	G4	S3		
<i>Etheostoma simoterum</i>	Snubnose darter	G3G4	S3		
<i>Etheostoma tennesseense</i>	Tennessee darter	G5	S3		
<i>Etheostoma zonale</i>	Banded darter	G5	S3		
<i>Fundulus catenatus</i>	Northern studfish	G5	S3		
<i>Fundulus lineolatus</i>	Lined topminnow	G5	S3		
<i>Lampetra aepyptera</i>	Least brook lamprey	G5	S3		
<i>Lampetra appendix</i>	American brook lamprey	G4	S3		
<i>Margariscus margarita</i>	Pearl dace	G5	S3		
= <i>Semotilus margarita</i>					
<i>Moxostoma duquesnei</i>	Black redhorse	G5	S3		
<i>Notropis chalybaeus</i>	Ironcolor shiner	G4	S3		
<i>Notropis chiliticus</i>	Redlip shiner	G4	S3		
<i>Notropis</i> sp. 4	Sawfin shiner	G4	S3		
<i>Percina caprodes</i>	Logperch	G5	S3		
<i>Percina gymnocephala</i>	Appalachia darter	G4	S3		
<i>Percina oxyrhynchus</i>	Sharpnose darter	G4	S3		
<i>Phenacobius uranops</i>	Stargazing minnow	G4	S3		
<i>Scartomyzon ariommum</i>	Bigeye jumprock	G4	S3		
= <i>Moxostoma ariommum</i>					
AMPHIBIANS					
<i>Aneides aeneus</i>	Green salamander	G3G4	S3		
<i>Desmognathus orestes</i>	Blue Ridge dusky salamander	G4	S3		
<i>Lithobates virgatipes</i>	Carpenter frog	G5	S3		
= <i>Rana virgatipes</i>					
<i>Plethodon kentucki</i>	Cumberland Plateau salamander	G4	S3		
<i>Plethodon montanus</i>	Northern Gray-cheeked salamander	G3	S3		
<i>Plethodon yonahlossee</i>	Yonahlossee salamander	G4	S3		
<i>Pseudacris nigrita</i>	Southern chorus frog	G5	S3		
<i>Pseudacris ocularis</i>	Little grass frog	G5	S3		
= <i>Limnaoedus ocularis</i>					
<i>Siren lacertina</i>	Greater siren	G5	S3		
<i>Stereochilus marginatus</i>	Many-lined salamander	G5	S3		
REPTILES					
<i>Farancia erytrogramma</i>	Rainbow snake	G4	S3		
<i>Graptemys geographica</i>	Northern map turtle	G5	S3		
<i>Lampropeltis elapsoides</i>	Scarlet kingsnake	G5	S2S4		
= <i>Lampropeltis triangulum elapsoides</i>					
<i>Malaclemys terrapin</i>	Diamond-backed terrapin	G4	S3		
<i>Opheodrys vernalis</i>	Smooth greensnake	G5	S3		
= <i>Liochlorophis vernalis</i>					
<i>Plestiodon anthracinus</i>	Coal skink	G5	S3		
= <i>Eumeces anthracinus</i>					
<i>Tantilla coronata</i>	Southeastern crowned snake	G5	S3		

NATURAL HERITAGE VERTEBRATE WATCH LIST (continued)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
BIRDS					
<i>Accipiter cooperii</i>	Cooper's Hawk	G5	S3B/S3N		
<i>Ardea herodias</i>	Great Blue Heron	G5	S3B/S5N		
<i>Calidris canutus rufa</i>	Red Knot	G4T2	S2N		C
<i>Cardellina canadensis</i> = <i>Wilsonia canadensis</i>	Canada Warbler	G5	S3S4B		
<i>Certhia americana</i>	Brown Creeper	G5	S3B/S5N		
<i>Dendroica cerulea</i>	Cerulean Warbler	G4	S3S4B		
<i>Empidonax minimus</i>	Least Flycatcher	G5	S3S4B		
<i>Haematopus palliatus</i>	American Oystercatcher	G5	S3B/S3N		
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3S4B/S3S4N		
<i>Ixobrychus exilis</i>	Least Bittern	G5	S3B/S3N		
<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	G5	S3B/S4N		
<i>Passerculus sandwichensis</i>	Savannah Sparrow	G5	S3S4B/S4N		
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	G5	S3S4B		
<i>Riparia riparia</i>	Bank Swallow	G5	S3B		
<i>Setophaga cerulea</i> = <i>Dendroica cerulea</i>	Cerulean Warbler	G4	S3S4B		
<i>Spiza americana</i>	Dickcissel	G5	S2S3B		
<i>Sterna forsteri</i>	Forster's Tern	G5	S3B/S3N		
<i>Sterna hirundo</i>	Common Tern	G5	S3B		
<i>Tyto alba</i>	Barn Owl	G5	S3B/S3N		
<i>Vermivora chrysoptera</i>	Golden-winged Warbler	G4	S3B		
<i>Vermivora cyanoptera</i> = <i>Vermivora pinus</i>	Blue-winged Warbler	G5	S3B		
MAMMALS					
<i>Blarina brevicauda telmalestes</i>	Dismal Swamp short-tailed shrew	G5T3	S3		
<i>Lasionycteris noctivagans</i>	Silver-haired bat	G5	SUB/S4N		
<i>Lasiurus cinereus</i>	Hoary bat	G5	SUB/S3N		
<i>Lontra canadensis</i> = <i>Lutra canadensis</i>	Northern river otter	G5	S4		
<i>Mustela nivalis</i>	Least weasel	G5	S3		
<i>Myotis lucifugus</i>	Little Brown Bat	G3	S3		
<i>Myotis septentrionalis</i>	Northern Myotis	G1G3	S3		
<i>Neotoma magister</i>	Allegheny (or Appalachian) woodrat	G3G4	S3		
<i>Perimyotis subflavus</i> = <i>Pipistrellus subflavus</i>	Tricolored Bat (Eastern Pipistrelle)	G3	S3		
<i>Peromyscus gossypinus</i>	Cotton mouse	G5	S3		
<i>Peromyscus leucopus easti</i>	Pungo mouse	G5T1	S1?		
<i>Sciurus niger niger</i>	Southeastern fox squirrel	G5T5	S3		
<i>Sorex dispar</i>	Long-tailed or rock shrew	G4	S3		
<i>Spilogale putorius</i>	Eastern spotted skunk	G5	S3S4		
<i>Sylvilagus floridanus hitchensi</i>	Smith Island cottontail	G5THQ	SH		
<i>Sylvilagus palustris</i>	Marsh rabbit	G5	S3		
<i>Sylvilagus transitionalis</i> = <i>Sylvilagus obscurus</i>	New England cottontail (Appalachian cottontail)	G4	S4?		
<i>Synaptomys cooperi helaletes</i>	Dismal Swamp bog lemming	G5T3	S3		

APPENDIX 5. NATURAL HERITAGE INVERTEBRATE WATCH LIST

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
GASTROPODA (SNAILS)					
<i>Catinella hubrichti</i>	Snowhill ambersnail	G3	S1S3		
<i>Elimia catenaria</i>	Gravel Elimia	G4	S3		
<i>Fontigens orolibas</i>	Blue Ridge springsnail	G3	S3		
<i>Hendersonia occulta</i>	Cherrystone Drop	G4	S3		
<i>Lobosculum pustuloides</i>	Tiny Liptooth	G4	S2S4		
<i>Mesomphix rugeli</i>	Wrinkled button	G4	S3		
<i>Paravitrea grimmi</i>	Buff Supercoil	G1G3Q	SU		
<i>Patera laevior</i>	Smooth Bladetooth	G4	S2S4		
<i>Philomycus virginicus</i>	Virginia mantlelug	G3	S3		
<i>Pleurocera gradata</i>	Bottle hornsnail	G3	S3?		
<i>Promenetus exacuouus</i>	Sharp Sprite	G5	S3		
<i>Somatogyrus pennsylvanicus</i>	Shale pebblesnail	G3	SU		
<i>Triodopsis burchi</i>	Pittsylvania three-tooth	G3	S3		
<i>Triodopsis fraudulentata</i>	Baffled three-tooth	G4	S3		
<i>Triodopsis tennesseensis</i>	Budded three-tooth	G4	S3		
<i>Ventridens arcellus</i>	Golden dome	G4	S3		
<i>Ventridens lasmodon</i>	Hollow dome	G4	S3		
<i>Vertigo parvula</i>	Smallmouth Vertigo	G3	SU		
BIVALVIA (MUSSELS & CLAMS)					
Mussels					
<i>Alasmidonta undulata</i>	Triangle floater	G4	S3S4		
<i>Anodonta implicata</i>	Alewife floater	G5	S3?		
<i>Fusconaia subrotunda</i>	Longsolid	G3	S3		
<i>Leptodea ochracea</i> = <i>Ligumia ochracea</i>	Tidewater mucket	G3G4	S3		
<i>Ligumia nasuta</i>	Eastern pondmussel	G4	S3		
<i>Medionidus conradicus</i>	Cumberland moccasinshell	G3G4	S3S4		
<i>Strophitus undulatus</i>	Creeper	G5	S3S4		
<i>Villosa constricta</i>	Notched rainbow	G3	S3		
<i>Villosa vanuxemensis</i>	Mountain creekshell	G4	S3S4		
ARACHNIDA (SPIDERS, PSEUDOSCORPIONS & RELATIVES)					
Spiders					
<i>Drassyllus louisianus</i>	A gnaphosid spider	G4?	S2S4		
<i>Hypochilus gertschi</i>	Gertsch's lampshade-web spider	G3	S3		
<i>Nesticus holsingeri</i>	Holsinger's cave spider	G3G4	S3		
<i>Nesticus tennesseensis</i>	A cave spider	G3G4	S3		
<i>Sphodros atlanticus</i>	Atlantic purse-web spider	G4	S3		
<i>Sphodros coylei</i>	Coyle's purse-web spider	G4?	S3		
<i>Sphodros niger</i>	Black purse-web spider	G4G5	S3		
<i>Sphodros rufipes</i>	Red-legged purse-web spider	G4	SU		
Pseudoscorpions					
<i>Chitrella cavicola</i>	A cave pseudoscorpion	G3	S3		

NATURAL HERITAGE INVERTEBRATE WATCH LIST (continued)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
CRUSTACEA (AMPHIPODS, ISOPODS & DECAPODS)					
Amphipods					
<i>Crangonyx antennatus</i>	Appalachian Valley cave amphipod	G5	S3		
<i>Gammarus pseudolimnaeus</i>	Northern spring amphipod	G5	S3		
<i>Stygobromus araeus</i>	Tidewater interstitial amphipod	G3	S3		
<i>Stygobromus estesi</i>	Craig County cave amphipod	G4	S3		
<i>Stygobromus indentatus</i>	Tidewater amphipod	G3	S3		
<i>Stygobromus spinosus</i>	Blue Ridge spring amphipod	G3	S3		
Isopods					
<i>Caecidotea holsingeri</i>	Greenbrier Valley cave isopod	G5	S3		
<i>Caecidotea pricei</i>	Price's cave isopod	G5	S3		
<i>Caecidotea recurvata</i>	Southwestern Virginia cave isopod	G5	S3		
<i>Caecidotea richardsonae</i>	Tennessee Valley cave isopod	G5	S3		
Decapods					
<i>Cambarus angularis</i>	Angled crayfish	G3	S3		
<i>Cambarus chasmodactylus</i>	New River crayfish	G4	S3		
<i>Cambarus diogenes</i>	Devil crawfish	G5	S3		
<i>Cambarus longirostris</i>	Longnose crayfish	G5Q	S3		
<i>Fallicambarus fodiens</i>	Digger crayfish	G5	S3		
= <i>Fallicambarus uhleri</i>					
<i>Orconectes cristavarius</i>	Spiny stream crayfish	G5	S3		
<i>Orconectes forceps</i>	Surgeon crayfish	G5	S3		
<i>Orconectes obscurus</i>	Allegheny crayfish	G5	S3		
Branchiopods					
<i>Eulimnadia</i> sp. 1	A clam shrimp	G?	SU		
DIPLOPODA (MILLIPEDES)					
<i>Abacion tessellatum</i>	A millipede	G5	S3		
<i>Andrognathus corticarius</i>	A millipede	G5	S3		
<i>Apheloria montana</i>	A millipede	G5	S3		
<i>Apheloria tigana</i>	A millipede	G5	S3		
<i>Brachycybe lecontii</i>	A millipede	G5	S3		
<i>Buotus carolinus</i>	A millipede	G3	S3		
<i>Cambala hubrichti</i>	A millipede	G5	S3		
<i>Cambala minor</i>	A millipede	G5	S3		
<i>Conotyla melinda</i>	Melinda millipede	G3	S3		
<i>Nannaria ericacea</i>	McGraw Gap xystodesmid millipede	G3	S3		
<i>Nannaria morrisoni</i>	A millipede	G3	S3		
<i>Nannaria wilsoni</i>	A millipede	G3	S3		
<i>Rudiloria kleinpeteri</i>	A millipede	G3	S3		
<i>Zygonopus packardi</i>	Packard's blind cave millipede	G4	S3		
= <i>Trichopetalum packardi</i>					
COLLEMBOLA (SPRINGTAILS)					
<i>Pseudosinella granda</i>	A cave springtail	G3	S3		
<i>Pygmarrhopalites carolynae</i>	A cave springtail	G4	S3		
<i>Pygmarrhopalites clarus</i>	A cave springtail	G4	S3		
<i>Pygmarrhopalites marshalli</i>	A cave springtail	G3	S3		
<i>Pygmarrhopalites pavo</i>	A cave springtail	G3?	S3		
<i>Sinella barri</i>	Barr's cave springtail	G5	S3		

NATURAL HERITAGE INVERTEBRATE WATCH LIST (continued)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
ODONATA (DAMSELFLIES & DRAGONFLIES)					
Damselflies					
<i>Argia bipunctulata</i>	Seepage dancer	G4	S3		
<i>Calopteryx angustipennis</i>	Appalachian jewelwing	G4	S3		
<i>Enallagma daeckii</i>	Attenuated bluet	G4	S3		
<i>Enallagma doubledayi</i>	Atlantic bluet	G5	S3		
<i>Enallagma dubium</i>	Burgundy bluet	G5	S3		
<i>Enallagma hageni</i>	Hagen's bluet	G5	S3		
<i>Enallagma weewa</i>	Blackwater bluet	G5	S3		
<i>Ischnura prognata</i>	Furtive forktail	G4	S3		
<i>Lestes forcipatus</i>	Sweetflag spreadwing	G5	S3		
<i>Nehalennia integricollis</i>	Southern sprite	G5	S3		
<i>Telebasis byersi</i>	Duckweed firetail	G5	S3		
Dragonflies					
<i>Anax longipes</i>	Comet darner	G5	S3		
<i>Cordulegaster erronea</i>	Tiger spiketail	G4	S3		
<i>Cordulia shurtleffii</i>	American emerald	G5	S3		
<i>Epiptera costalis</i> = <i>Tetragoneuria costalis</i>	Stripe-winged baskettail	G5	S2S4		
<i>Gomphaeschna antilope</i>	Taper-tailed darner	G4	S3		
<i>Gomphus abbreviatus</i>	Spine-crowned clubtail	G3G4	S3		
<i>Gomphus dilatatus</i>	Blackwater clubtail	G5	S3		
<i>Gomphus rogersi</i>	Sable clubtail	G4	S3		
<i>Helocordulia selysii</i>	Selys' sundragon	G4	S3		
<i>Leucorrhinia intacta</i>	Dot-tailed whiteface	G5	S3		
<i>Libellula flavida</i>	Yellow-sided skimmer	G5	S3		
ORTHOPTERA (GRASSHOPPERS, KATYDIDS, CRICKETS & RELATIVES)					
<i>Melanoplus celatus</i>	A spur-throat grasshopper	GU	SU		
<i>Melanoplus devius</i>	A spur-throat grasshopper	GU	SU		
<i>Melanoplus impudicus</i>	Immodest spur-throat grasshopper	G4G5	SU		
<i>Scudderia septentrionalis</i>	Northern bush katydid	G3?	S3		
HETEROPTERA (TRUE BUGS)					
<i>Corixidea major</i>	A true bug	GU	SU		
<i>Glyptocombus saltator</i>	A true bug	G?	SU		
<i>Isocytus chapmani</i>	Chapman's shore bug	G?	SU		
<i>Ligyrocoris depictus</i>	A seed bug	G4?	SU		
<i>Nannocoris arenarius</i>	A true bug	GU	SU		
<i>Neolygus crataegi</i>	Hawthorn plant bug	G?	S1S3		
<i>Nepa apiculata</i>	A water scorpion	G?	S2S4		
<i>Phytocoris hoffmani</i>	Spruce plant bug	G?	S1S3		
<i>Plagiognathus repetitus</i>	Pine barrens plant bug	G?	SU		
<i>Pnirontis languida</i>	An assassin bug	G4	S2S4		
<i>Ranatra australis</i>	Southern water scorpion	G5	S3		
<i>Stachyocnemus apicalis</i>	Sandpit alydid bug	G4	SU		
<i>Tominotus communis</i>	A burrower bug	G5	S2S4		
HOMOPTERA (CICADAS, LEAFHOPPERS & RELATIVES)					
<i>Trialeurodes phlogis</i>	Phlox whitefly	GU	SU		

NATURAL HERITAGE INVERTEBRATE WATCH LIST (continued)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
COLEOPTERA (BEETLES)					
<i>Anthophylax hoffmani</i>	A longhorned beetle	G?	S1S3		
<i>Calligrapha pnirsa</i>	A leaf beetle	G3	S1S3		
<i>Cicindela dorsalis media</i> = <i>Habroscelimorpha dorsalis media</i>	White tiger beetle	G4T3T4	S3		
<i>Cicindela purpurea</i>	Purple tiger beetle	G5	S3		
<i>Cicindela splendida</i>	Splendid tiger beetle	G5	S3		
<i>Diabrotica cristata</i>	A leaf beetle	G?	SU		
<i>Helops sulcipennis</i>	A flightless darkling beetle	G3?	S1S3		
<i>Hopierius planatus</i>	A predaceous diving beetle	G?	SU		
<i>Hydrobiomorpha casta</i>	A water scavenger beetle	G?	SU		
<i>Megacephala carolina</i> = <i>Tetracha carolina</i>	Carolina big-headed tiger beetle	G5	S3		
<i>Nicrophorus defodiens</i>	A burying beetle	G4	S3		
<i>Paralichas trivittis</i> = <i>Odontonyx trivittis</i>	A beetle	G?	SU		
<i>Pentagonica picticornis</i>	A ground beetle	G?	S1S3		
<i>Phloeoxena signata</i>	A ground beetle	G3?	S3		
<i>Pseudaptinus lecontei</i>	A ground beetle	G?	S1S3		
<i>Stenocorus schaumii</i>	Schaum's longhorn beetle	G?	S1S3		
<i>Urographis triangulifer</i> = <i>Graphisurus triangulifer</i>	A longhorned beetle	G4?	SU		
TRICHOPTERA (CADDISFLIES)					
<i>Agapetus hessi</i>	A glossosomatid caddisfly	G4G5	S2S4		
<i>Agapetus iridis</i>	A glossosomatid caddisfly	G5	S2S4		
<i>Agapetus pinatus</i>	A glossosomatid caddisfly	G5	S2S4		
<i>Brachycentrus solomoni</i>	A brachycentrid caddisfly	G4	S2S4		
<i>Brachycentrus spinae</i>	A brachycentrid caddisfly	G4	S2S4		
<i>Ceraclea ophioderus</i>	A leptocerid caddisfly	G5	S2S4		
<i>Ceratopsyche alhedra</i>	A hydropsychid caddisfly	G5	S2S4		
<i>Cheumatopsyche gracilis</i>	A hydropsychid caddisfly	G5	S2S4		
<i>Cheumatopsyche gyra</i>	A hydropsychid caddisfly	G4G5	S2S4		
<i>Cheumatopsyche halima</i>	A hydropsychid caddisfly	G5	S2S4		
<i>Cheumatopsyche parentum</i>	A hydropsychid caddisfly	G3	S3		
<i>Chimarra augusta</i>	A philopotamid caddisfly	G3G4	S3		
<i>Culoptila cantha</i>	A glossosomatid caddisfly	G5	S1S3		
<i>Frenesia difficilis</i>	A limnephilid caddisfly	G5	S2S4		
<i>Frenesia missa</i>	A limnephilid caddisfly	G5	S2S4		
<i>Goerita betteni</i>	A caddisfly	G4	S2S4		
<i>Glossosoma intermedium</i>	A glossosomatid caddisfly	G5	S2S4		
<i>Homoplectra doringa</i>	A hydropsychid caddisfly	G5	S2S4		
<i>Hydropsyche catawba</i>	A hydropsychid caddisfly	G3	S3		
<i>Hydropsyche franclemonti</i>	A hydropsychid caddisfly	G5	S2S4		
<i>Hydropsyche hoffmani</i>	A hydropsychid caddisfly	G3G4	S3		
<i>Hydropsyche ophthalmica</i>	A hydropsychid caddisfly	G3	S3		
<i>Hydroptila ajax</i>	A microcaddisfly	G5	S1S3		
<i>Hydroptila amoena</i>	A microcaddisfly	G5	S2S4		
<i>Hydroptila fiskei</i>	A microcaddisfly	G3G4	S2S4		
<i>Hydroptila talladega</i>	A microcaddisfly	G4	S1S3		
<i>Hydroptila vala</i>	A microcaddisfly	G4	S2S4		
<i>Hydroptila virgata</i>	A microcaddisfly	G5	S1S3		
<i>Ironoquia parvula</i>	A limnephilid caddisfly	G5	S2S4		
<i>Ithytrichia clavata</i>	A microcaddisfly	G5	S2S4		
<i>Lepidostoma pictile</i>	A lepidostomatid caddisfly	G5	S2S4		
<i>Leptocerus americanus</i>	A leptocerid caddisfly	G5	S2S4		

NATURAL HERITAGE INVERTEBRATE WATCH LIST (continued)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
Caddisflies (continued)					
<i>Limnephilus indivisus</i>	A limnephilid caddisfly	G5	S2S4		
<i>Limnephilus moestus</i>	A limnephilid caddisfly	G5	S2S4		
<i>Macrostemum transversum</i>	A hydropterygid caddisfly	G3G5	S2S4		
<i>Mayatrichia ayama</i>	A microcaddisfly	G5	S2S4		
<i>Micrasema burksi</i>	A brachycentrid caddisfly	G5	S2S4		
<i>Micrasema scotti</i>	A brachycentrid caddisfly	G3G4	S3		
<i>Neophylax ornatus</i>	A uenoid caddisfly	G4G5	S2S4		
<i>Neophylax stolus</i>	A uenoid caddisfly	G3	S3		
<i>Neophylax wigginsi</i>	A uenoid caddisfly	G3G4	S2S4		
<i>Neotrichia vibrans</i>	A microcaddisfly	G5	S2S4		
<i>Ochrotrichia arva</i>	A microcaddisfly	G4G5	S1S3		
<i>Ochrotrichia tarsalis</i>	A microcaddisfly	G5	S2S4		
<i>Ochrotrichia wojcickyi</i>	A microcaddisfly	G4G5	S1S3		
<i>Orthotrichia cristata</i>	A microcaddisfly	G5	S2S4		
<i>Oxyethira janella</i>	Little-entrance Oxyethiran microcaddisfly	G5	S2S4		
<i>Oxyethira michiganensis</i>	A microcaddisfly	G5	S2S4		
<i>Oxyethira rivicola</i>	A microcaddisfly	G5	S1S3		
<i>Paranyctiophylax denningi</i>	A polycentropodid caddisfly	G4G5	S1S3		
<i>Paranyctiophylax serratus</i>	A polycentropodid caddisfly	G4	S1S3		
<i>Polycentropus interruptus</i>	A polycentropodid caddisfly	G5	S1S3		
<i>Polycentropus nascotius</i>	A polycentropodid caddisfly	G5	S1S3		
<i>Polycentropus pentus</i>	A polycentropodid caddisfly	G5	S1S3		
<i>Pseudostenophylax sparsus</i>	A limnephilid caddisfly	G5	S2S4		
<i>Ptilostomis semifasciata</i>	A phryganeid caddisfly	G5	S2S4		
<i>Pycnopsyche conspersa</i>	A limnephilid caddisfly	G3G4	S2S4		
<i>Pycnopsyche flavata</i>	A limnephilid caddisfly	G4	S2S4		
<i>Pycnopsyche virginica</i>	A limnephilid caddisfly	G3G4	S3		
<i>Rhyacophila acutiloba</i>	A rhyacophilid caddisfly	G5	S2S4		
<i>Rhyacophila formosa</i>	A rhyacophilid caddisfly	G5	S2S4		
<i>Rhyacophila invaria</i>	A rhyacophilid caddisfly	G5	S2S4		
<i>Rhyacophila manistee</i>	A rhyacophilid caddisfly	G5	S2S4		
<i>Rhyacophila otica</i>	A rhyacophilid caddisfly	G3G4Q	S1S3		
<i>Rhyacophila shenandoahensis</i>	Shenandoah rhyacophilid caddisfly	G3	S3		
<i>Rhyacophila vibox</i>	A rhyacophilid caddisfly	G5	S2S4		
<i>Stactobiella martynovi</i>	A microcaddisfly	G4	S1S3		
<i>Wormaldia shawnee</i>	A philopotamid caddisfly	G4G5	S2S4		

LEPIDOPTERA (BUTTERFLIES, SKIPPERS & MOTHS)

Butterflies

<i>Atlides halesus</i>	Great purple hairstreak	G4G5	S3		
<i>Celastrina lucia</i>	Northern spring azure	G5	S2S4		
= <i>Celastrina ladon lucia</i>					
<i>Celastrina nigra</i>	Dusky azure	G4	S3S4		
= <i>Celastrina ebenina</i>					
<i>Celastrina serotina</i>	Cherry gall azure	G5	S2S4		
<i>Enodia creola</i>	Creole pearly eye	G3G4	S3S4		
<i>Euphydryas phaeton</i>	Baltimore checkerspot	G4	SU		
<i>Papilio appalachiensis</i>	Appalachian tiger swallowtail	G4	S3S4		
= <i>Pterourus appalachiensis</i>					
<i>Pieris virginiana</i>	West Virginia white	G3?	S3		
<i>Satyrium caryaevorus</i>	Hickory hairstreak	G4	S2S4		
<i>Satyrium edwardsii</i>	Edwards' hairstreak	G4	S3S4		
<i>Satyrium favonius ontario</i>	Northern oak hairstreak	G4T4	S3		
= <i>Fixsenia favonius ontario</i>					
<i>Speyeria diana</i>	Diana fritillary	G3G4	S3		

NATURAL HERITAGE INVERTEBRATE WATCH LIST (continued)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
Skippers					
<i>Amblyscirtes aesculapias</i>	Lace-winged roadside skipper	G3G4	S3		
<i>Amblyscirtes carolina</i>	Carolina roadside skipper	G3G4	S3S4		
<i>Amblyscirtes reversa</i>	Reversed roadside skipper	G3G4	S3		
<i>Autochton cellus</i>	Golden-banded skipper	G4	SU		
<i>Hesperia leonardus</i>	Leonard's skipper	G4	S3?		
<i>Poanes aaroni</i>	Aaron's skipper	G4	S3		
<i>Poanes yehl</i>	Yehl skipper	G4	S3		
<i>Thorybes confusus</i>	Confused cloudywing	G4	S2S4		
Moths					
<i>Abrostola ovalis</i>	A noctuid moth	G4	S2S4		
<i>Acronicta dactylina</i>	Fingered dagger moth	G5	SU		
<i>Acronicta haesitata</i>	Hesitant dagger moth	G5	S2S4		
<i>Acronicta radcliffei</i>	Radcliffe's dagger moth	G5	S2S4		
<i>Acronicta subochrea</i>	Puzzling dagger moth	G4?	S1S4		
<i>Acronicta tristis</i>	A dagger moth	G?	S1S3		
<i>Anaplectoides prasina</i>	Green arches	G5	S1S3		
<i>Apamea cariosa</i>	A noctuid moth	G4	S1S3		
<i>Apamea lignicolora</i>	Wood-colored Apamea moth	G5	S2S4		
<i>Apamea plutonia</i>	A noctuid moth	G4	S2S4		
<i>Apamea sordens</i> = <i>Apamea finitima</i>	Bordered Apamea moth	G?	S1S3		
Apameini new genus 2, sp. 1	A cane moth	G?	S1S3		
Apameini new genus 2, sp. 2	A cane moth	G?	S1S3		
Apameini new genus 2, sp. 3	A cane moth	G?	S1S3		
<i>Argyrostromis quadrifilaris</i>	Four-lined chocolate moth	G4	S1S3		
<i>Autographa ampla</i>	Large looper moth	G5	S1S3		
<i>Bellura brehmei</i>	A wetland borer moth	G?	S2S4		
<i>Bellura vulnifica</i> = <i>Bellura melanopyga</i>	A wetland borer moth	G?	S1S4		
<i>Cabera quadrifasciaria</i>	Four-lined Cabera moth	G?	S1S3		
<i>Callopietria granitosa</i>	Granitosa fern moth	G4	S1S3		
<i>Capsula subflava</i> = <i>Archanara subflava</i>	A sedge borer moth	G4	S1S3		
<i>Catocala angusi</i>	Angus' underwing	G4	S2S4		
<i>Catocala antinympa</i>	Sweetfern underwing	G5	S1S4		
<i>Catocala concumbens</i>	Sleepy underwing	G5	S1S3		
<i>Catocala crataegi</i>	Hawthorn underwing	G5	S2S4		
<i>Catocala insolabilis</i>	Inconsolable underwing	G5	S1S3		
<i>Catocala miranda</i>	Miranda underwing	G3G4	S2S4		
<i>Catocala parta</i>	Mother underwing	G5	S2S4		
<i>Catocala robinsoni</i>	Robinson's underwing	G4	S3		
<i>Catocala sappho</i>	Sappho underwing	G4	S1S3		
<i>Catocala serena</i>	Serene underwing	G5	S2S4		
<i>Crambidia casta</i>	Pearly-winged lichen moth	G5	S1S4		
<i>Crambidia pura</i>	Pure lichen moth	G4	S1S3		
<i>Cucullia alfarata</i>	A noctuid moth	G4	S1S4		
<i>Cucullia florea</i>	A noctuid moth	G?	S2S4		
<i>Cutina aluticolor</i>	A cypress moth	G4	S3		
<i>Darapsa versicolor</i>	Hydrangea sphinx	G4	S2S4		
<i>Dasychira pinicola</i>	Pine tussock moth	G4	S1S3		
<i>Dasychira plagiata</i>	A tussock moth	G?	S2S4		
<i>Derrima stellata</i>	Pink star moth	G4	S1S3		
<i>Diachrysia balluca</i>	A noctuid moth	G?	S1S3		
<i>Dyssstroma truncata</i>	Marbled carpet	G?	S2S4		
<i>Emarginea percara</i>	A noctuid moth	G4	S3		
<i>Erastria cruentaria</i>	Thin-lined Erastria moth	G4	S2S4		

NATURAL HERITAGE INVERTEBRATE WATCH LIST (continued)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
Moths (continued)					
<i>Eueretagrotis attentata</i>	Attentive dart moth	G4	S1S3		
<i>Eueretagrotis perattenta</i>	Two-spot dart moth	G5	S1S3		
<i>Eueretagrotis sigmoides</i>	Sigmoid dart moth	G5	S3		
<i>Eulithis molliculata</i>	Dimorphic Eulithis moth	G4	S3		
<i>Eupithecia peckorum</i>	Peck's Eupithecia moth	G4	S1S4		
<i>Euxoa bostoniensis</i>	Boston dart moth	G?	S2S4		
<i>Euxoa declarata</i>	A dart moth	G4G5	S1S3		
<i>Euxoa messoria</i>	A dart moth	G?	S2S4		
<i>Euxoa obeliscoides</i>	A dart moth	G?	S2S4		
<i>Euxoa redimicula</i>	Fillet dart moth	G?	S2S4		
<i>Euxoa scholastica</i>	Scholastic dart moth	G?	S2S4		
<i>Euxoa violaris</i>	Violet dart moth	G4	S1S3		
<i>Feralia comstocki</i>	Comstock's sawfly	G4	S1S3		
<i>Glena cognataria</i>	Blueberry Gray	G4	S1S4		
<i>Haploa colona</i>	Colona moth	G4G5	S2S4		
<i>Heliomata infulata</i>	Rare spring moth	G3G4	S2S4		
<i>Homochlodes disconventa</i>	Dark Homochlodes moth	G4	S2S4		
<i>Hydraecia stramentosa</i>	Figwort borer moth	G4	S2S4		
<i>Hydriomena bistriolata</i>	A geometrid moth	G?	S2S4		
<i>Hydriomena divisaria</i>	Black-dashed Hydriomena moth	G?	S1S4		
<i>Hypena sordidula</i> = <i>Bomolocha sordidula</i>	Sordid Hypena moth	G4?	S2S4		
<i>Idia majoralis</i>	Major Idia moth	G?	S1S3		
<i>Iridopsis pergracilis</i> = <i>Anacamptodes pergracilis</i>	A geometrid moth	G4G5	S1S3		
<i>Isoparce cupressi</i>	Cypress sphinx	G4	S3		
<i>Lacinipolia lustralis</i>	A noctuid moth	G?	SU		
<i>Leucania commoides</i>	A noctuid moth	G5	S1S4		
<i>Lintneria eremitus</i> = <i>Sphinx eremitus</i>	Hermit sphinx	G4	S1S3		
<i>Lithophane innominata</i>	Nameless pinion moth	G5	S1S4		
<i>Lithophane petulca</i>	Wanton noctuid moth	G5	S1S3		
<i>Lithophane querquera</i>	Shivering pinion moth	G?	S2S4		
<i>Lophocampa maculata</i>	Spotted Tussock Moth	G5	S1S3		
<i>Melanchra assimilis</i>	Black arches	G5	S1S3		
<i>Melipotis jucunda</i>	Merry Melipotis moth	G5	S1S3		
<i>Mesoleuca ruficillata</i>	White-ribboned carpet	G4	S2S4		
<i>Metanema inatomaria</i>	Pale Metanema moth	G?	S1S3		
<i>Morrisonia triangula</i>	Triangle-barred Morrisonia moth	G3G4	S2S4		
<i>Nemoria elfa</i>	Elfin emerald	G?	S1S3		
<i>Neoligia crytora</i> = <i>Oligia crytora</i>	A noctuid moth	G?	S2S4		
<i>Neoligia exhausta</i> = <i>Oligia exhausta</i>	A noctuid moth	G?	S1S3		
<i>Orthofidonia exornata</i>	A geometrid moth	G?	S1S4		
<i>Orthosia revicta</i>	Subdued Quaker moth	G?	S2S4		
<i>Panopoda repanda</i>	Orange Panopoda moth	G5	S3		
<i>Panthea acronyctoides</i>	Black zipzag	G5	S2S4		
<i>Papaipema impecuniosa</i>	Aster borer moth	G5	S2S4		
<i>Papaipema nelita</i>	Coneflower borer moth	G4	S1S4		
<i>Papaipema nephroleptena</i>	Turtlehead borer moth	G4	S2S4		
<i>Papaipema polymniae</i>	Leafcup borer moth	G4	S2S4		
<i>Papaipema pterisii</i>	Bracken fern borer moth	G5	S3		
<i>Papaipema speciosissima</i>	Osmunda borer moth	G4	S3		
<i>Papaipema unimoda</i>	Meadow rue borer moth	G5	S2S4		
<i>Pero zalissaria</i>	A geometrid moth	G4	S3		
<i>Petrophora subaequaria</i>	Northern Petrophora moth	G4G5	S1S3		
<i>Polychrysis morigera</i>	A noctuid moth	G4	S3		

NATURAL HERITAGE INVERTEBRATE WATCH LIST (continued)

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	FEDERAL STATUS	STATE STATUS
Moths (continued)					
<i>Protapamea danieli</i>	A cane moth	G?	S1S3		
<i>Protodeltote albidula</i> = <i>Lithacodia albidula</i>	A noctuid moth	G5	S1S3		
<i>Psaphida grandis</i> = <i>Eutolype grandis</i>	Gray sallow	G4	S1S3		
<i>Psaphida thaxterianus</i>	A noctuid moth	G4	S2S4		
<i>Pseudohermionassa tenuicula</i> = <i>Xestia tenuicula</i>	A dart moth	G4	S1S3		
<i>Schinia bina</i>	Bina flower moth	G4	S1S4		
<i>Schinia florida</i>	Primrose moth	G5	S2S4		
<i>Schinia nubila</i>	A flower moth	G5	S2S4		
<i>Schinia saturata</i>	Brown flower moth	G5	S2S4		
<i>Sideridis congermana</i>	German cousin moth	G?	S1S3		
<i>Speranza abruptata</i> = <i>Itame abruptata</i>	A geometrid moth	G4	S2S4		
<i>Speranza evagaria</i> = <i>Itame evagaria</i>	A geometrid moth	G?	S1S3		
<i>Speranza exauspicata</i> = <i>Itame exauspicata</i>	A geometrid moth	G?	S1S3		
<i>Speranza subcessaria</i> = <i>Itame subcessaria</i>	Barred Itame moth	G4	S2S4		
<i>Sphinx chersis</i>	Great ash sphinx	G4G5	S2S4		
<i>Sphinx drupiferarum</i>	Wild cherry sphinx	G4	S1S3		
<i>Spragueia dama</i>	Southern Spragueia moth	G5	S2S4		
<i>Sympistis badistriga</i> = <i>Homohadena badistriga</i>	Brown-lined sallow moth	G4	S1S4		
<i>Tarache delecta</i> = <i>Acontia delecta</i>	Delightful Bird-dropping moth	GU	SU		
<i>Virbia ferruginosa</i> = <i>Holomelina ferruginosa</i>	Rusty tiger moth	G5	SU		
<i>Virbia immaculata</i> = <i>Holomelina immaculata</i>	Immaculate tiger moth	G5	SU		
<i>Xanthorhoe labradorensis</i>	Labrador carpet	G4	S2S4		
<i>Zale calycanthata</i>	Double-banded Zale moth	G4	S2S4		
<i>Zale submediana</i>	A noctuid moth	G4	S2S4		
<i>Zanclognatha</i> sp. 1	A noctuid moth	G3G4	S2S4		

APPENDIX 6. LIST OF SYNONYMS

Synonym	Name used in lists above	Common name	Page
<i>Acipenser oxyrinchus</i>	<i>Acipenser oxyrinchus</i>	Atlantic sturgeon	7
<i>Acontia delecta</i>	<i>Tarache delecta</i>	Delightful Bird-dropping moth	42
<i>Aeshna mutata</i>	<i>Rhionaeschna mutata</i>	Spatterdock damer	21
<i>Aimophila aestivalis</i>	<i>Peucaea aestivalis</i>	Bachman's Sparrow	11
<i>Alasmidonta minor</i>	<i>Alasmidonta viridis</i>	Slippershell mussel	14
<i>Anacamptodes pergracilis</i>	<i>Iridopsis pergracilis</i>	A geometrid moth	41
<i>Anculosa subglobosa</i>	<i>Leptoxis praerosa</i>	Onyx rocksnail	12
<i>Anguispira alternata jessica</i>	<i>Anguispira jessica</i>	Mountain disc	12
<i>Anthrobia mammouthia</i>	<i>Anthrobia monmouthia</i>	A cave spider	15
<i>Apamea finitima</i>	<i>Apamea sordens</i>	Bordered Apamea moth	40
<i>Archana subflava</i>	<i>Capsula subflava</i>	A sedge borer moth	40
<i>Arugisa watsoni</i>	<i>Arugisa latiorella</i>	A noctuid moth	27
<i>Balaena glacialis</i>	<i>Eubalaena glacialis</i>	Northern right whale	30
<i>Bellura melanopyga</i>	<i>Bellura vulnifica</i>	A wetland borer moth	40
<i>Bison bison</i>	<i>Bos bison</i>	Bison	32
<i>Bomolocha sordidula</i>	<i>Hypena sordidula</i>	Sordid Hypena moth	41
<i>Bufo quercicus</i>	<i>Anaxyrus quercicus</i>	Oak toad	9
<i>Canis lycaon</i>	<i>Canis lupus</i>	Gray wolf	32
<i>Carpodacus purpureus</i>	<i>Haemorhous purpureus</i>	Purple Finch	10
<i>Carunculina glans</i>	<i>Toxolasma lividus</i>	Purple liliput	15
<i>Carunculina lividus</i>	<i>Toxolasma lividus</i>	Purple liliput	15
<i>Casmerodius albus</i>	<i>Ardea alba</i>	Great Egret	10
<i>Celastrina ebenina</i>	<i>Celastrina nigra</i>	Dusky azure	39
<i>Celastrina ladon lucia</i>	<i>Celastrina lucia</i>	Northern spring azure	39
<i>Cervus canadensis</i>	<i>Cervus elaphus</i>	Wapiti or elk	32
<i>Clemmys insculpta</i>	<i>Glyptemys insculpta</i>	Wood turtle	9
<i>Clemmys mühlenbergii</i>	<i>Glyptemys mühlenbergii</i>	Bog turtle	9
<i>Conradilla caelata</i>	<i>Lemiox rimosus</i>	Birdwing pearlymussel	14
<i>Cyprinella monacha</i>	<i>Erimonax monachus</i>	Spotfin chub (= turquoise shiner)	7
<i>Cyprogenia irrorata</i>	<i>Cyprogenia stegaria</i>	Fanshell	14
<i>Deciduphagus irus</i>	<i>Callophrys irus</i>	Frosted elfin	26
<i>Deciduphagus polios</i>	<i>Callophrys polios</i>	Hoary elfin	26
<i>Dendroica cerulea</i>	<i>Setophaga cerulea</i>	Cerulean Warbler	34
<i>Dendroica fusca</i>	<i>Setophaga fusca</i>	Blackburnian Warbler	11
<i>Dendroica kirtlandii</i>	<i>Setophaga kirtlandii</i>	Kirtland's Warbler	30
<i>Dendroica magnolia</i>	<i>Setophaga magnolia</i>	Magnolia Warbler	11
<i>Dendroica virens waynei</i>	<i>Setophaga virens waynei</i>	Wayne's Black-throated Green Warbler	11
<i>Dixioria coronata</i>	<i>Dixioria pela coronata</i>	A millipede	18
<i>Ellipsoptera gratiosa</i>	<i>Cicindela gratiosa</i>	Whitish tiger beetle	23
<i>Ellipsoptera lepida</i>	<i>Cicindela lepida</i>	Ghost tiger beetle	23
<i>Enallagma cyathigerum</i>	<i>Enallagma annexum</i>	Northern bluet	20
<i>Epioblasma florentina walkeri</i> (in part)	<i>Epioblasma florentina aureola</i>	Golden riffleshell	14
<i>Erythroecia hebari</i>	<i>Psectrotarsia hebari</i>	Hebard's noctuid moth	28
<i>Etheostoma clarum</i>	<i>Ammocrypta clara</i>	Western sand darter	7
<i>Etheostoma stigmaeum jessiae</i>	<i>Etheostoma jessiae</i>	Blueside darter	7
<i>Etheostoma stigmaeum meadiae</i>	<i>Etheostoma meadiae</i>	Bluespar darter	7
<i>Etheostoma tippecanoe</i> (in part)	<i>Etheostoma denoncourti</i>	Golden darter	7
<i>Eumeces anthracinus</i>	<i>Plestiodon anthracinus</i>	Coal skink	33
<i>Eutolype grandis</i>	<i>Psaphida grandis</i>	Gray sawbill	42
<i>Fallicambarus uhleri</i>	<i>Fallicambarus fodiens</i>	A crayfish	36
<i>Felis concolor cougar</i>	<i>Puma concolor cougar</i>	Eastern cougar	11
<i>Fixsenia favonius ontario</i>	<i>Satyrium favonius ontario</i>	Northern oak hairstreak	39
<i>Foveacheles paralleloseta</i>	<i>Traegaardia paralleloseta</i>	A cave mite	15
<i>Fusconaia barnesiana</i>	<i>Pleuronaia gibberum</i>	Tennessee pigtoe	14
<i>Fusconaia edgariana</i>	<i>Fusconaia cor</i>	Shiny pigtoe	14
<i>Gallinula chloropus</i> (in part)	<i>Gallinula galeata</i>	Common Gallinule	10
<i>Gastrocopta armifera clappi</i>	<i>Gastrocopta clappi</i>	Bluegrass snaggletooth	12
<i>Gastrocopta interna fonticula</i>	<i>Gastrodonta fonticula</i>	Appalachia bellytooth	12
<i>Gomphus brevis</i>	<i>Gomphus adelphus</i>	Moustached clubtail	21
<i>Goniobasis arachnoidea</i>	<i>Elimia arachnoidea</i>	Spider Elimia	12

APPENDIX 6 (continued)

Synonym	Name used in lists above	Common name	Page
<i>Graphisurus triangulifer</i>	<i>Urographis triangulifer</i>	A longhorned beetle	38
<i>Habroscelimorpha dorsalis dorsalis</i>	<i>Cicindela dorsalis dorsalis</i>	Northeastern beach tiger beetle	23
<i>Habroscelimorpha dorsalis media</i>	<i>Cicindela dorsalis media</i>	White tiger beetle	38
<i>Heterocloeon rubrolaterale</i>	<i>Iswaeon rubrolaterale</i>	A mayfly	20
<i>Holomelina ferruginosa</i>	<i>Virbia ferruginosa</i>	Rusty tiger moth	42
<i>Holomelina immaculata</i>	<i>Virbia immaculata</i>	Immaculate tiger moth	42
<i>Holomelina nigricans</i>	<i>Virbia nigricans</i>	A tiger moth	29
<i>Homohadena badistriga</i>	<i>Sympistis badistriga</i>	Brown-lined sawfly	42
<i>Hybopsis cahni</i>	<i>Erimystax cahni</i>	Slender chub	7
<i>Hybopsis dissimilis</i>	<i>Erimystax dissimilis</i>	Streamline chub	33
<i>Hybopsis insignis</i>	<i>Erimystax insignis</i>	Blotched chub	33
<i>Hybopsis labrosa</i>	<i>Cyprinella labrosa</i>	Thicklip chub	7
<i>Hybopsis monacha</i>	<i>Erimonax monachus</i>	Spotfin chub (= turquoise shiner)	7
<i>Incisalia irus</i>	<i>Callophrys irus</i>	Frosted elfin	26
<i>Incisalia polios</i>	<i>Callophrys polios</i>	Hoary elfin	26
<i>Itame abruptata</i>	<i>Speranza abruptata</i>	A geometrid moth	42
<i>Itame evagaria</i>	<i>Speranza evagaria</i>	A geometrid moth	42
<i>Itame exauspicata</i>	<i>Speranza exauspicata</i>	A geometrid moth	42
<i>Itame ribearia</i>	<i>Speranza ribearia</i>	Currant spanworm moth	29
<i>Itame subcessaria</i>	<i>Speranza subcessaria</i>	Barred Itame moth	42
<i>Lagochila lacera</i>	<i>Moxostoma lacerum</i>	Harelip sucker	32
<i>Lampropeltis getula nigra</i>	<i>Lampropeltis nigra</i>	Eastern black kingsnake	9
<i>Lampropeltis triangulum elapsoides</i>	<i>Lampropeltis elapsoides</i>	Scarlet kingsnake	33
<i>Lampsilis orbiculata</i>	<i>Lampsilis abrupta</i>	Pink mucket	14
<i>Lastena lata</i>	<i>Hemistena lata</i>	Cracking pearl mussel	14
<i>Lepipolys perscripta</i>	<i>Sympistis perscripta</i>	Scribbled sawfly	29
<i>Leurognathus marmoratus</i>	<i>Desmognathus marmoratus</i>	Shovel-nosed salamander	9
<i>Lexingtonia dolabelloides</i>	<i>Pleurotaia dolabelloides</i>	Slabside pearl mussel	14
<i>Libellula exusta</i>	<i>Ladona exusta</i>	White corporal skimmer	21
<i>Libellula julia</i>	<i>Ladona julia</i>	Chalk-fronted corporal skimmer	21
<i>Ligumia ochracea</i>	<i>Leptodea ochracea</i>	Tidewater mucket	35
<i>Ligumia recta latissima</i>	<i>Ligumia recta</i>	Black sandshell	14
<i>Limnaeus ocularis</i>	<i>Pseudacris ocularis</i>	Little grass frog	33
<i>Liochlorophis vernalis</i>	<i>Opheodrys vernalis</i>	Smooth greensnake	33
<i>Lithacodia albidula</i>	<i>Protodeltote albidula</i>	A noctuid moth	42
<i>Lithobates virgatipes</i>	<i>Rana virgatipes</i>	Carpenter frog	33
<i>Lithophane lepida adipel</i>	<i>Lithophane adipel</i>	A pinion moth	28
<i>Loxagrotis apicalis</i>	<i>Dichagyris grotei</i>	A noctuid moth	28
<i>Lutra canadensis</i>	<i>Lontra canadensis</i>	River otter	34
<i>Merolonche dolli</i>	<i>Acronicta dolli</i>	Doll's dagger moth	27
<i>Mesodon christyi</i>	<i>Fumonelix christyi</i>	Glossy covert	12
<i>Mesodon clingmanicus</i>	<i>Fumonelix wheatleyi clingmanicus</i>	Clingman covert	12
<i>Mesodon kalmianus</i>	<i>Inflectarius kalmianus</i>	Brown globelet	12
<i>Mesodon panselenus</i>	<i>Patera panselenus</i>	Virginia bladetooth	13
<i>Microcreagris valentinei</i>	<i>Lissocreagris valentinei</i>	Valentine's cave pseudoscorpion	16
<i>Mitoura hesseli</i>	<i>Callophrys hesseli</i>	Hessel's hairstreak	26
<i>Moxostoma ariommum</i>	<i>Scartomyzon ariommum</i>	Bigeye jumprock	33
<i>Moxostoma hamiltoni</i>	<i>Thoburnia hamiltoni</i>	Rustyside sucker	8
<i>Neadysgonia telma</i>	<i>Gondysia telma</i>	Telma darkwing moth	28
<i>Neonympha areolatus septentrionalis</i>	<i>Neonympha helicta</i>	Helicta satyr	27
<i>Notropis hypsinotus</i>	<i>Hybopsis hypsinotus</i>	Highback chub	7
<i>Notropis lirus</i>	<i>Lythrurus lirus</i>	Mountain shiner	8
<i>Notropis whipplei</i>	<i>Cyprinella whipplei</i>	Steelcolor shiner	7
<i>Nuttallornis borealis</i>	<i>Contopus cooperi</i>	Olive-sided Flycatcher	10
<i>Nycticorax violaceus</i>	<i>Nyctanassa violacea</i>	Yellow-crowned Night-heron	10
<i>Odontonyx trivittis</i>	<i>Paralichas trivittis</i>	A beetle	38
<i>Oligia crytora</i>	<i>Neoligia crytora</i>	A noctuid moth	41
<i>Oligia exhausta</i>	<i>Neoligia exhausta</i>	A noctuid moth	41
<i>Ophiogomphus alleghaniensis</i>	<i>Ophiogomphus incurvatus alleghaniensis</i>	Allegheny snaketail	21
<i>Oporornis philadelphia</i>	<i>Geothlypis philadelphia</i>	Mourning Warbler	10

APPENDIX 6 (continued)

Synonym	Name used in lists above	Common name	Page
<i>Percina macrocephala</i>	<i>Percina williamsi</i>	Sickle darter	8
<i>Phoxinus cumberlandensis</i>	<i>Chrosomus cumberlandensis</i>	Blackside dace	7
<i>Phoxinus tennesseensis</i>	<i>Chrosomus tennesseensis</i>	Tennessee dace	7
<i>Phyciodes pascoensis</i>	<i>Phyciodes cocyta</i>	Northern crescent	27
<i>Phyciodes selenis</i>	<i>Phyciodes cocyta</i>	Northern crescent	27
<i>Physeter catodon</i>	<i>Physeter macrocephalus</i>	Sperm whale	30
<i>Pipistrellus subflavus</i>	<i>Perimyotis subflavus</i>	Tricolored bat	34
<i>Plauditus rubrolateralis</i>	<i>Isuaeon rubrolaterale</i>	A mayfly	20
<i>Plecotus rafinesquii macrotis</i>	<i>Corynorhinus rafinesquii macrotis</i>	Eastern big-eared bat	11
<i>Plecotus townsendii virginianus</i>	<i>Corynorhinus townsendii virginianus</i>	Virginia big-eared bat	11
<i>Pleurobema maculatum</i>	<i>Pleurobema oviforme</i>	Tennessee clubshell	14
<i>Pleurobema pyramidatum</i>	<i>Pleurobema rubrum</i>	Pyramid pigtoe	14
<i>Polygyra plicata</i>	<i>Millerelix plicata</i>	Cumberland liptooth	13
<i>Polyzonium rosalbum</i>	<i>Petaserpes rosalbum</i>	A millipede	18
<i>Pseudaptinus pygmaeus</i>	<i>Thalpius pygmaeus</i>	A ground beetle	24
<i>Pterourus appalachiensis</i>	<i>Papilio appalachiensis</i>	Appalachian tiger swallowtail	39
<i>Pyrgus wyandot</i>	<i>Pyrgus centaureae wyandot</i>	Appalachian grizzled skipper	27
<i>Rhodoecia aurantiago</i>	<i>Pyrrhia aurantiago</i>	Aureolaria seed borer moth	29
<i>Richia grotei</i>	<i>Dichagyris grotei</i>	A noctuid moth	28
<i>Schinia inclara</i>	<i>Schinia siren</i>	A flower moth	29
<i>Seiurus noveboracensis</i>	<i>Parkesia noveboracensis</i>	Northern Waterthrush	11
<i>Semiothisa distribuaria</i>	<i>Macaria distribuaria</i>	A geometrid moth	28
<i>Semotilus margarita</i>	<i>Margariscus margarita</i>	Pearl dace	33
<i>Sphaeroderus nitidicollis schaumii</i>	<i>Sphaeroderus schaumii</i>	Schaum's false snail-eating beetle	24
<i>Sphinx eremitus</i>	<i>Lintneria eremitus</i>	Hermit sphinx	41
<i>Stenotrema leai alicia</i>	<i>Euchemotrema leai</i>	Lowland pillsnail	12
<i>Sterna antillarum</i>	<i>Sternula antillarum</i>	Least Tern	11
<i>Sterna caspia</i>	<i>Hydroprogne caspia</i>	Caspian Tern	10
<i>Sterna maxima</i>	<i>Thalasseus maximus</i>	Royal Tern	11
<i>Sterna nilotica</i>	<i>Gelochelidon nilotica</i>	Gull-billed Tern	10
<i>Sterna sandvicensis</i>	<i>Thalasseus sandvicensis</i>	Sandwich Tern	11
<i>Stizostedion canadense</i>	<i>Sander canadensis</i>	Sauger	8
<i>Sylvilagus obscurus</i>	<i>Sylvilagus transitionalis</i>	New England cottontail	34
<i>Sympetrum janeae</i>	<i>Sympetrum internum</i>	Cherry-faced meadowhawk	21
<i>Tetracha carolina</i>	<i>Megacephala carolina</i>	Carolina big-headed tiger beetle	38
<i>Tetragoneuria canis</i>	<i>Epithea canis</i>	Beaverpond baskettail	20
<i>Tetragoneuria costalis</i>	<i>Epithea costalis</i>	Stripe-winged baskettail	37
<i>Tetragoneuria semiaquea</i>	<i>Epithea semiaquea</i>	Mantled baskettail	20
<i>Tetragoneuria spinosa</i>	<i>Epithea spinosa</i>	Robust baskettail	21
<i>Trichopetalum packardi</i>	<i>Zygonopus packardi</i>	Packard's blind cave millipede	36
<i>Trichopetalum weyerienseis</i>	<i>Zygonopus weyerienseis</i>	Grand Caverns blind cave millipede	19
<i>Trichopetalum whitei</i>	<i>Zygonopus whitei</i>	Luray Caverns blind cave millipede	19
<i>Trionyx spiniferus</i>	<i>Apalone spinifera</i>	Spiny softshell	9
<i>Troglodytes troglodytes</i> (in part)	<i>Troglodytes hiemalis</i>	Winter Wren	11
<i>Vermivora pinus</i>	<i>Vermivora cyanoptera</i>	Blue-winged Warbler	34
<i>Vermivora ruficapilla</i>	<i>Oreothlypis ruficapilla</i>	Nashville Warbler	10
<i>Wilsonia canadensis</i>	<i>Cardellina canadensis</i>	Canada Warbler	34
<i>Wyeomyia haynei</i>	<i>Wyeomyia smythii</i>	Pitcher plant mosquito	29
<i>Xestia tenuicula</i>	<i>Pseudohermionassa tenuicula</i>	A dart moth	42
<i>Zanclognatha gypsalis</i>	<i>Zanclognatha theralis</i>	A noctuid moth	29

APPENDIX 7. RARE SPECIES SIGHTING FORM

Virginia Department of Conservation and Recreation, Division of Natural Heritage
217 Governor Street, Richmond, Virginia 23219
(804) 786-7951

An important component of the natural heritage inventory and protection process involves gathering information from state experts, professionals, and avocational naturalists throughout the state. To facilitate this, the Division of Natural Heritage has developed this rare species sighting form. If you would like to participate in our inventory and protection activities, please take a few moments to complete the attached form for any species from our rare species list. These data will be evaluated for incorporation into the natural heritage database and used exclusively for the protection of the rare species and its habitat. Please send the form to the staff zoologist at the address above. Thank you for your support. The Division of Natural Heritage can only realize the protection of the Commonwealth's natural diversity by working through a network of knowledgeable and concerned individuals.

SPECIES OBSERVED:

DATE OBSERVED:

COUNTY:

USGS QUADRANGLE MAP NAME (if known; mark location on a photocopy of the appropriate map and submit with this form):

LOCATION (Provide a detailed description, including directions from nearest town, road intersection, etc.):

HABITAT DESCRIPTION (Include associated species, elevation, natural features, natural community type, etc.):

POPULATION DATA (Number of individuals observed, age, size, evidence of reproduction, etc.):

LANDOWNER (If know, provide name, address, and phone number):

THREATS TO SPECIES OR EVIDENCE OF HABITAT DISTURBANCE:

REPORTED BY (Include name, address, and phone number):

DATE OF REPORT: