



P E N N S Y L V A N I A  
W I L D L I F E A C T I O N P L A N  
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## Species of Greatest Conservation Need

### APPENDIX 1.3

**Table 1.** Pennsylvania Species of Greatest Conservation Need, 2015-2025.

*Birds*

*Mammals*

*Amphibians*

*Reptiles*

*Fishes*

*Invertebrates*

**Table 2.** Species of Greatest Conservation Need removed from 2005 list, with justification.

**Table 3.** Data Deficient species, 2015-2025.

**Table 4.** Prioritized Species of Greatest Conservation Need, by category, 2015-2025.

*Birds*

*Mammals*

*Amphibians*

*Reptiles*

*Fishes*

*Invertebrates*

**Acronyms.** Definition of acronyms used frequently in the Appendix.



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## Pennsylvania Species of Greatest Conservation Need, 2015-2025

**Table 1.** 2015-2025 Pennsylvania Species of Greatest Conservation Need (SGCN), listed phylogenetically by taxonomic group and with justification for inclusion in the Wildlife Action Plan (Chapter 1, Fig. 1.2). Note that bird species are identified as SGCN for one or several focal seasons: breeding, migration and/or winter, as indicated. <sup>R</sup> Species for which Pennsylvania is responsible for  $\geq 10\%$  of North American population or  $\geq 25\%$  of North American range (i.e., Pennsylvania responsibility species). <sup>+</sup> Species added as SGCN in 2015 that were not SGCN in the 2005-2015 Wildlife Action Plan. Totals: 664 SGCN; 90 birds, 19 mammals, 65 fishes, 18 amphibians, 22 reptiles, 450 invertebrates.

BIRDS					
Common Name	Scientific Name	Breeding	Migration	Winter	Justification
Tundra Swan <sup>R</sup>	<i>Cygnus columbianus</i>		●		Species of conservation concern within its range; double the expected number during spring and/or fall migration within Atlantic and Mississippi Flyways (89% spring)
American Black Duck	<i>Anas rubripes</i>	●	●	●	Breeding: RSGCN H threats in PA, PABS Vulnerable, S3, H threats in PA - unknown population trend; Migration: Species of conservation concern within its range; Above-average percentages for both spring & fall migration and for regional Midwinter Waterfowl Survey (I.Gregg, personal communication)
Blue-winged Teal <sup>+</sup>	<i>Anas discors</i>	●			S1B
Green-winged Teal	<i>Anas crecca</i>	●			PABS Vulnerable, S1, H threats - unknown trend
Lesser Scaup <sup>+</sup>	<i>Aythya affinis</i>		●		S5N; BCR 13 Highest conservation status
Long-tailed Duck <sup>+</sup>	<i>Clangula hyemalis</i>		●	●	IUCN VU; 2014 Watch List Common Bird in Steep Decline
Ruffed Grouse <sup>+</sup>	<i>Bonasa umbellus</i>	●		●	RSGCN H threats in PA, winter resident
Pied-billed Grebe	<i>Podilymbus podiceps</i>	●			RSGCN VH threats in PA, PABS Vulnerable, S2B, VH threats - unknown trend
Horned Grebe <sup>+</sup>	<i>Podiceps auritus</i>			●	S3N, Canada ESA
Red-necked Grebe <sup>+</sup>	<i>Podiceps grisegena</i>			●	S3N, BCR 14 High conservation status



BIRDS					
Common Name	Scientific Name	Breeding	Migration	Winter	Justification
American Bittern	<i>Botaurus lentiginosus</i>	●			RSGCN VH threats in PA, PA Endangered, PABS Endangered, S2B, VH threats in PA - unknown population trend
Least Bittern	<i>Ixobrychus exilis</i>	●			RSGCN VH threats in PA, PA Endangered, PABS Endangered, S2B
Great Egret	<i>Ardea alba</i>	●			PA Endangered, PABS Endangered, S2B
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	●			RSGCN H threats in PA, PA Endangered, PABS Endangered, S2B
Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>	●			RSGCN H threats in PA, PA Endangered, PABS Endangered, S1B
Osprey	<i>Pandion haliaetus</i>	●			PA Threatened, PABS Threatened, S3B
Bald Eagle	<i>Haliaeetus leucocephalus</i>	●		●	PABS Threatened, S3B, winter resident
Northern Harrier	<i>Circus cyaneus</i>	●			RSGCN VH threats in PA, PA Threatened, PABS Threatened, S2B
Sharp-shinned Hawk	<i>Accipiter striatus</i>	●	●		Breeding: S3B, H threats - unknown trend; Migration: Species of conservation concern within its range; double the expected number during spring and/or fall migration within Atlantic and Mississippi Flyways (46% fall)
Northern Goshawk	<i>Accipiter gentilis</i>	●	●	●	Breeding: RSGCN VH threats in PA, S2B, VH threats - unknown trend; Migration: Species of conservation concern within its range; double the expected number during spring and/or fall migration within Atlantic and Mississippi Flyways (48% fall); Winter: S3N
Broad-winged Hawk	<i>Buteo platypterus</i>	●	●		Breeding: RSGCN H threats in PA; Migration: Species of conservation concern within its range; double the expected number during spring and/or fall migration within Atlantic and Mississippi Flyways
Golden Eagle <sup>R</sup>	<i>Aquila chrysaetos</i>		●	●	Species of conservation concern within its range; double the expected number during spring and/or fall migration within Atlantic and Mississippi Flyways (84% spring, 75% fall)



BIRDS					
Common Name	Scientific Name	Breeding	Migration	Winter	Justification
King Rail	<i>Rallus elegans</i>	●			RSGCN VH threats in PA, 2014 Watch List (Yellow category), PA Endangered, PABS Endangered, S1B
Virginia Rail	<i>Rallus limicola</i>	●			S3B
Sora	<i>Porzana carolina</i>	●			RSGCN H threats in PA, PABS Vulnerable, S3B, H threats - unknown trend
Common Gallinule	<i>Gallinula galeata</i>	●			RSGCN H threats in PA, S2B; Note: formerly Common Moorhen
American Coot	<i>Fulica americana</i>	●			PABS Vulnerable, S2B
Piping Plover (Great Lakes population)	<i>Charadrius melodus</i>	●	●		Breeding: G3, Federally endangered population, RSGCN VH threats in PA, 2014 Watch List (Red category), PA Endangered (extirpated), PABS Extirpated, Recoverable (Haffner et al. 2007); Migration: Federally threatened species during migration; 2014 Watch List (Red - extremely high vulnerability)
Spotted Sandpiper <sup>+</sup>	<i>Actitis macularius</i>	●			S3B, High threats - unknown trend
Upland Sandpiper	<i>Bartramia longicauda</i>	●			RSGCN VH threats in PA, PA Endangered, PABS Endangered, S2B, VH threats - unknown trend
Red Knot <sup>+</sup>	<i>Calidris canutus</i>		●		Federally Threatened; 2014 Watch List (Red - extremely high vulnerability)
Wilson's Snipe	<i>Gallinago delicata</i>	●			RSGCN H threats in PA, PA Vulnerable, S3
American Woodcock	<i>Scolopax minor</i>	●			RSGCN H threats in PA, H threats in PA
Black Tern	<i>Chlidonias niger</i>	●			RSGCN VH threats in PA, PA Endangered, PABS Endangered, S1
Common Tern	<i>Sterna hirundo</i>	●			PA Endangered, PABS Endangered
Barn Owl	<i>Tyto alba</i>	●			RSGCN VH threats in PA, S2
Long-eared Owl	<i>Asio otus</i>	●		●	Breeding: RSGCN VH threats in PA, PA Threatened, PABS Threatened, S1B; Winter: S3N, PA Threatened (breeder)



BIRDS					
Common Name	Scientific Name	Breeding	Migration	Winter	Justification
Short-eared Owl	<i>Asio flammeus</i>	●		●	Breeding: RSGCN VH threats in PA, PA Endangered, PABS Endangered, S1B; Winter: S3N; PA Endangered (breeder); 2014 WatchList Common Bird in Steep Decline
Northern Saw-whet Owl <sup>+</sup>	<i>Aegolius acadicus</i>	●	●		S3B; Migration: data deficient
Common Nighthawk	<i>Chordeiles minor</i>	●			RSGCN H threats in PA, S3, H threats - unknown trend
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	●			RSGCN H threats in PA, 2014 WatchList (Yellow category), PABS Vulnerable, S3, H threats - unknown trend
Chimney Swift	<i>Chaetura pelagica</i>	●			RSGCN VH threats in PA, S3, VH threats - decline of 11-40%
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	●			PABS Vulnerable
American Kestrel	<i>Falco sparverius</i>	●			RSGCN H threats in PA
Peregrine Falcon	<i>Falco peregrinus</i>	●			RSGCN H threats in PA, PA Endangered, PABS Endangered, S1
Olive-sided Flycatcher	<i>Contopus cooperi</i>	●			2014 WatchList (Yellow category), Data Deficient
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	●			PA Endangered, PABS Endangered, S1
Willow Flycatcher	<i>Empidonax traillii</i>	●			RSGCN H threats in PA
Loggerhead Shrike	<i>Lanius ludovicianus</i>	●			RSGCN VH threats in PA, PA Endangered, PABS Endangered, S1
Purple Martin <sup>+</sup>	<i>Progne subis</i>	●			PABS Vulnerable, S3
Bank Swallow	<i>Riparia riparia</i>	●			RSGCN VH threats in PA, PABS Vulnerable, S3
Brown Creeper <sup>+</sup>	<i>Certhia americana</i>	●			RSGCN H threats in PA
Winter Wren	<i>Troglodytes hiemalis</i>	●			RSGCN H threats in PA



BIRDS					
Common Name	Scientific Name	Breeding	Migration	Winter	Justification
Sedge Wren	<i>Cistothorus platensis</i>	●			RSGCN VH threats in PA, PA Endangered, PABS Endangered, S1
Marsh Wren	<i>Cistothorus palustris</i>	●			RSGCN H threats in PA, S2, H threats - unknown trend
Swainson's Thrush	<i>Catharus ustulatus</i>	●			RSGCNH H threats in PA, PABS Vulnerable, S3, H threats - unknown trend
Wood Thrush <sup>R</sup>	<i>Hylocichla mustelina</i>	●	●		Breeding: RSGCN H threats in PA, 2014 WatchList (declining trends), PA Responsible (8%, within 10% CI), H threats - decline of 11-40%; Migration: Species of conservation concern within its range; double the expected number during spring and/or fall migration within Atlantic and Mississippi Flyways (46% spring, 48% fall)
Gray Catbird <sup>R,+</sup>	<i>Dumetella carolinensis</i>	●			PA Responsible (10% North American population)
Louisiana Waterthrush	<i>Parkesia motacilla</i>	●			RSGCN H threats in PA
Northern Waterthrush	<i>Parkesia noveboracensis</i>	●			PABS Vulnerable, S2B, VH threats - unknown trend
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	●			RSGCN VH threats in PA, 2014 WatchList (declining trends), S2B
Blue-winged Warbler	<i>Vermivora cyanoptera</i>	●			RSGCN H threats in PA
Black-and-white Warbler	<i>Mniotilta varia</i>	●			RSGCN H threats in PA
Prothonotary Warbler	<i>Protonotaria citrea</i>	●			PABS Vulnerable, S3B
Nashville Warbler <sup>+</sup>	<i>Oreothlypis ruficapilla</i>	●			S3, H threats - unknown trend
Kentucky Warbler	<i>Geothlypis formosa</i>	●			RSGCN H threats in PA; 2014 WatchList (Yellow category)



BIRDS					
Common Name	Scientific Name	Breeding	Migration	Winter	Justification
Hooded Warbler <sup>+</sup>	<i>Setophaga citrina</i>		●		Species of conservation concern within its range; double the expected number during spring and/or fall migration within Atlantic and Mississippi Flyways (43% spring, 66% fall)
Cerulean Warbler <sup>R</sup>	<i>Setophaga cerulea</i>	●	●		IUCN Vulnerable, RSGCN VH threats in PA, 2014 WatchList (declining trends), S3, PA Responsible (8%, within 10% CI)
Blackburnian Warbler	<i>Setophaga fusca</i>		●		Species of conservation concern within its range; double the expected number during spring and/or fall migration within Atlantic and Mississippi Flyways (45% spring)
Blackpoll Warbler	<i>Setophaga striata</i>	●			RSGCN VH threats in PA, PA Endangered, PABS Endangered, S1B
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	●			RSGCN H threats in PA
Prairie Warbler	<i>Setophaga discolor</i>	●			RSGCN H threats in PA, 2014 WatchList (declining trends), S3B
Black-throated Green Warbler	<i>Setophaga virens</i>	●			RSGCN H threats in PA, S3B, H threats - decline of 41-60%
Canada Warbler	<i>Cardellina canadensis</i>	●			RSGCN H threats in PA, 2014 WatchList (declining trends)
Yellow-breasted Chat	<i>Icteria virens</i>	●			RSGCN VH threats in PA, S2B, VH threats - decline of 41-60%
Eastern Towhee <sup>+</sup>	<i>Pipilo erythrophthalmus</i>		●		Species of conservation concern within its range; double the expected number during spring and/or fall migration within Atlantic and Mississippi Flyways (45% fall)
Field Sparrow <sup>+</sup>	<i>Spizella pusilla</i>	●			RSGCN H threats in PA, S3B, H threats - decline of 11-40%
Vesper Sparrow <sup>+</sup>	<i>Pooecetes gramineus</i>	●			RSGCN H threats in PA, S2B
Savannah Sparrow <sup>+</sup>	<i>Passerculus sandwichensis</i>	●			S3B, H threats-decline of 11-40%
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	●			RSGCN H threats in PA, S3B, H threats - decline of 41-60%





BIRDS					
Common Name	Scientific Name	Breeding	Migration	Winter	Justification
Henslow's Sparrow	<i>Ammodramus henslowii</i>	●			RSGCN H threats in PA, PABS Vulnerable, S3B, H threats - unknown trend
White-throated Sparrow <sup>+</sup>	<i>Zonotrichia albicollis</i>	●			S3B, High threats - unknown trend
Summer Tanager	<i>Piranga rubra</i>	●			RSGCNH H threats in PA, S1B
Scarlet Tanager <sup>R</sup>	<i>Piranga olivacea</i>	●			PA Responsible (15% North American breeding population)
Dickcissel	<i>Spiza americana</i>	●			RSGCN H threats in PA, PA Endangered, PABS Endangered, S3B, H threats - unknown trend
Bobolink	<i>Dolichonyx oryzivorus</i>	●			RSGCN H threats in PA, 2014 WatchList (declining trends)
Eastern Meadowlark	<i>Sturnella magna</i>	●			RSGCN H threats in PA, S3B, H threats - decline of 11-40%
Rusty Blackbird <sup>+</sup>	<i>Euphagus carolinus</i>		●	●	IUCN Vulnerable; 2014 WatchList Common Bird in Steep Decline
Red Crossbill	<i>Loxia curvirostra</i>	●		●	Breeding: S1B, PABS Data Deficient, Winter: S3N; Appalachian Joint Venture priority species
Pine Siskin	<i>Spinus pinus</i>	●			S3B, PABS Data Deficient, H threats - unknown trend



<b>MAMMALS</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>Justification</b>
Eastern Fox Squirrel <sup>R</sup>	<i>Sciurus niger vulpinus</i>	PA Responsible (>25% of NA range)
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	PA Endangered, S1, H threats - declines of 30-50%
Rock Vole	<i>Microtus chrotorrhinus</i>	S3
Allegheny Woodrat	<i>Neotoma magister</i>	RSGCN VH threat in PA, PA Threatened, S2, VH threats - declines 10-30%
Prairie Deer Mouse <sup>+</sup>	<i>Peromyscus maniculatus bairdii</i>	S3S4
Appalachian Cottontail	<i>Sylvilagus obscurus</i>	RSGCN VH threat in PA, S1S2
North American Least Shrew	<i>Cryptotis parva</i>	RSGCN VH threats in PA, PA Endangered, S1, VH threats - declines of 10-30%
Long-tailed Shrew <sup>R</sup>	<i>Sorex dispar</i>	PA Responsible (>25% of NA range)
Northern Water Shrew	<i>Sorex palustris albibarbis</i>	S3
West Virginia Water Shrew	<i>Sorex palustris punctulatus</i>	PA Threatened
Maryland Shrew <sup>R</sup>	<i>Sorex cinereus fontinalis</i>	PA Responsible (>25% of NA range)
Big Brown Bat <sup>+</sup>	<i>Eptesicus fuscus</i>	RSGCN H threat in PA, S2S3, H threats - declines 30-70 %
Tricolored Bat <sup>+</sup>	<i>Perimyotis subflavus</i>	G3, RSGCN VH threats in PA, S1
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	G2G3, Federally Threatened, RSGCN H threats in PA, VH threats - declines of > 90%
Eastern Small-footed Bat	<i>Myotis leibii</i>	G1G3, PA Threatened, S2
Indiana Bat	<i>Myotis sodalis</i>	G2, IUCN Endangered, Federally Endangered, RSGCN VH threats, PA Endangered, VH threats - declines of >90%
Little Brown Bat <sup>+</sup>	<i>Myotis lucifugus</i>	G3, RSGCN VH threats in PA, VH threats - declines of >90%
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	S1
Eastern Spotted Skunk	<i>Spilogale putorius</i>	RSGCN H threats in PA, H threats - unknown trend



## AMPHIBIANS

Common Name	Scientific Name	Justification
Eastern Hellbender	<i>Cryptobranchus alleganiensis alleganiensis</i>	S2S3, G3
Mudpuppy <sup>+</sup>	<i>Necturus maculosus</i>	S3
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	S3
Blue-spotted Salamander <sup>+</sup>	<i>Ambystoma laterale</i>	S1, PA Endangered, RSGCN, H threats
Marbled Salamander	<i>Ambystoma opacum</i>	S3
Green Salamander	<i>Aneides aeneus</i>	S2, PA Threatened, G3
Northern Ravine Salamander <sup>+</sup>	<i>Plethodon electromorphus</i>	S2S3
Eastern Mud Salamander <sup>+</sup>	<i>Pseudotriton montanus montanus</i>	S1, PA Endangered
Eastern Spadefoot	<i>Scaphiopus holbrookii</i>	S2S3, PA Endangered
Fowler's Toad	<i>Anaxyrus fowleri</i> –PFBC	S3S4
Northern Cricket Frog	<i>Acris crepitans</i>	S1, PA Endangered, RSGCN, H threats
Cope's Gray Treefrog <sup>+</sup>	<i>Hyla chrysoscelis</i>	S1
Mountain Chorus Frog	<i>Pseudacris brachyphona</i>	S2
Upland Chorus Frog	<i>Pseudacris feriarum</i>	S1
New Jersey Chorus Frog	<i>Pseudacris kalmi</i>	S1, PA Endangered, RSGCN, VH threats
Western Chorus Frog	<i>Pseudacris triseriata</i>	S1
Northern Leopard Frog	<i>Lithobates pipiens</i> –PFBC	S2S3
Southern Leopard Frog <sup>+</sup>	<i>Lithobates sphenoccephalus utricularius</i> –PFBC	S1, PA Endangered



## REPTILES

Common Name	Scientific Name	Justification
Eastern Mud Turtle <sup>+</sup>	<i>Kinosternon subrubrum subrubrum</i>	S1, PA Endangered
Spotted Turtle	<i>Clemmys guttata</i>	S3S4, IUCN Endangered
Wood Turtle	<i>Glyptemys insculpta</i>	S3S4, G3, IUCN Endangered
Bog Turtle	<i>Glyptemys muhlenbergii</i>	S2, PA Endangered, G3, IUCN Critically Endangered
Blanding's Turtle	<i>Emydoidea blandingii</i>	S1, PA Candidate, IUCN Endangered
Eastern Redbelly Turtle	<i>Pseudemys rubriventris</i>	S2S3, PA Threatened, Federally Endangered
Eastern Box Turtle	<i>Terrapene carolina carolina</i>	S3S4, IUCN Vulnerable
Eastern Fence Lizard	<i>Sceloporus undulatus</i>	S3
Northern Coal Skink	<i>Plestiodon anthracinus anthracinus</i>	S3
Broadhead Skink	<i>Plestiodon laticeps</i>	S2, PA Candidate
Eastern Worm Snake <sup>+</sup>	<i>Carphophis amoenus amoenus</i> —PFBC	S2
Kirtland's Snake	<i>Clonophis kirtlandii</i>	SH, PA Endangered, G2
Eastern Hognose Snake	<i>Heterodon platirhinos</i>	S3S4
Rough Green Snake	<i>Opheodrys aestivus</i>	S1S2, PA Endangered, RSGCN, H threats
Queen Snake	<i>Regina septemvittata</i>	S3S4
Eastern Ribbonsnake	<i>Thamnophis sauritus</i>	S3
Shorthead Garter Snake <sup>R</sup>	<i>Thamnophis brachystoma</i>	PA Responsibility (>25% NA range)
Eastern Smooth Earth Snake	<i>Virginia valeriae valeriae</i> —PFBC	S1
Mountain Earth Snake	<i>Virginia valeria pulchra</i> —PFBC	S3
Copperhead	<i>Agkistrodon contortrix</i>	S3S4
Timber Rattlesnake	<i>Crotalus horridus</i>	S3S4, PA Candidate, RSGCN, H threats
Eastern Massasauga	<i>Sistrurus catenatus catenatus</i>	S1, PA Endangered, Federal Candidate



FISHES		
Common Name	Scientific Name	Justification
Ohio Lamprey	<i>Ichthyomyzon bdellium</i>	PA Candidate
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	S1, PA Endangered, RSGCN, VH threats
Mountain Brook Lamprey <sup>R</sup>	<i>Ichthyomyzon greeleyi</i>	PA Threatened, PA Responsibility (> 25% of NA Range)
Least Brook Lamprey	<i>Lampetra aepyptera</i>	PA Candidate
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	G3, Federally Endangered
Lake Sturgeon	<i>Acipenser fulvescens</i>	S1, PA Endangered
Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>	G3, IUCN Critically Endangered, Federally Endangered
Paddlefish	<i>Polyodon spathula</i>	IUCN Vulnerable, SX-Potentially recoverable
Spotted Gar	<i>Lepisosteus oculatus</i>	S1, PA Endangered
Bowfin	<i>Amia calva</i>	PA Candidate
American Eel	<i>Anguilla rostrata</i>	IUCN Endangered
Blueback Herring	<i>Alosa aestivalis</i>	S3, G3G4, IUCN Vulnerable
Hickory Shad	<i>Alosa mediocris</i>	RSGCN, H threats
Alewife	<i>Alosa pseudoharengus</i>	S3
American Shad	<i>Alosa sapidissima</i>	S3S4, RSGCN
Northern Redbelly Dace <sup>+</sup>	<i>Chrosomus eos</i>	S1, PA Endangered
Southern Redbelly Dace	<i>Chrosomus erythrogaster</i>	S2, PA Threatened
Redside Dace <sup>+ R</sup>	<i>Clinostomus elongatus</i>	PA Responsibility (>10% of NA population)
Streamline Chub <sup>R</sup>	<i>Erimystax dissimilis</i>	PA Responsibility (>10% of NA population)
Gravel Chub	<i>Erimystax x-punctatus</i>	PA Endangered, SU, Data Deficient
Tonguetied Minnow <sup>R</sup>	<i>Exoglossum laurae</i>	PA Responsibility (>10% of NA population)
Cutlip Minnow <sup>+ R</sup>	<i>Exoglossum maxillingua</i>	PA Responsibility (>10% of NA population)



FISHES		
Common Name	Scientific Name	Justification
Bigmouth Shiner	<i>Notropis dorsalis</i>	S2, PA Threatened
Redfin Shiner	<i>Lythrurus umbratilis</i>	S2, PA Endangered
Allegheny Pearl Dace <sup>+ R</sup>	<i>Margariscus margarita</i>	PA Responsibility (>10% of NA population)
Hornyhead Chub	<i>Nocomis biguttatus</i>	S1
Comely Shiner <sup>+ R</sup>	<i>Notropis amoenus</i>	PA Responsibility (> 25% of NA Range)
Bridle Shiner	<i>Notropis bifrenatus</i>	G3, PA Endangered
River Shiner	<i>Notropis blennioides</i>	PA Endangered, SU
Ghost Shiner	<i>Notropis buchmanii</i>	PA Endangered, SU
Ironcolor Shiner	<i>Notropis chalybaeus</i>	PA Endangered, RSGCN, VH threats
Blackchin Shiner	<i>Notropis heterodon</i>	S1, PA Endangered
Swallowtail Shiner <sup>+ R</sup>	<i>Notropis procne</i>	PA Responsibility (> 25% of NA Range)
Longnose Sucker	<i>Catostomus commersoni</i>	S1 PA Endangered, RSGCN, H threats
Bigmouth Buffalo	<i>Ictiobus cyprinellus</i>	S1, PA Endangered
Spotted Sucker	<i>Minytrema melanops</i>	S2, PA Threatened
White Catfish	<i>Ameiurus catus</i>	S3
Black Bullhead	<i>Ameiurus melas</i>	PA Endangered, SU
Blue Catfish <sup>+</sup>	<i>Ictalurus furcatus</i>	SX-Potentially Recoverable
Mountain Madtom	<i>Noturus eleutherus</i>	PA Endangered
Tadpole Madtom	<i>Noturus gyrinus</i>	S1, PA Endangered
Margined Madtom <sup>+ R</sup>	<i>Noturus insignis</i>	PA Responsibility (>10% of NA population)
Brindled Madtom	<i>Noturus miurus</i>	S2, PA Threatened
Northern Madtom	<i>Noturus stigmosus</i>	G3, PA Endangered



FISHES		
Common Name	Scientific Name	Justification
Cisco	<i>Coregonus artedi</i>	PA Endangered, SU
Brook Trout	<i>Salvelinus fontinalis</i>	S3S4
Central Mudminnow	<i>Umbra limi</i>	PA Candidate
Eastern Mudminnow	<i>Umbra pygmaea</i>	S3
Burbot	<i>Lota lota</i>	RSGCN, H threats
Allegheny Burbot <sup>R</sup>	<i>Lota sp cf lota</i>	PA Responsibility (>10% of NA population)
Brook Stickleback	<i>Culaea inconstans</i>	PA Candidate
Threespine Stickleback	<i>Gasterosteus aculeatus</i>	S1, PA Endangered
Checkered Sculpin	<i>Cottus sp cf cognatus</i>	S2
Banded Sunfish	<i>Enneacanthus obesus</i>	SH, PA Endangered
Warmouth	<i>Lepomis gulosus</i>	S3, PA Endangered
Longear Sunfish	<i>Lepomis megalotis</i>	S1, PA Endangered
Eastern Sand Darter	<i>Ammocrypta pellucida</i>	IUCN VU, PA Endangered
Iowa Darter	<i>Etheostoma exile</i>	S2, PA Endangered
Spotted Darter <sup>R</sup>	<i>Etheostoma maculatum</i>	G2G3, PA Responsibility (>10% of NA population)
Tessellated Darter <sup>+R</sup>	<i>Etheostoma olmstedii</i>	PA Responsibility (>10% of NA population)
Tippecanoe Darter <sup>R</sup>	<i>Etheostoma tippecanoe</i>	G3G4, PA Responsibility (>10% of NA population)
Variagate Darter <sup>+R</sup>	<i>Etheostoma variatum</i>	PA Responsibility (>10% of NA population)
Chesapeake Logperch <sup>R</sup>	<i>Percina bimaculata</i>	G1G2, PA Responsibility (>10% of NA population)
Longhead Darter <sup>R</sup>	<i>Percina macrocephala</i>	G3, PA Responsibility (>10% of NA population)
Shield Darter <sup>+R</sup>	<i>Percina peltata</i>	PA Responsibility (>10% of NA population)



INVERTEBRATES			
Taxonomic Group	Common Name	Scientific Name	Justification
Amphipods	Pennsylvania Cave Amphipod <sup>R</sup>	<i>Crangonyx dearolfi</i>	G2, S3, PA Responsibility
		<i>Gammarus cohabitus</i>	S1S2, PA Responsibility, PA Endemic
	Allegheny Cave Amphipod <sup>R</sup>	<i>Stygobromus allegheniensis</i>	S3S4, PA Responsibility
	Biggers' Cave Amphipod	<i>Stygobromus biggersi</i>	G2G4, S1
	Franz's Cave Amphipod	<i>Stygobromus franzi</i>	G3G4, S1
	Shenandoah Valley Cave Amphipod	<i>Stygobromus gracilipes</i>	G3G4, S1
	Pizzini's Cave Amphipod	<i>Stygobromus pizzinii</i>	G3G4, S2S3
	Stellmack's Cave Amphipod <sup>R</sup>	<i>Stygobromus stellmacki</i>	G1G2, S1, PA Responsibility, PA Endemic
	Potomac Groundwater Amphipod	<i>Stygobromus tenuis potomacus</i>	S1
Bees	Rusty-patched Bumblebee	<i>Bombus affinis</i>	G1, S1
	Yellow-banded Bumblebee <sup>R</sup>	<i>Bombus terricola</i>	G2G4, S1S3, PA Responsibility
Bumble Bee	Ashton's Cuckoo Bumble Bee	<i>Bombus ashtoni</i>	SH
Butterflies and Skippers	Roadside Skipper	<i>Amblyscirtes vialis</i>	S2S3
	Falcate Orangetip	<i>Anthocharis midea</i>	S2
	Dusted Skipper	<i>Atrytonopsis hianna</i>	S1S2
	Golden-banded Skipper	<i>Autochton cellus</i>	SH
	Silver-bordered Fritillary	<i>Boloria selene myrina</i>	S2S3
	Northern Metalmark	<i>Calephelis borealis</i>	G3G4, S1S2
	Brown Elfin	<i>Callophrys augustinus</i>	S3S4
	Juniper Hairstreak	<i>Callophrys gryneus</i>	S3S4





Henry's Elfin	<i>Callophrys henrici</i>	S2S3
Frosted Elfin	<i>Callophrys irus</i>	G3, S1S2
Hoary Elfin	<i>Callophrys polios</i>	SH
Arctic Skipper	<i>Carterocephalus palaemon mandan</i>	S3
Appalachian Azure	<i>Celastrina neglectamajor</i>	S3S4
Dusky Azure	<i>Celastrina nigra</i>	SH
Harris' Checkerspot	<i>Chlosyne harrisii</i>	S3
Silvery Checkerspot	<i>Chlosyne nycteis</i>	S3S4
Pink-edged Sulphur	<i>Colias interior</i>	S2
Monarch	<i>Danaus plexippus</i>	S2S4
Early Hairstreak	<i>Erora laeta</i>	S1S2
Columbine Duskywing	<i>Erynnis lucilius</i>	S1
Mottled Duskywing	<i>Erynnis martialis</i>	G3, S1
Persius Duskywing	<i>Erynnis persius persius</i>	S1
Olympia Marble	<i>Euchloe olympia</i>	SH
Baltimore	<i>Euphydryas phaeton</i>	S3
Two-spotted Skipper	<i>Euphyes bimacula</i>	S2S3
Black Dash	<i>Euphyes conspicua</i>	S3S4
Dion Skipper	<i>Euphyes dion</i>	S3
Zebra Swallowtail	<i>Eurytides marcellus</i>	S3S4
Harvester	<i>Feniseca tarquinius</i>	S3S4
Silvery Blue	<i>Glaucoopsyche lygdamus nittanyensis</i>	S1S2
Leonard's Skipper	<i>Hesperia leonardus</i>	S3S4



	Cobweb Skipper	<i>Hesperia metea</i>	S2S3
	Indian Skipper	<i>Hesperia sassacus</i>	S3S4
	Eyed Brown	<i>Lethe eurydice</i>	S2S3
	Bog Copper	<i>Lycaena epixanthe</i>	S2
	Bronze Copper	<i>Lycaena hyllus</i>	S3S4
	Swarthy Skipper	<i>Nastra lherminier</i>	S3S4
	Northern Crescent	<i>Phyciodes cocyta</i>	S3
	West Virginia White	<i>Pieris virginiensis</i>	G3?, S2
	Mulberry Wing	<i>Poanes massasoit</i>	S2S3
	Broad-winged Skipper	<i>Poanes viator viator</i>	S2S3
	Long Dash	<i>Polites mystic</i>	S3S4
	Green Comma	<i>Polygonia faunus</i>	S1
	Appalachian Grizzled Skipper <sup>R</sup>	<i>Pyrgus wyandot</i>	G1G2Q, S1, PA Responsibility
	Acadian Hairstreak	<i>Satyrium acadica</i>	S2S3
	Edwards' Hairstreak	<i>Satyrium edwardsii</i>	S3S4
	Northern Hairstreak	<i>Satyrium favonius ontario</i>	S3
	Coral Hairstreak	<i>Satyrium titus</i>	S3S4
	Atlantis Fritillary	<i>Speyeria atlantis</i>	S3
	Regal Fritillary <sup>R</sup>	<i>Speyeria idalia</i>	G3, S1, PA Responsibility
	Southern Cloudywing	<i>Thorybes bathyllus</i>	S3S4
<b>Caddisflies</b>	Beloved Rainbow Caddisfly	<i>Agapetus iridis</i>	S1S3
	Alabama Long-horned Caddisfly	<i>Ceraclea alabamae</i>	G1G3, S1S3
	White-spotted Long-horned Caddisfly	<i>Ceraclea albosticta</i>	S3



	Helma's Cheumatopsyche Caddisfly	<i>Cheumatopsyche helma</i>	G3, S1S3
	Vannote's Cheumatopsyche Caddisfly <sup>R</sup>	<i>Cheumatopsyche vannotei</i>	S1S3, PA Endemic
	A Ring-horn Micro-caddisfly	<i>Leucotrichia pictipes</i>	S3S4
	A Free-living Caddisfly	<i>Rhyacophila otica</i>	G3G4Q, S1S3
<b>Craneflies</b>	Allen's Crane Fly	<i>Limnophila alleni</i>	S1S3
	Marchand's Crane Fly	<i>Limnophila marchandi</i>	S1S3
	Williams' Crane Fly	<i>Tipula williamsiana</i>	S1S3
<b>Crayfishes</b>	Spinycheek Crayfish	<i>Orconectes limosus</i>	S2
<b>Dragonflies and Damselflies</b>	Mottled Darner	<i>Aeshna clepsydra</i>	S3
	Lance-tipped Darner	<i>Aeshna constricta</i>	S3S4
	Variable Darner	<i>Aeshna interrupta</i>	S3
	Comet Darner	<i>Anax longipes</i>	S2S3
	Seepage Dancer	<i>Argia bipunctulata</i>	S1
	Blue-ringed Dancer	<i>Argia sedula</i>	S2
	Lilypad Clubtail	<i>Arigomphus furcifer</i>	S3S4
	River Jewelwing	<i>Calopteryx aequabilis</i>	S3
	Superb Jewelwing	<i>Calopteryx amata</i>	S3
	Appalachian Jewelwing	<i>Calopteryx angustipennis</i>	SH
	Sparkling Jewelwing	<i>Calopteryx dimidiata</i>	SX-Recoverable
	Banded Pennant	<i>Celithemis fasciata</i>	S2S3
	Martha's Pennant	<i>Celithemis martha</i>	SH
	Taiga Bluet	<i>Coenagrion resolutum</i>	S1S2
	Brown Spiketail	<i>Cordulegaster bilineata</i>	S1S2



Tiger Spiketail	<i>Cordulegaster erronea</i>	S3
Arrowhead Spiketail	<i>Cordulegaster obliqua</i>	S3
American Emerald	<i>Cordulia shurtleffii</i>	S3S4
Petite Emerald	<i>Dorocordulia lepida</i>	S2S3
River Bluet	<i>Enallagma anna</i>	S1S2
Boreal Bluet	<i>Enallagma boreale</i>	S2S3
Tule Bluet	<i>Enallagma carunculatum</i>	S1S3
Attenuated Bluet	<i>Enallagma daeckii</i>	SH
Turquoise Bluet	<i>Enallagma divagans</i>	S3S4
Atlantic Bluet	<i>Enallagma doubledayi</i>	SH
Big Bluet	<i>Enallagma durum</i>	S2
New England Bluet	<i>Enallagma laterale</i>	G3G4, S1S2
Slender Baskettail	<i>Epithea costalis</i>	SH
Spiny Baskettail	<i>Epithea spinigera</i>	S1S2
Seaside Dragonlet	<i>Erythrodiplax berenice</i>	SH
Little Blue Dragonlet	<i>Erythrodiplax minuscula</i>	SH
Taper-tailed Darner	<i>Gomphaeschna antilope</i>	SX-Recoverable
Harlequin Darner	<i>Gomphaeschna furcillata</i>	S3
Spine-crowned Clubtail	<i>Gomphus abbreviatus</i>	S2S3
Moustached Clubtail	<i>Gomphus adelphus</i>	S3S4
Beaverpond Clubtail	<i>Gomphus borealis</i>	S3
Midland Clubtail	<i>Gomphus fraternus</i>	S2S4
Splendid Clubtail	<i>Gomphus lineatifrons</i>	SH
Rapids Clubtail	<i>Gomphus quadricolor</i>	G3G4, S2S3



Sable Clubtail	<i>Gomphus rogersi</i>	S3
Septima's Clubtail <sup>R</sup>	<i>Gomphus septima delawarensis</i>	G2, S1S2, PA Responsibility, PA Endemic
Skillet Clubtail	<i>Gomphus ventricosus</i>	G3, SH
Green-faced Clubtail	<i>Gomphus viridifrons</i>	G3G4, S2
Uhler's Sunfly	<i>Helocordulia uhleri</i>	S3S4
Smoky Rubyspot	<i>Hetaerina titia</i>	SH
Lilypad Forktail	<i>Ischnura kellicotti</i>	S1S2
Furtive Forktail	<i>Ischnura prognata</i>	SX-Recoverable
Rambur's Forktail	<i>Ischnura ramburii</i>	S1S2
Blue Corporal	<i>Ladona deplanata</i>	S3S4
White Skimmer	<i>Ladona exusta</i>	S1
Emerald Spreadwing	<i>Lestes dryas</i>	S3
Amber-winged Spreadwing	<i>Lestes eurinus</i>	S3S4
Crimson-ringed Whiteface	<i>Leucorrhinia glacialis</i>	S3S4
Belted Whiteface	<i>Leucorrhinia proxima</i>	S2S3
Golden-winged Skimmer	<i>Libellula auripennis</i>	S2S3
Bar-winged Skimmer	<i>Libellula axilena</i>	S1S2
Yellow-sided Skimmer	<i>Libellula flavida</i>	SH
Needham's Skimmer	<i>Libellula needhami</i>	S1S2
Allegheny River Cruiser	<i>Macromia alleghaniensis</i>	S1S2
Royal River Cruiser	<i>Macromia taeniolata</i>	S2S3
Elfin Skimmer	<i>Nannothemis bella</i>	S1S2
Cyrano Darner	<i>Nasiaeschna pentacantha</i>	S2S3



Southern Sprite	<i>Nehalennia integricollis</i>	SH
Extra-striped Snaketail	<i>Ophiogomphus anomalus</i>	S2?
Riffle Snaketail	<i>Ophiogomphus carolus</i>	S3S4
Pygmy Snaketail	<i>Ophiogomphus howei</i>	G3, SH
Appalachian Snaketail	<i>Ophiogomphus incurvatus incurvatus</i>	G3T2T3, S1
Maine Snaketail	<i>Ophiogomphus mainensis</i>	S3S4
Common Sanddragon	<i>Progomphus obscurus</i>	S1S2
Spatterdock Darner	<i>Rhionaeschna mutata</i>	S3
Ski-tailed Emerald	<i>Somatochlora elongata</i>	S3
Forcipate Emerald	<i>Somatochlora forcipata</i>	S2
Incurvate Emerald	<i>Somatochlora incurvata</i>	S2
Mocha Emerald	<i>Somatochlora linearis</i>	S2S3
Brush-tipped Emerald	<i>Somatochlora walshii</i>	S3
Williamson's Emerald	<i>Somatochlora williamsoni</i>	S1
Riverine Clubtail	<i>Stylurus amnicola</i>	SH
Elusive Clubtail	<i>Stylurus notatus</i>	G3, S1S3
Russet-tipped Clubtail	<i>Stylurus plagiatus</i>	S2S3
Zebra Clubtail	<i>Stylurus scudderi</i>	S3
Blue-faced Meadowhawk	<i>Sympetrum ambiguum</i>	S1S2
Saffron-winged Meadowhawk	<i>Sympetrum costiferum</i>	SH
Cherry-faced Meadowhawk	<i>Sympetrum internum</i>	S1S3
Band-winged Meadowhawk	<i>Sympetrum semicinctum</i>	S3S4



	Gray Petaltail	<i>Tachopteryx thoreyi</i>	S3
<b>Flatworms</b>	Refton Cave Planarian <sup>R</sup>	<i>Sphalloplana pricei</i>	G2G3, S1, PA Responsibility, PA Endemic
<b>Freshwater Mussels</b>	Dwarf Wedgemussel	<i>Alasmidonta heterodon</i>	G1G2, S1, Federally Endangered, PA Endangered, RSGCN, VH Threats, IUCN-Vulnerable
	Elktoe	<i>Alasmidonta marginata</i>	S3S4
	Triangle Floater	<i>Alasmidonta undulata</i>	S3
	Brook Floater	<i>Alasmidonta varicosa</i>	G3, S2, RSGCN, VH Threats
	Three-ridge	<i>Amblema plicata</i>	S2S3
	Alewife Floater	<i>Anodonta implicata</i>	S3, RSGCN, VH Threats
	Flat Floater	<i>Anodonta suborbiculata</i>	S1
	Cylindrical Papershell	<i>Anodontoides ferussacianus</i>	S3
	Purple Wartyback	<i>Cyclonaias tuberculata</i>	SH
	Fanshell	<i>Cyprogenia stegaria</i>	G1Q, SH, Federally Endangered, IUCN-Critically Endangered
	Butterfly	<i>Ellipsaria lineolata</i>	SH
	Elephant Ear	<i>Elliptio crassidens</i>	SH
	Northern Spike	<i>Elliptio fisheriana</i>	S1
	Northern Riffleshell <sup>R</sup>	<i>Epioblasma torulosa rangiana</i>	G2T2, S2, Federally Endangered, PA Endangered, PA Responsibility
	Snuffbox	<i>Epioblasma triquetra</i>	G3, S2, Federally Endangered, PA Endangered
	Wabash Pigtoe	<i>Fusconaia flava</i>	S2S3
	Long-solid	<i>Fusconaia subrotunda</i>	G3, S2
	Pink Mucket	<i>Lampsilis abrupta</i>	G2, SH, Federally Endangered
	Yellow Lampmussel	<i>Lampsilis cariosa</i>	G3G4, S3?, RSGCN, H Threats
Pocketbook	<i>Lampsilis ovata</i>	S2S3, RSGCN, H Threats	



Eastern Lampmussel	<i>Lampsilis radiata</i>	S1, RSGCN, VH Threats
White Heelsplitter	<i>Lasmigona complanata</i>	S1S2
Creek Heelsplitter	<i>Lasmigona compressa</i>	S2, RSGCN, H Threats
Green Floater	<i>Lasmigona subviridis</i>	G3, S2S3
Fragile Papershell	<i>Leptodea fragilis</i>	S2S3
Tidewater Mucket	<i>Leptodea ochracea</i>	G3G4, S1
Eastern Pondmussel	<i>Ligumia nasuta</i>	S1S2, RSGCN, H Threats
Eastern Pearlshell	<i>Margaritifera margaritifera</i>	S1S2, PA Endangered, RSGCN, H Threats
Threehorn Wartyback	<i>Obliquaria reflexa</i>	S3
Hickorynut	<i>Obovaria olivaria</i>	SH
Round Hickorynut	<i>Obovaria subrotunda</i>	S1, PA Endangered
Orange-foot Pimpleback	<i>Plethobasus cooperianus</i>	G1, SH, Federally Endangered, IUCN-Critically Endangered
Sheepnose	<i>Plethobasus cyphus</i>	G3, S1S2, Federally Threatened, PA Threatened
Clubshell <sup>R</sup>	<i>Pleurobema clava</i>	G1G2, S2, Federally Endangered, PA Endangered, PA Responsibility, IUCN-Critically Endangered
Ohio Pigtoe	<i>Pleurobema cordatum</i>	SH
Rough Pigtoe	<i>Pleurobema plenum</i>	G1, SH, Federally Endangered, IUCN-Critically Endangered
Pyramid Pigtoe	<i>Pleurobema rubrum</i>	G2G3, SH
Round Pigtoe	<i>Pleurobema sintoxia</i>	S2S3
Pink Papershell	<i>Potamilus ohioensis</i>	S1
Rabbitsfoot	<i>Quadrula cylindrica cylindrica</i>	G3G4T3, S1S2, Federally Threatened, PA Endangered
Monkeyface	<i>Quadrula metanevra</i>	SH
Pimpleback	<i>Quadrula pustulosa</i>	S1





	Mapleleaf	<i>Quadrula quadrula</i>	S3
	Pistolgrip	<i>Quadrula verrucosa</i>	S1, PA Endangered
	Salamander Mussel	<i>Simpsonaias ambigua</i>	G3, S1, PA Endangered
	Lilliput	<i>Toxolasma parvum</i>	S2S3
	Fawnsfoot	<i>Truncilla donaciformis</i>	S1
	Deertoe	<i>Truncilla truncata</i>	S1, RSGCN, H Threats
	Rayed Bean <sup>R</sup>	<i>Villosa fabalis</i>	G2, S1S2, Federally Threatened, PA Endangered, PA Responsibility
	Rainbow	<i>Villosa iris</i>	S3, RSGCN, H Threats
<b>Freshwater Snails</b>		<i>Amnicola decius<sup>R</sup></i>	G1Q, SH, PA Responsibility, Known from only several sites globally, one in PA
	Moss Bladder Snail	<i>Aplexa hypnorum</i>	S3
	Globe Siltsnail	<i>Birgella subglobosa</i>	S2S3
	Watercress Snail	<i>Fontigens nickliniana</i>	S2
	Blue Ridge Springsnail	<i>Fontigens orolibas</i>	G3, S1S2
	Flexed Gyro	<i>Gyraulus deflectus</i>	S3S4
	Henscomb Hydrobe	<i>Littoridinops tenuipes</i>	S1S3
	Woodland Pondsnailed	<i>Lymnaea catascopium</i>	S2S3
	Great Pondsnailed	<i>Lymnaea stagnalis</i>	S1S3
	Boreal Marstonia	<i>Marstonia lustrica</i>	S3S4
	Vernal Physa	<i>Physa vernalis</i>	G3, S2S3
	Sprite Elimia	<i>Pleurocera proxima</i>	S1S2
	Sharp Sprite	<i>Promenetus exacuus</i>	S3S4
	Ohio Pebblesnail	<i>Somatogyryus integra</i>	G3, S2S3
	Shale Pebblesnail	<i>Somatogyryus</i>	G3, S2S3



		<i>pennsylvanicus</i>	
	Three-ridge Valvata	<i>Valvata tricarinata</i>	S1S3
<b>Grasshoppers</b>	Appalachian Grasshopper <sup>R</sup>	<i>Appalachia hebardii</i>	SH, PA Responsibility. This species was described by Rehn and Rehn in 1936, with the type location in PA. Several other PA and VA sites were listed. Responsibility species because 4 of 7 documented counties were in PA.
<b>Ground Beetles</b>	Pennsylvania Cave Beetle <sup>R</sup>	<i>Pseudanophthalmus sp nov</i>	SH, PA Responsibility. Endemic to one cave, which has been mostly destroyed by mining. The beetle has not been seen in decades, but the area is not open to surveys.
<b>Isopods</b>	Franz's Cave Isopod <sup>R</sup>	<i>Caecidotea franzi</i>	G2G4, S1, PA Responsibility
	An Isopod <sup>R</sup>	<i>Caecidotea kenki</i>	G3, S2S3, PA Responsibility, PA Endemic
	Price's Cave Isopod <sup>R</sup>	<i>Caecidotea pricei</i>	S3S4, PA Responsibility
<b>Mayflies</b>	A Brown Dun	<i>Ameletus browni</i>	G3G4, S1S3
	A Brown Dun	<i>Ameletus cryptostimulus</i>	S2S3
	A Mayfly	<i>Anafroptilum semirufum</i>	G3G4, S2
		<i>Arthroplea bipunctata</i>	S1S2
		<i>Choroerpes basalis</i>	S2S3
		<i>Ephemerella aurivillii</i>	S3S4
	Pale Morning Dun	<i>Ephemerella excrucians</i>	S1S3
		<i>Ephemerella floripara</i>	G3Q, S1S3
		<i>Ephemerella inconstans</i>	S1S3
	Two-colored Chocolate Dun	<i>Eurylophella bicoloroides</i>	G3, S3S4
	Poconos Chocolate Dun	<i>Eurylophella poconoensis</i>	G1G2, S3S4
		<i>Heptagenia culacantha</i>	G2G3
	<i>Isonychia hoffmani</i>	G1G3, S2S3	



		<i>Neophemera purpurea</i>	S1S2
		<i>Siphloplecton basale</i>	S3
<b>Moths, Clear-winged</b>	Lilac borer	<i>Podosesia syringae</i>	S1
<b>Moths, Dagger</b>	Doll's Merolonche	<i>Acronicta dolli</i>	G3G4, S1S2
<b>Moths, Erebid</b>	Twin-dotted Macrochilo	<i>Macrochilo hypocriticalis</i>	S3
	Masked Parahyphenodes	<i>Parahyphenodes quadralis</i>	S2S3
	An Oak Moth	<i>Phoberia ingenua</i>	G3G4, S2
	Pine Barrens Zanclognatha	<i>Zanclognatha martha</i>	S3S4
<b>Moths, Flannel</b>	Black-waved Flannel Moth	<i>Lagoa crispata</i>	S3
<b>Moths, Geometrids</b>	New Jersey Tea Inchworm	<i>Apodrepanulatrix liberaria</i>	G3, S1S2
	Southern Pine Looper Moth	<i>Caripeta aretaria</i>	S2S3
	Broad-lined Erastria Moth	<i>Erastria coloraria</i>	G3G4, S1S2
	Blueberry Gray	<i>Glena cognataria</i>	S3
	Rare Spring Moth	<i>Heliomata infulata</i>	G3G4, S3
	Esther Moth	<i>Hypagyrtis esther</i>	S3S4
	Straw Wave Moth	<i>Idaea eremiata</i>	S2
	A Wave Moth	<i>Idaea violacearia</i>	S2
	Twilight Moth	<i>Lycia rachelae</i>	S1S2
	Promiscuous Angle	<i>Macaria promiscuata</i>	S3
	Barrens Metarranthis Moth	<i>Metarranthis apiciaria</i>	G1G3, SH
	Early Metarranthis Moth	<i>Metarranthis sp near duaria</i>	S3
	Tuscarora Emerald	<i>Nemoria tuscarora</i>	S1S2



	Purple Plagodis	<i>Plagodis kuetzingi</i>	S1, VH Threats, G-Rank does not take European Ash Borer (EAB) into account; expected to be globally rare in coming years
	Barrens Itame	<i>Speranza exonerata</i>	G3G4, S2S3
	Shiny Gray Carpet Moth	<i>Stamnodes gibbicostata</i>	S1S3
<b>Moths, Giant Silkworm and Royal</b>	Spiny Oakworm Moth	<i>Anisota stigma</i>	S3
	Pine Devil	<i>Citheronia sepulcralis</i>	S3S4
	Barrens Buckmoth	<i>Hemileuca maia</i>	S2
<b>Moths, Noctuid</b>	Yankee Dart	<i>Abagrotis brunneipennis</i>	S2S3
	A Cutworm Moth	<i>Apamea burgessi</i>	SH
	Crested Apamea	<i>Apamea cristata</i>	S3
	A Noctuid Moth	<i>Aplectoides condita</i>	S3S4
	Straight Lined Mallow Moth	<i>Bagisara rectifascia</i>	S2S3
	Boreal Fan Moth	<i>Brachionycha borealis</i>	S2S3
	Curved Halter Moth	<i>Capis curvata</i>	S3
	Rare Sand Quaker	<i>Caradrina meralis</i>	S2
	A Bird-dropping Moth	<i>Cerma cora</i>	G3G4, S1
	A Sallow Moth	<i>Chaetagnalea cerata</i>	G3G4, S2S3
	Barrens Chaetagnalea	<i>Chaetagnalea tremula</i>	S1S3
	Marvel Moth	<i>Chytonix sensilis</i>	S2S3
	Grote's Sallow	<i>Copivaleria grotei</i>	S1
	The Pink Streak	<i>Dargida rubripennis</i>	G3G4, S2
	Red Dart Moth	<i>Diarsia rubifera</i>	S2S3
	A Noctuid Moth	<i>Dichagyris acclivis</i>	S3
	A Noctuid Moth	<i>Dichagyris grotei</i>	SH



	George's Midget Moth	<i>Elaphria georgei</i>	S2S4
	Pointed Sallow	<i>Epiglaea apiata</i>	S3S4
	Marsh Fern Moth	<i>Fagitana littera</i>	SH
	Sundew Cutworm Moth	<i>Hemipachnobia monochromatea</i>	S2S3
	Fingered Lemmeria <sup>R</sup>	<i>Lemmeria digitalis</i>	S3, PA Responsibility
	Goldenrod Brindle	<i>Lithomoia germana</i>	S3
	Franclemont's Pinion Moth	<i>Lithophane franclemonti</i>	G2G4, SH
	Thaxter's Pinion Moth	<i>Lithophane thaxteri</i>	SH
	Northern Brocade Moth	<i>Neoligia semicana</i>	G2G4, S1S2
	A Noctuid Moth	<i>Properigea costa</i>	S2S3
	Pink Sallow	<i>Psectraglaea carnosa</i>	G3, S2S3
	Aureolaria Seed Borer	<i>Pyrrhia aurantiago</i>	G3G4, SH
		<i>Sideridis maryx</i>	S2S3
	Private Sallow Moth	<i>Sutyna privata</i>	S3S4
	Toothed Apharata	<i>Sympistis dentata</i>	S2S3
	Pirate Looper Moth	<i>Syngrapha epigaea</i>	S2S3
	Southern Variable Dart Moth	<i>Xestia elimata</i>	S3
	Broad Sallow Moth	<i>Xylotype capax</i>	S3
<b>Moths, Notodontid</b>	Post-burn Datana Moth	<i>Datana ranaeiceps</i>	G3G4, S2
	Plain Schizura	<i>Schizura apicalis</i>	G3G4, SH
<b>Moths, Other</b>	The Angel	<i>Olceclostera angelica</i>	S1, VH Threats, G-Rank does not take European Ash Borer (EAB) into account; expected to be globally rare in coming years
	Splendid Palpita	<i>Palpita magniferalis</i>	S1



	Gold-Spotted Ghost Moth	<i>Sthenopis auratus</i>	G3G4, S1S3
<b>Moths, Papaipema</b>	Hop Vine Borer	<i>Hydraecia immanis</i>	SH
	Figwort Borer Moth	<i>Hydraecia stramentosa</i>	S1S2
	Yellow Stoneroot Borer Moth	<i>Papaipema astuta</i>	G2G4, SH
	Indigo Stem Borer	<i>Papaipema baptisiae</i>	S3S4
	Golden Borer	<i>Papaipema cerina</i>	G2G4, SU
	Dark Stoneroot Borer Moth <sup>R</sup>	<i>Papaipema duplicata</i>	G2G4, S1S2, PA Responsibility
	Joe-Pye-Weed Borer	<i>Papaipema eupatorii</i>	S3
	Ash-tip Borer	<i>Papaipema furcata</i>	S1
	Vernonia Borer Moth	<i>Papaipema limpida</i>	G2G4, SH
	Loosestife Borer	<i>Papaipema lysimachiae</i>	S3
	Brick-red Borer Moth	<i>Papaipema marginidens</i>	S1S3
	Maritime Sunflower Borer Moth	<i>Papaipema maritima</i>	G3, SH
	Sunflower Borer Moth	<i>Papaipema necopina</i>	SH
	Coneflower Borer	<i>Papaipema nelita</i>	S3
	Turtlehead Borer	<i>Papaipema nepheleptena</i>	S2S3
	Mayapple Borer	<i>Papaipema rutila</i>	S3
	Flypoison Borer Moth <sup>R</sup>	<i>Papaipema sp 1</i>	G2G3, S2S3, PA Responsibility
	Ostrich Fern Borer	<i>Papaipema sp 2 nr pterisii</i>	G3G4, S1S2
Buffalo Moth	<i>Parapamea buffaloensis</i>	S1S2	
<b>Moths, Sac-Bearers</b>	Melsheimer's Sack Bearer	<i>Cicinnus melsheimeri</i>	S3S4
<b>Moths, Sphinx</b>	Graceful Clearwing	<i>Hemaris gracilis</i>	G3G4, S2S3



	Ash Sphinx	<i>Manduca jasmineearum</i>	S1
	Great Ash Sphinx	<i>Sphinx chersis</i>	S1
	Franck's Sphinx Moth	<i>Sphinx franckii</i>	SH
	Apple Sphinx	<i>Sphinx gordius</i>	S3S4
<b>Moths, Tent Caterpillar &amp; Lappet</b>	Dot-lined White Moth	<i>Artace cribraria</i>	S3S4
	Tolype Moth	<i>Tolype notialis</i>	S3
<b>Moths, Tiger</b>	Packard's Lichen Moth	<i>Cisthene packardii</i>	S3S4
	Lead Colored Lichen Moth	<i>Cisthene plumbea</i>	S3
	Pure Lichen Moth	<i>Crambidia pura</i>	S2
	Phyllira Tiger Moth	<i>Grammia phyllira</i>	SH
	Joyful Holomelina Moth	<i>Virbia laeta</i>	S2
	Blackish Tiger Moth	<i>Virbia nigricans</i>	SH
<b>Moths, Underwing</b>	Angus' Underwing	<i>Catocala angusi</i>	SH
	Dejected Underwing	<i>Catocala dejecta</i>	SH
	Sweet Underwing	<i>Catocala dulciola</i>	G3, SH
	Miranda Underwing	<i>Catocala miranda</i>	G3G4, S2S3
	Robinson's Underwing	<i>Catocala robinsonii</i>	SH
	Pine Woods Underwing	<i>Catocala sp 1 nr jair</i>	S2S3
	Shadow Underwing	<i>Catocala umbrosa</i>	S1
<b>Moths, Zale</b>	Black-eyed Zale	<i>Zale curema</i>	S3
	Pine Barrens Zale	<i>Zale lunifera</i>	G3G4, S2S3
	Oblique Zale Moth	<i>Zale obliqua</i>	S2S3
	Gray-banded Zale	<i>Zale squamularis</i>	S2S3
	Gray Spring Zale	<i>Zale submediana</i>	S2S3



<b>Other Beetles</b>	Six-banded Longhorn Beetle	<i>Dryobius sexnotatus</i>	S1
	American Burying Beetle	<i>Nicrophorus americanus</i>	G2G3, SX-Recoverable, Federally Endangered, IUCN-Critically Endangered
<b>Other Invertebrates</b>	Pennsylvania Sponge	<i>Heteromeyenia longistylus</i>	G1G3, SU. The organism is under-sampled. Thorp and Covich (2010) says that <i>H longistylus</i> is known only from the Lehigh River near Bethlehem, PA, and is almost certainly a junior synonym for <i>H. baileyi</i> , which is widely distributed throughout eastern North America. Anecdotal information suggests that freshwater sponges are fairly widespread in PA. With little study of the species and no known expert on their PA distribution, this species is data deficient.
<b>Sawflies</b>	Black-headed Ash Sawfly	<i>Tethida barda</i>	S1
<b>Spiders</b>	A Ghost Spider	<i>Arachosia cubana</i>	S1S3
	Beach Wolf Spider	<i>Arctosa littoralis</i>	S1S3
	Weyer's Sheetweb Cave Spider	<i>Bathyphantes weyeri</i>	S1S3
	Turret Spider	<i>Geolycosa turricola</i>	S1S3
	Wright's Burrowing Wolf Spider	<i>Geolycosa wrighti</i>	S1S3
	Beatty's Sheetweb Cave Spider	<i>Oreonetides beattyi</i>	S1S3
	Subterranean Sheetweb Spider	<i>Phanetta subterranea</i>	S1S3
	Appalachian Cave Spider	<i>Porrhomma cavernicola</i>	S1S3
	A Striped Orbweaver	<i>Singa eugeni</i>	S2S4
<b>Springtails</b>	Heller Cave Springtail	<i>Typhlogastrura helleri</i>	S1, Endemic
<b>Stoneflies</b>	Eastern Stone	<i>Acroneuria arenosa</i>	S2
	Elegant Stone	<i>Acroneuria arida</i>	G3, SH. Historic records, but no recent surveys
	Lobed Stone	<i>Acroneuria internata</i>	SH
	Stonyfork Snowfly	<i>Allocaonia harperi</i>	S2
	Spatulate Snowfly	<i>Allocaonia simmonsii</i>	G3, S2





	Aracoma Sallfly	<i>Alloperla aracoma</i>	G3, S3
	Dusky Sallfly	<i>Alloperla biserrata</i>	G3, S2
	Duckhead Sallfly	<i>Alloperla concolor</i>	S2
	Vernal Sallfly	<i>Alloperla ideii</i>	G3, S2
	Scotia Sallfly	<i>Alloperla vostoki</i>	G3, S2
	Giant Stone	<i>Attaneuria ruralis</i>	SH
	Appalachian Stone	<i>Hansonoperla appalachia</i>	G3, S3
	Variable Needlefly	<i>Leuctra variabilis</i>	S3
	Shenandoah Needlefly	<i>Megaleuctra flinti</i>	G2, S1
	Three-spined Forestfly	<i>Nemoura trispinosa</i>	S2
	Choctaw Stone	<i>Neoperla choctaw</i>	S3
	Bent Forestfly	<i>Ostrocerca prolongata</i>	G3, S1
	Striped Stone	<i>Perlinella drymo</i>	S2
	Powdermill Forestfly <sup>R</sup>	<i>Soyedina merritti</i>	G2, S1, PA Responsibility, PA Endemic
	Shenandoah Sallfly	<i>Sweltsa palearata</i>	G2G3, S3
	Gaspe Sallfly	<i>Utaperla gaspesiana</i>	G3, S3
<b>Terrestrial Snails</b>	Broad-banded Forestsnail	<i>Allogona profunda</i>	S2
	Flamed Tigersnail	<i>Anguispira alternata</i>	S3
	Coastal Plain Disc	<i>Anguispira fergusonii</i>	S1
	Banded Globe	<i>Anguispira kochi</i>	S3
	Spike-lip Crater	<i>Appalachina sayana</i>	S2
	Obese Thorn	<i>Carychium exiguum</i>	S3
	File Thorn	<i>Carychium nannodes</i>	S1



<b>Terrestrial Snails</b>	Toothless Column Snail	<i>Columella columella</i>	S1
	Meadow Slug	<i>Deroceras laeve</i>	S3
	Angular Disc	<i>Discus catskillensis</i>	S3
	Domed Disc	<i>Discus patulus</i>	S3
	Lowland Pill Snail	<i>Euchemotrema leai</i>	S2
	Toothed Hive	<i>Euconulus dentatus</i>	S1
	Brown Hive	<i>Euconulus fulvus</i>	S3
	Armed Snaggletooth	<i>Gastrocopta armifera</i>	S3
	Bark Snaggletooth	<i>Gastrocopta corticaria</i>	S3
	White Snaggletooth	<i>Gastrocopta tappaniana</i>	S1
	Brown Bellytooth	<i>Gastrodonta interna</i>	SH-Reported once not recently; no focused search yet
	Maryland Glyph	<i>Glyphyalinia raderi</i>	G2, S2
	Cherrystone Drop	<i>Hendersonia occulta</i>	S2
	Changeable Mantleslug	<i>Megapallifera mutabilis</i>	S3
	Toothed Globe	<i>Mesodon zaletus</i>	S3
	Blue Glass Snail	<i>Nesovitrea binneyana</i>	S2
	Foster Mantleslug	<i>Pallifera fosteri</i>	S3
	Redfoot Mantleslug	<i>Pallifera ohioensis</i>	S3
	Severed Mantleslug	<i>Pallifera secreta</i>	S2
	Variable Mantleslug	<i>Pallifera varia</i>	G2G4, S3
	Proud Globelet	<i>Patera pennsylvanica</i>	S2
	Slender Walker	<i>Pomatiopsis lapidaria</i>	S2
	Moss Chrysalis Snail	<i>Pupilla muscorum</i>	S1
White-lip Dagger	<i>Pupoides albilabris</i>	S2	



	Bristled Slitmouth	<i>Stenotrema barbatum</i>	S3
	Maze Pinecone	<i>Strobilops labyrinthicus</i>	S3
	Southern Pinecone	<i>Strobilops texasianus</i>	S3
	Baffled Three-tooth	<i>Triodopsis fraudulenta</i>	S3
	Atlantic Threetooth	<i>Triodopsis juxtidentis</i>	S1
	Dished Three-tooth	<i>Triodopsis vulgata</i>	S3
	Split-tooth Dome	<i>Ventridens virginicus</i>	S3
	Delicate Vertigo	<i>Vertigo bollesiana</i>	S3
	Crested Vertigo	<i>Vertigo cristata</i>	S3
	Blade Vertigo	<i>Vertigo milium</i>	S1
	Ovate Vertigo	<i>Vertigo ovata</i>	S2
	Pygmy Vertigo	<i>Vertigo pygmaea</i>	S3
	Honey Vertigo	<i>Vertigo tridentata</i>	S3
	Five-tooth Vertigo	<i>Vertigo ventricosa</i>	S3
	Eastern Glass-snail	<i>Vitrina angelicae</i>	S2
	Striped Whitelip	<i>Webbhelix multilineata</i>	SH-Occurs in wetlands, which have not been recently targeted for surveys Possibly undersampled and may be rediscovered
	Black Gloss	<i>Zonitoides nitidus</i>	S3
<b>Tiger Beetles</b>	Appalachian Tiger Beetle	<i>Cicindela ancocisconensis</i>	G3, S1S3
	Big Sand Tiger Beetle	<i>Cicindela formosa</i>	S1, Possibly disjunct; need data from surrounding states
	Hairy-necked Tiger Beetle	<i>Cicindela hirticollis</i>	S1
	Cobblestone Tiger Beetle	<i>Cicindela marginipennis</i>	G2, S1, RSGCN, H-VH Threats
	Northern Barrens Tiger Beetle	<i>Cicindela patruela</i>	G3



	Festive Tiger Beetle	<i>Cicindela scutellaris</i>	SH
	Splendid Tiger Beetle	<i>Cicindela splendida</i>	S1S2
	One-spotted Tiger Beetle	<i>Cicindela unipunctata</i>	S1S3
	Ghost Tiger Beetle	<i>Ellipsoptera lepida</i>	G3G4, SH
<b>True bugs</b>	Fringetree Lace Bug	<i>Leptoypha mutica</i>	S1



**Table 2.** Species removed from the 2005 Pennsylvania Wildlife Action Plan priority species list for the 2015 revision, with justification. Modified selection criteria accounted for some of these deletions, while others were removed due to a better understanding of population size and distribution, thanks in part to State & Tribal Wildlife Grants Program funds.

SPECIES REMOVED			
Taxonomic Group	Common Name	Scientific Name	Justification
Birds	Ruddy Duck	<i>Oxyura jamaicensis</i>	A substantial portion of the migratory population does not occur in PA (A. Wilson, unpublished data); not a high priority in waterfowl arena compared to other species (I. Gregg, personal communication)
	Northern Bobwhite	<i>Colinus virginianus</i>	Native wild breeding populations are extirpated from Pennsylvania with very low recovery potential
	Great Blue Heron	<i>Ardea herodias</i>	S5, medium threats, >25% increase in short-term trend
	Red-shouldered Hawk	<i>Buteo lineatus</i>	S4, medium threats
	Solitary Sandpiper	<i>Tringa solitaria</i>	A substantial portion of the migratory population does not occur in PA (A. Wilson, unpublished data)
	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	S4, medium threats, relatively stable ( $\leq 10\%$ change) short-term trend
	Acadian Flycatcher	<i>Empidonax virescens</i>	S4, medium threats, relatively stable ( $\leq 10\%$ change) short-term trend
	Alder Flycatcher	<i>Empidonax alnorum</i>	S5, medium threats, >25% increase in short-term trend
	Yellow-throated Vireo	<i>Vireo flavifrons</i>	S4, medium threats, relatively stable ( $\leq 10\%$ change) short-term trend
	Blue-headed Vireo	<i>Vireo solitarius</i>	S5, medium threats, relatively stable ( $\leq 10\%$ change) short-term trend
	Worm-eating Warbler	<i>Helmitheros vermivorum</i>	S4, medium threats, relatively stable ( $\leq 10\%$ change) short-term trend
Mammals	Delmarva Fox Squirrel	<i>Sciurus niger cinereus</i>	Federally endangered (proposed delisting); PA extirpated -low recovery potential
	Eastern Red Bat	<i>Lasiurus borealis</i>	S4, medium threat, relatively stable ( $\leq 10\%$ change) short-term trend
	Fisher	<i>Martes pennanti</i>	Increasing populations and expanding range following reintroductions
	Hoary Bat	<i>Lasiurus cinereus</i>	S4, medium threats
	Least Weasel	<i>Mustela nivalis</i>	S5, low threats



	North American River Otter	<i>Lontra canadensis</i>	S4, medium threats, increasing (11-25% change) short-term trend
	Snowshoe Hare	<i>Lepus americanus</i>	S4, medium threats, relatively stable ( $\leq 10\%$ change) short-term trend
	Southern Bog Lemming	<i>Synaptomys cooperi</i>	S4, low threats
<b>Reptiles</b>	Map Turtle	<i>Graptemys geographica</i>	S4, low threat
	Smooth Green Snake	<i>Opheodrys vernalis-PFBC</i>	S4, unknown threat, stable population
<b>Amphibians</b>	Four-toed Salamander	<i>Hemidactylium scutatum</i>	S4, low threat
<b>Fishes</b>	American Brook Lamprey	<i>Lethenteron appendix</i>	S4, Low threat
	Longnose Gar	<i>Lepisosteus osseus</i>	S5, Low threat
	Goldeye	<i>Hiodon alosoides</i>	SX-Unrecoverable
	Mooneye	<i>Hiodon tergisus</i>	S4, Low threat
	Skipjack Herring	<i>Alosa chrysochloris</i>	S4, Low threat
	Silver Chub	<i>Macrhybopsis storeriana</i>	S4, U threat, increasing trend
	River Carpsucker	<i>Carpionodes carpio</i>	S4, Low threat
	Highfin Carpsucker	<i>Carpionodes velifer</i>	SU, considered extirpated unless a valid specimen turns up; all reports believed to be misidentifications
	Smallmouth Buffalo	<i>Ictiobus bubalus</i>	S5, Low threat
	River Redhorse	<i>Moxostoma carinatum</i>	S4, Low threat
	Rainbow Smelt	<i>Osmerus mordax</i>	SX-Unrecoverable
	Brook Silverside	<i>Labidesthes sicculus</i>	S5, Low threat
	Bluebreast Darter	<i>Etheostoma camurum</i>	S4S5
	Channel Darter	<i>Percina copelandi</i>	S5, Low threat



	Gilt Darter	<i>Percina evides</i>	S4
	Cheat Minnow	<i>Pararhinichthys bowersi</i>	Taxonomic change; No longer considered a species.
<b>Butterflies and Skippers</b>	Arogos Skipper	<i>Atrytone arogos arogos</i>	SX, probably not recoverable.
	Tawny Emperor	<i>Asterocampa clyton</i>	S4S5
	Pipevine Swallowtail	<i>Battus philenor</i>	S4S5
	Silver-bordered Fritillary	<i>Boloria selene</i>	Parent record for <i>Boloria selene myrina</i> Redundant to list twice
	Eastern Pine Elfin	<i>Callophrys niphon</i>	Parent record for <i>Carterocephalus plaemon mandan</i> Redundant to list twice
	Arctic Skipper	<i>Carterocephalus palaemon</i>	Parent record for <i>Carterocephalus plaemon mandan</i> Redundant to list twice
	Cherry Gall Azure	<i>Celastrina serotina</i>	S4
	Eastern Tailed Blue	<i>Cupido (Everes) comyntas</i>	S5
	Persius Duskywing	<i>Erynnis persius</i>	Parent record for <i>Erynnis persius persius</i> Redundant to list twice
	Silvery Blue	<i>Glaucopsyche lygdamus</i>	Parent record for <i>Glaucopsyche lygdamus lygdamus</i> Redundant to list twice
	Dotted Skipper	<i>Hesperia attalus</i>	Parent record for <i>Hesperia attalus slossonae</i> Redundant to list twice
	Dotted Skipper	<i>Hesperia attalus slossonae</i>	SNA, Not "extirpated" This was a stray and could stray into PA again No resident breeding populations
	Northern Pearly Eye	<i>Lethe anhedon</i>	S4
	Eyed Brown	<i>Lethe eurydice eurydice</i>	Subspecies record for <i>Lethe eurydice</i> Not using subspecies Redundant to list twice
	Giant Swallowtail	<i>Papilio cresphontes</i>	G5, S4S5
White M Hairstreak	<i>Parrhasius m-album</i>	G5, S4S5	



	Tawny Crescent	<i>Phyciodes batesii batesii</i>	SX, probably not recoverable.
	Karner Blue	<i>Plebejus melissa samuelis</i>	SX, probably not recoverable.
	Mulberry Wing	<i>Poanes massasoit chermocki</i>	Use parent name only This subspecies not in PA Redundant to list twice
	Checkered White	<i>Pontia protodice</i>	SNA. Not a PA resident
	Southern Hairstreak	<i>Satyrium favonius</i>	Parent record for <i>Satyrium favonius ontario</i> Redundant to list twice
	Aphrodite Fritillary	<i>Speyeria aphrodite</i>	G5, S4
	Diana	<i>Speyeria diana</i>	SNA. Not "extirpated". This was a stray and could stray into PA again. No resident breeding populations.
<b>Crayfishes</b>	A Crayfish	<i>Cambarus carolinus</i>	Historical accounts of Pennsylvania's crayfish fauna included <i>Cambarus carolinus</i> (Ortmann 1906); however, Hobbs and Bouchard (1973) reassigned those specimens to <i>Cambarus dubius</i> and it is now accepted that <i>Cambarus carolinus</i> does not occur in PA and that those specimens referred to as <i>Cambarus carolinus</i> by Ortmann (1906) are actually <i>Cambarus dubius</i> (Hobbs 1989, Taylor et al 2007, Bouchard et al 2007).
<b>Dragonflies and Damselflies</b>	Black-tipped Darner	<i>Aeshna tuberculifera</i>	G4, S4, More common than previously recognized
	Green-striped Darner	<i>Aeshna verticalis</i>	G5, S4, More common than previously recognized
	Blue-tipped Dancer	<i>Argia tibialis</i>	G5, S4, More common than previously recognized
	Ocellated Darner	<i>Boyeria grafiana</i>	G5, S4, More common than previously recognized
	Halloween Pennant	<i>Celithemis eponina</i>	G5, S4S5, More common than previously recognized
	Northern Bluet	<i>Enallagma annexum</i>	G5, S4?, More common than previously recognized
	Azure Bluet	<i>Enallagma aspersum</i>	G5, S4S5, More common than previously recognized
	Double-striped Bluet	<i>Enallagma basidens</i>	G5, S4, More common than previously recognized





	Harpoon Clubtail	<i>Gomphus desertus</i>	G4, S4, More common than previously recognized
	Cobra Clubtail	<i>Gomphus vastus</i>	G5, S4, More common than previously recognized
	Northern Pygmy Clubtail	<i>Lanthus parvulus</i>	G4, S4, More common than previously recognized
	Sweetflag Spreadwing	<i>Lestes forcipatus</i>	G5, S4, More common than previously recognized
	Slaty Skimmer	<i>Libellula incesta</i>	G5, S4, More common than previously recognized
	Great Blue Skimmer	<i>Libellula vibrans</i>	G5, SNA, Not a permanent resident in PA; an adventive species that sometimes moves in from the south
	Edmund's Snaketail	<i>Ophiogomphus edmundo</i>	Presence in PA was never confirmed; probable misidentification
	Fine-lined Emerald	<i>Somatochlora filosa</i>	G5, SNA, Historic record exists, but this species may never have been reproducing in PA
	Variegated Meadowhawk	<i>Sympetrum corruptum</i>	G5, SNA, Not a permanent breeder in state
	White-faced Meadowhawk	<i>Sympetrum obtrusum</i>	G5, S4, More common than previously recognized
<b>Freshwater Mussels</b>	Atlantic Spike	<i>Elliptio producta</i>	Preliminary genetic analyses that indicate lanceolate mussels in Pennsylvania may all be Northern Lance ( <i>Elliptio fisheriana</i> ) (Bogan et al 2009)
	Tubercled Blossom	<i>Epioblasma torulosa</i>	<i>Epioblasma torulosa</i> is the parent species name under which there are three subspecies ( <i>gubernaculum</i> , <i>rangiana</i> , and <i>torulosa</i> ) <i>Etrangiana</i> is the only subspecies that remains ( <i>gubernaculum</i> (Tennessee River headwaters) is extinct and the big river form (or autonym) <i>torulosa</i> is also extinct) PA therefore recognizes <i>E t rangiana</i> as the only known PA form – Ortmann did not report finding the big river form ( <i>torulosa torulosa</i> ) in Pennsylvania. Removed per N. Welte.
	Cracking Pearlymussel	<i>Hemistena lata</i>	SX Non-recoverable



	Black Sandshell	<i>Ligumia recta</i>	G4G5, S4
	Ring Pink	<i>Obovaria retusa</i>	SX Non-recoverable
	Pink Heelsplitter	<i>Potamilus alatus</i>	G5, S4
	Eastern Floater	<i>Pyganodon cataracta</i>	G5, S4
		<i>Quadrula cylindrica</i>	PA has <i>Quadrula cylindrica cylindrica</i> Redundant <i>Quadrula cylindrica</i> is another parent name under which there are two subspecies <i>cylindrica</i> (which is the autonym) and <i>strigillata</i> <i>Q c strigillata</i> is a Cumberlandian endemic (Tennessee/Cumberland rivers) and all other forms fall under the autonym <i>Q c cylindrica</i>
	Paper Pondshell	<i>Utterbackia imbecillis</i>	G5, S4
<b>Freshwater Snails</b>		<i>Cincinnatia cincinnatiensis</i>	This species is a junior synonym of <i>Cincinnatia integra</i> See entry under that name
		<i>Lithasia obovata</i>	This species is a junior synonym of <i>Cincinnatia integra</i> See entry under that name
		<i>Lyogyrus walkeri</i>	Species has been lumped with a common species
		<i>Promenetus umbilicatellus</i>	Perhaps a misidentification of <i>Promenetus exacuous</i> - see entry under that name
		<i>Valvata perdepressa</i>	No valid PA records
<b>Moths, Clear-winged</b>	American Chestnut Clearwing Moth	<i>Synanthedon castaneae</i>	SX, Not recoverable
<b>Moths, Dagger</b>	Barrens Dagger Moth	<i>Acronicta albarufa</i>	SX, probably not recoverable.
<b>Moths, Geometrids</b>	Autumnal Moth	<i>Epirrita autumnata</i>	Parent record for <i>Epirrita autumnata henshawi</i> Redundant to list twice
<b>Moths, Noctuid</b>		<i>Lithomoia solidaginis</i>	Parent record for <i>Lithomoia solidaginis germana</i> (now called <i>L germana</i> ) Redundant to list twice



	Footpath Sallow Moth	<i>Metaxaglaea semitaria</i>	G5, S4
		<i>Panthea furcilla</i>	G5, S4
	Anointed Sallow Moth	<i>Pyreferra ceromatica</i>	SX, probably not recoverable.
		<i>Sutyna privata privata</i>	Retain <i>Sutyna privata</i> and delete this subspecies Redundant to list both Lafontaine and Schmidt (2010) do not recognize any subspecies
		<i>Sutyna privata teltowa</i>	Retain <i>Sutyna privata</i> and delete this subspecies Redundant to list both Lafontaine and Schmidt (2010) do not recognize any subspecies
<b>Moths, Other</b>	Chestnut Case-bearer Moth	<i>Coleophora leucochrysell</i>	SX, probably not recoverable.
	Yponomeutid Moth	<i>Swammerdamia castaneae</i>	SX, probably not recoverable.
<b>Moths, Papaipema</b>	A Borer Moth	<i>Papaipema aerata</i>	SX, probably not recoverable.
	A Borer Moth	<i>Papaipema araliae</i>	SNA, Not a PA Resident
<b>Moths, Underwing</b>	Precious Underwing	<i>Catocala pretiosa pretiosa</i>	SX, probably not recoverable.
<b>Other Beetles</b>	Black Lordithon Rove Beetle	<i>Lordithon niger</i>	SX, probably not recoverable.
	A Burying Beetle	<i>Nicrophorus marginatus</i>	SX, probably not recoverable.
<b>Stoneflies</b>		<i>Isogenoides olivaceus</i>	Not known to be in PA
	Midwestern Salmonfly	<i>Pteronarcys pictetii</i>	SX, probably not recoverable.
<b>Terrestrial Snails</b>	Cumberland Tigersnail	<i>Anguispira</i>	Species does not occur in PA. Remove from PA list.



		<i>cumberlandiana</i>	
	Robust Pillar	<i>Cochlicopa nitens</i>	Based on mis-identification Reported by Hubricht (1985) evidently based on his specimen now at Field Museum No 230150, which was formerly ID as <i>C. nitens</i> but they now have it listed as <i>C lubrica</i> Remove entirely from PA species list
	High-spire Column	<i>Columella simplex</i>	G5Q, S4
	Dimple Supercoil	<i>Paravitrea capsella</i>	Based on mis-identification of <i>P. multidentata</i> ; Remove entirely from PA list
	Ramp Cove Supercoil	<i>Paravitrea lacteodens</i>	Based on mis-identification of <i>P. multidentata</i>
	Glass Spot	<i>Punctum vitreum</i>	G5, S4
	Ridge-and-valley Slitmouth	<i>Stenotrema edwardsi</i>	No specimen available from PA. Remove from PA list
	Spruce Knob Threetooth	<i>Triodopsis picea</i>	No specimen available from PA. Remove from PA list
	Variable Vertigo	<i>Vertigo gouldi</i>	G5, S4
<b>Tiger Beetles</b>	A Tiger Beetle	<i>Cicindela abdominalis</i>	Not known to be in PA
	A Tiger Beetle	<i>Cicindela formosa generosa</i>	Already an entry for the full species. There is only one subspecies in Pennsylvania.
	Common Claybank Tiger Beetle	<i>Cicindela limbalis</i>	S4
	Red-bellied Tiger Beetle	<i>Cicindela rufiventris</i>	S4S5
	A Tiger Beetle	<i>Cicindela scutellaris rugifrons</i>	Already an entry for the full species. There was only one subspecies in Pennsylvania, if it ever was here.
	Oblique-lined Tiger Beetle	<i>Cicindela tranquebarica</i>	G5, S4, More common than previously recognized
	Virginia Big-headed Tiger Beetle	<i>Tetracha virginica</i>	SU, Unsure if this species is in PA. One (1) old undocumented mention in literature



**Table 3.** Species identified as data deficient (i.e., too few data to evaluate conservation status at the state level) in the 2015 Pennsylvania Wildlife Action Plan. These are not considered Species of Greatest Conservation Need, but are included to highlight species for additional data collection efforts.

DATA DEFICIENT			
Taxonomic Group	Common Name	Scientific Name	Justification
Fishes	Fourspine Stickleback	<i>Apeltes quadracus</i>	SU, data deficient. A single recent record from Coastal Plain; status unknown
	Steelcolor Shiner	<i>Cyprinella whipplei</i>	SU, data deficient. First PA record in 1991; no records after 2001. Not enough information to determine status
	Silver Lamprey	<i>Ichthyomyzon unicuspis</i>	SU, data deficient. No known spawning occurrences and few records
	Black Buffalo	<i>Ictiobus niger</i>	SU, data deficient. Recently expanded into PA but few records; some Identification problems. Needs further review
	Blacknose Shiner	<i>Notropis heterolepis</i>	SU, data deficient. Status uncertain; survey work needed
	Pugnose Minnow	<i>Opsopoeodus emiliae</i>	SU, data deficient. Known only from a few collections - status survey needed
Mammals	Evening Bat	<i>Nycticeius humeralis</i>	Data deficient
Bees	A Mining Bee	<i>Andrena daeckei</i>	SU, data deficient
Crayfishes	Devil Crawfish	<i>Cambarus diogenes</i>	Data deficient
	Upland Burrowing Crayfish	<i>Cambarus dubius</i>	Data deficient
	Blue Crayfish	<i>Cambarus monongalensis</i>	SNR, data deficient, PA Responsibility. Species has not been systematically surveyed in over 100 years (see Ortmann 1906 for last systematic survey of the species in Pennsylvania)
	A Crayfish	<i>Cambarus robustus</i>	Data deficient
	Little Brown Mudbug	<i>Cambarus thomai</i>	Data deficient
	Northern Clearwater Crayfish	<i>Orconectes propinquus</i>	SNR, data deficient



DATA DEFICIENT			
Taxonomic Group	Common Name	Scientific Name	Justification
<b>Freshwater Snails</b>	Disk Gyro	<i>Gyraulus circumstriatus</i>	SU, data deficient
<b>Mayflies</b>	Small Eastern Blue-winged Olive	<i>Attenella attenuata</i>	SNR, data deficient
	Little Western Blue-winged olive	<i>Attenella margarita</i>	SNR, data deficient
<b>Moths, Dagger</b>	A Noctuid Moth	<i>Acronicta lanceolaria</i>	SU, data deficient
<b>Moths, Erebid</b>	A Noctuid Moth	<i>Renia sp 1 nr discoloralis</i>	SU, data deficient
<b>Moths, Geometrids</b>	A Geometrid Moth	<i>Cyclophora nanaria</i>	SU, data deficient
	November Moth	<i>Epirrita autumnata henshawi</i>	SU, data deficient
<b>Moths, Giant Silkworm and Royal</b>	Nevada Buckmoth	<i>Hemileuca nevadensis</i>	SU, data deficient
	Midwestern Fen Buckmoth	<i>Hemileuca nevadensis ssp 3</i>	SU, data deficient
<b>Moths, Noctuid</b>	A Noctuid Moth	<i>Bagisara gulfare</i>	SU, data deficient
	Pink Star Moth	<i>Derrima stellata</i>	SU, data deficient
		<i>Elaphria cornutinis</i>	SU, data deficient
	Violet Dart Moth	<i>Euxoa violaris</i>	SNA, data deficient
<b>Moths, Papaipema</b>	Columbine Borer	<i>Papaipema leucostigma</i>	SNA, data deficient
<b>Moths, Tiger</b>	Lichen Moth	<i>Crambidia sp near cephalica</i>	SNA, data deficient
<b>Moths, Underwing</b>	Meske's Underwing	<i>Catocala meskei</i>	SU, data deficient



DATA DEFICIENT			
<b>Other Insects</b>	Earwig Scorpionfly	<i>Merope tuber</i>	SU, data deficient
<b>Taxonomic Group</b>	<b>Common Name</b>	<b>Scientific Name</b>	<b>Justification</b>
<b>Other Invertebrates</b>	A Freshwater Sponge	<i>Spongilla lacustris</i>	SU, data deficient
	Blue Crab	<i>Callinectes sapidus</i>	Data deficient
<b>Spiders</b>	Snetsinger's Purseweb Spider	<i>Atypus snetsingeri</i>	SU. Considered a PA endemic, or, if report from across NJ border are accurate, a responsibility species. However, there are suspicions that this might be an introduced species; because of the tiny global range, next to a large city, a hemisphere away from its congeners, and the fact that it was not noticed by earlier researchers. Further research is needed to confirm as a native species.
<b>Stoneflies</b>	Tiny Stone	<i>Perlesta nitida</i>	Data deficient
	Teaysia Stone	<i>Perlesta teaysia</i>	Data deficient
	Spiny Salmonfly	<i>Pteronarcys comstocki</i>	SNR, data deficient
<b>Terrestrial Snails</b>	Appalachian Thorn	<i>Carychium clappi</i>	SNR, data deficient
	Suboval Ambersnail	<i>Catinella vermeta</i>	SNR, data deficient
	Forest Disc	<i>Discus whitneyi</i>	SNR, data deficient
	Bluegrass Snaggletooth	<i>Gastrocopta clappi</i>	SNR, data deficient
	Crested Snaggletooth	<i>Gastrocopta cristata</i>	SNR, data deficient
	Wing Snaggletooth	<i>Gastrocopta procera</i>	SNR, data deficient
	Great Lakes Snaggletooth	<i>Gastrocopta similis</i>	SNR, data deficient
	Spiral Mountain	<i>Glyphyalinia carolinensis</i>	SNR, data deficient



### DATA DEFICIENT

	Glyph		
	Hill Glyph	<i>Glyphyalinia cumberlandiana</i>	SNR, data deficient
	Depressed Glyph	<i>Glyphyalinia virginica</i>	SNR, data deficient
	Southeastern Gem	<i>Hawaiiia alachuana</i>	SNR, data deficient
	Tight Coil	<i>Helicodiscus notius</i>	SNR, data deficient
	Shagreen	<i>Inflectarius inflectus</i>	SNR, data deficient
	Yellow Globelet	<i>Mesodon clausus</i>	SNR, data deficient
	Proud Globe	<i>Mesodon elevatus</i>	SNR, data deficient
	Sealed Globelet	<i>Mesodon mitchellianus</i>	SNR, data deficient
	Oval Ambersnail	<i>Novisuccinea ovalis</i>	SNR, data deficient
		<i>Oxyloma decampi gouldi</i>	SNR, data deficient
	Blunt Ambersnail	<i>Oxyloma retusum</i>	SNR, data deficient
		<i>Pallifera pennsylvanicus</i>	SNR, data deficient
	Carolina Mantleslug	<i>Philomycus carolinianus</i>	SNR, data deficient
	Brown Walker	<i>Pomatiopsis cincinnatiensis</i>	SNR, data deficient
	Inland Slitmouth	<i>Stenotrema stenotrema</i>	SNR, data deficient
	Eightfold Pincone	<i>Strobilops affinis</i>	SNR, data deficient
		<i>Succinea aurea</i>	SNR, data deficient
	Penn Ambersnail	<i>Succinea pennsylvanica</i>	SNR, data deficient
	Santa Rita Ambersnail	<i>Succinea grosvenori</i>	SNR, data deficient





### DATA DEFICIENT

Xeric Ambersnail	<i>Succinea indiana</i>	SNR, data deficient
Mimic Threetooth	<i>Triodopsis fallax</i>	SNR, data deficient
Budded Threetooth	<i>Triodopsis tennesseensis</i>	SNR, data deficient
Trumpet Vallonia	<i>Vallonia parvula</i>	SNR, data deficient
Glossy Dome	<i>Ventridens acerra</i>	SNR, data deficient
Perforate Dome	<i>Ventridens demissus</i>	SNR, data deficient
Throaty Dome	<i>Ventridens gularis</i>	SNR, data deficient
Tapered Vertigo	<i>Vertigo elatior</i>	SNR, data deficient
Bladetooth Wedge	<i>Xolotrema fosteri</i>	SNR, data deficient
Sharp Wedge	<i>Xolotrema obstrictum</i>	SNR, data deficient



## Species of Greatest Conservation Need Prioritizations, 2015-2025

**Table 4.** Priority scores for Species of Greatest Conservation Need in Pennsylvania (2015-2025), by prioritization category. 1 = top priority (**red**), 6 = lowest priority (**green**). Species scoring a 1, 2, or 3 in any category are the highest priorities for focused conservation action. <sup>R</sup> Pennsylvania responsibility species.

*Category 1:* Contribute to the conservation of globally or regionally important species. *Category 2:* Prevent common species from becoming at risk. *Category 3:* Maintain rare native species. *Category 4:* Reduce knowledge gaps to better assess conservation status of species. See Chapter 1 for methods. For birds, B = breeding, M = migrant, W = wintering population.

BIRDS						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Tundra Swan <sup>R</sup> - M	<i>Cygnus columbianus</i>	G5S3M	4	1	4	6
American Black Duck - B	<i>Anas rubripes</i>	G5S3	5	2	5	6
American Black Duck - M	<i>Anas rubripes</i>	G5S3M	5	2	5	6
American Black Duck - W	<i>Anas rubripes</i>	G5S4W	6	2	6	6
Blue-winged Teal	<i>Anas discors</i>	G5S1	4	6	2	6
Green-winged Teal	<i>Anas crecca</i>	G5S1	3	5	1	6
Lesser Scaup - M	<i>Aythya affinis</i>	G5S5M	6	6	6	6
Long-tailed Duck - M	<i>Clangula hyemalis</i>	G5S4M	4	4	5	6
Long-tailed Duck - W	<i>Clangula hyemalis</i>	G5S4W	4	4	5	6
Ruffed Grouse - B	<i>Bonasa umbellus</i>	G5S4	4	1	5	6
Ruffed Grouse - W	<i>Bonasa umbellus</i>	G5S4W	6	3	5	6
Pied-billed Grebe	<i>Podilymbus podiceps</i>	G5S2	3	4	2	5
Horned Grebe - W	<i>Podiceps auritus</i>	G5S3W	6	2	3	5
Red-necked Grebe - W	<i>Podiceps grisegena</i>	G5S3W	6	3	3	5
American Bittern	<i>Botaurus lentiginosus</i>	G4S2	3	5	3	6
Least Bittern	<i>Ixobrychus exilis</i>	G5S2	4	5	3	6



BIRDS						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Great Egret	<i>Ardea alba</i>	G5S2	4	6	3	6
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	G5S2	4	5	3	6
Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>	G5S1	4	5	2	6
Osprey	<i>Pandion haliaetus</i>	G5S3	4	1	3	5
Bald Eagle - B	<i>Haliaeetus leucocephalus</i>	G5S3	4	1	3	5
Bald Eagle - W	<i>Haliaeetus leucocephalus</i>	G5S5W	6	5	5	5
Northern Harrier	<i>Circus cyaneus</i>	G5S2	4	5	3	6
Sharp-shinned Hawk - B	<i>Accipiter striatus</i>	G5S3	4	2	4	6
Sharp-shinned Hawk - M	<i>Accipiter striatus</i>	G5S5M	6	5	6	6
Northern Goshawk - B	<i>Accipiter gentilis</i>	G5S2	5	6	4	6
Northern Goshawk - M	<i>Accipiter gentilis</i>	G5S2M	6	6	4	6
Northern Goshawk - W	<i>Accipiter gentilis</i>	G5S3W	6	2	5	6
Broad-winged Hawk - B	<i>Buteo platypterus</i>	G5S4	4	1	5	6
Broad-winged Hawk - M	<i>Buteo platypterus</i>	G5S5M	6	5	6	6
Golden Eagle <sup>R</sup> - M	<i>Aquila chrysaetos</i>	G5S4M	4	2	4	5
Golden Eagle - W	<i>Aquila chrysaetos</i>	G5S4W	4	2	4	5
King Rail	<i>Rallus elegans</i>	G4S1	4	6	3	6
Virginia Rail	<i>Rallus limicola</i>	G5S3?	4	1	3	5
Sora	<i>Porzana carolina</i>	G5S3	4	1	4	6
Common Gallinule	<i>Gallinula galeata</i>	G5S2	4	5	3	6
American Coot	<i>Fulica americana</i>	G5S2	4	6	3	6
Piping Plover - B	<i>Charadrius melodus</i>	G3SU	2	5	2	3
Piping Plover - M	<i>Charadrius melodus</i>	G3SUM	2	5	2	3
Spotted Sandpiper	<i>Actitis macularius</i>	G5S3	4	1	3	5
Upland Sandpiper	<i>Bartramia longicauda</i>	G5S2	4	5	3	6



BIRDS						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Red Knot - M	<i>Calidris canutus</i>	G4S2M	2	4	2	6
Wilson's Snipe	<i>Gallinago delicata</i>	G5S3	4	1	4	6
American Woodcock	<i>Scolopax minor</i>	G5S4	4	1	5	6
Black Tern	<i>Chlidonias niger</i>	G4S1	4	6	3	6
Common Tern	<i>Sterna hirundo</i>	G5SU	5	6	3	3
Barn Owl	<i>Tyto alba</i>	G5S2	4	5	3	6
Long-eared Owl - B	<i>Asio otus</i>	G5S1	5	6	3	6
Long-eared Owl - W	<i>Asio otus</i>	G5S3W	6	2	5	6
Short-eared Owl - B	<i>Asio flammeus</i>	G5S1	5	6	3	6
Short-eared Owl - W	<i>Asio flammeus</i>	G5S3W	6	5	5	6
Northern Saw-whet Owl - B	<i>Aegolius acadicus</i>	G5S3	4	2	4	6
Northern Saw-whet Owl - M	<i>Aegolius acadicus</i>	G5S3M	6	4	4	6
Common Nighthawk	<i>Chordeiles minor</i>	G5S3	4	1	4	6
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	G5S3	4	1	4	6
Chimney Swift	<i>Chaetura pelagica</i>	G5S3	4	1	4	6
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	G5S4	6	3	4	5
American Kestrel	<i>Falco sparverius</i>	G5S4	4	1	5	6
Peregrine Falcon	<i>Falco peregrinus</i>	G4S1	3	5	2	6
Olive-sided Flycatcher	<i>Contopus cooperi</i>	G4SU	6	6	3	3
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	G5S1	4	6	2	6
Willow Flycatcher	<i>Empidonax traillii</i>	G5S4	4	1	5	6
Loggerhead Shrike	<i>Lanius ludovicianus</i>	G4S1	4	6	3	6
Purple Martin	<i>Progne subis</i>	G5S3	4	2	4	6
Bank Swallow	<i>Riparia riparia</i>	G5S3	4	1	4	6
Brown Creeper	<i>Certhia americana</i>	G5S4	4	1	5	6



BIRDS						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Winter Wren	<i>Troglodytes hiemalis</i>	G5S4	4	1	5	6
Sedge Wren	<i>Cistothorus platensis</i>	G5S1	4	5	2	6
Marsh Wren	<i>Cistothorus palustris</i>	G5S2	3	4	2	5
Swainson's Thrush	<i>Catharus ustulatus</i>	G5S3	4	1	4	6
Wood Thrush <sup>R</sup> - B	<i>Hylocichla mustelina</i>	G5S4	4	1	5	6
Wood Thrush - M	<i>Hylocichla mustelina</i>	G5S4M	6	3	5	6
Gray Catbird <sup>R</sup>	<i>Dumetella carolinensis</i>	G5S5	6	4	5	5
Louisiana Waterthrush	<i>Parkesia motacilla</i>	G5S4	4	1	4	5
Northern Waterthrush	<i>Parkesia noveboracensis</i>	G5S2	5	6	4	6
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	G4S2	3	5	3	6
Blue-winged Warbler	<i>Vermivora cyanoptera</i>	G5S4	4	1	5	6
Black-and-white Warbler	<i>Mniotilta varia</i>	G5S4	4	1	5	6
Prothonotary Warbler	<i>Protonotaria citrea</i>	G5S3	6	3	4	6
Nashville Warbler	<i>Oreothlypis ruficapilla</i>	G5S3	4	1	3	5
Kentucky Warbler	<i>Geothlypis formosa</i>	G5S4	4	1	5	6
Hooded Warbler - M	<i>Setophaga citrina</i>	G5S4M	6	2	4	5
Cerulean Warbler <sup>R</sup> - B	<i>Setophaga cerulea</i>	G4S3	3	1	4	6
Cerulean Warbler - M	<i>Setophaga cerulea</i>	G4S4M	3	3	5	6
Blackburnian Warbler - M	<i>Setophaga fusca</i>	G5S4M	6	3	5	6
Blackpoll Warbler	<i>Setophaga striata</i>	G5S1	4	5	2	6
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	G5S4	4	1	5	6
Prairie Warbler	<i>Setophaga discolor</i>	G5S3	4	1	4	6
Black-throated Green Warbler	<i>Setophaga virens</i>	G5S3	4	1	4	6
Canada Warbler	<i>Cardellina canadensis</i>	G5S4	4	1	4	5



BIRDS						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Yellow-breasted Chat	<i>Icteria virens</i>	G5S2	4	5	3	6
Eastern Towhee - M	<i>Pipilo erythrophthalmus</i>	G5S4M	6	3	5	6
Field Sparrow	<i>Spizella pusilla</i>	G5S3	4	1	4	6
Vesper Sparrow	<i>Pooecetes gramineus</i>	G5S2	4	5	3	6
Savannah Sparrow	<i>Passerculus sandwichensis</i>	G5S3	4	2	4	6
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	G5S3	4	1	4	6
Henslow's Sparrow	<i>Ammodramus henslowii</i>	G4S3	3	1	4	6
White-throated Sparrow	<i>Zonotrichia albicollis</i>	G5S3	4	2	4	6
Summer Tanager	<i>Piranga rubra</i>	G5S1	5	6	3	6
Scarlet Tanager <sup>R</sup>	<i>Piranga olivacea</i>	G5S4	4	1	4	5
Dickcissel	<i>Spiza americana</i>	G5S3	4	1	4	6
Bobolink	<i>Dolichonyx oryzivorus</i>	G5S4	4	1	4	6
Eastern Meadowlark	<i>Sturnella magna</i>	G5S3	4	1	4	6
Rusty Blackbird - M	<i>Euphagus carolinus</i>	G4S3M	3	1	3	6
Rusty Blackbird - W	<i>Euphagus carolinus</i>	G4S5W	3	4	5	6
Red Crossbill - B	<i>Loxia curvirostra</i>	G5S1	4	5	2	6
Red Crossbill - W	<i>Loxia curvirostra</i>	G5S3W	6	4	4	6
Pine Siskin	<i>Spinus pinus</i>	G5S3	4	1	3	6



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MAMMALS						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Eastern Fox Squirrel <sup>R</sup>	<i>Sciurus niger vulpinus</i>	G5T4T5S2	3	5	3	6
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	G5S1	4	6	2	6
Rock Vole	<i>Microtus chrotorrhinus</i>	G4S3	5	4	4	6
Allegheny Woodrat	<i>Neotoma magister</i>	G3G4S2	2	5	3	6
Praire Deer Mouse	<i>Peromyscus maniculatus bairdii</i>	G5T5S3S4	6	2	4	5
Appalachian Cottontail	<i>Sylvilagus obscurus</i>	G4S1S2	3	5	2	3
North American Least Shrew	<i>Cryptotis parva</i>	G5S1	4	5	2	6
Long-tailed Shrew <sup>R</sup>	<i>Sorex dispar</i>	G4S4	3	2	4	5
Northern Water Shrew	<i>Sorex palustris albibarbis</i>	G5T5S3	4	1	4	6
West Virginia Water Shrew	<i>Sorex palustris punctulatus</i>	G5T3S2	2	5	3	6
Maryland Shrew <sup>R</sup>	<i>Sorex cinereus fontinalis</i>	G4QS5	3	5	6	6
Big Brown Bat	<i>Eptesicus fuscus</i>	G5S2S3	4	5	3	4
Tricolored Bat	<i>Perimyotis subflavus</i>	G3S1	2	5	2	6
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	G2G3S1	1	5	2	6
Eastern Small-footed Bat	<i>Myotis leibii</i>	G1G3S2	2	5	3	6
Indiana Bat	<i>Myotis sodalis</i>	G2S1	2	6	3	6
Little Brown Bat	<i>Myotis lucifugus</i>	G3S1	2	5	2	6
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	G5S1	6	5	2	6
Eastern Spotted Skunk	<i>Spilogale putorius</i>	G4S2	3	6	4	6



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AMPHIBIANS						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Eastern Spadefoot	<i>Scaphiopus holbrookii</i>	G5S2S3	6	5	3	4
Fowler's Toad	<i>Anaxyrus fowleri</i> (PFBC)	G5S3S4	6	3	4	5
Northern Cricket Frog	<i>Acris crepitans</i>	G5S1	4	5	2	6
Cope's Gray Treefrog	<i>Hyla chrysoscelis</i>	G5S1	6	6	2	6
Mountain Chorus Frog	<i>Pseudacris brachyphona</i>	G5S2	4	5	3	6
Upland Chorus Frog	<i>Pseudacris feriarum</i>	G5S1	6	6	2	6
New Jersey Chorus Frog	<i>Pseudacris kalmi</i>	G4S1	3	5	2	6
Western Chorus Frog	<i>Pseudacris triseriata</i>	G5S1	4	6	2	6
Northern Leopard Frog	<i>Lithobates pipiens</i> (PFBC)	G5S2S3	6	5	3	4
Southern Leopard Frog	<i>Lithobates sphenoccephalus utricularius</i> (PFBC)	G5TNRS1	4	6	2	6
Eastern Hellbender	<i>Cryptobranchus alleganiensis alleganiensis</i>	G3S2S3	2	5	3	4
Mudpuppy	<i>Necturus maculosus</i>	G5S3	6	3	4	6
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	G5S3	6	3	4	6
Blue-spotted Salamander	<i>Ambystoma laterale</i>	G5S1	4	5	2	6
Marbled Salamander	<i>Ambystoma opacum</i>	G5S3	6	3	4	6
Green Salamander	<i>Aneides aeneus</i>	G3S2	2	5	3	6
Northern Ravine Salamander	<i>Plethodon electromorphus</i>	G5S2S3	6	6	3	5
Eastern Mud Salamander	<i>Pseudotriton montanus montanus</i>	G5T5S1	6	6	3	6





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REPTILES						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Eastern Mud Turtle	<i>Kinosternon subrubrum subrubrum</i>	G5T5S1	5	6	3	6
Spotted Turtle	<i>Clemmys guttata</i>	G5S3S4	4	2	3	5
Wood Turtle	<i>Glyptemys insculpta</i>	G3S3S4	2	1	4	5
Bog Turtle	<i>Glyptemys muhlenbergii</i>	G3S2	2	5	3	6
Blanding's Turtle	<i>Emydoidea blandingii</i>	G4S1	3	5	2	6
Eastern Redbelly Turtle	<i>Pseudemys rubriventris</i>	G5S2S3	4	5	3	4
Eastern Box Turtle	<i>Terrapene carolina carolina</i>	G5T5S3S4	4	1	3	5
Eastern Fence Lizard	<i>Sceloporus undulatus</i>	G5S3	6	4	4	6
Northern Coal Skink	<i>Plestiodon anthracinus anthracinus</i>	G5T5S3	4	3	4	6
Broadhead Skink	<i>Plestiodon laticeps</i>	G5S2	6	5	3	6
Eastern Worm Snake	<i>Carphophis amoenus amoenus (PFBC)</i>	G5T5S2	6	6	3	6
Kirtland's Snake	<i>Clonophis kirtlandii</i>	G2SH	3	5	2	6
Eastern Hognose Snake	<i>Heterodon platirhinos</i>	G5S3S4	6	3	4	5
Rough Green Snake	<i>Opheodrys aestivus</i>	G5S1S2	4	5	2	3
Queen Snake	<i>Regina septemvittata</i>	G5S3S4	6	3	4	5
Eastern Ribbonsnake	<i>Thamnophis sauritus</i>	G5T5S3	6	3	4	6
Shorthead Garter Snake <sup>R</sup>	<i>Thamnophis brachystoma</i>	G4S4	3	3	5	6
Eastern Smooth Earth Snake	<i>Virginia valeriae valeriae (PFBC)</i>	G5T5SH	6	6	2	6
Mountain Earth Snake	<i>Virginia valeria pulchra (PFBC)</i>	G5T3T4S3	2	3	4	6
Copperhead	<i>Agkistrodon contortrix</i>	G5S3S4	6	3	4	5
Timber Rattlesnake	<i>Crotalus horridus</i>	G4S3S4	3	1	4	5
Eastern Massasauga	<i>Sistrurus catenatus catenatus</i>	G3G4T3QS1	2	6	2	6



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FISHES						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Ohio Lamprey	<i>Ichthyomyzon bdellium</i>	G3G4S4	3	2	4	6
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	G4S1	4	6	3	6
Mountain Brook Lamprey <sup>R</sup>	<i>Ichthyomyzon greeleyi</i>	G4S4	3	2	4	5
Least Brook Lamprey	<i>Lampetra aepyptera</i>	G5S4	6	2	4	6
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	G3S1	2	5	2	6
Lake Sturgeon	<i>Acipenser fulvescens</i>	G3G4S1	4	5	2	6
Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>	G3S2	2	5	3	6
Paddlefish	<i>Polyodon spathula</i>	G4SX	4	6	3	6
Spotted Gar	<i>Lepisosteus oculatus</i>	G5S1	6	6	2	6
Bowfin	<i>Amia calva</i>	G5S4	6	2	4	6
American Eel	<i>Anguilla rostrata</i>	G4S5	3	5	6	6
Blueback Herring	<i>Alosa aestivalis</i>	G3G4S3	2	1	4	6
Hickory Shad	<i>Alosa mediocris</i>	G4S2	3	5	3	6
Alewife	<i>Alosa pseudoharengus</i>	G5S3	4	1	4	6
American Shad	<i>Alosa sapidissima</i>	G5S4	6	3	5	6
Northern Redbelly Dace	<i>Chrosomus eos</i>	G5S1	6	6	2	6
Southern Redbelly Dace	<i>Chrosomus erythrogaster</i>	G5S2	6	6	3	6
Redside Dace <sup>R</sup>	<i>Clinostomus elongatus</i>	G3G4S4	3	2	4	5
Streamline Chub <sup>R</sup>	<i>Erimystax dissimilis</i>	G4S4S5	5	2	4	5
Gravel Chub	<i>Erimystax x-punctatus</i>	G4SU	6	6	3	3



FISHES						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Tonguetied Minnow <sup>R</sup>	<i>Exoglossum laurae</i>	G4S4	3	2	4	5
Cutlip Minnow <sup>R</sup>	<i>Exoglossum maxillingua</i>	G5S5	4	4	5	5
Bigmouth Shiner	<i>Hybopsis dorsalis</i>	G5S2	6	6	3	6
Redfin Shiner	<i>Lythrurus umbratilis</i>	G5S2	6	6	3	6
Allegheny Pearl Dace <sup>R</sup>	<i>Margariscus margarita</i>	G4S4	5	2	4	5
Hornyhead Chub	<i>Nocomis biguttatus</i>	G5S1	6	6	2	6
Comely Shiner <sup>R</sup>	<i>Notropis amoenus</i>	G5S4	4	3	5	6
Bridle Shiner	<i>Notropis bifrenatus</i>	G3S1	2	5	2	6
River Shiner	<i>Notropis blennioides</i>	G5SU	6	6	2	3
Ghost Shiner	<i>Notropis buchmanii</i>	G5SU	5	5	1	2
Ironcolor Shiner	<i>Notropis chalybaeus</i>	G4S1	3	6	2	6
Blackchin Shiner	<i>Notropis heterodon</i>	G5S1	6	6	2	6
Swallowtail Shiner <sup>R</sup>	<i>Notropis procne</i>	G5S4	4	3	5	6
Longnose Sucker	<i>Catostomus commersoni</i>	G5S1	5	6	3	6
Bigmouth Buffalo	<i>Ictiobus cyprinellus</i>	G5S1	6	6	2	6
Spotted Sucker	<i>Minytremia melanops</i>	G5S2	5	5	2	6
White Catfish	<i>Ameiurus catus</i>	G5S3	6	2	4	6
Black Bullhead	<i>Ameiurus melas</i>	G5SU	6	6	3	3
Blue Catfish	<i>Ictalurus furcatus</i>	G5SX	6	6	2	6
Mountain Madtom	<i>Noturus eleutherus</i>	G4S4	5	3	4	6
Tadpole Madtom	<i>Noturus gyrinus</i>	G5S1	5	5	1	6
Margined Madtom <sup>R</sup>	<i>Noturus insignis</i>	G5S5	6	4	5	5
Brindled Madtom	<i>Noturus miurus</i>	G5S2	3	5	2	6
Northern Madtom	<i>Noturus stigmosus</i>	G3S4	3	2	4	6



FISHES						
Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Cisco	<i>Coregonus artedi</i>	G5SU	6	6	3	3
Brook Trout	<i>Salvelinus fontinalis</i>	G5S4	6	2	4	6
Central Mudminnow	<i>Umbra limi</i>	G5S4	6	3	4	6
Eastern Mudminnow	<i>Umbra pygmaea</i>	G5S3	4	2	3	6
Burbot	<i>Lota lota</i>	G5S3	4	1	3	6
Allegheny Burbot <sup>R</sup>	<i>Lota sp. cf. lota</i>	G5S3	Unable to assess	4	2	5
Brook Stickleback	<i>Culaea inconstans</i>	G5S4	6	3	4	6
Threespine Stickleback	<i>Gasterosteus aculeatus</i>	G5S1	4	6	2	6
Checkered Sculpin	<i>Cottus sp. cf. cognatus</i>	G4QS2	5	5	3	6
Banded Sunfish	<i>Enneacanthus obesus</i>	G5SH	6	6	3	6
Warmouth	<i>Lepomis gulosus</i>	G5S3	6	2	3	6
Longear Sunfish	<i>Lepomis megalotis</i>	G5S1	5	6	3	6
Eastern Sand Darter	<i>Ammocrypta pellucida</i>	G4S1	3	5	2	6
Iowa Darter	<i>Etheostoma exile</i>	G5S2	6	6	3	6
Spotted Darter <sup>R</sup>	<i>Etheostoma maculatum</i>	G2G3S4	1	2	4	6
Tessellated Darter <sup>R</sup>	<i>Etheostoma olmstedii</i>	G5S5	6	4	5	5
Tippecanoe Darter <sup>R</sup>	<i>Etheostoma tippecanoe</i>	G3G4S4	3	2	4	5
Variagate Darter <sup>R</sup>	<i>Etheostoma variatum</i>	G5S5	4	4	5	5
Chesapeake Logperch <sup>R</sup>	<i>Percina bimaculata</i>	G1G2S1	1	5	2	6
Longhead Darter <sup>R</sup>	<i>Percina macrocephala</i>	G3S4	1	2	4	5
Shield Darter <sup>R</sup>	<i>Percina peltata</i>	G5S5	4	4	5	5



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INVERTEBRATES							
Taxonomic Group	Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
<b>Amphipods</b>	Pennsylvania Cave Amphipod <sup>R</sup>	<i>Crangonyx dearolfi</i>	G2S3	1	3	4	6
	Allegheny Cave Amphipod <sup>R</sup>	<i>Stygobromus allegheniensis</i>	G5S3S4	4	1	4	5
	Biggers' Cave Amphipod	<i>Stygobromus biggersi</i>	G2G4S1	2	6	2	6
	Franz's Cave Amphipod	<i>Stygobromus franzi</i>	G3G4S1	2	6	2	6
	Shenandoah Valley Cave Amphipod	<i>Stygobromus gracilipes</i>	G3G4S1	2	6	2	6
	Pizzini's Cave Amphipod	<i>Stygobromus pizzinii</i>	G3G4S2S3	2	6	3	6
	Stellmack's Cave Amphipod	<i>Stygobromus stellmacki</i>	G1G2S1	1	5	2	6
	Potomac Groundwater Amphipod	<i>Stygobromus tenuis potomacus</i>	G4T4S1	3	6	2	6
		<i>Gammarus cohabitus</i>	GNRS1S2	Unable to assess	5	2	2
<b>Bees</b>	Yellow-banded Bumblebee <sup>R</sup>	<i>Bombus terricola</i>	G2G4S1S3	4	5	2	3
	Rusty-patched Bumblebee	<i>Bombus affinis</i>	G1S1	1	6	2	6
<b>Bumble Bees</b>	Ashton's Cuckoo Bumble Bee	<i>Bombus ashtoni</i>	GHS1	3	6	2	6
<b>Beetles, Ground</b>	Pennsylvania Cave Beetle <sup>R</sup>	<i>Pseudanophthalmus sp. nov.</i>	GNRS1	Unable to assess	5	2	6
<b>Beetles, Other</b>	Six-banded Longhorn Beetle	<i>Dryobius sexnotatus</i>	GNRS1	Unable to assess	6	2	6
	American Burying Beetle	<i>Nicrophorus americanus</i>	G2G3SX	1	6	2	6
<b>Beetles, Tiger</b>	Appalachian Tiger Beetle	<i>Cicindela ancocisconensis</i>	G3S1S3	2	5	2	3
	Big Sand Tiger Beetle	<i>Cicindela formosa</i>	G5S1	6	6	2	6
	Hairy-necked Tiger Beetle	<i>Cicindela hirticollis</i>	G5S1	6	6	2	6
	Ghost Tiger Beetle	<i>Ellipsoptera lepida</i>	G3G4SH	4	5	2	6



INVERTEBRATES							
Taxonomic Group	Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Beetles, Tiger	Cobblestone Tiger Beetle	<i>Cicindela marginipennis</i>	G2S1	1	5	2	6
	Northern Barrens Tiger Beetle	<i>Cicindela patruela</i>	G3S2S3	4	5	3	5
	Festive Tiger Beetle	<i>Cicindela scutellaris</i>	G5SH	6	6	2	6
	Splendid Tiger Beetle	<i>Cicindela splendida</i>	G5S1S2	6	6	2	4
	One-spotted Tiger Beetle	<i>Cicindela unipunctata</i>	G4G5S1S3	5	5	2	3
Butterflies & Skippers	Roadside Skipper	<i>Amblyscirtes vialis</i>	G4S2S3	5	6	3	4
	Dusted Skipper	<i>Atrytonopsis hianna</i>	G4G5S1S2	5	6	2	2
	Golden-banded Skipper	<i>Autochton cellus</i>	G4SH	5	6	2	6
	Arctic Skipper	<i>Carterocephalus palaemon mandan</i>	G5T5S3	6	4	4	6
	Columbine Duskywing	<i>Erynnis lucilius</i>	G4S1	5	6	2	6
	Mottled Duskywing	<i>Erynnis martialis</i>	G3S1	2	6	2	6
	Persius Duskywing	<i>Erynnis persius persius</i>	G5T1T3S1	1	6	2	6
	Two-spotted Skipper	<i>Euphyes bimaacula</i>	G4S2S3	5	6	3	4
	Black Dash	<i>Euphyes conspicua</i>	G4S3S4	5	4	4	5
	Dion Skipper	<i>Euphyes dion</i>	G4S3	5	4	4	6
	Leonard's Skipper	<i>Hesperia leonardus</i>	G4S3S4	5	4	4	5
	Cobweb Skipper	<i>Hesperia metea</i>	G4S2S3	5	6	3	4
	Indian Skipper	<i>Hesperia sassacus</i>	G4G5S3S4	5	4	4	5
	Swarthy Skipper	<i>Nastra lherminier</i>	G5S3S4	6	4	4	5
	Mulberry Wing	<i>Poanes massasoit</i>	G4S2S3	5	6	3	4
	Broad-winged Skipper	<i>Poanes viator viator</i>	G5T4S2S3	5	6	3	4
	Long Dash	<i>Polites mystic</i>	G5S3S4	6	4	4	5
	Appalachian Grizzled Skipper <sup>R</sup>	<i>Pyrgus wyandot</i>	G1G2QS1	1	5	2	6
	Southern Cloudywing	<i>Thorybes bathyllus</i>	G5S3S4	6	4	4	6



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Taxonomic Group	Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Butterflies & Skippers	Brown Elfin	<i>Callophrys augustinus</i>	G5S3S4	6	4	4	5
	Juniper Hairstreak	<i>Callophrys gryneus</i>	G5S3S4	6	4	4	5
	Henry's Elfin	<i>Callophrys henrici</i>	G5S2S3	6	6	3	4
	Frosted Elfin	<i>Callophrys irus</i>	G3S1S2	2	6	2	2
	Hoary Elfin	<i>Callophrys polios</i>	G5SH	6	6	2	6
	Appalachian Azure	<i>Celastrina neglectamajor</i>	G4S3S4	5	2	4	5
	Dusky Azure	<i>Celastrina nigra</i>	G4SH	5	6	2	6
	Early Hairstreak	<i>Erora laeta</i>	GUS1S2	1	6	2	6
	Harvester	<i>Feniseca tarquinius</i>	G4S3S4	5	4	4	5
	Silvery Blue	<i>Glaucopsyche lygdamus nittanyensis</i>	G5T3T4S1S2	4	6	2	2
	Bog Copper	<i>Lycaena epixanthe</i>	G4G5S2	3	6	3	6
	Acadian Hairstreak	<i>Satyrium acadica</i>	G5S2S3	6	6	3	4
	Edwards' Hairstreak	<i>Satyrium edwardsii</i>	G4S3S4	3	4	4	5
	Northern Hairstreak	<i>Satyrium favonius ontario</i>	G4T4S3	5	2	4	6
	Coral Hairstreak	<i>Satyrium titus</i>	G5S3S4	6	4	4	5
	Silver-bordered Fritillary	<i>Boloria selene myrina</i>	G5T5S2S3	6	6	3	4
	Harris' Checkerspot	<i>Chlosyne harrisii</i>	G4S3	5	2	4	6
	Silvery Checkerspot	<i>Chlosyne nycteis</i>	G5S3S4	6	4	4	5
	Baltimore	<i>Euphydryas phaeton</i>	G4S3	5	2	4	6
	Northern Crescent	<i>Phyciodes cocyta</i>	G5S3	6	4	4	6
Green Comma	<i>Polygonia faunus</i>	G5S1	6	6	2	6	
Eyed Brown	<i>Lethe eurydice</i>	G5S2S3	6	6	3	4	
Atlantis Fritillary	<i>Speyeria atlantis</i>	G5S3	6	4	4	6	
Regal Fritillary <sup>R</sup>	<i>Speyeria idalia</i>	G3S1	2	5	2	5	



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Butterflies & Skippers	Zebra Swallowtail	<i>Eurytides marcellus</i>	G5S3S4	6	4	4	5
	Falcate Orangetip	<i>Anthocharis midea</i>	G4G5S2	3	6	3	6
	Pink-edged Sulphur	<i>Colias interior</i>	G5S2	6	6	3	6
	Olympia Marble	<i>Euchloe olympia</i>	G4G5SH	5	6	2	6
	West Virginia White	<i>Pieris virginiensis</i>	G3?S2	2	6	3	6
	Northern Metalmark	<i>Calephelis borealis</i>	G3G4S1S2	4	6	2	2
	Bronze Copper	<i>Lycaena hylus</i>	G5S3S4	6	4	4	5
	Monarch	<i>Danaus plexippus</i>	G4S2S4	5	6	3	3
Caddisflies	Helma's Cheumatopsyche Caddisfly	<i>Cheumatopsyche helma</i>	G3S1S3	4	6	2	2
	Vannote's Cheumatopsyche Caddisfly <sup>R</sup>	<i>Cheumatopsyche vannotei</i>	GHS1S3	1	6	2	2
	A Ring-horn Micro-caddisfly	<i>Leucotrichia pictipes</i>	G5S3S4	6	4	4	5
	Alabama Long-horned Caddisfly	<i>Ceraclea alabamiae</i>	G1G3S1S3	3	6	2	2
	White-spotted Long-horned Caddisfly	<i>Ceraclea albosticta</i>	GHS3	3	4	4	6
	A Free-living Caddisfly	<i>Rhyacophila otica</i>	G3G4QS1S3	2	6	2	2
	Beloved Rainbow Caddisfly	<i>Agapetus iridis</i>	G5S1S3	6	6	2	2
Craneflies	Williams' Crane Fly	<i>Tipula williamsiana</i>	GNRS1S3	Unable to assess	6	2	3
	Allen's Crane Fly	<i>Limnophila alleni</i>	GNRS1S3	Unable to assess	6	2	3
	Marchand's Crane Fly	<i>Limnophila marchandi</i>	GNRS1S3	Unable to assess	6	2	3
Crayfishes	Spinycheek Crayfish	<i>Orconectes limosus</i>	G5S2	5	6	4	6
Dragonflies & Damselflies	Mottled Darner	<i>Aeshna clepsydra</i>	G4S3	5	4	4	6
	Lance-tipped Darner	<i>Aeshna constricta</i>	G5S3S4	6	4	4	6
	Spatterdock Darner	<i>Rhionaeschna mutata</i>	G4S3	5	4	4	6





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Taxonomic Group	Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
<b>Dragonflies &amp; Damselflies</b>	Comet Darner	<i>Anax longipes</i>	G5S2S3	6	6	3	5
	Taper-tailed Darner	<i>Gomphaeschna antilope</i>	G4SX	5	6	2	6
	Harlequin Darner	<i>Gomphaeschna furcillata</i>	G5S3	6	4	4	6
	Cyrano Darner	<i>Nasiaeschna pentacantha</i>	G5S2S3	6	6	3	5
	River Jewelwing	<i>Calopteryx aquabilis</i>	G5S3	6	4	4	6
	Superb Jewelwing	<i>Calopteryx amata</i>	G4S3	5	4	4	6
	Appalachian Jewelwing	<i>Calopteryx angustipennis</i>	G4SH	5	6	2	6
	Sparkling Jewelwing	<i>Calopteryx dimidiata</i>	G5SX	6	6	2	6
	Smoky Rubyspot	<i>Hetaerina titia</i>	G5SH	6	6	2	6
	Seepage Dancer	<i>Argia bipunctulata</i>	G4S1	3	6	2	6
	Blue-ringed Dancer	<i>Argia sedula</i>	G5S2	6	6	3	6
	Taiga Bluet	<i>Coenagrion resolutum</i>	G5S1S2	6	6	2	3
	Boreal Bluet	<i>Enallagma boreale</i>	G5S2S3	6	6	3	5
	Attenuated Bluet	<i>Enallagma daeckii</i>	G4SH	5	6	2	6
	Turquoise Bluet	<i>Enallagma divagans</i>	G5S3S4	6	4	4	6
	Atlantic Bluet	<i>Enallagma doubledayi</i>	G5SH	6	6	2	6
	Big Bluet	<i>Enallagma durum</i>	G5S2	6	6	3	6
	New England Bluet	<i>Enallagma laterale</i>	G3G4S1S2	4	6	2	3
	Furtive Forktail	<i>Ischnura prognata</i>	G4SX	5	6	2	6
	Rambur's Forktail	<i>Ischnura ramburii</i>	G5S1S2	6	6	2	3
	Southern Sprite	<i>Nehalennia integricollis</i>	G5SH	6	6	2	6
	Brown Spiketail	<i>Cordulegaster bilineata</i>	G5S1S2	6	6	2	3
	American Emerald	<i>Cordulia shurtleffii</i>	G5S3S4	6	4	4	6
Petite Emerald	<i>Dorocordulia lepida</i>	G5S2S3	6	6	3	5	
Slender Baskettail	<i>Epitheca costalis</i>	G5SH	6	6	2	6	



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<b>Dragonflies &amp; Damselflies</b>	Spiny Baskettail	<i>Epitheca spinigera</i>	G5S1S2	6	6	2	3
	Uhler's Sunfly	<i>Helocordulia uhleri</i>	G5S3S4	6	4	4	6
	Ski-tailed Emerald	<i>Somatochlora elongata</i>	G5S3	6	4	4	6
	Forcipate Emerald	<i>Somatochlora forcipata</i>	G5S2	4	5	3	6
	Incurvate Emerald	<i>Somatochlora incurvata</i>	G4S2	5	5	3	6
	Mocha Emerald	<i>Somatochlora linearis</i>	G5S2S3	6	6	3	5
	Brush-tipped Emerald	<i>Somatochlora walshii</i>	G5S3	6	4	4	6
	Williamson's Emerald	<i>Somatochlora williamsoni</i>	G5S1	4	6	2	6
	Lilypad Clubtail	<i>Arigomphus furcifer</i>	G5S3S4	6	4	4	6
	Spine-crowned Clubtail	<i>Gomphus abbreviatus</i>	G4S2S3	5	6	3	5
	Moustached Clubtail	<i>Gomphus adelphus</i>	G4S3S4	5	4	4	6
	Midland Clubtail	<i>Gomphus fraternus</i>	G5S2S4	6	6	3	4
	Splendid Clubtail	<i>Gomphus lineatifrons</i>	G4SH	5	6	2	6
	Rapids Clubtail	<i>Gomphus quadricolor</i>	G3G4S2S3	4	6	3	5
	Sable Clubtail	<i>Gomphus rogersi</i>	G4S3	5	4	4	6
	Septima's Clubtail <sup>R</sup>	<i>Gomphus septima delawarensis</i>	G2S1S2	3	5	2	2
	Skillet Clubtail	<i>Gomphus ventricosus</i>	G3SH	4	6	2	6
	Green-faced Clubtail	<i>Gomphus viridifrons</i>	G3G4S2	4	6	3	6
	Extra-striped Snaketail	<i>Ophiogomphus anomalus</i>	G4S2?	5	6	3	6
	Riffle Snaketail	<i>Ophiogomphus carolus</i>	G5S3S4	6	4	4	6
	Pygmy Snaketail	<i>Ophiogomphus howei</i>	G3SH	4	6	2	6
	Appalachian Snaketail	<i>Ophiogomphus incurvatus incurvatus</i>	G3T2T3S1	3	6	2	6
	Maine Snaketail	<i>Ophiogomphus mainensis</i>	G4S3S4	5	4	4	6
Common Sanddragon	<i>Progomphus obscurus</i>	G5S1S2	6	6	2	3	



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<b>Dragonflies &amp; Damselflies</b>	Riverine Clubtail	<i>Stylurus amnicola</i>	G4SH	5	6	2	6
	Elusive Clubtail	<i>Stylurus notatus</i>	G3S1S3	4	6	2	3
	Russet-tipped Clubtail	<i>Stylurus plagiatus</i>	G5S2S3	6	6	3	5
	Zebra Clubtail	<i>Stylurus scudderi</i>	G4S3	5	4	4	6
	Emerald Spreadwing	<i>Lestes dryas</i>	G5S3	6	4	4	6
	Amber-winged Spreadwing	<i>Lestes eurinus</i>	G4S3S4	5	4	4	6
	Martha's Pennant	<i>Celithemis martha</i>	G4SH	5	6	2	6
	Seaside Dragonlet	<i>Erythrodiplax berenice</i>	G5SH	6	6	2	6
	Little Blue Dragonlet	<i>Erythrodiplax minuscula</i>	G5SH	6	6	2	6
	Blue Corporal	<i>Ladona deplanata</i>	G5S3S4	6	4	4	6
	White Skimmer	<i>Ladona exusta</i>	G4S1	5	6	2	6
	Crimson-ringed Whiteface	<i>Leucorrhinia glacialis</i>	G5S3S4	6	4	4	6
	Belted Whiteface	<i>Leucorrhinia proxima</i>	G5S2S3	6	6	3	5
	Golden-winged Skimmer	<i>Libellula auripennis</i>	G5S2S3	6	6	3	5
	Bar-winged Skimmer	<i>Libellula axilena</i>	G5S1S2	6	6	2	3
	Yellow-sided Skimmer	<i>Libellula flavida</i>	G5SH	6	6	2	6
	Needham's Skimmer	<i>Libellula needhami</i>	G5S1S2	6	6	2	3
	Elfin Skimmer	<i>Nannothemis bella</i>	G4S1S2	5	6	2	3
	Blue-faced Meadowhawk	<i>Sympetrum ambiguum</i>	G5S1S2	6	6	2	3
	Saffron-winged Meadowhawk	<i>Sympetrum costiferum</i>	G5SH	6	6	2	6
	Cherry-faced Meadowhawk	<i>Sympetrum internum</i>	G5S1S3	6	6	2	3
	Band-winged Meadowhawk	<i>Sympetrum semicinctum</i>	G5S3S4	6	4	4	6
	Allegheny River Cruiser	<i>Macromia alleghaniensis</i>	G4S1S2	5	6	2	3
Gray Petaltail	<i>Tachopteryx thoreyi</i>	G4S3	5	4	4	6	
Variable Darner	<i>Aeshna interrupta</i>	G5S3	6	4	4	6	



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<b>Dragonflies &amp; Damselflies</b>	Tule Bluet	<i>Enallagma carunculatum</i>	G5S1S3	6	6	2	3
	Tiger Spiketail	<i>Cordulegaster erronea</i>	G4S3	5	4	4	6
	Arrowhead Spiketail	<i>Cordulegaster obliqua</i>	G4S3	5	4	4	6
	Beaverpond Clubtail	<i>Gomphus borealis</i>	G4S3	5	4	4	6
	Royal River Cruiser	<i>Macromia taeniolata</i>	G5S2S3	6	6	3	5
	Banded Pennant	<i>Celithemis fasciata</i>	G5S2S3	6	6	3	5
	River Bluet	<i>Enallagma anna</i>	G5S1S2	6	6	2	3
	Lilypad Forktail	<i>Ischnura kellicotti</i>	G5S1S2	6	6	2	3
<b>Flatworms</b>	Refton Cave Planarian <sup>R</sup>	<i>Sphalloplana pricei</i>	G2G3S1	3	5	2	6
<b>Grasshoppers</b>	Appalachian Grasshopper <sup>R</sup>	<i>Appalachia hebardii</i>	GHS	3	5	2	6
<b>Isopods</b>	Franz's Cave Isopod <sup>R</sup>	<i>Caecidotea franzi</i>	G2G4S1	2	5	2	6
	An Isopod <sup>R</sup>	<i>Caecidotea kenki</i>	G3S2S3	2	5	3	4
	Price's Cave Isopod <sup>R</sup>	<i>Caecidotea pricei</i>	G5S3S4	4	1	4	5
<b>Mayflies</b>	A Brown Dun	<i>Ameletus browni</i>	G3G4S1S3	4	6	2	2
	A Mayfly	<i>Anafroptilum semirufum</i>	G3G4S2	2	6	3	6
	Two-colored Chocolate Dun	<i>Eurylophella bicoloroides</i>	G3S3S4	4	4	4	5
	Poconos Chocolate Dun	<i>Eurylophella poconoensis</i>	G1G2S3S4	3	4	4	5
		<i>Heptagenia culacantha</i>	G2G3S4	3	4	5	6
		<i>Isonychia hoffmani</i>	G1G3S2S3	3	6	3	4
		<i>Ephemerella floripara</i>	G3QS1S3	4	6	2	2
	Pale Morning Dun	<i>Ephemerella excrucians</i>	G5S1S3	6	6	2	2
		<i>Ephemerella inconstans</i>	G5S1S3	6	6	2	2
		<i>Siphloplecton basale</i>	G5S3	6	4	4	6
	A Brown Dun	<i>Ameletus cryptostimulus</i>	G4S2S3	3	6	3	4



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Mayflies		<i>Neophemera purpurea</i>	G5S1S2	6	6	2	2
		<i>Arthroplea bipunctata</i>	G5S1S2	6	6	2	2
		<i>Ephemerella aurivillii</i>	G5S3S4	6	4	4	5
		<i>Choroterpes basalis</i>	G5S2S3	4	6	3	4
Moths, Clear-winged	Lilac borer	<i>Podosesia syringae</i>	GNRS1	Unable to assess	6	2	6
Moths, Dagger	Doll's Merolonche	<i>Acronicta dolli</i>	G3G4S1S2	4	6	2	2
Moths, Erebid	Twin-dotted Macrochilo	<i>Macrochilo hypocritalis</i>	G4S3	5	4	4	6
	Masked Parahypenodes	<i>Parahypenodes quadralis</i>	G4S2S3	5	6	3	4
	An Oak Moth	<i>Phoberia ingenua</i>	G3G4S2	4	6	3	6
	Pine Barrens Zanclognatha	<i>Zanclognatha martha</i>	G4S3S4	5	4	4	5
Moths, Flannel	Black-waved Flannel Moth	<i>Lagoa crispata</i>	G5S3	6	4	4	6
Moths, Geometrids	New Jersey Tea Inchworm	<i>Apodrepanulatrix liberaria</i>	G3S1S2	4	6	2	2
	Southern Pine Looper Moth	<i>Caripeta aretaria</i>	G4S2S3	5	6	3	4
	Broad-lined Erastria Moth	<i>Erastria coloraria</i>	G3G4S1S2	4	6	2	2
	Blueberry Gray	<i>Glena cognataria</i>	G4S3	5	4	4	6
	Rare Spring Moth	<i>Heliomata infulata</i>	G3G4S3	4	4	4	6
	Esther Moth	<i>Hypagyrtis esther</i>	G5S3S4	6	4	4	5
	Straw Wave Moth	<i>Idaea eremiata</i>	G4S2	5	6	3	6
	A Wave Moth	<i>Idaea violacearia</i>	G4S2	5	6	3	6
	Barrens Itame	<i>Speranza exonerata</i>	G3G4S2S3	4	6	3	4
	Twilight Moth	<i>Lycia rachelae</i>	G4G5S1S2	5	6	2	2
	Promiscuous Angle	<i>Macaria promiscuata</i>	G4S3	5	4	4	6
	Barrens Metarranthis Moth	<i>Metarranthis apiciaria</i>	G1G3SH	3	6	2	6
	Early Metarranthis Moth	<i>Metarranthis sp. near duaria</i>	GNRS3	Unable to assess	4	4	6



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Moths, Geometrids	Tuscarora Emerald	<i>Nemoria tuscarora</i>	GUS1S2	3	6	2	6
	Shiny Gray Carpet Moth	<i>Stamnodes gibbicostata</i>	G4S1S3	5	6	2	2
	Purple Plagodis	<i>Plagodis kuetzingi</i>	G5S1	4	6	2	6
Moths, Giant Silkworm & Royal	Spiny Oakworm Moth	<i>Anisota stigma</i>	G5S3	6	4	4	6
	Pine Devil	<i>Citheronia sepulcralis</i>	G4G5S3S4	5	4	4	5
	Barrens Buckmoth	<i>Hemileuca maia</i>	G5S2	6	6	3	6
Moths, Noctuid	A Cutworm Moth	<i>Apamea burgessi</i>	G4SH	5	6	2	6
	Crested Apamea	<i>Apamea cristata</i>	G4S3	5	4	4	6
	Toothed Apharata	<i>Sympistis dentata</i>	G4S2S3	5	6	3	4
	A Noctuid Moth	<i>Aplectoides condita</i>	G4S3S4	5	4	4	5
	Straight Lined Mallow Moth	<i>Bagisara rectifascia</i>	G4S2S3	5	6	3	4
	Boreal Fan Moth	<i>Brachionycha borealis</i>	G4S2S3	5	6	3	4
	Curved Halter Moth	<i>Capis curvata</i>	G4S3	5	4	4	6
	A Bird-dropping Moth	<i>Cerma cora</i>	G3G4S1	4	6	2	6
	A Sallow Moth	<i>Chaetagnalea cerata</i>	G3G4S2S3	4	6	3	4
	Barrens Chaetagnalea	<i>Chaetagnalea tremula</i>	G5S1S3	6	6	2	2
	Marvel Moth	<i>Chytonix sensilis</i>	G4S2S3	5	6	3	4
	Red Dart Moth	<i>Diarsia rubifera</i>	G5S2S3	6	6	3	4
	George's Midget Moth	<i>Elaphria georgei</i>	G4S2S4	5	6	3	3
	Pointed Sallow	<i>Epiglaea apiata</i>	G5S3S4	6	4	4	5
	Marsh Fern Moth	<i>Fagitana littera</i>	G4SH	5	6	2	6
	The Pink Streak	<i>Dargida rubripennis</i>	G3G4S2	4	6	3	6
	Sundew Cutworm Moth	<i>Hemipachnobia monochromatea</i>	G4S2S3	5	6	3	4
	Fingered Lemmeria <sup>R</sup>	<i>Lemmeria digitalis</i>	G4S3	5	3	4	6



INVERTEBRATES							
Taxonomic Group	Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Moths, Noctuid	Goldenrod Brindle	<i>Lithomoia germana</i>	G5S3	6	4	4	6
	Franclemont's Pinion Moth	<i>Lithophane franclemonti</i>	G2G4SH	4	6	2	6
	Thaxter's Pinion Moth	<i>Lithophane thaxteri</i>	G4SH	5	6	2	6
	Northern Brocade Moth	<i>Neoligia semicana</i>	G2G4S1S2	4	6	2	2
	Rare Sand Quaker	<i>Caradrina meralis</i>	G4S2	5	6	3	6
	A Noctuid Moth	<i>Properigea costa</i>	G4S2S3	5	6	3	4
	Pink Sallow	<i>Psectraglaea carnosa</i>	G3S2S3	4	6	3	4
	Aureolaria Seed Borer	<i>Pyrrhia aurantiago</i>	G3G4SH	4	6	2	6
	A Noctuid Moth 182	<i>Dichagyris acclivis</i>	G4G5S3	5	4	4	6
	A Noctuid Moth 183	<i>Dichagyris grotei</i>	G4SH	5	6	2	6
		<i>Sideridis maryx</i>	G4S2S3	5	6	3	4
	Private Sallow Moth	<i>Sutyna privata</i>	G5S3S4	6	4	4	5
	Pirate Looper Moth	<i>Syngrapha epigaea</i>	G5S2S3	6	6	3	4
	Southern Variable Dart Moth	<i>Xestia elimata</i>	G5S3	6	4	4	6
	Broad Sallow Moth	<i>Xylotype capax</i>	G4S3	5	4	4	6
	Yankee Dart	<i>Abagrotis brunneipennis</i>	G4S2S3	5	6	3	4
Grote's Sallow	<i>Copivaleria grotei</i>	G5S1	4	6	2	6	
Moths, Notodontid	Post-burn Datana Moth	<i>Datana ranaeiceps</i>	G3G4S2	4	6	3	6
	Plain Schizura	<i>Schizura apicalis</i>	G3G4SH	4	6	2	6
Moths, Other	Gold-Spotted Ghost Moth	<i>Sthenopis auratus</i>	G3G4S1S3	4	6	2	2
	The Angel	<i>Olceclostera angelica</i>	G5S1	4	6	2	6
	Splendid Palpita	<i>Palpita magniferalis</i>	GNRS1	Unable to assess	6	2	6
Moths, Papaipema	Hop Vine Borer	<i>Hydraecia immanis</i>	G4SH	5	6	2	6
	Figwort Borer Moth	<i>Hydraecia stramentosa</i>	G4S1S2	5	6	2	2
	Yellow Stoneroot Borer Moth	<i>Papaipema astuta</i>	G2G4SH	4	6	2	6



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<b>Moths, Papaipema</b>	Dark Stoneroot Borer Moth <sup>R</sup>	<i>Papaipema duplicata</i>	G2G4S1S2	4	5	2	2
	Brick-red Borer Moth	<i>Papaipema marginidens</i>	G4S1S3	5	6	2	2
	Maritime Sunflower Borer Moth	<i>Papaipema maritima</i>	G3SH	4	6	2	6
	Flypoison Borer Moth <sup>R</sup>	<i>Papaipema sp. 1</i>	G2G3S2S3	3	5	3	4
	Ostrich Fern Borer	<i>Papaipema sp. 2 nr. pterisii</i>	G3G4S1S2	4	6	2	2
	Buffalo Moth	<i>Parapamea buffaloensis</i>	G4S1S2	5	6	2	2
	Indigo Stem Borer	<i>Papaipema baptisiae</i>	G4G5S3S4	5	4	4	5
	Golden Borer	<i>Papaipema cerina</i>	G2G4SU	4	6	2	2
	Joe-Pye-Weed Borer	<i>Papaipema eupatorii</i>	G4S3	5	2	4	6
	Ash-tip Borer	<i>Papaipema furcata</i>	GUS1	1	6	2	6
	Vernonia Borer Moth	<i>Papaipema limpida</i>	G2G4SH	4	6	2	6
	Loosestife Borer	<i>Papaipema lysimachiae</i>	G4G5S3	5	4	4	6
	Sunflower Borer Moth	<i>Papaipema necopina</i>	G4?SH	5	6	2	6
	Coneflower Borer	<i>Papaipema nelita</i>	G4S3	5	4	4	6
	Turtlehead Borer	<i>Papaipema nepheleptena</i>	G4S2S3	5	6	3	4
Mayapple Borer	<i>Papaipema rutila</i>	G4S3	5	4	4	6	
<b>Moths, Sac-Bearers</b>	Melsheimer's Sack Bearer	<i>Cicinnus melsheimeri</i>	G4S3S4	3	4	4	5
<b>Moths, Sphinx</b>	Graceful Clearwing	<i>Hemaris gracilis</i>	G3G4S2S3	4	6	3	4
	Franck's Sphinx Moth	<i>Sphinx franckii</i>	G4SH	5	6	2	6
	Apple Sphinx	<i>Sphinx gordius</i>	G4S3S4	5	4	4	5
	Ash Sphinx	<i>Manduca jasminearum</i>	G4G5S1	3	6	2	6
	Great Ash Sphinx	<i>Sphinx chersis</i>	G4G5S1	1	6	2	6
<b>Moths, Tent Caterpillar &amp; Lappet</b>	Dot-lined White Moth	<i>Artace cribraria</i>	G5S3S4	6	4	4	5





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<b>Moths, Tent Caterpillar &amp; Lappet</b>	Tolype Moth	<i>Tolype notialis</i>	G4G5S3	5	4	4	6
<b>Moths, Tiger</b>	Packard's Lichen Moth	<i>Cisthene packardii</i>	G5S3S4	6	4	4	5
	Lead Colored Lichen Moth	<i>Cisthene plumbea</i>	G5S3	6	4	4	6
	Pure Lichen Moth	<i>Crambidia pura</i>	G4S2	5	6	3	6
	Phyllira Tiger Moth	<i>Grammia phyllira</i>	G4SH	5	6	2	6
	Joyful Holomelina Moth	<i>Virbia laeta</i>	G4S2	5	6	3	6
	Blackish Tiger Moth	<i>Virbia nigricans</i>	G4SH	3	6	2	6
<b>Moths, Underwing</b>	Sweet Underwing	<i>Catocala dulciola</i>	G3SH	4	6	2	6
	Miranda Underwing	<i>Catocala miranda</i>	G3G4S2S3	4	6	3	4
	Pine Woods Underwing	<i>Catocala sp. 1 nr. jair</i>	G5S2S3	6	6	3	4
	Shadow Underwing	<i>Catocala umbrosa</i>	G5S1	6	6	2	6
	Angus' Underwing	<i>Catocala angusi</i>	G4SH	5	6	2	6
	Dejected Underwing	<i>Catocala dejecta</i>	G4SH	5	6	2	6
	Robinson's Underwing	<i>Catocala robinsonii</i>	G4SH	5	6	2	6
<b>Moths, Zale</b>	Black-eyed Zale	<i>Zale curema</i>	G4S3	5	4	4	6
	Oblique Zale Moth	<i>Zale lunifera</i>	G5S2S3	6	6	3	4
	Pine Barrens Zale	<i>Zale obliqua</i>	G3G4S2S3	4	6	3	4
	Gray-banded Zale	<i>Zale squamularis</i>	G4S2S3	5	6	3	4
	Gray Spring Zale	<i>Zale submediana</i>	G4S2S3	5	6	3	4
<b>Mussels, Freshwater</b>	Eastern Pearlshell	<i>Margaritifera margaritifera</i>	G4S1S2	3	5	2	3
	Dwarf Wedgemussel	<i>Alasmidonta heterodon</i>	G1G2S1	1	5	2	6
	Triangle Floater	<i>Alasmidonta undulata</i>	G4S3	3	2	4	6
	Brook Floater	<i>Alasmidonta varicosa</i>	G3S2	2	5	3	6
	Three-ridge	<i>Amblema plicata</i>	G5S2S3	4	6	3	5



## INVERTEBRATES

Taxonomic Group	Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Mussels, Freshwater	Alewife Floater	<i>Anodonta implicata</i>	G5S3	4	1	4	6
	Flat Floater	<i>Anodonta suborbiculata</i>	G5S1	6	6	2	6
	Cylindrical Papershell	<i>Anodontoides ferussacianus</i>	G5S3	6	3	4	6
	Purple Wartback	<i>Cyclonaias tuberculata</i>	G5SH	6	6	2	6
	Fanshell	<i>Cyprogenia stegaria</i>	G1QSH	1	6	2	6
	Butterfly	<i>Ellipsaria lineolata</i>	G4G5SH	5	6	2	6
	Elephant Ear	<i>Elliptio crassidens</i>	G5SH	6	6	2	6
	Northern Spike	<i>Elliptio fisheriana</i>	G4S1	3	5	2	6
	Northern Riffleshell <sup>R</sup>	<i>Epioblasma torulosa rangiana</i>	G2T2S2	1	5	3	6
	Snuffbox	<i>Epioblasma triquetra</i>	G3S2	2	6	3	6
	Wabash Pigtoe	<i>Fusconaia flava</i>	G5S2S3	4	6	3	5
	Long-solid	<i>Fusconaia subrotunda</i>	G3S2	2	6	3	6
	Pink Mucket	<i>Lampsilis abrupta</i>	G2SH	1	6	2	6
	Yellow Lampmussel	<i>Lampsilis cariosa</i>	G3G4S3?	2	1	4	6
	Pocketbook	<i>Lampsilis ovata</i>	G5S2S3	4	5	3	5
	Eastern Lampmussel	<i>Lampsilis radiata</i>	G5S1	4	5	2	6
	White Heelsplitter	<i>Lasmigona complanata</i>	G5S1S2	4	6	2	3
	Creek Heelsplitter	<i>Lasmigona compressa</i>	G5S2	4	5	3	6
	Green Floater	<i>Lasmigona subviridis</i>	G3S2S3	2	5	3	5
	Fragile Papershell	<i>Leptodea fragilis</i>	G5S2S3	6	5	3	5
	Tidewater Mucket	<i>Leptodea ochracea</i>	G3G4S1	2	5	2	6
	Eastern Pondmussel	<i>Ligumia nasuta</i>	G4S1S2	3	5	2	3
Threehorn Wartback	<i>Obliquaria reflexa</i>	G5S3	6	4	4	6	
Hickorynut	<i>Obovaria olivaria</i>	G4SH	5	6	2	6	



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Mussels, Freshwater	Round Hickorynut	<i>Obovaria subrotunda</i>	G4S1	3	6	2	6
	Orange-foot Pimpleback	<i>Plethobasus cooperianus</i>	G1SH	1	6	2	6
	Sheepnose	<i>Plethobasus cyphus</i>	G3S1S2	2	6	2	3
	Clubshell <sup>R</sup>	<i>Pleurobema clava</i>	G1G2S2	1	5	3	6
	Ohio Pigtoe	<i>Pleurobema cordatum</i>	G4SH	5	6	2	6
	Rough Pigtoe	<i>Pleurobema plenum</i>	G1SH	1	6	2	6
	Pyramid Pigtoe	<i>Pleurobema rubrum</i>	G2G3SH	3	6	2	6
	Round Pigtoe	<i>Pleurobema sintoxia</i>	G4G5S2S3	3	6	3	5
	Rabbitsfoot	<i>Quadrula cylindrica cylindrica</i>	G3G4T3S1S2	2	6	2	3
	Monkeyface	<i>Quadrula metanevra</i>	G4SH	5	6	2	6
	Pimpleback	<i>Quadrula pustulosa</i>	G5S1	4	6	2	6
	Mapleleaf	<i>Quadrula quadrula</i>	G5S3	6	4	4	6
	Salamander Mussel	<i>Simpsonaias ambigua</i>	G3S1	2	6	2	6
	Lilliput	<i>Toxolasma parvum</i>	G5S2S3	6	6	3	5
	Pistolgrip	<i>Quadrula verrucosa</i>	G4G5S1	3	6	2	6
	Fawnsfoot	<i>Truncilla donaciformis</i>	G5S1	4	6	2	6
	Deertoe	<i>Truncilla truncata</i>	G5S1	4	5	2	6
	Rayed Bean <sup>R</sup>	<i>Villosa fabalis</i>	G2S1S2	1	5	2	3
	Rainbow	<i>Villosa iris</i>	G5QS3	4	1	4	6
	Elktoe	<i>Alasmidonta marginata</i>	G4S3S4	5	3	4	6
Pink Papershell	<i>Potamilus ohioensis</i>	G5S1	6	6	2	6	
Sawflies	Black-headed Ash Sawfly	<i>Tethida barda</i>	GNRS1	Unable to assess	6	2	6
Snails, Freshwater		<i>Amnicola decius<sup>R</sup></i>	G1QSH	3	5	2	6
	Watercress Snail	<i>Fontigens nickliniana</i>	G5S2	4	6	3	6



## INVERTEBRATES

Taxonomic Group	Common Name	Scientific Name	Combined Global and State Ranks	FINAL SCORE Category 1	FINAL SCORE Category 2	FINAL SCORE Category 3	FINAL SCORE Category 4
Snails, Freshwater	Blue Ridge Springsnail	<i>Fontigens orolibas</i>	G3S1S2	2	6	2	2
	Shale Pebblesnail	<i>Somatogyrus pennsylvanicus</i>	G3S2S3	4	6	3	4
	Moss Bladder Snail	<i>Aplexa hypnorum</i>	G5S3	6	4	4	6
	Flexed Gyro	<i>Gyraulus deflectus</i>	G5S3S4	6	4	4	5
	Sharp Sprite	<i>Promenetus exacuus</i>	G5S3S4	6	4	4	5
	Three-ridge Valvata	<i>Valvata tricarinata</i>	G5S1S3	6	6	2	2
	Boreal Marstonia	<i>Marstonia lustrica</i>	G5S3S4	6	4	4	5
	Sprite Elimia	<i>Pleurocera proxima</i>	G5S1S2	4	5	2	2
	Henscomb Hydrobe	<i>Littoridinops tenuipes</i>	G5S1S3	6	6	2	2
	Vernal Physa	<i>Physa vernalis</i>	G3S2S3	4	6	3	4
	Globe Siltsnail	<i>Birgella subglobosa</i>	G4S2S3	5	6	3	4
	Great Pondsnaill	<i>Lymnaea stagnalis</i>	G5S1S3	6	6	2	2
	Woodland Pondsnaill	<i>Lymnaea catascopium</i>	G5S2S3	6	6	3	4
	Ohio Pebblesnail	<i>Somatogyrus integra</i>	G3S2S3	4	6	3	4
Snails, Terrestrial	File Thorn	<i>Carychium nannodes</i>	G5S1	6	6	2	6
	Slender Walker	<i>Pomatiopsis lapidaria</i>	G5S2	6	6	3	6
	Cherrystone Drop	<i>Hendersonia occulta</i>	G4S2	5	6	3	6
	Coastal Plain Disc	<i>Anguispira fergusonii</i>	G4S1	5	6	2	6
	Banded Globe	<i>Anguispira kochi</i>	G5S3	6	4	4	6
	Toothed Hive	<i>Euconulus dentatus</i>	G5S1	6	6	2	6
	Brown Hive	<i>Euconulus fulvus</i>	G5S3	6	4	4	6
	Severed Mantleslug	<i>Pallifera secreta</i>	G4S2	5	6	3	6
	Broad-banded Forestsnail	<i>Allogona profunda</i>	G5S2	6	6	3	6
	Baffled Three-tooth	<i>Triodopsis fraudulenta</i>	G4S3	5	4	4	6



## INVERTEBRATES

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Snails, Terrestrial	Dished Three-tooth	<i>Triodopsis vulgata</i>	G5S3	6	4	4	6
	Striped Whitelip	<i>Webbhelix multilineata</i>	G5SH	6	6	2	6
	Bark Snaggletooth	<i>Gastrocopta corticaria</i>	G5S3	6	4	4	6
	Delicate Vertigo	<i>Vertigo bollesiana</i>	G4S3	5	4	4	6
	Blade Vertigo	<i>Vertigo milium</i>	G5S1	6	6	2	6
	Ovate Vertigo	<i>Vertigo ovata</i>	G5S2	6	6	3	6
	Pygmy Vertigo	<i>Vertigo pygmaea</i>	G5S3	6	4	4	6
	Honey Vertigo	<i>Vertigo tridentata</i>	G5S3	6	4	4	6
	Five-tooth Vertigo	<i>Vertigo ventricosa</i>	G5S3	6	4	4	6
	Eastern Glass-snail	<i>Vitrina angelicae</i>	G5S2	6	6	3	6
	Brown Bellytooth	<i>Gastrodonta interna</i>	G5SH	6	6	2	6
	Maryland Glyph	<i>Glyphyalinia raderi</i>	G2S2	3	6	3	6
	Blue Glass Snail	<i>Nesovitrea binneyana</i>	G5S2	6	6	3	6
	Split-tooth Dome	<i>Ventridens virginicus</i>	G4S3	5	4	4	6
	Obese Thorn	<i>Carychium exiguum</i>	G5S3	6	4	4	6
	Flamed Tigersnail	<i>Anguispira alternata</i>	G5S3	6	4	4	6
	Angular Disc	<i>Discus catskillensis</i>	G5S3	6	4	4	6
	Domed Disc	<i>Discus patulus</i>	G5S3	6	4	4	6
	Meadow Slug	<i>Deroceras laeve</i>	G5S3	6	4	4	6
	Changeable Mantleslug	<i>Megapallifera mutabilis</i>	G5S3	6	4	4	6
	Spike-lip Crater	<i>Appalachina sayana</i>	G5S2	6	6	3	6
	Lowland Pill Snail	<i>Euchemotrema leai</i>	G5S2	6	6	3	6
	Toothed Globe	<i>Mesodon zaletus</i>	G5S3	6	4	4	6
Proud Globelet	<i>Patera pennsylvanica</i>	G4S2	5	6	3	6	
Bristled Slitmouth	<i>Stenotrema barbatum</i>	G5S3	6	4	4	6	



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Snails, Terrestrial	Atlantic Threetooth	<i>Triodopsis juxtidentis</i>	G5S1	6	6	2	6
	Armed Snaggletooth	<i>Gastrocopta armifera</i>	G5S3	6	4	4	6
	White Snaggletooth	<i>Gastrocopta tappaniana</i>	G5S1	6	6	2	6
	White-lip Dagger	<i>Pupoides albilabris</i>	G5S2	6	6	3	6
	Maze Pinecone	<i>Strobilops labyrinthicus</i>	G5S3	6	4	4	6
	Southern Pinecone	<i>Strobilops texasianus</i>	G5S3	6	4	4	6
	Black Gloss	<i>Zonitoides nitidus</i>	G5S3	6	4	4	6
	Toothless Column Snail	<i>Columella columella</i>	G5S1	6	6	2	6
	Foster Mantleslug	<i>Pallifera fosteri</i>	G5S3	6	4	4	6
	Redfoot Mantleslug	<i>Pallifera ohioensis</i>	G5S3	6	4	4	6
	Variable Mantleslug	<i>Pallifera varia</i>	G2G4S3	4	4	4	6
	Moss Chrysalis Snail	<i>Pupilla muscorum</i>	G5S1	6	6	2	6
Crested Vertigo	<i>Vertigo cristata</i>	G5S3	6	4	4	6	
Spiders	Weyer's Sheetweb Cave Spider	<i>Bathyphantes weyeri</i>	G4S1S3	5	6	2	3
	A Ghost Spider	<i>Arachosia cubana</i>	GNRS1S3	Unable to assess	6	2	3
	A Striped Orbweaver	<i>Singa eugeni</i>	GNRS2S4	Unable to assess	6	3	4
	Subterranean Sheetweb Spider	<i>Phanetta subterranea</i>	G5S1S3	6	6	2	3
	Appalachian Cave Spider	<i>Porrhomma cavernicola</i>	G5S1S3	6	6	2	3
	Beach Wolf Spider	<i>Arctosa littoralis</i>	GNRS1S3	Unable to assess	6	2	3
	Beatty's Sheetweb Cave Spider	<i>Oreonetides beattyi</i>	GNRS1S3	Unable to assess	6	2	3
	Wright's Burrowing Wolf Spider	<i>Geolycosa wrighti</i>	GNRS1S3	Unable to assess	6	2	3
	Turret Spider	<i>Geolycosa turricola</i>	GNRS1S3	Unable to assess	6	2	3



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<b>Sponge</b>	Pennsylvania Sponge	<i>Heteromeyenia longistylus</i>	G1G3SU	3	6	2	2
<b>Springtails</b>	Heller Cave Springtail	<i>Typhlogastrura helleri</i>	GNRS1	Unable to assess	6	2	6
<b>Stoneflies</b>	Spatulate Snowfly	<i>Allocapnia simmonsii</i>	G3S2	4	6	3	6
	Aracoma Sallfly	<i>Alloperla aracoma</i>	G3S3	4	4	4	6
	Scotia Sallfly	<i>Alloperla vostoki</i>	G3S2	4	6	3	6
	Gaspe Sallfly	<i>Utaperla gaspesiana</i>	G3S3	4	4	4	6
	Shenandoah Needlefly	<i>Megaleuctra flinti</i>	G2S1	3	6	2	6
	Bent Forestfly	<i>Ostrocerca prolongata</i>	G3S1	4	6	2	6
	Powdermill Forestfly <sup>R</sup>	<i>Soyedina merritti</i>	G2S1	3	5	2	6
	Elegant Stone	<i>Acroneuria arida</i>	G3SH	4	6	2	6
	Appalachian Stone	<i>Hansonoperla appalachia</i>	G3S3	4	4	4	6
	Dusky Sallfly	<i>Alloperla biserrata</i>	G3S2	4	6	3	6
	Duckhead Sallfly	<i>Alloperla concolor</i>	G5S2	6	6	3	6
	Vernal Sallfly	<i>Alloperla ideii</i>	G3S2	4	6	3	6
	Shenandoah Sallfly	<i>Sweltsa palearata</i>	G2G3S3	3	4	4	6
	Variable Needlefly	<i>Leuctra variabilis</i>	G4S3	5	4	4	6
	Three-spined Forestfly	<i>Nemoura trispinosa</i>	G5S2	6	6	3	6
	Stonyfork Snowfly	<i>Allocapnia harperi</i>	G4S2	5	6	3	6
	Eastern Stone	<i>Acroneuria arenosa</i>	G5S2	6	6	3	6
	Lobed Stone	<i>Acroneuria internata</i>	G4SH	5	6	2	6
	Giant Stone	<i>Attaneuria ruralis</i>	G4SH	5	6	2	6
	Choctaw Stone	<i>Neoperla choctaw</i>	G4S3	5	4	4	6
Striped Stone	<i>Perlinella drymo</i>	G5S2	6	6	3	6	
<b>True bugs</b>	Fringetree Lace Bug	<i>Leptopypha mutica</i>	GNRS1	Unable to assess	6	2	6



## Acronyms

Acronym	Description
G	Global conservation status (NatureServe); 1-critically imperiled, 2-imperiled, 3-vulnerable, 4- apparently secure, 5-secure
H	High
IUCN	International Union for the Conservation of Nature
RSGCN	(Northeast U.S.) Regional Species of Greatest Conservation Need (see Terwilliger Consulting and NEFWDC 2013)
S	State conservation status (NatureServe); 1-critically imperiled, 2-imperiled, 3-vulnerable, 4- apparently secure, 5-secure
SH	State historic
SU	Unrankable
SX	State extirpated
SNR	Unranked
VH	Very High
VU	Vulnerable