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Maryland Wildlife and Heritage Service Natural Heritage Program





Larry Hogan, Governor Boyd Rutherford, Lt. Governor Jeannie Haddaway-Riccio, Secretary



Wildlife & Heritage Service

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Cover photo: Northern Saw-whet Owl (*Aegolius acadicus*), a highly rare breeding bird in Maryland. (Photo credit, Hal Wierenga)

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INTRODUCTION

The following list comprises 519 native Maryland animals that are among the least understood, the rarest, and the most in need of conservation efforts. It includes species occurring in Maryland that are on the federal list of Endangered and Threatened Wildlife and Plants under the Endangered Species Act (ESA), species currently on the State's Threatened and Endangered Species list, and additional species that are considered rare or under assessment by the Wildlife and Heritage Service. The purpose of this list is to inform the public of rare species, 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 conservation. For more information about Maryland's wildlife, habitats, and their conservation, see the 2015 Maryland State Wildlife Action Plan, available at: dnr.maryland.gov/wildlife/Pages/plants_wildlife/SWAP_home.aspx

Compiled by Wildlife and Heritage Service staff and conservation partners, this list of rare species is a result of more than 40 years of effort to gather, research, and analyze data from numerous sources, such as museums, scientific literature, unpublished documents, reports from zoologists and amateur naturalists, and extensive field work conducted by scientists from the Department of Natural Resources (DNR). Our knowledge of Maryland's fauna has grown steadily. Field surveys and studies conducted by Wildlife and Heritage Service biologists and cooperators have led to the rediscovery of species previously thought to be extirpated from the state, as well as the discovery of species are now known to be either rarer or more common than were previously believed. Collectively, these efforts have contributed to a better understanding of the status, distribution, abundance, ecology, and conservation needs of the state's fauna. Thus, this list and the conservation rank and legal status of each species are periodically revised to keep pace with new information. The list was first published in 1984, and its last revision was in 2016.

The primary Maryland law (enacted in 1975) that governs the legal listing of threatened and endangered species is the Nongame and Endangered Species Conservation Act (Annotated Code of Maryland 10-2A-01). The Act is supported by regulations (Code of Maryland Regulations, COMAR 08.03.08) that define listing criteria for endangered, threatened, in need of conservation, and endangered extirpated species; lists the species included in each category; establishes the purpose and intent of research and collection permits; and lists prohibited activities. Maryland regulations may be found online at: dsd.state.md.us/COMAR/ComarHome.html

The Wildlife and Heritage Service (the Service) within DNR is the lead state agency responsible for the identification, ranking, protection, and management of rare and endangered species and natural communities in Maryland. The Service seeks to identify and sustain populations of rare plants and animals through the maintenance of healthy natural ecosystems. The Service maintains a database of natural areas and occurrences of rare, threatened, and endangered plant and animal species. This database is aligned with the NatureServe network, an international association of over 80 programs that tracks and monitors species and plant communities using identical methodologies across all 50 states, Canada, and Latin America. Wildlife and Heritage Service biologists are concerned with many more species than those included on Maryland's Threatened and Endangered Species list. Some of these species are potential candidates for listing and usually require further investigation into their conservation status. Others are thought to be secure at present but are worthy of attention because of limited distributions, declining populations, or other ecological vulnerabilities.

The Maryland Department of Natural Resources Fisheries Service maintains an official list of game and commercial fish species that are legally 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, Annapolis, MD 21401 or by visiting their website at: dnr.maryland.gov/fisheries/Pages/endangered.aspx.

GUIDE TO THE LIST

This list of rare, threatened, and endangered animal species is arranged phylogenetically, with invertebrate groups listed before vertebrate groups. Within each group, species are listed alphabetically by scientific name. Space limitations preclude inclusion of the scientific authors' names for the taxa in this list. Some invertebrate groups are not fully represented or are entirely absent from this list. Available information has been compiled for only certain species or groups of invertebrates. Many invertebrate species are not well known and have not been sufficiently researched or surveyed in Maryland.

Birds and other migratory species are primarily of conservation concern to the Service on the basis of their breeding status. For example, Dark-eyed Juncos breed in only a few remote areas in western Maryland during the summer,

but are abundant backyard birds during the winter. 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 legally listed as Endangered, Threatened, or In Need of Conservation under current listing criteria. However, some birds, such as the Red Knot, and other migratory species, such as whales and sea turtles, have been included because of their federal legal status even though they typically do not breed in Maryland.

Each page of the following list includes six columns, titled (from left to right) Scientific Name, Common Name, Global Rank (G rank), State Rank (S rank), State Status (if any), and Federal Status (if any). Because taxonomists periodically update scientific names, the most relevant synonyms are embedded within the list inside brackets. Common names, global ranks, and state ranks may also be found at the NatureServe Explorer website at: explorer.natureserve.org/. At the end of the list are two appendices:

- Appendix I details the changes to species' state ranks and statuses since the last publication of the list in December 2016.
- Appendix II contains a list of species with unusual, non-standard ranks and has been provided to clarify their current conservation status in Maryland.

UNDERSTANDING CONSERVATION STATUS RANK AND LEGAL STATUS

Conservation status ranks are intended to indicate risk of elimination or extinction in the foreseeable future and are arranged along a simple numerical scale (1-5) with the lower numbers reflecting increasing rarity and risk. Conservation status ranks also present geographic information about rarity and risk. Subnational or state ranks (S ranks) represent the vulnerability of the species in the state; whereas global ranks (G ranks) represent the imperilment of the species throughout its range (although most species are far from being globally distributed). The status rank of a species is determined through analyses of a number of factors within the pertinent jurisdiction, primarily population number, size, viability, threats, and both short-term and long-term trends. The final metric, a combination of the numeric index (1-5) and the geographic identifier (G or S), distills this large amount of information into a single value. Thus, for a particular species that has a global rank of G1 and a state rank of S1, the species is not only rare and at risk of elimination from within Maryland but also rare throughout its entire range and at risk of extinction. Similarly, an animal with ranks of G5 and S5 indicate that the species is demonstrably secure in Maryland and throughout the species' global range as well.

Most species have single-valued conservation ranks; however, some variations are possible. Range ranks, e.g., G1G2 or S1S3, indicate the (usually narrow) range of uncertainty in the rank. For example, a species may have more populations than is typical of the lower rank, but few are protected; this may affect the viability of the population(s). A taxon (T) rank follows the global (G) rank of the full species as a qualifier to indicate the conservation status of the subspecies, e.g., G5T3. The latter indicates that the subspecies is much rarer or at risk than the full species. A global rank may also be followed by a 'Q'-qualifier to indicate that there are prevailing taxonomic questions for that species (e.g., G4Q). A '?'-qualifier may be used to indicate that there is a level of uncertainty in the global or state rank (e.g. G4? or S2?). Finally, the "!" symbol to the right of a species name indicates that the conservation status of that species is currently under review. For migratory species, state (S) ranks may include a qualifier indicating the numeric value is relevant to its breeding (B) status, non-breeding (N) status, or migrant (M) status within Maryland. Definitions of conservation status ranks and rank qualifiers are presented in Table 1. State ranks for many species are modified as needed to reflect current information. All member programs of the NatureServe Network of Natural Heritage Programs and Conservation Data Centers across the Western Hemisphere use the same ranking system and format. Global ranks are maintained by NatureServe, while the various member programs maintain the subnational or state ranks. This allows direct conservation status comparisons across the political and geographic landscape, and it is one of the most powerful aspects of the Network.

Rank	Definitions of Global / State Ranks
GX or SX	Presumed Extirpated — Species believed to be extirpated from the jurisdiction (i.e. global, or state/province). Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
GH or SH	Historical (Possibly Extirpated) — Known only from historical records and some hope of rediscovery remains. There is some evidence that the species may no longer be present, but not enough to know this with certainty.

Table 1. Definitions of Global (G) and State (S) Conservation Status Ranks and Rank Qualifiers.

G1 or S1	Critically Imperiled / Highly State Rare — At very high risk of extinction or extirpation due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors. Typically occurring in five or fewer populations.
G2 or S2	Imperiled / State Rare — At high risk of extinction or extirpation due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors. Typically occurring in 6-20 populations.
G3 or S3	Vulnerable / Watchlist — At moderate risk of extinction or extirpation due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors. Typically occurring in 21-80 populations.
G4 or S4	Apparently Secure — At fairly low risk of extinction or extirpation due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
G5 or S5	Demonstrably Secure — At very low risk of extinction or extirpation due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
S3.1	Vulnerable and Globally Rare — Species is actively tracked by the Service because of the global significance of Maryland occurrences. Although not currently threatened or endangered, Maryland occurrences may be critical to the long-term security of the species.
SU	Status Uncertain — A numerical rank cannot be established with confidence for reasons including lack of historical records, low survey effort, cryptic nature of the species, or concerns that the species may not be native to the state. Uncertainty spans a range of more than three ranks as defined above.
GNR or SNR	Not Ranked — Species has not yet been ranked.
Qualifier	Not Ranked — Species has not yet been ranked. Definitions of Rank Qualifiers
Qualifier	Definitions of Rank Qualifiers Breeding Rank — Indicates the species is a migrant and the rank applies to the status of the
Qualifier B	Definitions of Rank Qualifiers Breeding Rank — Indicates the species is a migrant and the rank applies to the status of the breeding population in Maryland. Migrant Rank — Indicates the species is a migrant and the rank applies to the status of the
Qualifier B M	Definitions of Rank Qualifiers Breeding Rank — Indicates the species is a migrant and the rank applies to the status of the breeding population in Maryland. Migrant Rank — Indicates the species is a migrant and the rank applies to the status of the transitional population in Maryland. Non-breeding Rank — Indicates the species is a migrant and the rank applies to the status of the transitional population in Maryland. Non-breeding Rank — Indicates the species is a migrant and the rank applies to the status of the non-breeding population in Maryland. This may include individuals outside the typical
Qualifier B M N	Definitions of Rank Qualifiers Breeding Rank — Indicates the species is a migrant and the rank applies to the status of the breeding population in Maryland. Migrant Rank — Indicates the species is a migrant and the rank applies to the status of the transitional population in Maryland. Non-breeding Rank — Indicates the species is a migrant and the rank applies to the status of the transitional population in Maryland. Non-breeding Rank — Indicates the species is a migrant and the rank applies to the status of the non-breeding population in Maryland. This may include individuals outside the typical breeding season, wintering individuals, or summering non-breeding individuals. Questionable Taxonomy — Indicates that the taxon has questionable, controversial, or uncertain taxonomic standing, e.g., treated by some authors as a species, whereas others treat
Qualifier B M N Q	Definitions of Rank Qualifiers Breeding Rank — Indicates the species is a migrant and the rank applies to the status of the breeding population in Maryland. Migrant Rank — Indicates the species is a migrant and the rank applies to the status of the transitional population in Maryland. Non-breeding Rank — Indicates the species is a migrant and the rank applies to the status of the non-breeding population in Maryland. This may include individuals outside the typical breeding season, wintering individuals, or summering non-breeding individuals. Questionable Taxonomy — Indicates that the taxon has questionable, controversial, or uncertain taxonomic standing, e.g., treated by some authors as a species, whereas others treat it as a subspecies or not at all. Taxon Rank — Indicates that the infraspecific taxon (subspecies) is ranked independently from

Legal status presents a simple hierarchy of endangerment in four categories: Endangered (E), Threatened (T), In Need of Conservation (I), and Endangered Extirpated (X). Definitions of legal statuses are presented in Table 2. Legal protection statuses of species are typically reviewed and updated, if needed, every two to three years. All species listed as threatened or endangered at the federal level also have a legal status within Maryland.

State Status	Definitions
Endangered (E)	A species whose continued existence as a viable component of Maryland's fauna is determined to be in jeopardy.
Threatened (T)	A species that appears likely, within the foreseeable future, to become endangered in Maryland.
In Need of Conservation (I)	An animal species whose population is limited or declining in Maryland such that it may become threatened in the foreseeable future if current trends or conditions persist.
Endangered Extirpated (X)	A species that was once a viable component of the fauna of Maryland, but for which no naturally occurring populations are known to exist.
(State Status)*	A qualifier denoting the species is listed in a limited geographical area only.
Federal Status	Definitions
Endangered (LE)	Taxa listed as Endangered under the federal ESA; in danger of extinction throughout all or a significant portion of its range.
Threatened (LT)	Taxa listed as Threatened under the federal ESA; likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

ADDITIONAL RESOURCES AND IMPORTANT LINKS

National

The U.S. Department of Interior, Fish and Wildlife Service's (USFWS) Office of Endangered Species publishes a list of federally designated Threatened and Endangered species. Copies of USFWS publications, including *Endangered and Threatened Wildlife and Plants; Review of Plant and Animal Taxa That are Candidates for Listing as Endangered or Threatened Species* may be obtained from the Publication Unit, U.S. Fish and Wildlife Service, Washington DC 20240 or viewed at: <u>fws.gov/endangered/</u> or the Office of Federal Register website: <u>federalregister.gov/agencies/fish-and-wildlife-service</u>

Additional protections for most of Maryland's bird species are provided by the Migratory Bird Treaty Act, as enforced by USFWS. Their website can be viewed at: fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php

The Encyclopedia of Life includes information on such topics as life history, distribution, and taxonomic relationships of all taxa occurring throughout the world at the following link: <u>eol.org</u>.

NatureServe compiles data from all member programs in the Network of Natural Heritage Programs and Conservation Data Centers and provides a synthesis in the form of species summaries on their Explorer website: <u>explorer.natureserve.org</u>. The state ranks for Maryland shown in NatureServe's online database may be different than in this list due to the timing of data synchronization between the two databases.

Maryland

The Department of Natural Resources (DNR) conserves more than just rare, threatened, and endangered animals in Maryland. The state's reptiles and amphibians are also protected through regulations that limit the numbers and types of species that can be possessed without permits and that list the conditions under which permits from the DNR

would be required. These protections are provided in Code of Maryland Regulations (COMAR) 08.03.11. Furthermore, certain additional nongame mammals are provided protections through regulating activities that require permits under COMAR 08.03.08.15. For more information, regulations can be viewed on the state Division of State Documents website: <u>dsd.state.md.us/COMAR/ComarHome.html</u>

The Natural History Society of Maryland maintains collections of Maryland specimens at: marylandnature.org.

The Maryland Amphibian and Reptile Atlas provides information on the distribution of turtles, lizards, snakes, salamanders, frogs and toads in Maryland at: webapps02.dnr.state.md.us/mara/default.aspx?strSelection=SystemStats

The Maryland Biodiversity Project provides information on all species of animals known to occur in Maryland at: <u>marylandbiodiversity.com/</u>

For more information about Maryland's wildlife, habitats, and their conservation, see the 2015 Maryland State Wildlife Action Plan, available at: dnr.maryland.gov/wildlife/Pages/plants_wildlife/SWAP_home.aspx

To obtain additional copies of this report; to receive a copy of Rare, Threatened, and Endangered Animals of Maryland; or to receive other information on Maryland's rare species and natural areas; please contact the Maryland Wildlife and Heritage Service at Tawes State Office Building, E-1, 580 Taylor Avenue, Annapolis, MD 21401 or visit the website at: https://dnr.maryland.gov/wildlife/Pages/plants_wildlife/rte/espaa.aspx

The conservation of Maryland's natural communities is vital in sustaining our natural diversity and rare species. These recurring assemblages of plants and animals are uniquely tied to a particular suite of environmental conditions and species adapted to those conditions. More information on Maryland's natural communities can be found at: <u>dnr.maryland.gov/wildlife/Pages/plants_wildlife/nhpnatcomm.aspx</u>

The Maryland Geological Survey (<u>mgs.md.gov/</u>) provides detailed physiographic maps with accompanying explanatory text, available at: <u>mgs.md.gov/geology/physiographic map.html.</u>

HOW YOU CAN HELP

You can take an active part in conserving Maryland's rare species by contacting the Wildlife and Heritage Service with the following types of information:

I. Submitting information on rare, threatened or endangered species

1. Location details should be included (exact mapped location using GPS is preferred, but not required). Online applications such as Google Earth are invaluable but precise, written directions including driving and walking are acceptable.

2. Documentation that includes a photograph, description of the species, identification source, and habitat description should accompany the report.

3. Information on the ecology or biology of the species including observed and/or identified pollinators should accompany the report.

**Additional information, including a downloadable PDF of our rare species reporting form can be found at: <u>dnr.maryland.gov/wildlife/Pages/plants_wildlife/rte_reportinginst.aspx</u>

II. Assisting the Service with conservation status rank assessments

1. Submit data indicating that a species should be assigned a different rank and status, with supporting documentation.

2. Submit nominations of additional species to be included on the list or of species that should be deleted from the list, with supporting documentation.

3. Submit information on historical collections or documentation in the scientific literature.

	Liet er Hare, fin eaterieu, and Endangereu / Inniae er maryland				
SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
PLANARIANS					
Paraplanaria dactyligera	A Planarian	GNR	S2		
Phagocata virilis	A Planarian	GNR	S1		
Procotyla typhlops	A Planarian	G1G2	S1	Е	
Sphalloplana buchanani	A Cave Obligate Planarian	G1G2	SNR		
Sphalloplana hoffmasteri	Hoffmaster's Cave Planarian	G3G4	S1	Е	
Sphalloplana pricei	Refton Cave Planarian	G2G3	SNR		
Sphalloplana sp. 1	A Planarian	GNR	S1S2		
MOLLUSKS					
Alasmidonta heterodon	Dwarf Wedgemussel	G1G2	S1	Е	LE
Alasmidonta undulata	Triangle Floater	G4	S1S2	т	
Alasmidonta varicosa	Brook Floater	G3	S1	Е	
[Anodonta implicate]	Utterbackiana implicata				
Catinella hubrichti	Snowhill Ambersnail	G3	SNR		
Discus catskillensis	Angular Disc Snail	G5	S1		
Elliptio fisheriana	Northern Lance	G4	S3S4		
Elliptio lanceolata	Yellow Lance	G2	S1	Т	LT
Elliptio producta	Atlantic Spike	G3Q	S2S3	I	
Fontigens bottimeri	Appalachian Springsnail	G2G3	S2	I	
Fontigens orolibas	Blue Ridge Spring Snail	G3	S1	Е	
Glyphyalinia picea	Rust Glyph	G3	SU		
Glyphyalinia raderi	Maryland Glyph	G2	SH	Х	
Hendersonia occulta	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	G4	S1S2		
Oxyloma effusum	Coastal-plain Ambersnail	G3	SNR		
Oxyloma subeffusum	Chesapeake Ambersnail	G3	SNR		
Paravitrea pontis	Natural Bridge Supercoil	G3	SNR		
Stenotrema simile	Bear Creek Slitmouth	G2	SU		
Strophitus undulatus	Creeper	G5	S2S3	I	
Triodopsis picea	Spruce Knob Threetooth	G3	S1		
Utterbackia imbecillis	Paper Pondshell	G5	S3		
Utterbackiana implicata	Alewife Floater	G5	S3		
Vertigo ventricosa	Five-tooth Vertigo	G5	SU		
Webbhelix multilineata	Striped Whitelip	G5	S1		
CRUSTACEANS					
Acanthocyclops columbiensis	A Cyclopoid Copepod	G1	SNR		
Ankylocythere tridentata	An Entocytherid Ostracod	G1	SH		
Attheyella spinipes	A Cyclopoid Copepod	GNR	SU		
Caecidotea alleghenyensis	Allegheny Spring Isopod	G1G2	S1	E	

SCIENTIFIC NAME		GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Caecidotea franzi	Franz's Cave Isopod	G2G4	S1	E	
Caecidotea holsingeri	Holsinger's Cave Isopod	G5	S1	E	
Caecidotea mausi	Maus' Cave Isopod	G2	S1	E	
Caecidotea nordeni	Norden's Groundwater Isopod	GH	SH	X	
Caecidotea pricei	Price's Cave Isopod	G5	S3		
Caecidotea sp. 1	An Isopod	G1	S1		
Caecidotea vandeli	Vandel's Cave Isopod	G3G4	S1	Е	
Cambarus acuminatus	Acuminate Crayfish	G4Q	S2	I	
Crangonyx dearolfi	Pennsylvania Cave Crangonyctid	G2	S1	Е	
Crangonyx stagnicolous	An Amphipod	G2	SNR		
Dactylocythere scotos	An Entocytherid Ostracod	GNR	S1		
Diacyclops palustris	A Cyclopoid Copepod	GNR	SU		
Donnaldsoncythere donnaldsonensis	Donaldson's Cave Ostracod	G3	SNR		
Faxonius obscurus	Allegheny Crayfish	G5	S3		
[Orconectes obscurus]	see Faxonius obscurus				
Stygobromus allegheniensis	Allegheny Cave Amphipod	G5	S2S3	I	
Stygobromus amicus	Friendly Cave Amphipod	G1	S1	Е	
Stygobromus biggersi	Biggers' Cave Amphipod	G2G4	S1	E	
Stygobromus caecilius	Cecil Groundwater Amphipod	G1	S1	Е	
Stygobromus emarginatus	Greenbrier Cave Amphipod	G3	S1	Е	
Stygobromus felleri	Feller's Groundwater Amphipod	G1	S1	Е	
Stygobromus foliatus	Rappahannock Spring Amphipod	G2	S1	Е	
Stygobromus franzi	Franz's Cave Amphipod	G3G4	S2S3	I	
Stygobromus gracilipes	Shenandoah Valley Cave Amphipod	G3G4	S1	Е	
Stygobromus indentatus	Tidewater Amphipod	G3	S1		
Stygobromus kenki	Rock Creek Groundwater Amphipod	G2	S1	E	
Stygobromus paxillus	Prettyboy Groundwater Amphipod	G1	S1	Е	
Stygobromus pizzinii	Pizzini's Cave Amphipod Capital Area Groundwater	G3G4	S1		
Stygobromus sextarius	Amphipod	G1	S1	Е	
Stygobromus sp. 14	Roundtop Amphipod	GNR	S1		
Stygobromus sp. 5	Barrelville Amphipod	GNR	S1		
Stygobromus sp. 6	Devil's Hole Cave Amphipod	GNR	S1		
Stygobromus tenuis potomacus	Potomac Amphipod	G4T4	S3		
Stygobromus tenuis tenuis	Slender Amphipod	G4T4	SU		
SPIDERS					
Oreonetides sp. 1	Snively's Cave Spider	GNR	SU		
Porrhomma cavernicola	Appalachian Cave Spider	G5	S2		
INSECTS					
Coleoptera					
Cicindela abdominalis	Eastern Pinebarrens Tiger Beetle	G3G4	S1	Е	
Cicindela ancocisconensis	Appalachian Tiger Beetle	G3	S1	Е	
[Cicindela dorsalis dorsalis]	see Habroscelimorpha dorsalis dorsalis				

SCIENTIFIC NAME		GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
[Cicindela dorsalis media]	see Habroscelimorpha dorsalis media				
Cicindela formosa	Big Sand Tiger Beetle	G5	SU		
[Cicindela lepida]	see Ellipsoptera lepida				
Cicindela patruela	Northern Barrens Tiger Beetle	G3	S1	E	
[Cicindela puritan]	see Ellipsoptera puritana				
Cicindela purpurea	Cow Path Tiger Beetle	G5	S3		
Cicindela scutellaris	Festive Tiger Beetle	G5	S3		
Cicindela splendida	Splendid Tiger Beetle	G5	S1		
[Cicindela unipunctata]	see Cylindera unipunctata				
Cylindera unipunctata	One-spotted Tiger Beetle	G4G5	S3		
Dryobius sexnotatus	Six-banded Longhorn Beetle	GNR	S1	Е	
Ellipsoptera lepida	Ghost Tiger Beetle	G3G4	S1	Е	
Ellipsoptera puritana	Puritan Tiger Beetle	G1G2	S1S2	Е	LT
Habroscelimorpha dorsalis dorsalis	Eastern Beach Tiger Beetle	G3G4T2	S1	Е	LT
Habroscelimorpha dorsalis media	White Tiger Beetle	G3G4T3T4	S1	Е	
Helops cisteloides	A Tenebrionid Beetle	GNR	S1	Е	
Hoperius planatus	A Dytiscid Beetle	GNR	S2		
Hydrochara occultus	A Hydrophilid Beetle	GNR	SU		
- Hydrochus spangleri	Seth Forest Water Scavenger Beetle	G1	S1	E	
Hydrocolus deflatus	A Predaceous Diving Beetle	GNR	S3		
Laccophilus schwarzi	Schwarz' Diving Beetle	GNR	SX		
Lucanus elaphus	Giant Stag Beetle	G3G5	SU		
Nephus gordoni	A Coccinellid Beetle	GNR	SU		
Nicrophorus americanus	American Burying Beetle	G3	SX	Х	LE
Photuris bethaniensis	Bethany Beach Firefly	G1	S1		
Pseudanophthalmus sp. 15	Maryland Cave Beetle	G1	S1		
Schoenicus puberulus	A Tenebrionid Beetle	GNR	S1	Е	
Sperchopsis tessellatus	A Hydrophilid Beetle	GNR	S2		
Collembola Arrhopalites sp. 1	Crabtree Cave Springtail	GNR	SU		
Diptera Wyeomyia smithii	Pitcher-plant Mosquito	G5	S2		
Ephemeroptera					
Anthopotamus verticis	Walker's Tusked Sprawler	G5	SU		
Siphloplecton costalense	Speith's Great Speckled Olive Mayfly	G2G4	SNR		
Hemiptera					
Chlorotettix sp. 1	A Cicadellid Leafhopper	GNR	SU		
Limotettix minuendus	Eastern Sedge Barrens Leafhopper	G1	S1	Е	
Hymenoptera					
Andrena braccata	A Mining Bee	GNR	SU		

,	Jeneral (1997)	GLOBAL	STATE	STATE	FEDERAL
SCIENTIFIC NAME	COMMON NAME	RANK	RANK	STATUS	STATUS
Andrena fulvipennis	A Mining Bee	GNR	SU		
Bombus affinis	Rusty-patched Bumble Bee	G2	SH	E	LE
Bombus auricomus	Black-and-Gold Bumble Bee	G5	SU		
Bombus bohemicus	Gypsy Cuckoo Bumble Bee	G3G5	SH		
Bombus citrinus	Lemon Cuckoo Bumble Bee	G4	SU		
Bombus fraternus	Southern Plains Bumble Bee	G2G4	SH		
Bombus pensylvanicus	American Bumble Bee	G3G4	S2S3		
Bombus sandersoni	Sanderson's Bumble Bee	G5	S3		
Bombus terricola	Yellow-banded Bumble Bee	G3G4	S1		
Bombus vagans	Half-black Bumble Bee	G4	S3		
Bombus variabilis	Variable Cuckoo Bumble Bee	G1G2	SH		
Colletes aestivalis	A Cellophane Bee	GNR	SH		
Dieunomia heteropoda	Sunflower Sweat Bee	G5	S1S3		
Dieunomia nevadensis	A Dieunomia Bee	G5	SU		
Epeoloides pilosula	Macropis Cuckoo Bee	GU	SH		
Lasioglossum arantium	A Sweat Bee	GNR	S2S3		
Lasioglossum georgeickworti	George Eickwort's Sweat Bee	GNR	SU		
Lasioglossum marinum	Marine Metallic-Sweat Bee	GNR	SU		
Lasioglossum nymphale	A Sweat Bee	GNR	S2S3		
Lasioglossum raleighense	A Sweat Bee	GNR	SU		
Macropis ciliata	Fringed Loosestrife Oil-collecting Bee	GNR	S1		
Macropis patellata	Patellar Oil-collecting Bee	GNR	SH		
Nomada rubicunda	A Cuckoo Bee	GNR	S1S3		
Nomada seneciophila	a cuckoo bee	GNR	S1		
Nomia maneei	Pearly-banded Bee	G3?	S1S3		
Osmia chalybea	A Mason Bee	G4G5	S1S3		
Protandrena abdominalis	A Mining Bee	GNR	SU		
Lepidoptera - Butterflies					
Amblyscirtes hegon	Pepper and Salt Skipper	G5	S2	I	
Anatrytone logan	Delaware Skipper	G5	S3		
Atlides halesus	Great Purple Hairstreak	G4G5	S2S3		
[Autochton cellus]	see Telegonus cellus				
Boloria selene	Silver-bordered Fritillary	G5	S3		
Calephelis borealis	Northern Metalmark	G3	S2	Т	
Callophrys hesseli	Hessel's Hairstreak	G3	SH	Х	
Callophrys irus	Frosted Elfin	G2G3	S1	Е	
Callophrys polios	Hoary Elfin	G5	S1	Е	
Celastrina neglectamajor	Appalachian Blue	G4	S3S4		
Celastrina nigra	Dusky Azure	GU	SH	Х	
Chlosyne harrisii	Harris's Checkerspot	G5	S2	Т	
Colias interior	Pink-edged Sulphur	G5	S1		
Erora laeta	Early Hairstreak	G2G3	S1	Е	
Erynnis martialis	Mottled Duskywing	G3	S1	Е	
Euchloe olympia	Olympia Marble	G5	S2	I	

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SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Euphydryas phaeton	Baltimore Checkerspot	G4	S2		
Euphyes bimacula	Two-spotted Skipper	G4	S1	Е	
Euphyes dion	Dion Skipper	G5	S3		
Glaucopsyche lygdamus	Silvery Blue	G5	S2	I	
Hermeuptychia sosybius	Carolina Satyr	G5	S1S3		
Hesperia leonardus	Leonard's Skipper	G4	S2		
Hesperia metea	Cobweb Skipper	G4	S3		
Hesperia sassacus	Indian Skipper	G5	S3		
Limochores mystic	Long Dash	G5	S3		
Lycaena epixanthe	Bog Copper	G5	S1	Е	
Nymphalis vaualbum	Compton Tortoiseshell	G5	SU		
Papilio cresphontes	Giant Swallowtail	G5	S2	I	
[Papilio palamedes]	see Pterourus palamedes				
Phyciodes batesii	Tawny Crescent	G5	SH	Х	
Phyciodes cocyta	Northern Crescent	G5	SU		
Pieris virginiensis	West Virginia White	G2G3	S1S2		
Poanes massasoit chermocki	Chermock's Mulberry Wing	G4T1	S1	Е	
[Polites mystic]	see Limochores mystic				
Polygonia progne	Gray Comma	G5	S3		
Problema bulenta	Rare Skipper	G3	S1	Т	
Pterourus palamedes	Palamedes Swallowtail	G4	S1	Е	
Pyrgus wyandot	Appalachian Grizzled Skipper	G5T1T2	S1	Е	
Satyrium caryaevorus	Hickory Hairstreak	G4	S1	Е	
Satyrium edwardsii	Edwards' Hairstreak	G4	S1	Е	
Satyrium favonius ontario	Northern Oak Hairstreak	G4G5T4	S1S2	Е	
Satyrium kingi	King's Hairstreak	G3G4	S1	Е	
Speyeria atlantis	Atlantis Fritillary	G5	S1	Т	
Speyeria idalia	Regal Fritillary	G3?	SH	Х	
Telegonus cellus	Golden-banded Skipper	G4	SH	Х	
Lepidoptera - Moths					
Agnorisma bollii	A Noctuid Moth	G4?	SU		
Apamea apamiformis	Rice Worm Moth	G4	S2S3		
Apamea plutonia	Dusky Apamea Moth	G5	SU		
Apodrepanulatrix liberaria	New Jersey Tea Inchworm	G3	SU		
Capis curvata	Curved Halter Moth	G5	S1S2		
Catocala marmorata	Marbled Underwing	G3G4	SH		
Catocala pretiosa pretiosa	Precious Underwing	G4T2	SH		
Ectoedemia castaneae	American Chestnut Nepticulid Moth	GH	SH		
Ectoedemia phleophaga	Phleophagan Chestnut Nepticulid Moth	GH	SH		
Elaphria georgei	George's Midget Moth	G4	SU		
Erastria coloraria	Broad-lined Erastria	G3G4	SH		
Euchlaena milnei	Milne's Looper Moth	G2G4	SNR		
Hadena ectypa	The Starry Campion Moth	G3G4	SU		
Hemaris gracilis	Slender Clearwing	G3G4	SNR		

SCIENTIFIC NAME		GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Hemipachnobia subporphyrea	Venus Flytrap Cutworm	G1	SNR		
Isoparce cupressi	Cypress Sphinx Moth	G4	S1S2		
Lithophane lemmeri	Lemmer's Noctuid Moth	G3G4	SNR		
Lytrosis sinuosa	Sinuous Lytrosis Moth	G4	S1S3		
Melanapamea mixta	Coastal Plain Apamea Moth	GU	S1		
Meropleon ambifusca	Newman's Brocade	G3G4	SU		
Meropleon cosmion	An Owlet Moth	G4	SNR		
Meropleon titan	An Owlet Moth	G2G4	S2S4		
Papaipema araliae	Aralia Shoot Borer Moth	G3G4	SNR		
Papaipema duovata	Seaside Goldenrod Stem Borer	G4	SU		
Papaipema polymniae	Polymnia Borer Moth	G4?	SH		
Psectraglaea carnosa	Pink Sallow	G3	SNR		
Ptichodis bistrigata	Southern Ptichodis	G3	SNR		
Pyrrhia aurantiago	Aureolaria Seed Borer	G3G4	SNR		
Schizura apicalis	Plain Schizura	G3G4	SNR		
Sphinx franckii	Franck's Sphinx	G4G5	S1S2		
Zale lunifera	Bold-based Zale Moth	G3G4	SNR		
Zale submediana	Gray Spring Zale	G4	S1S3		
Odonata					
Aeshna canadensis	Canada Darner	G5	S2		
Aeshna constricta	Lance-tipped Darner	G5	SH		
Aeshna tuberculifera	Black-tipped Darner	G5	S2		
Aeshna verticalis	Green-striped Darner	G5	S2		
Amphiagrion saucium	Eastern Red Damsel	G5	S3S4		
Anax longipes	Comet Darner	G5	S3		
Archilestes grandis	Great Spreadwing	G5	S3		
Argia bipunctulata	Seepage Dancer	G4	S3		
Argia sedula	Blue-ringed Dancer	G5	S3		
Boyeria grafiana	Ocellated Darner	G5	S1		
Brachymesia gravida	Four-spotted Pennant	G5	S3S4		
Calopteryx amata	Superb Jewelwing	G5	S1S2	Т	
Calopteryx angustipennis	Appalachian Jewelwing	G4	S1S2		
Calopteryx dimidiata	Sparkling Jewelwing	G5	S2		
Celithemis bertha	Red-veined Pennant	G5	S1		
Celithemis fasciata	Banded Pennant	G5	S3		
Celithemis martha	Martha's Pennant	G4	S1		
Celithemis ornata	Faded Pennant	G5	SH		
Celithemis verna	Double-ringed Pennant	G5	S2		
Chromagrion conditum	Aurora Damsel	G5	S3S4		
Cordulegaster bilineata	Brown Spiketail	G5	S3		
Cordulegaster diastatops	Delta-spotted Spiketail	G5	S3S4		
Cordulegaster erronea	Tiger Spiketail	G4	S3		
Cordulegaster obliqua	Arrowhead Spiketail	G4	S2		
Cordulegaster obliqua fasciata	Banded Spiketail	G4T3Q	S1		

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Cordulia shurtleffii	American Emerald	G5	S3		
Dorocordulia lepida	Petite Emerald	G5	SH		
Enallagma annexum	Northern Bluet	G5	S1		
Enallagma antennatum	Rainbow Bluet	G5	S1		
Enallagma carunculatum	Tule Bluet	G5	S1		
Enallagma daeckii	Attenuated Bluet	G4	S3		
Enallagma divagans	Turquoise Bluet	G5	S3S4		
Enallagma doubledayi	Atlantic Bluet	G5	S1		
Enallagma dubium	Burgundy Bluet	G5	S1		
Enallagma durum	Big Bluet	G5	S3		
Enallagma ebrium	Marsh Bluet	G5	SH		
Enallagma pallidum	Pale Bluet	G4	S1		
Enallagma traviatum	Slender Bluet	G5	S3		
Enallagma vesperum	Vesper Bluet	G5	S3		
Enallagma weewa	Blackwater Bluet	G5	S2		
Epitheca canis	Beaverpond Baskettail	G5	S3		
Epitheca costalis	Slender Baskettail	G5	S1		
Epitheca semiaquea	Mantled Baskettail	G5	SH		
Epitheca spinosa	Robust Baskettail	G4	S1S2		
Erpetogomphus designatus	Eastern Ringtail	G5	S2		
Erythrodiplax minuscula	Little Blue Dragonlet	G5	S1		
Gomphaeschna antilope	Taper-tailed Darner	G4	S2		
Gomphaeschna furcillata	Harlequin Darner	G5	S3S4		
Gomphurus fraternus	Midland Clubtail	G5	S2		
Gomphurus lineatifrons	Splendid Clubtail	G4	S1		
Gomphurus ventricosus	Skillet Clubtail	G3	SH	Х	
[Gomphus abbreviatus]	see Hylogomphus abbreviatus				
[Gomphus adelphus]	see Hylogomphus adelphus				
[Gomphus descriptus]	see Phanogomphus descriptus				
[Gomphus fraternus]	see Gomphurus fraternus				
[Gomphus lineatifrons]	see Gomphurus lineatifrons				
[Gomphus parvidens]	see Hylogomphus parvidens				
[Gomphus quadricolor]	see Phanogomphus quadricolor				
[Gomphus rogersi]	see Stenogomphurus rogersi				
[Gomphus ventricosus]	see Gomphurus ventricosus				
[Gomphus viridifrons]	see Hylogomphus viridifrons	04	00	Ŧ	
Helocordulia selysii	Selys' Sundragon	G4	S2	Т	
Helocordulia uhleri	Uhler's Sundragon	G5	S3		
Hetaerina titia	Smoky Rubyspot	G5	SH		
Hylogomphus abbreviatus	Spine-crowned Clubtail	G4	S1		
Hylogomphus adelphus	Mustached Clubtail	G5	S1	V	
Hylogomphus parvidens	Piedmont Clubtail	G4	SH	Х	
Hylogomphus viridifrons	Green-faced Clubtail	G3G4	S1		
Ischnura kellicotti	Lilypad Forktail	G5	S3S4		
lschnura prognata	Furtive Forktail	G4	S1		

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Ladona exusta	White Corporal	G5	S1	Е	
Ladona julia	Chalk-fronted Skimmer	G5	S3		
Lanthus parvulus	Northern Pygmy Clubtail	G4G5	S2		
Lanthus vernalis	Southern Pygmy Clubtail	G4	S2		
Lestes congener	Spotted Spreadwing	G5	S3		
Lestes dryas	Emerald Spreadwing	G5	SH		
Lestes eurinus	Amber-winged Spreadwing	G5	S3		
Lestes forcipatus	Sweetflag Spreadwing	G5	S3		
Lestes unguiculatus	Lyre-tipped Spreadwing	G5	SH		
Leucorrhinia frigida	Frosted Whiteface	G5	S1		
Leucorrhinia glacialis	Crimson-ringed Whiteface	G5	S1		
Leucorrhinia hudsonica	Hudsonian Whiteface	G5	S1		
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	S2S3		
Macromia alleghaniensis	Allegheny River Cruiser	G4	S2		
Macromia illinoiensis georgina	Georgia River Cruiser	G5T5	S3S4		
Macromia taeniolata	Royal River Cruiser	G5	S3		
Nannothemis bella	Elfin Skimmer	G4G5	S1	E	
Nasiaeschna pentacantha	Cyrano Darner	G5	S3S4		
Nehalennia gracilis	Sphagnum Sprite	G5	S2		
Nehalennia integricollis	Southern Sprite	G5	S1S2		
Nehalennia irene	Sedge Sprite	G5	S3		
Neurocordulia obsoleta	Umber Shadowdragon	G5	S3		
Neurocordulia yamaskanensis	Stygian Shadowdragon	G5	S3		
Ophiogomphus howei	Pygmy Snaketail	G3	S1		
Ophiogomphus incurvatus incurvatus	Appalachian Snaketail	G3T2T3	S1	E	
Ophiogomphus mainensis fastigiatus	Maine Snaketail	G4G5TU	S1		
Ophiogomphus rupinsulensis	Rusty Snaketail	G5	S2		
Ophiogomphus sp. 1	Chesapeake Snaketail	G1	S1		
Phanogomphus descriptus	Harpoon Clubtail	G4G5	S1S2		
Phanogomphus quadricolor	Rapids Clubtail	G3G4	S2	I	
Progomphus obscurus	Common Sanddragon	G5	S3		
Rhionaeschna mutata	Spatterdock Darner	G4	S1	E	
Somatochlora elongata	Ski-tailed Emerald	G5	S2		
Somatochlora filosa	Fine-lined Emerald	G5	S2		
Somatochlora georgiana	Coppery Emerald	G3G4	S1		
Somatochlora linearis	Mocha Emerald	G5	S3S4		
Somatochlora provocans	Treetop Emerald	G4	S1	E	
Somatochlora walshii	Brush-tipped Emerald	G5	S1		
Stenogomphurus rogersi	Sable Clubtail	G4	S2	I	
Stylurus amnicola	Riverine Clubtail	G4	SH	Х	
Stylurus laurae	Laura's Clubtail	G4	S2S3		
Stylurus plagiatus	Russet-tipped Clubtail	G5	S3		

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SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Stylurus scudderi	Zebra Clubtail	G5	S1		
Stylurus spiniceps	Arrow Clubtail	G5	S3		
Sympetrum ambiguum	Blue-faced Meadowhawk	G5	S3S4		
Sympetrum obtrusum	White-faced Meadowhawk	G5	S 3		
Sympetrum semicinctum	Band-winged Meadowhawk	G5	S 3		
Tachopteryx thoreyi	Gray Petaltail	G4	S 3		
Telebasis byersi	Duckweed Firetail	G5	S1		
Plecoptera					
Alloperla aracoma	Aracoma Sallfly	G3	SNR		
Alloperla biserrata	Dusky Sallfly	G3	SNR		
Megaleuctra flinti	Shenandoah Needlefly	G2	SNR		
Sweltsa palearata	Shenandoah Sallfly	G2G3	SNR		
Sweltsa pocahontas	Pocahontas Sallfly	G2	SNR		
Utaperla gaspesiana	Gaspe Sallfly	G3	SNR		
Trichoptera					
Ceraclea spongillovorax	A Longhorned Caddisfly	G3G4	SNR		
Ceraclea uvalo	Spatulate Long-horned Caddisfly	G2G4	SNR		
Cernotina pallida	Pale Trumpet-net Caddisfly	G3G4	SNR		
Cheumatopsyche parentum	A Hydropschid Caddisfly	G3	SNR		
Culoptila plummerensis	A Saddlecase Caddisfly	G1G2	SNR		
Hydropsyche brunneipennis	A Net-spinning Caddisfly	G3G4	S3		
Hydropsyche hoffmani	A Net-spinning Caddisfly	G3G4	SNR		
Protoptila georgiana	A Caddisfly	G3G4	SNR		
FISHES			•••••		
Acantharchus pomotis	Mud Sunfish	G4G5	S3		
Acipenser brevirostrum	Shortnose Sturgeon	G3	S1	E	LE
Acipenser oxyrinchus	Atlantic Sturgeon	G3	S1	E	LE
Catostomus catostomus	Longnose Sucker	G5	SX	Х	
Centrarchus macropterus	Flier	G5	S2S3	Ι	
Clinostomus elongatus	Redside Dace	G3G4	SX		
Cottus sp. 7	Checkered Sculpin	G4Q	S2	_	
Enneacanthus chaetodon	Blackbanded Sunfish	G3G4	S1	E	
Enneacanthus obesus	Banded Sunfish	G5	S3S4		
Etheostoma fusiforme	Swamp Darter	G5	S3		
Etheostoma nigrum	Johnny Darter	G5	S3	_	
Etheostoma sellare	Maryland Darter	GH	SH	E	LE
Etheostoma vitreum	Glassy Darter	G4G5	S2	Т	
Fundulus luciae	Spotfin Killifish	G4	SU		
Lepomis gulosus	Warmouth	G5	S3S4	-	
Lethenteron appendix	American Brook Lamprey	G4	S2	T	
Luxilus chrysocephalus	Striped Shiner	G5	S1S2	1	
Margariscus margarita	Allegheny Pearl Dace	G5	S2S3	I	

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SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Notropis amoenus	Comely Shiner	G5	S 3		
Notropis bifrenatus	Bridle Shiner	G3	SH	Х	
Notropis chalybaeus	Ironcolor Shiner	G4	S1	Е	
Noturus flavus	Stonecat	G5	S1	Е	
Pararhinichthys bowersi	Cheat Minnow	GNA	SX	Х	
Percina bimaculata	Chesapeake Logperch	G1G2	S1S2	Т	
Percina notogramma	Stripeback Darter	G4	S1	Е	
Percina peltata	Shield Darter	G5	S3S4		
Percopsis omiscomaycus	Trout-perch	G5	SX	Х	
Salvelinus fontinalis	Brook Trout	G5	S3S4		
AMPHIBIANS					
Ambystoma jeffersonianum	Jefferson Salamander	G4	S3		
Ambystoma tigrinum	Eastern Tiger Salamander	G5	S1	Е	
Aneides aeneus	Green Salamander	G3G4	S1	Е	
Cryptobranchus alleganiensis	Eastern Hellbender	G3	S1	Е	
Dryophytes gratiosus	Barking Treefrog	G5	S1	Е	
Eurycea cirrigera	Southern Two-lined Salamander	G5	SU		
Gastrophryne carolinensis	Eastern Narrow-mouthed Toad	G5	S2S3	Е	
[Hyla gratiosa]	see Dryophytes gratiosus				
Lithobates kauffeldi	Atlantic Coast Leopard Frog	G3G4	SU		
Lithobates virgatipes	Carpenter Frog	G4	S3		
Necturus maculosus	Common Mudpuppy	G5	SX	Х	
Plethodon wehrlei	Wehrle's Salamander	G4	S2	I	
Pseudacris brachyphona	Mountain Chorus Frog	GNR	SH	Е	
Pseudotriton montanus	Mud Salamander	G5	S2?		
REPTILES					
Apalone spinifera	Eastern Spiny Softshell	G5	S1	I	
Aspidoscelis sexlineata	Six-lined Racerunner	G5	S 3		
Caretta caretta	Loggerhead Sea Turtle	G3	S1B	Т	LT
Cemophora coccinea	Scarletsnake	G5	S1		
Chelonia mydas	Green Sea Turtle	G3	S1N	Т	LT
Clemmys guttata	Spotted Turtle	G5	S3S4		
Crotalus horridus	Timber Rattlesnake	G4	S3		
Dermochelys coriacea	Leatherback Sea Turtle	G2	S1N	Е	LE
Eretmochelys imbricata	Atlantic Hawksbill Sea Turtle	G3	SNA	E	LE
Farancia erytrogramma	Rainbow Snake	G4	S1	E	
Glyptemys insculpta	Wood Turtle	G3	S2S3		
Glyptemys muhlenbergii	Bog Turtle	G2G3	S2	Т	LT
Graptemys geographica	Northern Map Turtle	G5	S1	E*	
Lampropeltis rhombomaculata	Northern Mole Kingsnake	G5	S1		
Lepidochelys kempii	Kemp's Ridley Sea Turtle	G1	S1N	Е	LE
Nerodia erythrogaster	Plain-bellied Watersnake	G5	S2S3		
Pantherophis guttatus	Red Cornsnake	G5	S2		

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SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Pituophis melanoleucus	Northern Pinesnake	G4	SH		
Plestiodon anthracinus	Northern Coal Skink	G5	S1	Е	
Virginia valeriae pulchra	Mountain Earthsnake	G5T3T4	S1S2	Е	
BIRDS					
Accipiter gentilis	Northern Goshawk	G5	S1B	E*	
Accipiter striatus	Sharp-shinned Hawk	G5	S2S3B		
Actitis macularius	Spotted Sandpiper	G5	S3S4B		
Aegolius acadicus	Northern Saw-whet Owl	G5	S1B		
[Ammodramus caudacutus]	see Ammospiza caudacuta				
[Ammodramus henslowii]	see Centronyx henslowii				
Ammospiza caudacuta	Saltmarsh Sparrow	G2	S2B,S1N	I	
[Anas discors]	see Spatula discors				
[Anas strepera]	see Mareca strepera				
Antrostomus vociferus	Eastern Whip-poor-will	G5	S3S4B		
Ardea alba	Great Egret	G5	S3S4B		
Asio flammeus	Short-eared Owl	G5	S1B	Е	
Asio otus	Long-eared Owl	G5	S1B		
Bartramia longicauda	Upland Sandpiper	G5	S1B	Е	
Botaurus lentiginosus	American Bittern	G5	S1B	т	
Calidris canutus rufa	Red Knot	G4T2	S1M	т	LT
Campephilus principalis	Ivory-billed Woodpecker	G1	SX	Х	LE
Cardellina canadensis	Canada Warbler	G5	S3B		
[Carpodacus purpureus]	see Haemorhous purpureus				
Catharus ustulatus	Swainson's Thrush	G5	SHB	Х	
Centronyx henslowii	Henslow's Sparrow	G4	S2B	I	
Certhia americana	Brown Creeper	G5	S3B		
Charadrius melodus	Piping Plover	G3	S1B	Е	LT
Charadrius wilsonia	Wilson's Plover	G5	S1B	Е	
Chondestes grammacus	Lark Sparrow	G5	SXB	Х	
Chordeiles minor	Common Nighthawk	G5	S2S3B		
Circus hudsonius	Northern Harrier	G5	S2B	I	
Cistothorus platensis	Sedge Wren	G5	S1B	Е	
Contopus cooperi	Olive-sided Flycatcher	G4	SHB	Х	
Corvus corax	Common Raven	G5	S3S4		
Dolichonyx oryzivorus	Bobolink	G5	S3S4B		
Dryobates borealis	Red-cockaded Woodpecker	G3	SHB	Х	LE
Egretta caerulea	Little Blue Heron	G5	S3B		
Egretta thula	Snowy Egret	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	S2B	I	
Fulica americana	American Coot	G5	S1B		
Gallinula galeata	Common Gallinule	G5	S2S3B	I	

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Gelochelidon nilotica	Gull-billed Tern	G5	S1B	Е	
Geothlypis philadelphia	Mourning Warbler	G5	S1B	Е	
Haematopus palliatus	American Oystercatcher	G5	S3B		
Haemorhous purpureus	Purple Finch	G5	S3B,S3N	1	
Haliaeetus leucocephalus	Bald Eagle	G5	S3S4		
Himantopus mexicanus	Black-necked Stilt	G5	S1B		
lxobrychus exilis	Least Bittern	G4G5	S2S3B	I	
Junco hyemalis	Dark-eyed Junco	G5	S3B		
Lanius ludovicianus	Loggerhead Shrike	G4	S1B	Е	
Laterallus jamaicensis	Black Rail	G3	S1	Е	LT
Leiothlypis ruficapilla	Nashville Warbler	G5	S1B	Т	
Leucophaeus atricilla	Laughing Gull	G5	S1B		
Limnothlypis swainsonii	Swainson's Warbler	G4	S1B	Е	
Lophodytes cucullatus	Hooded Merganser	G5	S3B		
Mareca strepera	Gadwall	G5	S2B		
Melospiza georgiana nigrescens	Coastal Plain Swamp Sparrow	G5T3	S2S3B	I	
Mergus merganser	Common Merganser	G5	S2B		
Numenius borealis	Eskimo Curlew	GH	SXM	Х	LE
Nyctanassa violacea	Yellow-crowned Night-Heron	G5	S3B		
Nycticorax nycticorax	Black-crowned Night-Heron	G5	S3B,S2N	1	
[Oreothlypis ruficapilla]	see Leiothlypis ruficapilla				
Parkesia noveboracensis	Northern Waterthrush	G5	S2B	I	
Pelecanus occidentalis	Brown Pelican	G4	S1B		
Peucaea aestivalis	Bachman's Sparrow	G3	SHB	Х	
[Picoides borealis]	see Dryobates borealis				
Plegadis falcinellus	Glossy Ibis	G5	S3B		
Podilymbus podiceps	Pied-billed Grebe	G5	S2S3B		
Porzana carolina	Sora	G5	S2B		
Rallus elegans	King Rail	G4	S2B		
Regulus satrapa	Golden-crowned Kinglet	G5	S3B		
Riparia riparia	Bank Swallow	G5	S3B		
Rynchops niger	Black Skimmer	G5	S1B	E	
Setophaga caerulescens	Black-throated Blue Warbler	G5	S3S4B		
Setophaga cerulea	Cerulean Warbler	G4	S3B		
Setophaga coronata	Yellow-rumped Warbler	G5	S2B		
Setophaga fusca	Blackburnian Warbler	G5	S3B		
Setophaga magnolia	Magnolia Warbler	G5	S3S4B		
Setophaga virens waynei	Wayne's Black-throated Green Warbler	G5T1	SUB		
Sitta canadensis	Red-breasted Nuthatch	G5	S3B		
Spatula discors	Blue-winged Teal	G5	S1B		
Sphyrapicus varius	Yellow-bellied Sapsucker	G5	S1B		
Spinus pinus	Pine Siskin	G5	S2B		
Spiza americana	Dickcissel	G5	S3B		
Sterna dougallii	Roseate Tern	G4	SXB	Х	LE

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SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Sterna forsteri	Forster's Tern	G5	S2B	I	
Sterna hirundo	Common Tern	G5	S1B	Е	
Sternula antillarum	Least Tern	G4	S2B	Т	
Thalasseus maximus	Royal Tern	G5	S1B	Е	
Thalasseus sandvicensis	Sandwich Tern	G5	S1B		
Thryomanes bewickii altus	Appalachian Bewick's Wren	G5T2Q	SXB	Х	
Troglodytes hiemalis	Winter Wren	G5	S2B		
Tympanuchus cupido	Greater Prairie Chicken	G4	SX	Х	
Tyto alba	Barn Owl	G5	S2B	I	
Vermivora chrysoptera	Golden-winged Warbler	G4	S2B	I	
MAMMALS					
Balaenoptera borealis	Sei Whale	G3	S1	Е	LE
Balaenoptera musculus	Blue Whale	G3G4	S1	Е	LE
Balaenoptera physalus	Fin Whale	G3G4	S1S2	Е	LE
Bos bison	American Bison	G4	SX		
Canis lupus	Gray Wolf	G5	SX	Х	PS
Cervus elaphus	Elk	G5	SX	Х	
Condylura cristata parva	Southeastern Star-nosed Mole	G5T4	SU		
Erethizon dorsatum	North American Porcupine	G5	S3S4		
Eubalaena glacialis	North Atlantic Right Whale	G1	S1	Е	LE
Lasionycteris noctivagans	Silver-haired Bat	G3G4	SU		
Lasiurus borealis	Eastern Red Bat	G3G4	S3S4		
Lasiurus cinereus	Hoary Bat	G3G4	S3S4		
Lepus americanus	Snowshoe Hare	G5	SH	Х	
Lynx rufus	Bobcat	G5	S3	Ι	
Martes americana	American Marten	G5	SX	Х	
Megaptera novaeangliae	Humpback Whale	G4	S1S2	Е	LE
Mesoplodon europaeus	Gervais' Beaked Whale	G3	SNR		
Microtus chrotorrhinus carolinensis	Southern Rock Vole	G5T3	S1	Е	
Mustela nivalis	Least Weasel	G5	S2S3	I	
Myotis leibii	Eastern Small-footed Myotis	G4	S1	E	
Myotis lucifugus	Little Brown Bat	G3	S1		
Myotis septentrionalis	Northern Long-eared Bat	G1G2	S1	Т	LT
Myotis sodalis	Indiana Bat	G2	S1	E	LE
Neotoma magister	Allegheny Woodrat	G3G4	S1	E	
Perimyotis subflavus	Tricolored Bat	G2G3	S1		
Physeter catodon	Sperm Whale	G3G4	S1	E	LE
Puma concolor couguar	Eastern Cougar	G5TXQ	SH	Х	LE
Reithrodontomys humulis	Eastern Harvest Mouse	G5	SH	Х	
Sciurus niger cinereus	Delmarva Fox Squirrel	G5T3	S1	I	
Sorex dispar	Long-tailed Shrew	G4	S2	I	
Sorex fumeus	Smoky Shrew	G5	S2S3	I	
Sorex hoyi winnemana	Southern Pygmy Shrew	G5T4	S2		
Sorex longirostris	Southeastern Shrew	G5	S3S4		

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	STATE STATUS	FEDERAL STATUS
Sorex palustris punctulatus	Southern Water Shrew	G5T3	S1	Е	
Spilogale putorius	Eastern Spotted Skunk	G4	S1		
Sylvilagus obscurus	Appalachian Cottontail	G4	S1	I	
Synaptomys cooperi	Southern Bog Lemming	G5	S3		
Ursus americanus	American Black Bear	G5	S3S4		

APPENDIX I

CHANGES TO STATE RANKS AND STATUSES SINCE THE LAST PUBLISHED LIST (December 2016)

SCIENTIFIC NAME	COMMON NAME	CURRENT RANK	FORMER RANK	STATE STATUS	FORMER STATUS
MOLLUSKS					
Alasmidonta undulata	Triangle Floater	S1S2	S1	т	E
Elliptio fisheriana	Northern Lance	S3S4	S3		
Elliptio lanceolata	Yellow Lance	S1	SU	Т	
Elliptio producta	Atlantic Spike	S2S3	S2	I	I
Fontigens bottimeri	Appalachian Springsnail	S2	S2	I	
Strophitus undulatus	Creeper	S2S3	S2	I	I
INSECTS					
Coleoptera					
Hydrocolus deflatus	A Predaceous Diving Beetle	S3	SNR		
Hymenoptera					
Bombus affinis	Rusty-patched Bumble Bee	SH	SH	E	
Bombus fraternus	Southern Plains Bumble Bee	SH	SNR		
Dieunomia heteropoda	Sunflower Sweat Bee	S1S3	SU		
Nomada seneciophila	a cuckoo bee	S1	SNR		
Lepidoptera – Butterflies					
Atlides halesus	Great Purple Hairstreak	G4G5	S2S3	delisted	т
Nymphalis vaualbum	Compton Tortoiseshell	G5	SU	delisted	E
Lepidoptera – Moths					
Pachypolia atricornis	Hunter Lake Moth	SNR	SH		
<u>FISH</u>					
Acantharchus pomotis	Mud Sunfish	S3	S2	delisted	I
Ameiurus catus	White Catfish	S4	SU		
Amia calva	Bowfin	SNA	S1?		
Catostomus catostomus	Longnose Sucker	SX	SH	Х	Х
Centrarchus macropterus	Flier	S2S3	S1S2	I	Т
Cottus bairdii	Mottled Sculpin	S4	S3S4		
Cottus sp. 7	Checkered Sculpin	S2	S1S2		
Enneacanthus gloriosus	Bluespotted Sunfish	S4	S3S4		
Enneacanthus obesus	Banded Sunfish	S3S4	S2		
Etheostoma fusiforme	Swamp Darter	S3	S2	delisted	I
Etheostoma vitreum	Glassy Darter	S2	S1S2	Т	Т
Fundulus luciae	Spotfin Killifish	SU	S2?		
Lepisosteus osseus	Longnose Gar	S4	S2?		
Lepomis gulosus	Warmouth	S3S4	S3?		
Lethenteron appendix	American Brook Lamprey	S2	S1S2	Т	Т
Margariscus margarita	Pearl Dace	S2S3	S1S2	I	Т

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CHANGES TO STATE RANKS AND STATUSES SINCE THE LAST PUBLISHED LIST (December 2016)

SCIENTIFIC NAME	COMMON NAME	CURRENT RANK	FORMER RANK	STATE STATUS	FORMER STATUS
Percina peltata	Shield Darter	S3S4	S3		
AMPHIBIANS					
Ambystoma tigrinum	Eastern Tiger Salamander	S1	S2	Е	E
Aneides aeneus	Green Salamander	S1	S2	Е	E
Eurycea cirrigera	Southern Two-lined Salamander	SU	SNR		
Gastrophryne carolinensis	Eastern Narrow-mouthed Toad	S2S3	S1S2	Е	E
Lithobates kauffeldi	Atlantic Coast Leopard Frog	SU	SNR		
Necturus maculosus	Common Mudpuppy	SX	S1	Х	Х
Pseudacris brachyphona	Mountain Chorus Frog	SH	S1	Е	E
<u>REPTILES</u>					
Aspidoscelis sexlineata	Six-lined Racerunner	S3	S4		
Cemophora coccinea	Scarletsnake	S1	S3		
Clemmys guttata	Spotted Turtle	S3S4	S 5		
Glyptemys insculpta	Wood Turtle	S2S3	S4		
Lampropeltis rhombomaculata	Northern Mole Kingsnake	S1	S4		
Pantherophis guttatus	Red Cornsnake	S2	S4		
BIRDS					
Calidris canutus rufa	Red Knot	S1M	SZN	Т	
MAMMALS					
Mesoplodon mirus	True's Beaked Whale	SNR	SNA		

APPENDIX II

ANIMAL SPECIES REPORTED, FALSELY REPORTED, OR POTENTIALLY OCCURRING IN MARYLAND

The following species do not regularly occur in Maryland based on currently available information. Although not exhaustive, the list is included to provide clarification for those species whose rank in Maryland may be unclear due to conflicting reports or vague published accounts. For those species with a rank of SR, only unverified reports exist. Species with a rank of SRF have been falsely reported, and the error may persist in the literature. The list is also provided to bring attention to those species that potentially occur in Maryland (SP) and, if documented, their presence could have significant conservation value.

SCIENTIFIC NAME	COMMON NAME	STATE RANK
MOLLUSKS		
Alasmidonta marginata	Elktoe	SRF
Amnicola limosus	Mud Amnicola	SP
Campeloma decisum	Pointed Campeloma	SP
Elimia virginica	Piedmont Elimia	SP
Ferrissia fragilis	Fragile Ancylid	SP
Fontigens nickliniana	Watercress Snail	SP
Gillia altilis	Buffalo Pebblesnail	SP
Gyraulus deflectus	Flexed Gyro	SP
Leptoxis carinata	Crested Mudalia	SP
Lioplax subcarinata	Ridged Lioplax	SP
Lyogyrus granum	Squat Duskysnail	SP
Micromenetus dilatatus	Bugle Sprite	SP
Physella heterostropha	Pewter Physa	SP
Planorbella trivolvis	Marsh Rams-horn	SP
Planorbula armigera	Thicklip Rams-horn	SP
Pseudosuccinea columella	Mimic Lymnaea	SP
Valvata tricarinata	Threeridge Valvata	SP
INSECTS		
Coleoptera		
Cicindela marginipennis	Cobblestone Tiger Beetle	SP
Lordithon niger	Black Lordithon Rove Beetle	SP
Photuris bethaniensis	A Lampyrid Firefly	SP
Lepidoptera – Butterflies		
Calephelis virginiensis	Little Metalmark	SR
Cyllopsis gemma	Gemmed Satyr	SR
Neonympha mitchellii	Mitchell's Satyr	SR
Lepidoptera – Moths		005
Synanthedon castaneae	Chestnut Clearwing Moth	SRF
Odonata		
Aeshna eremita	Lake Darner	SR
Arigomphus furcifer	Lilypad Clubtail	SP
Calopteryx aequabilis	River Jewelwing	SR
Enallagma sulcatum	Golden Bluet	SRF
Epitheca spinigera	Spiny Baskettail	SP

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SCIENTIFIC NAME		STATE RANK
Gomphus borealis	Beaverpond Clubtail	SP
Gomphus spicatus	Dusky Clubtail	SR
Neurocordulia virginiensis	Cinnamon Shadowdragon	SRF
Ophiogomphus carolus	Riffle Snaketail	SP
Ophiogomphus alleghaniensis	Allegheny Snaketail	SR
Somatochlora forcipata	Forcipate Emerald	SP
Stylurus notatus	Elusive Clubtail	SR
Sympetrum internum	Cherry-faced Meadowhawk	SR
<u>FISHES</u>		
Cottus cognatus	Slimy Sculpin	SRF
Percina caprodes	Logperch	SRF
AMPHIBIANS		
Hyla femoralis	Pine Woods Treefrog	SP
Siren lacertina	Greater Siren	SRF
REPTILES		
Eretmochelys imbricata	Atlantic Hawksbill Sea Turtle	SRN
MAMMALS		
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	SP
Glaucomys sabrinus fuscus	Virginia Northern Flying Squirrel	SP
Glaucomys sabrinus	Northern Flying Squirrel	SP
Lasiurus seminolus	Seminole Bat	SR
Mustela erminea	Ermine	SR
Myotis austroriparius	Southeastern Myotis	SR
Pseudorca crassidens	False Killer Whale	SR