

RARE, THREATENED, AND ENDANGERED ANIMALS OF MARYLAND

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Prepared by

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INTRODUCTION

The following report identifies those native Maryland animals that are among the rarest and most in need of conservation efforts as elements of our State's natural diversity. It includes species occurring in Maryland that are listed or candidates for listing on the Federal list of Endangered and Threatened Wildlife and Plants, species currently on the State's Threatened and Endangered Species List, and additional species that are considered rare by the Maryland Wildlife and Heritage Service. The purpose of this report is to inform the public of which species are rare, to provide an indication of their degree of rarity, to solicit additional information on the status and distribution of these species, and to promote an interest in their protection.

Compiled by Wildlife and Heritage Service staff, this list of rare species is a result of over 20 years of data gathering from numerous sources, such as museums and private collections, scientific literature, unpublished documents, reports from biologists and amateur naturalists, and from field work conducted by Wildlife and Heritage Service ecologists. The original version of this list was included in the Department of Natural Resources' 1984 publication Threatened and Endangered Plants and Animals of Maryland, which also contained detailed information on the distribution and status of Maryland's rare species known at that time.

Since 1984, our knowledge of Maryland's fauna has grown steadily. Through extensive field work, Wildlife and Heritage Service ecologists and other researchers have located species which were previously unrecorded for the State and have discovered that some species are more scarce than previously known. Similarly, some species are now known to be either more widespread or less vulnerable to ecological disturbances than previously believed. Thus, the list and status of each species is periodically revised to keep pace with new information.

The official State Threatened and Endangered Species List is part of the State Threatened and Endangered Species regulations (COMAR 08.03.08). Wildlife and Heritage Service ecologists are concerned with many more species than those included on the State's Threatened and Endangered Species List. Some of these species are potential candidates for listing and usually require further investigation into their rarity and endangerment status. Others are thought to be secure at present, but are worthy of attention because of limited distributions, declining populations, or ecological vulnerabilities.

ABOUT THIS LIST

The Maryland Wildlife and Heritage Service's list of rare, threatened, and endangered animals is arranged phylogenetically; the invertebrate groups are listed first followed by vertebrates. Within each major group, species are listed alphabetically by scientific name. Some invertebrate groups are not fully represented or are entirely absent from this list. To date, available information has been compiled for only certain species or groups of invertebrates. Many invertebrate species are not well known and have not been fully researched or inventoried in Maryland, and the taxonomy of some has not been standardized.

Birds and other migratory species are tracked and considered rare by the Wildlife and Heritage Service on the basis of their breeding status alone. For example, Dark-eyed Juncos are abundant backyard birds during the winter; however, they breed in only a few remote areas in Western Maryland during the summer. To be included on the official State Threatened and Endangered Species List, migrants that are rare Maryland breeders must also be rare during the non-breeding season. Thus, the Dark-eyed Junco cannot be included on the official State List under current listing criteria. Other migratory species, such as whales and sea turtles, have been included because of their Federal status even though they typically do not breed in Maryland.

Four columns are printed to the right of each name. The global and state rarity ranks of each species are included in the first and second columns, respectively. The third column shows the species' status on the State Threatened and Endangered Species List. The last column indicates the Federal status of each species as determined by the U.S. Fish and Wildlife Service. Definitions for the codes used in all four columns are provided in Appendix IV. A summary of the changes to state ranks since the last time this list was published can be found in Appendix I. Because taxonomists periodically update scientific names, a list of synonym names is included as a cross reference in Appendix II. Species currently under consideration for inclusion on the list appear in Appendix III. DNR biologists seek information on the status and location of these taxa from all interested parties.

OTHER LISTS AND INFORMATION

The U.S. Fish and Wildlife Service's Office of Endangered Species publishes a list of federally-designated threatened and endangered species. Copies of the U.S. Department of Interior's booklet, Endangered and Threatened Wildlife and Plants (50 CFR 17.11 & 17.12), can be obtained from the Publication Unit, U.S. Fish and Wildlife Service, Washington, DC 20240.

The Department of Natural Resources' Fisheries Service maintains an official list of game and commercial fish species that are designated as endangered, threatened, or in need of conservation in Maryland. The list of Endangered and Threatened Fish Species (COMAR 08.02.12) can be obtained by contacting the Fisheries Service, Department of Natural Resources, Tawes State Office Building B-2, Annapolis, MD 21401.

To obtain additional copies of this report, to receive a copy of "Rare, Threatened, and Endangered Plants of Maryland," or to receive other information on Maryland's rare species and natural areas, please contact the Maryland Wildlife and Heritage Service at the address shown above or visit our website at www.dnr.state.md.us/wildlife.

The Wildlife and Heritage Service is the lead State agency for the identification, ranking, and protection of Maryland's rare species and significant natural areas. Staff biologists obtain information on the biology and status of rare native flora and fauna from various sources, including scientific experts, knowledgeable amateur naturalists, and research projects funded through the Chesapeake Bay and Endangered Species tax check-off. You can take an active part in protecting Maryland's rare species by contacting the Wildlife and Heritage Service with the following types of information:

1. Location (exact mapped location, if possible) and population size/vigor information for any species on the Program's rare, threatened, and endangered species list, including historical information if known.
2. Data documenting that a species should be assigned a different state rank or status.
3. Nominations of species that either should be added to, or deleted from, the list with supporting data.
4. Documentation of threats to any rare species populations, including the species' habitat.
5. Information on the biology or ecology of rare species and references to the species in the literature.
6. Any additional information that would support the protection, conservation, or management of rare species, habitats, or natural communities in Maryland.

If you would like to provide location information for any rare species, please fill out the reporting form found at the web address provided above and mail it to the Wildlife and Heritage Service along with a location map. You can also send an e-mail message to Ross Geredien, Natural Heritage Information Manager, at rgeredien@dnr.state.md.us

SCIENTIFIC NAME	COMMON NAME	Global Rank	State Rank	State Status	Federal Status
PLANARIANS					
Macrocotyla hoffmasteri	Hoffmaster's Cave Planarian	G3G4	S1	E	
Phagocata virilis	A Planarian	GNR	S1		
Planaria dactyligera	A Planarian	GNR	S2		
Procotyla typhlops	A Planarian	G1G2	S1	E	
Sphalloplana sp. 1	A Planarian	GNR	S1S2		
MOLLUSKS					
Alasmidonta heterodon	Dwarf Wedge Mussel	G1G2	S1	E	LE
Alasmidonta undulata	Triangle Floater	G4	S1	E	
Alasmidonta varicosa	Brook Floater	G3	S1	E	
Anodonta implicata	Alewife Floater	G5	S3		
Discus catskillensis	Angular Disc	G5	S1		
Elliptio fisheriana	Northern Lance	G4	S3		
Elliptio lanceolata	Yellow Lance	G2G3	SU		
Elliptio producta	Atlantic Spike	G3Q	S2	I	
Fontigens bottimeri	Appalachian Spring Snail	G2	S2		
Fontigens orolibas	Blue Ridge Spring Snail	G3	S1	E	
Glyphyalinia raderi	Rader's Snail (Maryland Glyph)	G2	SH	X	
Hendersonia occulta	Cherrydrop Snail (Cherrystone Drop)	G4	S2	I	
Lampsilis cariosa	Yellow Lampmussel	G3G4	SU		
Lampsilis radiata	Eastern Lampmussel	G5	SU		
Lasmigona subviridis	Green Floater	G3	S1	E	
Leptodea ochracea	Tidewater Mucket	G3G4	S1S2		
Ligumia nasuta	Eastern Pondmussel	G4G5	S1S2		
Stenotrema simile	Bear Creek Slitmouth	G2	SU		
Strophitus undulatus	Creepers	G5	S2	I	
Triodopsis picea	Spruce Knob Threetooth	G3	S1		
Utterbackia imbecillis	Paper Pondshell	G5	S3		
Vertigo bollesiana	Delicate Vertigo	G3G4	SX		
Vertigo ventricosa	Cylindrically-ornate Wood Snail	G5	SU		
Webbhelix multilineata	Striped Whitelip	G5	S1		
CRUSTACEANS					
Ankylocythere tridentata	An Entocytherid Ostracod	GNR	SH		
Attheyella spinipes	A Harpacticoid Copepod	GNR	SU		
Caecidotea franzi	Franz's Cave Isopod	G2G4	S1	E	
Caecidotea pricei	Price's Cave Isopod	G5	S3		
Caecidotea sp. 1	An Isopod	G1	S1		
Caecidotea sp. 2	An Isopod	GNR	S1		
Caecidotea sp. 3	An Isopod	G3	S1		
Caecidotea sp. 4	An Isopod	GNR	S1		
Caecidotea sp. 5	An Isopod	GNR	S1		
Caecidotea sp. 6	An Isopod	GNR	S2		
Cambarus acuminatus	A Crayfish	G4	S3		
Crangonyx dearolfi	Dearolf's Cave Amphipod	G2G4	S1	E	
Dactylocythere scotos	An Entocytherid Ostracod	GNR	S1		
Diacyclops palustris	A Cyclopoid Copepod	GNR	SU		
Orconectes obscurus	A Crayfish	G5	S3		
Stygobromus allegheniensis	Allegheny Cave Amphipod	G5	S2S3	I	
Stygobromus biggersi	Biggers' Cave Amphipod	G2G4	S1	E	
Stygobromus emarginatus	Greenbrier Cave Amphipod	G3G4	S1	E	
Stygobromus franzi	Franz's Cave Amphipod	G3G4	S2S3	I	
Stygobromus gracilipes	Shenandoah Cave Amphipod	G3G4	S1	E	
Stygobromus indentatus	Tidewater Amphipod	G3	S1		
Stygobromus pizzinii	Pizzini's Amphipod	G3G4	S1		
Stygobromus sp. 5	Barrelville Amphipod	GNR	S1		
Stygobromus sp. 6	An Amphipod	GNR	S1		
Stygobromus sp. 14	Roundtop Amphipod	GNR	S1		

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Stygobromus tenuis potomacus	Potomac Amphipod	G4T4	S3		
Stygobromus tenuis tenuis	Tenuis Amphipod	G4T4	SU		
SPIDERS					
Oreonetides sp. 1	Snivelys Cave Spider	GNR	SU		
Porrhomma cavernicola	Appalachian Cave Spider	G5	S2		
Sphodros rufipes	Red-legged Purse-web Spider	G4	S1S2		
INSECTS					
<u>Collembola</u>					
Arrhopalites sp. 1	Crabtree cave springtail	G?	SU		
<u>Coleoptera</u>					
Cicindela abdominalis	Eastern pinebarrens tiger beetle	G5	S1	E	
Cicindela ancocisconensis	Appalachian tiger beetle	G3	S1	E	
Cicindela dorsalis dorsalis	Northeastern beach tiger beetle	G4T2	S1	E	LT
Cicindela dorsalis media	White tiger beetle	G4T4	S1	E	
Cicindela formosa	Big sand tiger beetle	G5	SU		
Cicindela lepida	Ghost tiger beetle	G3G4	S1	E	
Cicindela margipennis	Cobblestone Tiger Beetle	G2G3	SP		
Cicindela patruela	Northern barrens tiger beetle	G3	S1	E	
Cicindela puritana	Puritan Tiger Beetle	G1G2	S1	E	LT
Cicindela purpurea	Cow path tiger beetle	G5	S3		
Cicindela scutellaris	Festive tiger beetle	G5	S3S4		
Cicindela splendida	Splendid tiger beetle	G5	S1		
Cicindela unipunctata	One-spotted tiger beetle	G4	S3	T	
Dryobius sexnotatus	Six-banded longhorn beetle	GNR	S1	E	
Helops cisteloides	A tenebrionid beetle	GNR	S1	E	
Hoperius planatus	A dytiscid beetle	GNR	S2		
Hydrochara occulta	A water scavenger beetle	GNR	SU		
Hydrochus spangleri	Seth Forest Water Scavenger Beetle	G1	S1	E	
Hydrocolus deflatus	A predaceous diving beetle	GNR	S?		
Laccophilus schwarzi	Swartz' diving beetle	GNR	SX		
Lucanus elephas	Giant Stag Beetle	G3G5	SU		
Nephus gordonii	A coccinellid beetle	GNR	SU		
Nicrophorus americanus	American burying beetle	G2G3	SX	X	LE
Photuris bethaniensis	A lampyrid firefly	G1?	SP		
Pseudanophthalmus sp 15	A cave beetle	G1	S1		
Schoenicus puberulus	A tenebrionid beetle	GNR	S1	E	
Sperchopsis tessellates	A hydrophilid beetle	GNR	S2		
<u>Diptera</u>					
Wyeomyia smithii	Pitcher-plant mosquito	G5	S2		
<u>Ephemeroptera</u>					
Anthopotamus verticis	Walker's tusked sprawler	G5	SU		
<u>Homoptera</u>					
Chlorotettix sp. 1	A Cicadellid Leafhopper	GNR	SU		
Limotettix minuendus	Eastern Sedge Barrens Planthopper	G1	S1		
<u>Lepidoptera - Butterflies</u>					
Amblyscirtes hegon	Pepper and Salt Skipper	G5	S2	I	
Atlides halesus	Great Purple Hairstreak	G5	S1S2	T	
Autochton cellus	Golden-banded Skipper	G4	SH	X	
Boloria selene	Silver-bordered Fritillary	G5	S3		
Calephelis borealis	Northern Metalmark	G3G4	S2	T	
Callophrys hesseli	Hessel's Hairstreak	G3G4	SH	X	
Callophrys irus	Frosted Elfin	G3	S1	E	
Callophrys polios	Hoary Elfin	G5	S1		

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<i>Celastrina neglectamajor</i>	Appalachian Blue	G4	S3S4		
<i>Celastrina nigra</i>	Dusky Azure	G4	SH	E	
<i>Chlosyne harrisii</i>	Harris's Checkerspot	G4	S2	T	
<i>Colias interior</i>	Pink-edged Sulphur	G5	S1		
<i>Erora laeta</i>	Early Hairstreak	GU	S1	E	
<i>Erynnis martialis</i>	Mottled Duskywing	G3G4	S1	E	
<i>Erynnis persius persius</i>	Persius Duskywing	G5T1T3	SRF		
<i>Euchloe olympia</i>	Olympia Marble	G4G5	S2	I	
<i>Euphydryas phaeton</i>	Baltimore Checkerspot	G4	S3		
<i>Euphyes bimacula</i>	Two-spotted Skipper	G4	S1	E	
<i>Euphyes dion</i>	Dion Skipper	G4	S3		
<i>Glaucopsyche lygdamus</i>	Silvery Blue	G5	S2	I	
<i>Hermeuptychia sosybius</i>	Carolina Satyr	G5	S1S3		
<i>Hesperia attalus slossonae</i>	Dotted Skipper	G2G4T2T3	SH		
<i>Hesperia sassacus</i>	Indian Skipper	G5	S3		
<i>Lycaena epixanthe</i>	Bog Copper	G4G5	S1	E	
<i>Neonympha mitchellii</i>	Mitchell's Satyr	G1G2	SR		LE
<i>Nymphalis vaualbum</i>	Compton Tortoiseshell	G5	S1	E	
<i>Papilio crespontes</i>	Giant Swallowtail	G5	S2	I	
<i>Papilio palamedes</i>	Palamedes Swallowtail	G4	S1	E	
<i>Phyciodes batesii</i>	Tawny Crescent	G4	SH	X	
<i>Poanes massasoit chermocki</i>	Chermock's Mulberry Wing	G4T1	S1	E	
<i>Polites mystic</i>	Long Dash	G5	S3		
<i>Problema bulenta</i>	Rare Skipper	G2G3	S1	T	
<i>Pyrgus wyandot</i>	Southern Grizzled Skipper	G1G2Q	S1	E	
<i>Satyrrium caryaevorus</i>	Hickory Hairstreak	G4	S1	E	
<i>Satyrrium edwardsii</i>	Edwards' Hairstreak	G4	S1	E	
<i>Satyrrium favonius ontario</i>	Northern Oak hairstreak	G4T4	S1S2	E	
<i>Satyrrium kingi</i>	King's Hairstreak	G3G4	S1	E	
<i>Speyeria atlantis</i>	Atlantis Fritillary	G5	S1	T	
<i>Speyeria idalia</i>	Regal Fritillary	G3	SH	X	

Lepidoptera - Moths

<i>Agnorisma bollii</i>	A Noctuid Moth	G4?	SU		
<i>Apamea apamiformis</i>	A Noctuid Moth	G4	S2S3		
<i>Apamea mixta</i>	A Noctuid Moth	GU	S1		
<i>Apamea plutonia</i>	A Noctuid Moth	G4	SU		
<i>Capis curvata</i>	A Noctuid Moth	G4	S1S2		
<i>Catocala marmorata</i>	Marbled Underwing	G3G4	SH		
<i>Catocala pretiosa pretiosa</i>	Precious Underwing	G4T2	SH		
<i>Dasychira atrivenosa</i>	A Lymantriid Moth	G4	SU		
<i>Ectoedemia castaneae</i>	American Chestnut Nepticulid Moth	GH	SH		
<i>Ectoedemia phleophaga</i>	Phleophagan Chestnut Nepticulid Moth	GH	SH		
<i>Elaphria georgei</i>	A Noctuid Moth	G4	SU		
<i>Hadena ectypa</i>	A Noctuid Moth	G3G4	SU		
<i>Meropleon titan</i>	A Noctuid Moth	G2G4	SU		
<i>Papaipema duovata</i>	Seaside Goldenrod Stem Borer	G4	SU		
<i>Papaipema polymniae</i>	Polymnia Stalk Borer	G4	SH		
<i>Schinia parmeliana</i>	A Noctuid Moth	GU	SH		
<i>Lytrosis sinuosa</i>	Sinuuous Lytrosis	G4	S1S3		
<i>Cyclophora nanaria</i>	A Geometrid Moth	G5	S1?		
<i>Isoparce cupressi</i>	Cypress Sphinx Moth	G4	SU		
<i>Sphinx franckii</i>	Franck's Sphinx	G4	S1S2		
<i>Hemileuca maia maia</i>	The Buckmoth	G5T5	SU		
<i>Synanthedon castanea</i>	Chestnut clearwing moth	G3G5	SX		

Odonata

<i>Aeshna canadensis</i>	Canada Darner	G5	S2		
<i>Aeshna constricta</i>	Lance-tipped Darner	G5	SH		
<i>Aeshna tuberculifera</i>	Black-tipped Darner	G4	S2		
<i>Aeshna verticalis</i>	Green-striped Darner	G5	S2		
<i>Amphiagrion saucium</i>	Eastern Red Damsel	G5	S3		
<i>Anax longipes</i>	Comet Darner	G5	S3		
<i>Archilestes grandis</i>	Great Spreadwing	G5	S3		
<i>Argia bipunctulata</i>	Seepage Dancer	G4	S3		

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<i>Argia sedula</i>	Blue-ringed Dancer	G5	S3		
<i>Boyeria grafiana</i>	Ocellated Darner	G5	S1		
<i>Brachymeria grisea</i>	Four-spotted Pennant	G5	S3S4		
<i>Calopteryx aequabilis</i>	River Jewelwing	G5	S1		
<i>Calopteryx amata</i>	Superb Jewelwing	G4	S2		
<i>Calopteryx dimidiata</i>	Sparkling Jewelwing	G5	SH		
<i>Celithemis fasciata</i>	Banded Pennant	G5	S3		
<i>Celithemis martha</i>	Martha's Pennant	G4	S2		
<i>Celithemis ornata</i>	Faded Pennant	G5	S1		
<i>Celithemis verna</i>	Double-ringed Pennant	G5	S2		
<i>Chromagrion conditum</i>	Aurora Damsel	G5	S3S4		
<i>Cordulegaster bilineata</i>	Brown Spiketail	G5	S2		
<i>Cordulegaster diastatops</i>	Delta-spotted Spiketail	G5	S3		
<i>Cordulegaster erronea</i>	Tiger Spiketail	G4	S2		
<i>Cordulegaster obliqua</i>	Arrowhead Spiketail	G4	S2		
<i>Cordulia shurtleffii</i>	American Emerald	G5	S3		
<i>Dorocordulia lepida</i>	Petite Emerald	G5	SH		
<i>Enallagma antennatum</i>	Rainbow Bluet	G5	S1		
<i>Enallagma aspersum</i>	Azure Bluet	G5	S3S4		
<i>Enallagma carunculatum</i>	Tule Bluet	G5	SH		
<i>Enallagma daeckii</i>	Attenuated Bluet	G4	S3		
<i>Enallagma divagans</i>	Turquoise Bluet	G5	S3S4		
<i>Enallagma doubledayi</i>	Atlantic Bluet	G5	SH		
<i>Enallagma dubium</i>	Burgundy Bluet	G5	S1		
<i>Enallagma durum</i>	Big Bluet	G5	S3		
<i>Enallagma ebrium</i>	Marsh Bluet	G5	SH		
<i>Enallagma hageni</i>	Hagen's Bluet	G5	S3S4		
<i>Enallagma pallidum</i>	Pale Bluet	G4	S1		
<i>Enallagma sulcatum</i>	Golden Bluet	G4	SU		
<i>Enallagma traviatum</i>	Slender Bluet	G5	S3		
<i>Enallagma vesperum</i>	Vesper Bluet	G5	S3		
<i>Enallagma weewa</i>	Blackwater Bluet	G5	S1		
<i>Epiptera canis</i>	Beaverpond Baskettail	G5	S3		
<i>Epiptera costalis</i>	Stripe-winged Baskettail	G5	S1		
<i>Epiptera semiaquea</i>	Mantled Baskettail	G5	SH		
<i>Epiptera spinosa</i>	Robust Baskettail	G4	S1S2		
<i>Erpetogomphus designatus</i>	Eastern Ringtail	G5	S2		
<i>Erythrodiplax minuscula</i>	Little Blue Dragonlet	G5	S1		
<i>Gomphaeschna antilope</i>	Taper-tailed Darner	G4	S2		
<i>Gomphaeschna furcillata</i>	Harlequin Darner	G5	S3		
<i>Gomphus abbreviatus</i>	Spine-crowned Clubtail	G3G4	SH		
<i>Gomphus fraternus</i>	Midland Clubtail	G5	S2		
<i>Gomphus lineatifrons</i>	Splendid Clubtail	G4	SH		
<i>Gomphus parvidens</i>	Piedmont Clubtail	G4	SH		
<i>Gomphus quadricolor</i>	Rapids Clubtail	G3G4	S1		
<i>Gomphus rogersi</i>	Sable Clubtail	G4	S1	E	
<i>Gomphus vastus</i>	Cobra Clubtail	G5	S3		
<i>Gomphus ventricosus</i>	Skillet Clubtail	G3	SH		
<i>Gomphus viridifrons</i>	Green-faced Clubtail	G3	S1		
<i>Helocordulia selysii</i>	Selys' Sunfly	G4	S2		
<i>Helocordulia uhleri</i>	Uhler's Sundragon	G5	S3		
<i>Hetaerina americana</i>	American Rubyspot	G5	S3S4		
<i>Hetaerina titia</i>	Smoky Rubyspot	G5	SH		
<i>Ischnura kellicotti</i>	Lilypad Forktail	G5	S3S4		
<i>Ladona exusta</i>	White Corporal	G4	S1		
<i>Ladona julia</i>	Chalk-fronted Skimmer	G5	S2		
<i>Lanthus parvulus</i>	Northern Pygmy Clubtail	G4	S1		
<i>Lanthus vernalis</i>	Southern Pygmy Clubtail	G4	S1		
<i>Lestes congener</i>	Spotted Spreadwing	G5	S3		
<i>Lestes dryas</i>	Emerald Spreadwing	G5	SH		
<i>Lestes eurinus</i>	Amber-winged Spreadwing	G4	S3		
<i>Lestes forcipatus</i>	Sweetflag Spreadwing	G5	S3		
<i>Lestes unguiculatus</i>	Lyre-tipped Spreadwing	G5	SH		
<i>Leucorrhinia glacialis</i>	Crimson-ringed Whiteface	G5	S1		
<i>Leucorrhinia hudsonica</i>	Hudsonian Whiteface	G5	S1		

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Leucorrhinia intacta	Dot-tailed Whiteface	G5	S3		
Libellula auripennis	Golden-winged Skimmer	G5	S3		
Libellula axilena	Bar-winged Skimmer	G5	S3		
Libellula flavida	Yellow-sided Skimmer	G5	S2		
Libellula quadrimaculata	Four-spotted Skimmer	G5	SA?		
Macromia alleghaniensis	Allegheny River Cruiser	G4	S2		
Macromia illinoiense georgina	Georgia River Cruiser	G5T5	S3S4		
Macromia taeniolata	Royal River Cruiser	G5	S3		
Nannothemis bella	Elfin Skimmer	G4	S1		
Nasiaeschna pentacantha	Cyrano Darner	G5	S3		
Nehalennia gracilis	Sphagnum Sprite	G5	S2		
Nehalennia integricolis	Southern Sprite	G5	S1S2		
Nehalennia irene	Sedge Sprite	G5	S3		
Neurocordulia obsoleta	Umber Shadowdragon	G5	S3		
Neurocordulia virginiensis	Cinnamon Shadowdragon	G4	S1		
Neurocordulia yamaskanensis	Stygian Shadowdragon	G5	S2		
Ophiogomphus incurvatus	Allegheny Snaketail	G3	S2		
Ophiogomphus rupinsulensis	Rusty Snaketail	G5	S2		
Progomphus obscurus	Common Sanddragon	G5	S3		
Rhionaeschna mutata	Spring Blue Darner	G4	S1	E	
Somatochlora elongata	Ski-tailed Emerald	G5	S1		
Somatochlora filosa	Fine-lined Emerald	G5	S2		
Somatochlora linearis	Mocha Emerald	G5	S3S4		
Somatochlora provocans	Treetop Emerald	G4	S1		
Somatochlora tenebrosa	Clamp-tipped Emerald	G5	S3S4		
Stylogomphus albistylus	Least Clubtail	G5	S3S4		
Stylurus amnicola	Riverine Clubtail	G4	SH		
Stylurus laurae	Laura's Clubtail	G4	S2		
Stylurus notatus	Elusive Clubtail	G3	SU		
Stylurus plagiatus	Russet-tipped Clubtail	G5	S3		
Stylurus scudderi	Zebra Clubtail	G4	S1		
Stylurus spiniceps	Arrow Clubtail	G5	S3		
Sympetrum ambiguuum	Blue-faced Meadowhawk	G5	S3S4		
Sympetrum janeae	Jane's Meadowhawk	G5	SU		
Sympetrum obtrusum	White-faced Meadowhawk	G5	S3		
Sympetrum semicinctum	Band-winged Meadowhawk	G5	S3		
Tachopteryx thoreyi	Gray Petaltail	G4	S2		

Trichoptera

Hydropsyche brunneipennis	A Scalaris Trichopteran	G3G4	S3		
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FISHES

Acantharchus pomotis	Mud Sunfish	G5	S2	I	
Acipenser brevirostrum	Shortnose Sturgeon	G3	S1	E	LE
Acipenser oxyrinchus	Atlantic Sturgeon	G3	S1		C
Ameiurus catus	White Catfish	G5	SU		
Amia calva	Bowfin	G5	S1?		
Catostomus catostomus	Longnose Sucker	G5	SH	X	
Centrarchus macropterus	Flier	G5	S1S2	T	
Clinostomus elongatus	Redside Dace	G4	SX?		
Cottus bairdii	Mottled Sculpin	G5	S3S4		
Cottus cognatus	Slimy Sculpin	G5	SRF		
Cottus sp. 7	Checkered Sculpin	G4Q	S1S2		
Enneacanthus chaetodon	Blackbanded Sunfish	G4	S1	E	
Enneacanthus gloriosus	Bluespotted Sunfish	G5	S3S4		
Enneacanthus obesus	Banded Sunfish	G5	S2		
Etheostoma fusiforme	Swamp Darter	G5	S2	I	
Etheostoma nigrum	Johnny Darter	G5	S3		
Etheostoma sellare	Maryland Darter	GH	SH	E	LE
Etheostoma vitreum	Glassy Darter	G4G5	S1S2	T	
Fundulus luciae	Spotfin Killifish	G4	S2?		
Lampetra appendix	American Brook Lamprey	G4	S1S2	T	
Lepisosteus osseus	Longnose Gar	G5	S2?		

SCIENTIFIC NAME	COMMON NAME	Global Rank	State Rank	State Status	Federal Status
<i>Lepomis gulosus</i>	Warmouth	G5	S3?		
<i>Luxilus chrysocephalus</i>	Striped Shiner	G5	S1S2	I	
<i>Margariscus margarita</i>	Pearl Dace	G5	S1S2	T	
<i>Notropis amoenus</i>	Comely Shiner	G5	S2	T	
<i>Notropis bifrenatus</i>	Bridle Shiner	G3	SH	E	
<i>Notropis chalybaeus</i>	Ironcolor Shiner	G4	S1	E	
<i>Noturus flavus</i>	Stonecat	G5	S1	E	
<i>Pararhinichthys bowersi</i>	Cheat Minnow	G1G2Q	SX	X	
<i>Percina caprodes</i>	Loggerhead	G5	S1S2	T	
<i>Percina notogramma</i>	Stripeback Darter	G4	S1	E	
<i>Percina peltata</i>	Shield Darter	G5	S3		
<i>Percopsis omiscomaycus</i>	Trout-perch	G5	SX	X	
<i>Salvelinus fontinalis</i>	Brook Trout	G5	S3S4		

AMPHIBIANS

<i>Ambystoma jeffersonianum</i>	Jefferson Salamander	G4	S3		
<i>Ambystoma tigrinum</i>	Eastern Tiger Salamander	G5	S2	E	
<i>Aneides aeneus</i>	Green Salamander	G3G4	S2	E	
<i>Cryptobranchus alleganiensis</i>	Hellbender	G3G4	S1	E	
<i>Gastrophryne carolinensis</i>	Eastern Narrow-mouthed Toad	G5	S1S2	E	
<i>Hyla gratiosa</i>	Barking Treefrog	G5	S1	E	
<i>Necturus maculosus</i>	Mudpuppy	G5	S1	X	
<i>Plethodon wehrlei</i>	Wehrle's Salamander	G4	S2	I	
<i>Pseudacris brachyphona</i>	Mountain Chorus Frog	G5	S1	E	
<i>Rana virgatipes</i>	Carpenter Frog	G5	S3		
<i>Siren lacertian</i>	Greater Siren	G5	SRF		

REPTILES

<i>Apalone spinifera</i>	Eastern Spiny Softshell	G5	S1	I	
<i>Caretta caretta</i>	Atlantic Loggerhead Turtle	G3	S1B	T	LT
<i>Cemophora coccinea</i>	Eastern Scarlet Snake	G5	S3		
<i>Chelonia mydas</i>	Atlantic Green Turtle	G3	S1N	T	LT
<i>Crotalus horridus</i>	Timber Rattlesnake	G4	S3		
<i>Dermochelys coriacea</i>	Atlantic Leatherback Turtle	G2	S1	E	LE
<i>Eretmochelys imbricata</i>	Atlantic Hawksbill Turtle	G3	SRN	E	LE
<i>Eumeces anthracinus</i>	Northern Coal Skink	G5	S1	E	
<i>Farancia erythrogramma</i>	Rainbow Snake	G4	S1	E	
<i>Glyptemys muhlenbergii</i>	Bog Turtle	G3	S2	T	LT
<i>Graptemys geographica</i>	Map Turtle	G5	S1	E*	
<i>Lepidochelys kempii</i>	Atlantic Ridley Turtle	G1	S1N	E	LE
<i>Nerodia erythrogaster erythrogaster</i>	Redbelly Water Snake	G5T5	S2S3		
<i>Pituophis melanoleucus</i>	Northern Pine Snake	G4	SR		
<i>Virginia valeriae pulchra</i>	Mountain Earth Snake	G5T3T4	S1S2	E	

BIRDS

<i>Accipiter gentilis</i>	Northern Goshawk	G5	S1B	E*	
<i>Accipiter striatus</i>	Sharp-shinned Hawk	G5	S1S2B		
<i>Actitis macularius</i>	Spotted Sandpiper	G5	S3S4B		
<i>Aegolius acadicus</i>	Northern Saw-whet Owl	G5	S1B		
<i>Aimophila aestivalis</i>	Bachman's Sparrow	G3	SHB	X	
<i>Ammodramus caudacutus</i>	Saltmarsh Sharp-tailed Sparrow	G4	S3B		
<i>Ammodramus henslowii</i>	Henslow's Sparrow	G4	S1S2B	T	
<i>Anas discors</i>	Blue-winged Teal	G5	S2B		
<i>Anas strepera</i>	Gadwall	G5	S2B		
<i>Asio flammeus</i>	Short-eared Owl	G5	S1B	E	
<i>Asio otus</i>	Long-eared Owl	G5	SHB		
<i>Bartramia longicauda</i>	Upland Sandpiper	G5	S1B	E	
<i>Botaurus lentiginosus</i>	American Bittern	G4	S1S2B	I	
<i>Campephilus principalis</i>	Ivory-billed Woodpecker	GH	SX	X	LE
<i>Camptorhynchus labradorius</i>	Labrador Duck	GX	SX		

SCIENTIFIC NAME	COMMON NAME	Global Rank	State Rank	State Status	Federal Status
Caprimulgus vociferus	Whip-poor-will	G5	S3S4B		
Carpodacus purpureus	Purple Finch	G5	S3B		
Catharus guttatus	Hermit Thrush	G5	S3S4B		
Catharus ustulatus	Swainson's Thrush	G5	SXB		
Charadrius melodus	Piping Plover	G3	S1B	E	LT
Charadrius wilsonia	Wilson's Plover	G5	S1B	E	
Chondestes grammacus	Lark Sparrow	G5	SXB	X	
Chordeiles minor	Common Nighthawk	G5	S3S4B		
Circus cyaneus	Northern Harrier	G5	S2B		
Cistothorus platensis	Sedge Wren	G5	S1B	E	
Contopus cooperi	Olive-sided Flycatcher	G4	SHB	E	
Conuropsis carolinensis	Carolina Parakeet	GX	SX		
Corvus corax	Common Raven	G5	S2		
Dendroica caerulescens	Black-throated Blue Warbler	G5	S3S4B		
Dendroica cerulea	Cerulean Warbler	G4	S3S4B		
Dendroica fusca	Blackburnian Warbler	G5	S1S2B	T	
Dendroica magnolia	Magnolia Warbler	G5	S3S4B		
Dendroica virens waynei	Wayne's Warbler	G5TU	SUB		
Ectopistes migratorius	Passenger Pigeon	GX	SX		
Egretta caerulea	Little Blue Heron	G5	S3B		
Egretta tricolor	Tricolored Heron	G5	S3B		
Empidonax alnorum	Alder Flycatcher	G5	S2B	I	
Empidonax minimus	Least Flycatcher	G5	S3S4B		
Falco peregrinus anatum	American Peregrine Falcon	G4T4	S2	I	
Gallinula chloropus	Common Moorhen	G5	S2B	I	
Gelochelidon nilotica	Gull-billed Tern	G5	S1B	E	
Haematopus palliatus	American Oystercatcher	G5	S3B		
Haliaeetus leucocephalus	Bald Eagle	G5	S2S3B	T	LT
Ixobrychus exilis	Least Bittern	G5	S2S3B	I	
Junco hyemalis	Dark-eyed Junco	G5	S2B		
Lanius ludovicianus	Loggerhead Shrike	G4	S1B	E	
Lanius ludovicianus migrans	Loggerhead Shrike	G4T3Q	S1	E	
Larus atricilla	Laughing Gull	G5	S1B		
Laterallus jamaicensis	Black Rail	G4	S1	E	
Limnithyphis swainsonii	Swainson's Warbler	G4	S1B	E	
Lophodytes cucullatus	Hooded Merganser	G5	S1B		
Melospiza georgiana nigrescens	Coastal Plain Swamp Sparrow	G5T3	S2B	I	
Nyctanassa violacea	Yellow-crowned Night-heron	G5	S2B		
Oporornis philadelphia	Mourning Warbler	G5	S1B	E	
Passerculus sandwichensis	Savannah Sparrow	G5	S3S4B		
Pelecanus occidentalis	Brown Pelican	G4	S1B		
Picoides borealis	Red-cockaded Woodpecker	G3	SHB	X	LE
Podilymbus podiceps	Pied-billed Grebe	G5	S2B		
Poocetes gramineus	Vesper Sparrow	G5	S3S4B		
Porzana carolina	Sora	G5	S1B		
Rallus elegans	King Rail	G4	S3S4B		
Regulus satrapa	Golden-crowned Kinglet	G5	S2B		
Riparia riparia	Bank Swallow	G5	S3S4B		
Rynchops niger	Black Skimmer	G5	S1B	E	
Seiurus noveboracensis	Northern Waterthrush	G5	S2S3B		
Sitta canadensis	Red-breasted Nuthatch	G5	S1B		
Sphyrapicus varius	Yellow-bellied Sapsucker	G5	SHB		
Spiza americana	Dickcissel	G5	S2B		
Sterna dougallii	Roseate Tern	G4	SHB	X	LE
Sternula antillarum	Least Tern	G4	S2B	T	
Thalasseus maximus	Royal Tern	G5	S1B	E	
Thalasseus sandvicensis	Sandwich Tern	G5	S1B		
Thryomanes bewickii altus	Bewick's Wren	G5T2Q	S1B	E	
Troglodytes troglodytes	Winter Wren	G5	S2B		
Tympanuchus cupido	Greater Prairie-chicken	G4	SX	X	
Tympanuchus cupido cupido	Heath Hen	G4TX	SX	X	
Tyto alba	Barn Owl	G5	S3		
Vermivora chrysoptera	Golden-winged Warbler	G4	S3B		
Vermivora ruficapilla	Nashville Warbler	G5	S1S2B	I	
Wilsonia canadensis	Canada Warbler	G5	S3B		

SCIENTIFIC NAME	COMMON NAME	Global Rank	State Rank	State Status	Federal Status
MAMMALS					
<i>Balaenoptera borealis</i>	Sei Whale	G3	SZN	E	LE
<i>Balaenoptera musculus</i>	Blue Whale	G3G4	SZN	E	LE
<i>Balaenoptera physalus</i>	Fin Whale	G3G4	SZN	E	LE
<i>Bos bison</i>	American Bison	G4	SX		
<i>Canis lupus</i>	Gray Wolf	G4	SX	X	LE
<i>Cervus canadensis</i>	American Elk	G5	SX	X	
<i>Condylura cristata parva</i>	Southeastern Star-nosed Mole	G5T4	SU		
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	SP		
<i>Erethizon dorsatum</i>	Porcupine	G5	S1S2	I	
<i>Eubalaena glacialis</i>	Black Right Whale	G1	SZN	E	LE
<i>Lepus americanus</i>	Snowshoe Hare	G5	SH	X	
<i>Lynx rufus</i>	Bobcat	G5	S3	I	
<i>Martes americana</i>	American Marten	G5	SX	X	
<i>Megaptera novaeangliae</i>	Humpback Whale	G3	SZN	E	LE
<i>Microtus chrotorrhinus carolinensis</i>	Southern Rock Vole	G4T3	S1	E	
<i>Mustela nivalis</i>	Least Weasel	G5	S2S3	I	
<i>Myotis leibii</i>	Eastern Small-footed Bat	G3	S1	E	
<i>Myotis sodalist</i>	Indiana Bat	G2	S1	E	LE
<i>Neotoma magister</i>	Allegheny Woodrat	G3G4	S1	E	
<i>Physeter macrocephalus</i>	Sperm Whale	G3G4	SZN	E	LE
<i>Puma concolor cougar</i>	Eastern Cougar	G5THQ	SH	X	LE
<i>Reithrodontomys humulis</i>	Eastern Harvest Mouse	G5	SH	X	
<i>Sciurus niger cinereus</i>	Delmarva Fox Squirrel	G5T3	S1	E	LE
<i>Sorex dispar</i>	Long-tailed Shrew	G4	S2	I	
<i>Sorex fumeus</i>	Smoky Shrew	G5	S2S3	I	
<i>Sorex hoyi winnemana</i>	Southern Pygmy Shrew	G5T4	S2		
<i>Sorex longirostris</i>	Southeastern Shrew	G5	S3S4		
<i>Sorex palustris punctulatus</i>	Southern Water Shrew	G5T3	S1	E	
<i>Spilogale putorius</i>	Eastern Spotted Skunk	G5	S1		
<i>Sylvilagus transitionalis</i>	New England Cottontail	G4	S1	I	
<i>Synaptomys cooperi</i>	Southern Bog Lemming	G5	S3		
<i>Ursus americanus</i>	Black Bear	G5	S3S4		

APPENDIX I

CHANGES TO ANIMAL RANKS SINCE LAST PUBLISHED LIST (DECEMBER 2003)

Scientific Name	Common Name	Current Rank	Former Rank	State Status	Federal Status
MOLLUSKS					
<i>Elliptio producta</i>	Atlantic Spike	S2	S2S3	I	
<i>Lampsilis cariosa</i>	Yellow Lampmussel	SU	S1		
<i>Leptodea ochracea</i>	Tidewater Mucket	S1S2	SU		
<i>Ligumia nasuta</i>	Eastern Pondmussel	S1S2	SU		
<i>Vertigo bollesiana</i>	Delicate Vertigo	SX	New		
CRUSTACEANS					
<i>Ankylocythere tridentata</i>	An Entocytherid Ostracod	SH	SX	E	
INSECTS – Coleoptera					
<i>Cicindela splendida</i>	A Tiger Beetle	S1	S3		
<i>Helops cisteloides</i>	A Tenebrionid Beetle	S1	S?		
INSECTS – Lepidoptera					
<i>Erynnis persius persius</i>	Persius Duskywing	SRF	SH		
INSECTS – Odonata					
<i>Enallagma pallidum</i>	Pale Bluet	S1	SH		
AMPHIBIANS					
<i>Pseudacris brachyphona</i>	Mountain Chorus Frog	S1	S2	E	
<i>Rana virgatipes</i>	Carpenter Frog	S3	S2		
REPTILES					
<i>Eumeces anthracinus</i>	Northern Coal Skink	S1	SU	E	
<i>Pituophis melanoleucus</i>	Northern Pine Snake	SR	SH		
<i>Virginia valeriae pulchra</i>	Mountain Earth Snake	S1S2	S2	E	
BIRDS					
<i>Laterallus jamaicensis</i>	Black Rail	S1	S2S3B	E	
MAMMALS					
<i>Myotis leibii</i>	Eastern Small-footed Bat	S1	S1B	E	

APPENDIX II

CROSS REFERENCE OF ANIMAL SYNONYM NAMES

Synonym Name	Current Name
<i>Aeshna mutata</i>	<i>Rhionaeschna mutata</i>
<i>Allocaonia zekiah</i>	<i>Allocaonia wrayi</i>
<i>Anodonta cataracta</i>	<i>Pyganodon cataracta</i>
<i>Anodonta imbecillis</i>	<i>Utterbackia imbecillis</i>
<i>Atypus bicolor</i>	<i>Sphodros rufipes</i>
<i>Cambarus carolinus</i>	<i>Cambarus dubius</i>
<i>Cariniocoris nyssae</i> (?)	<i>Lygocoris nyssae</i>
<i>Celithemis monomelaena</i>	<i>Celithemis fasciata</i>
<i>Cervus elaphus</i>	<i>Cervus canadensis</i>
<i>Clemmys insculpta</i>	<i>Glyptemys insculpta</i>
<i>Clemmys muhlenbergii</i>	<i>Glyptemys muhlenbergii</i>
<i>Elliptio angustata</i>	<i>Elliptio lanceolata</i>
<i>Erythrodiplax connata minuscula</i>	<i>Erythrodiplax minuscula</i>
<i>Fallicambarus uhleri</i>	<i>Fallicambarus fodiens</i>
<i>Felis concolor</i>	<i>Puma concolor</i>
<i>Felis concolor cougar</i>	<i>Puma concolor cougar</i>
<i>Fixsenia favonius ontario</i>	<i>Satyrium favonius ontario</i>
<i>Fixsenia ontario</i>	<i>Satyrium favonius ontario</i>
<i>Gomphus notatus</i>	<i>Stylurus notatus</i>
<i>Hermeuptychia hermes</i>	<i>Hermeuptychia sosybius</i>
<i>Hydrochus</i> sp 1	<i>Hydrochus spangleri</i>
<i>Incisalia irus</i>	<i>Callophrys irus</i>
<i>Leptohiphes robacki</i>	<i>Tricorythodes robacki</i>
<i>Libellula exusta</i>	<i>Ladona exusta</i>
<i>Libellula julia</i>	<i>Ladona julia</i>
<i>Lutra canadensis</i>	<i>Lontra canadensis</i>
<i>Macromia georgiana</i>	<i>Macromia illinoiensis georgiana</i>
<i>Mesodon sayanus</i>	<i>Appalachina sayana</i>
<i>Mitoura hesseli</i>	<i>Callophrys hesseli</i>
<i>Notropis buccata</i>	<i>Notropis buccatus</i>
<i>Oxyura dominica</i>	<i>Nomonyx dominicus</i>
<i>P. selenis, P. tharos</i>	<i>Phyciodes cocyta</i>
<i>Phoca groenlandica</i>	<i>Pagophilus groenlandicus</i>
<i>Physeter catodon</i>	<i>Physeter macrocephalus</i>
<i>Plecotus rafinesquii</i>	<i>Corynorhinus rafinesquii</i>

Synonym Name	Current Name
Porhomma cavernicola	Porrhomma cavernicola
Potamanthus walkeri	Anthopotamus verticis
Pseudemys scripta	Trachemys scripta
Satyrium caryaevorum	Satyrium caryaevorus
Scymnus gordonii	Nephus gordonii
Sphalloplana hoffmasteri	Macrocotyla hoffmasteri
Sterna antillarum	Sternula antillarum
Sterna maxima	Thalasseus maximus
Sterna nilotica	Gelochelidon nilotica
Sylvilagus obscurus	Sylvilagus transitionalis
Triodopsis multilineata	Webbhelix multilineata
Xestia bollii	Agnorisma bollii

APPENDIX III

ANIMAL SPECIES UNDER REVIEW FOR INCLUSION ON LIST

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK
MOLLUSKS			
<i>Allogona profunda</i>	Broad-banded forestsnail	G5	SU
<i>Appalachina sayana</i>	Spike-lip crater	G4G5	SU
<i>Gastrocopta corticaria</i>	Bark snaggletooth	G4G5	SU
<i>Glyphyalinia picea</i>	Rust glyph	G3	SU
<i>Paravitrea multidentata</i>	Dentate supercoil	G4G5	SU
<i>Stenotrema stenotrema</i>	Inland slitmouth	G5	SU
<i>Vertigo gouldi</i>	Variable vertigo	G4G5	SU
<i>Vitrina angelicae</i>	Eastern glass-snail	G?	SU
CRUSTACEANS			
<i>Eulimnadia diversa</i>	A clam shrimp	G5	SU
INSECTS			
<u>Coleoptera</u>			
<i>Cyphon</i> sp 1	A water beetle	G?	S?
<u>Diptera</u>			
<i>Wyeomyia haynei</i>	A mosquito	G4	S?
<u>Ephemeroptera</u>			
<i>Paraleptophlebia assimilis</i>	A mayfly	G3	S?
<i>Tricorythodes robacki</i>	A mayfly	G3	S?
<u>Plecoptera</u>			
<i>Alloperla biserrata</i>	A stonefly	G3	S?
<u>Heteroptera</u>			
<i>Chinaola quercicola</i>	A microphysid bug	G?	S?
<i>Hesperophylum heidemanni</i>	A plant bug	G?	S?
<i>Lygocoris nyssae</i>	A mirid bug	G?	S?
<u>Lepidoptera - Butterflies</u>			
<i>Atrytone logan</i>	Delaware skipper	G5	S4
<i>Atrytonopsis hianna</i>	Dusted skipper	G4G5	S4
<i>Chlosyne nycteis</i>	Silvery checkerspot	G5	S4
<i>Hesperia leonardus</i>	Leonard's skipper	G4	S4
<i>Hesperia metea</i>	Cobweb skipper	G4G5	S3
<i>Phyciodes cocyta</i>	Northern crescent	G5	SP
<i>Pieris virginienis</i>	West Virginia white	G3G4	S3
<i>Polygonia progne</i>	Gray comma	G5	S1S3
<i>Thorybes confusus</i>	Confused cloudywing	G4	SU
<u>Lepidoptera - Moths</u>			
<i>Anacamptodes pergracilis</i>	A geometrid moth	G?	S?
<i>Anisota stigma</i>	Spiny oakworm	G5	S4
<i>Anomogyna elimata</i>	Southern variable dart moth	G5	S5
<i>Argyrostromis quadrifilaris</i>	Four-lined chocolate moth	G4	S?
<i>Artace cribraria</i>	A lasiocampid moth	G5	S5
<i>Caripeta aretaria</i>	A moth	G4	S4
<i>Cisthene packardii</i>	Packard's lichen moth	G5	S5
<i>Erastria coloraria</i>	Broad-lined catopyrrha	G4	SH

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK
<u>Lepidoptera - Moths (cont.)</u>			
<i>Euxoa immixta</i>	A noctuid moth	G4	S?
<i>Hemeroplanis scopulepes</i>	Variable tropic moth	G5	S?
<i>Hemileuca maia</i>	The buckmoth	G5	S4
<i>Holomelina immaculata</i>	Plain-winged holomelina	G?	S?
<i>Holomelina laeta</i>	Joyful holomelina moth	G5	S1?
<i>Hypagyrtis esther</i>	Esther moth	G5	S5
<i>Idaea eremiata</i>	A geometrid moth	G4	S1?
<i>Lagoa crispata</i>	Black-waved flannel moth	G5	SU
<i>Lithophane lemmeri</i>	Lemmer's noctuid moth	G3G4	S?
<i>Macrochilo hypocritalis</i>	A noctuid moth	G4	S4?
<i>Metaxaglaea semitaria</i>	Footpath sawfly moth	G5	S4
<i>Pachypolia atricornis</i>	Three-horned moth	G3G4	SH
<i>Papaipema araliae</i>	Aralia shoot borer moth	G3G4	S?
<i>Papaipema marginidens</i>	A borer moth	G4	S4
<i>Parapema buffaloensis</i>	A noctuid moth	G?	S?
<i>Ptichodis bistrigata</i>	Southern ptichodis	G3	S?
<i>Ptichodis herbarum</i>	Common ptichodis	G4	S?
<i>Renia nemoralis</i>	A noctuid moth	G4	S1S3
<i>Rhodoecia aurantiago</i>	Aureolaria seed borer	G4	S?
<i>Semiothisa aequiferaria</i>	A geometrid moth	G?	S?
<i>Xylotype capax</i>	Barrens xylotype	G4	SU
<i>Zale curema</i>	A noctuid moth	G3G4	S1?
<i>Zale squamularis</i>	A noctuid moth	G4	SU
<i>Zale submediana</i>	A noctuid moth	G4	S1S3
<i>Zanclognatha martha</i>	Pine Barrens zanclognatha	G4	S1S3
<u>Plecoptera</u>			
<i>Allocaonia wrayi</i>	A plecopteran	G5	S?
AMPHIBIANS			
<i>Pseudotriton montanus</i>	Mud salamander	G5	S2?
REPTILES			
<i>Clemmys insculpta</i>	Wood turtle	G4	S4
<i>Elaphe guttata</i>	Corn snake	G5	S4
<i>Eumeces laticeps</i>	Broadhead skink	G5	S4
<i>Regina septemvittata</i>	Queen snake	G5	S5
<i>Thamnophis sauritus</i>	Eastern ribbon snake	G5	S5

APPENDIX IV

EXPLANATION OF SPECIES RANK AND STATUS CODES

GLOBAL AND STATE RANKS

The global and state ranking system is used by all 50 state Natural Heritage Programs and numerous Conservation Data Centers in other countries in this hemisphere. Because they are assigned based upon standard criteria, the ranks can be used to assess the range-wide status of a species, as well as the status within portions of the species' range. The primary criterion used to define these ranks is the number of known distinct occurrences with consideration given to the total number of individuals at each locality. Additional factors considered include the current level of protection, the types and degree of threats, ecological vulnerability, and population trends. Global and state ranks are used in combination to set inventory, protection, and management priorities for species both at the state as well as regional level.

GLOBAL RANK

- G1 Highly globally rare. Critically imperiled globally because of extreme rarity (typically 5 or fewer estimated occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
- G2 Globally rare. Imperiled globally because of rarity (typically 6 to 20 estimated occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
- G3 Either very rare and local throughout its range or distributed locally (even abundantly at some of its locations) in a restricted range (e.g., a single western state, a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout its range; typically with 21 to 100 estimated occurrences.
- G4 Apparently secure globally, although it may be quite rare in parts of its range, especially at the periphery.
- G5 Demonstrably secure globally, although it may be quite rare in parts of its range, especially at the periphery.
- GH No known extant occurrences (i.e., formerly part of the established biota, with the expectation that it may be rediscovered).
- GNR Not yet assessed for global conservation status rank.
- GU Possibly in peril range-wide, but its status is uncertain; more information is needed.
- GX Believed to be extinct throughout its range (e.g., passenger pigeon) with virtually no likelihood that it will be rediscovered.
- G? The species has not yet been ranked.
- _Q Species containing a "Q" in the rank indicates that the taxon is of questionable or uncertain taxonomic standing (i.e., some taxonomists regard it as a full species, while others treat it at an infraspecific level).
- _T Ranks containing a "T" indicate that the infraspecific taxon is being ranked differently than the full species.

STATE RANK

- S1 Highly State rare. Critically imperiled in Maryland because of extreme rarity (typically 5 or fewer estimated occurrences or very few remaining individuals or acres in the State) or because of some factor(s) making it especially vulnerable to extirpation. Species with this rank are actively tracked by the Wildlife and Heritage Service.
- S2 State rare. Imperiled in Maryland because of rarity (typically 6 to 20 estimated occurrences or few remaining individuals or acres in the State) or because of some factor(s) making it vulnerable to becoming extirpated. Species with this rank are actively tracked by the Wildlife and Heritage Service.
- S3 Watch List. Rare to uncommon with the number of occurrences typically in the range of 21 to 100 in Maryland. It may have fewer occurrences but with a large number of individuals in some populations, and it may be susceptible to large-scale disturbances. Species with this rank are not actively tracked by the Wildlife and Heritage Service.
- S3.1 A "Watch List" species that is actively tracked by the Wildlife and Heritage Service because of the global significance of Maryland occurrences. For instance, a G3 S3 species is globally rare to uncommon, and although it may not be currently threatened with extirpation in Maryland, its occurrences in Maryland may be critical to the long term security of the species. Therefore, its status in the State is being monitored.
- S4 Apparently secure in Maryland with typically more than 100 occurrences in the State or may have fewer occurrences if they contain large numbers of individuals. It is apparently secure under present conditions, although it may be restricted to only a portion of the State.
- S5 Demonstrably secure in Maryland under present conditions.
- SA Accidental or a vagrant in Maryland.
- SE Established, but not native to Maryland; it may be native elsewhere in North America.
- SH Historically known from Maryland, but not verified for an extended period (usually 20 or more years), with the expectation that it may be rediscovered.
- SP Potentially occurring in Maryland or likely to have occurred in Maryland (but without persuasive documentation).
- SR Reported from Maryland, but without persuasive documentation that would provide a basis for either accepting or rejecting the report (e.g., no voucher specimen exists).
- SRF Reported falsely (in error) from Maryland, and the error may persist in the literature.
- SU Possibly rare in Maryland, but of uncertain status for reasons including lack of historical records, low search effort, cryptic nature of the species, or concerns that the species may not be native to the State. Uncertainty spans a range of 4 or 5 ranks as defined above.
- SX Believed to be extirpated in Maryland with virtually no chance of rediscovery.
- SZ The species would not substantially benefit from protection efforts at a given location in Maryland because of its transitory nature.
- S? The species has not yet been ranked.

STATE RANK (cont.)

- _B A qualifier at the end of a rank. This species is a migrant and the subrank refers only to the breeding status of the species in Maryland. This species may have a different subrank for non-breeding populations.
- _N A qualifier at the end of a rank. This species is a migrant and the subrank refers only to the nonbreeding status of the species in Maryland. This species may have a different subrank for breeding populations.

STATE STATUS

This is the status of a species as determined by the Maryland Department of Natural Resources, in accordance with the Nongame and Endangered Species Conservation Act. Definitions for the following categories have been taken from Code of Maryland Regulations (COMAR) 08.03.08.

- E Endangered; a species whose continued existence as a viable component of the State's flora or fauna is determined to be in jeopardy.
- I In Need of Conservation; an animal species whose population is limited or declining in the State such that it may become threatened in the foreseeable future if current trends or conditions persist.
- T Threatened; a species of flora or fauna which appears likely, within the foreseeable future, to become endangered in the State.
- X Endangered Extirpated; a species that was once a viable component of the flora or fauna of the State, but for which no naturally occurring populations are known to exist in the State.
- * A qualifier denoting the species is listed in a limited geographic area only.

FEDERAL STATUS

This is the status of a species as determined by the U.S. Fish and Wildlife Service's Office of Endangered Species, in accordance with the Endangered Species Act. Definitions for the following categories have been modified from 50 CRF 17.

- LE Taxa listed as endangered; in danger of extinction throughout all or a significant portion of their range.
- LT Taxa listed as threatened; likely to become endangered within the foreseeable future throughout all or a significant portion of their range.
- PE Taxa proposed to be listed as endangered.
- PT Taxa proposed to be listed as threatened.
- C Candidate taxa for listing for which the Service has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened.