

APPENDIX G. SPECIES OF CONCERN

Common Name	Scientific Name	Global		State		Proposed	Federal
		Rank	State Rank	Status	Status	Status	
Plants							
Alleghany Plum	<i>Prunus alleghaniensis</i>	G4	S2S3	N	PT		
Blue False-indigo	<i>Baptisia australis</i>	G5	S3	N	TU		
Broad-leaved Willow	<i>Salix myricoides</i>	G4	S2	N	TU		
Canadian Milkvetch	<i>Astragalus canadensis</i>	G5	S2	N	TU		
Declined Trillium	<i>Trillium flexipes</i>	G5	S2	TU	TU		
Drooping Bluegrass	<i>Poa languida</i>	G3G4Q	S2	TU	PT		
Featherbells	<i>Stenanthium gramineum</i>	G4G5	S1S2	N	TU		
Hairy Honeysuckle	<i>Lonicera hirsuta</i>	G4G5	S1	TU	PE		
Heartleaf Meehania	<i>Meehania cordata</i>	G5	S1	TU	PE		
Highbush-cranberry	<i>Viburnum trilobum</i>	G5T5	S3S4	TU	PR		
Lobed Spleenwort	<i>Asplenium pinnatifidum</i>	G4	S3	N	PR		
Meadow Willow	<i>Salix x subsericea</i>	G5	SNA	TU	DL		
Mountain Starwort	<i>Stellaria borealis</i>	G5	S1S2	N	TU		
Queen-of-the-prairie	<i>Filipendula rubra</i>	G4G5	S1S2	TU	TU		
Red-head Pondweed	<i>Potamogeton richardsonii</i>	G5	S3	PT	PR		
Small Wood Sunflower	<i>Helianthus microcephalus</i>	G5	S3	N	TU		
Virginia Bunchflower	<i>Melanthium virginicum</i>	G5	SU	N	TU		
Wild Kidney Bean	<i>Phaseolus polystachios</i>	G5	S1S2	N	TU		

Bats

Eastern Small-footed Myotis	<i>Myotis leibii</i>	G3	S1B,S1N	PT	PT		
Indiana or Social Myotis	<i>Myotis sodalis</i>	G2	SUB,S1N	PE	PE		LE
Northern Myotis	<i>Myotis septentrionalis</i>	G4	S3B,S3N		CR		

Birds

American Bittern	<i>Botaurus lentiginosus</i>	G4	S1B	PE	PE		
Dickcissel	<i>Spiza americana</i>	G5	S2B	PE	PE		
Great Blue Heron	<i>Ardea herodias</i>	G5	S3S4B,S4N				
Long-eared Owl	<i>Asio otus</i>	G5	S2B,S2S3N		CU		
Northern Harrier	<i>Circus cyaneus</i>	G5	S3B,S4N		CA		
Short-eared Owl	<i>Asio flammeus</i>	G5	S1B,S3N	PE	PE		

Fish

Bluebreast Darter	<i>Etheostoma camurum</i>	G4	S2	PT	PT		
Channel Darter	<i>Percina copelandi</i>	G4	S2	PT	PT		
Goldeye	<i>Hiodon alosoides</i>	G5	S2?	PT	PT		
Longhead Darter	<i>Percina macrocephala</i>	G3	S2S3	PT	PT		
Longnose Gar	<i>Lepisosteus osseus</i>	G5	S3	PC	CR		

Common Name	Scientific Name	Global		Proposed		Federal Status
		Rank	State Rank	State Status	State Status	
<i>Fish (continued)</i>						
Mooneye	<i>Hiodon tergisus</i>	G5	S2S3	PT	PT	
Ohio Lamprey	<i>Ichthyomyzon bdellium</i>	G3G4	S2S3	PC	C	
Popeye Shiner	<i>Notropis ariommus</i>	G3	SX		PX	
River Redhorse	<i>Moxostoma carinatum</i>	G4	S3S4	PC	CU	

Reptiles

Eastern Hognose Snake	<i>Heterodon platirhinos</i>	G5	S3S4			
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Invertebrates

Butterfly Mussel	<i>Ellipsaria lineolata</i>	G4	S1S2		CU	
Clubshell	<i>Pleurobema clava</i>	G2	S1S2	PE	PE	LE, XN
Elephant Ear	<i>Elliptio crassidens</i>	G5	SX		CU	
Elktoe	<i>Alasmidonta marginata</i>	G4	S4		N	
Fanshell	<i>Cyprogenia stegaria</i>	G1	SX		PX	LE
Fragile Papershell	<i>Leptodea fragilis</i>	G5	S2		CR	
Lilliput	<i>Toxolasma parvum</i>	G5	S1S3		PE	
Long-solid	<i>Fusconaia subrotunda</i>	G3	S1		PE	
Mapleleaf	<i>Quadrula quadrula</i>	G5	S1S2		PT	
Monkeyface	<i>Quadrula metanevra</i>	G4	SX		PX	
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	G2T2	S2	PE	PE	LE
Ohio Pigtoe	<i>Pleurobema cordatum</i>	G3	SX		PE	
Paper Pondshell	<i>Utterbackia imbecillis</i>	G5	S3S4		CU	
Pimpleback	<i>Quadrula pustulosa</i>	G5	SX		PX	
Pink Heelsplitter	<i>Potamilus alatus</i>	G5	S2		CR	
Pink Mucket	<i>Lampsilis abrupta</i>	G2	SX		PX	LE
Pistolgrip Mussel	<i>Tritogonia verrucosa</i>	G4	S1		PE	
Purple Wartback	<i>Cyclonaias tuberculata</i>	G5	SX		PX	
Pyramid Pigtoe	<i>Pleurobema rubrum</i>	G2	SX		PX	
Rabbitsfoot	<i>Quadrula cylindrica</i>	G3	S1		PE	PS
Rainbow Mussel	<i>Villosa iris</i>	G5	S1		PE	
Rayed Bean Mussel	<i>Villosa fabalis</i>	G1G2	S1S2		PE	C
Rough Pigtoe	<i>Pleurobema plenum</i>	G1	SX		PX	LE
Round Hickorynut	<i>Obovaria subrotunda</i>	G4	S1		PE	
Round Pigtoe	<i>Pleurobema sintoxia</i>	G4	S2		PE	
Sable Clubtail	<i>Gomphus rogersi</i>	G4	S1			
Salamander Mussel	<i>Simpsonaias ambigua</i>	G3	S1?		PT	
Sheepnose Mussel	<i>Plethobasus cyphus</i>	G3	S1		PE	C
Snuffbox	<i>Epioblasma triquetra</i>	G3	S1		PE	
Wabash Pigtoe	<i>Fusconaia flava</i>	G5	S2		PE	

Common Name	Scientific Name	Global Rank	State Rank	State Status	Proposed	
					State Status	Federal Status
<i>Invertebrates (continued)</i>						
Wavy-rayed Lampmussel	<i>Lampsilis fasciola</i>	G4	S4		N	

Natural Communities

High-gradient Clearwater Creek		GNR	S3			
Northern hardwood forest		GNR	S4			

Basic Global Rank Codes and Definitions

Rank Code	Description	Definition
GX	Presumed Extinct	Believed to be extinct throughout its range. Not located despite intensive searches of historic sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
GH	Possibly Extinct	Known from only historical occurrences. Still some hope of rediscovery.
G1	Critically Imperiled	Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction. Typically 5 or fewer occurrences or very few remaining individuals (<1,000) or acres (<2,000) or stream miles (<10).
G2	Imperiled	Imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000) or acres (2,000 to 10,000) or stream miles (10 to 50).
G3	Vulnerable	Vulnerable globally either because very rare and local throughout its range, found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extinction. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
G4	Apparently Secure	Uncommon but not rare, and usually widespread. Possibly cause for long-term concern. Typically more than 100 occurrences and more than 10,000 individuals.
G5	Secure	Common, typically widespread and abundant. Typically with considerably more than 100 occurrences and more than 10,000 individuals.
G#G#	Range Rank	A numeric range rank (e.g., G2G3) is used to indicate uncertainty about the exact status of a taxon.
T	Intraspecific Taxon (trinomial)	The status of intraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank. Rules for assigning T ranks follow the same principles outlined above. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1. A T subrank cannot imply the subspecies or variety is more abundant than the species= basic rank (e.g., a G1T2 subrank should not occur). A population (e.g., listed under the U.S. Endangered Species Act or assigned candidate status) may be tracked as an intraspecific taxon and given a T rank; in such cases a Q is used after the T rank to denote the taxon's questionable taxonomic status.

Global Rank Qualifiers

Qualifier	Description	Definition
?	Inexact Numeric Rank	Denotes inexact numeric rank.
Q	Questionable Taxonomy	Taxonomic status is questionable; numeric rank may change with taxonomy.
C	Captive or Cultivated Only	Taxon at present is extant only in captivity or cultivation, or as a reintroduced population not yet established.

State Rank Codes and Definitions

Rank Code	Description	Definition
SX	Extirpated	Element is believed to be extirpated from the "state" (or province or other subnational unit).
SH	Historical	Element occurred historically in the state (with expectation that it may be rediscovered), perhaps having not been verified in the past 20 years, and suspected to be still extant. Naturally, an element would become SH without such a 20-year delay if the only known occurrences in a state were destroyed or if it had been extensively and unsuccessfully looked for. Upon verification of an extant occurrence, SH-ranked elements would typically receive an S1 rank. The SH rank should be reserved for elements for which some effort has been made to relocate occurrences, rather than simply ranking all Elements not known from verified extant occurrences with this rank.
S1	Critically Imperiled	Critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer occurrences or very few remaining individuals or acres.
S2	Imperiled	Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 occurrences or few remaining individuals or acres.
S3	Vulnerable	Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences.
S4	Apparently Secure	Uncommon but not rare, and usually widespread in the state. Usually more than 100 occurrences.
S5	Secure	Demonstrably widespread, abundant, and secure in the state, and essentially ineradicable under present conditions.
S?	Unranked	State rank is not yet assessed.
SU	Unrankable	Currently unrankable due to lack of information or due to substantially conflicting information about status or trends. NOTE: Whenever possible, the most likely rank is assigned and a question mark added (e.g., S2?) to express uncertainty, or a range rank (e.g., S2S3) is used to delineate the limits (range) of uncertainty.
S#S#	Range Rank	A numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status of the Element. Ranges cannot skip more than one rank (e.g., SU should be used rather than S1S4).
HYB	Hybrid	Element represents an interspecific hybrid.
SE	Exotic	An exotic established in the state; may be native in nearby regions (e.g., house finch or catalpa in eastern U.S.).
SE#	Exotic Numeric	An exotic established in the state that has been assigned a numeric rank to indicate its status, as with S1 through S5.

State Rank Codes and Definitions (continued)

Rank Code	Description	Definition
SA	Accidental	Accidental or casual in the state (i.e., infrequent and outside usual range). Includes species (usually birds or butterflies) recorded once or only a few times. A few of these species may have bred on the one or two occasions they were recorded. Examples include European strays or western birds on the East Coast and vice-versa.
SZ	Zero Occurrences	Not of practical conservation concern in the state because there are no definable occurrences, although the taxon is native and appears regularly in the state. This rank will generally be used for long distance migrants whose occurrences during their migrations have little or no conservation value for the migrant as they are typically too irregular (in terms of repeated visitation to the same locations), transitory, and dispersed to be reliably identified, mapped, and protected. Typically, the SZ rank applies to a non-breeding population in the subnation -- for example, birds on migration. An SZ rank may in a few instances also apply to a breeding population, for example certain Lepidoptera which regularly die out every year with no significant return migration. Although the SZ rank typically applies to migrants, it should not be used indiscriminately. Just because a species is on migration does not mean it receives an SZ rank. SZ only applies when the migrants occur in an irregular, transitory, and dispersed manner.
SP	Potential	Potential that Element occurs in the state but no extant or historic occurrences reported.
SR	Reported	Element reported in the state but without a basis for either accepting or rejecting the report. Some of these are very recent discoveries for which the program hasn't yet received first-hand information; others are old, obscure reports.
SRF	Reported Falsely	Element erroneously reported in the state (e.g., misidentified specimen) and the error has persisted in the literature
SSYN	Synonym	Element reported as occurring in the state, but state does not recognize the taxon; therefore the Element is not ranked by the state.
*		S rank has been assigned and is under review. Contact the individual state Natural Heritage program for assigned rank.
Not Provided		Species is known to occur in this state. Contact the individual state Natural Heritage program for assigned rank.

State Rank Qualifiers

Qualifier	Description	Definition
B	Breeding	Basic rank refers to the breeding population of the Element in the state.
N	Non-breeding	Basic rank refers to the non-breeding population of the Element in the state.
?	Inexact or Uncertain	Denotes inexact or uncertain numeric rank. For SE denotes uncertainty of exotic status. (The ? qualifies the character immediately preceding it in the
C	Captive or Cultivated	Element is presently extant in the state only in captivity or cultivation, or as a reintroduced population not yet established.

NOTE - A breeding status subrank is only used for species that have distinct breeding and/or non-breeding populations in the state. A breeding-status SRANK can be coupled with its complementary non-breeding-status SRANK. The two are separated by a comma, with the higher-priority rank listed first in their pair (e.g., AS2B,S3N@ or ASHN,S4S5B@).

Pennsylvania Status Definitions - Plants

Status	Description	Definition	
PE	Pennsylvania Endangered	Plant species which are in danger of extinction throughout most of their natural range within this Commonwealth, if critical habitat is not maintained or if the species is greatly exploited by man. This classification shall also include any populations of plant species that have been classified as Pennsylvania Extirpated, but which subsequently are found to exist in this	
PT	Pennsylvania Threatened	Plant species which may become endangered throughout most or all of their natural range within this Commonwealth, if critical habitat is not maintained to prevent their future decline, or if the species is greatly exploited by man.	
PR	Pennsylvania Rare	Plant species, which are uncommon within this Commonwealth. All species of the native wild plants classified as Disjunct, Endemic, Limit of Range and Restricted are included within the Pennsylvania Rare classification.	
	Disjunct	Significantly separated from their main area of distribution	
	Endemic	Confined to a specialized habitat.	
	Limit of Range	At or near the periphery of their natural distribution	
PX	Restricted	Found in specialized habitats or habitats infrequent in Pennsylvania.	
	Pennsylvania Extirpated	Plant species believed by the Department to be extinct within this Commonwealth. These plants may or may not be in existence outside the Commonwealth.	
	PV	Pennsylvania Vulnerable	Plant species which are in danger of population decline within Commonwealth because of their beauty, economic value, use as a cultivar, or other factors which indicate that persons may seek to remove these species from their native habitats.
	TU	Tentatively Undetermined	A classification of plant species which are believed to be in danger of population decline, but which cannot presently be included within another classification due to taxonomic uncertainties, limited evidence within historical records, or insufficient data.

Pennsylvania Status Definitions - Plants

Status	Description	Definition
N		No current legal status exists, but is under review for future listing.

Pennsylvania State Status - Wild Birds and Mammals

Status	Description	Definition
PE	Pennsylvania Endangered	Species in imminent danger of extinction or extirpation throughout their range in Pennsylvania if the deleterious factors affecting them continue to operate. These are: 1) species whose numbers have already been reduced to a critically low level or whose habitat has been so drastically reduced or degraded that immediate action is required to prevent their extirpation from the Commonwealth; or 2) species whose extreme rarity or peripherality places them in potential danger of precipitous declines or sudden extirpation throughout their range in Pennsylvania; or 3) species that have been classified as "Pennsylvania Extirpated", but which are subsequently found to exist in Pennsylvania as long as the above conditions 1 or 2 are met; or 4) species determined to be "Endangered" pursuant to the Endangered Species Act of 1973, Public Law 93 205 (87 Stat. 884), as amended.
PT	Pennsylvania Threatened	Species that may become endangered within the foreseeable future throughout their range in Pennsylvania unless the casual factors affecting the organism are abated. These are: 1) species whose populations within the Commonwealth are decreasing or have been heavily depleted by adverse factors and while not actually endangered, are still in critical condition; 2) species whose populations may be relatively abundant in the Commonwealth but are under severe threat from serious adverse factors that have been identified and documented; or 3) species whose populations are rare or peripheral and in possible danger of severe decline throughout their range in Pennsylvania; or 4) species determined to be "Threatened" pursuant to the Endangered Species Act of 1973, Public Law 93205 (87 Stat. 884), as amended, that are not listed as "Pennsylvania Endangered".
N		No current legal status but is under review for future listing.

Pennsylvania State Status - Fish, Amphibians, Reptiles, and Aquatic Organisms

Status	Description	Definition
PE	Pennsylvania Endangered	All species declared by: 1) the Secretary of the United States Department of the Interior to be threatened with extinction and appear on the Endangered Species List or the Native Endangered Species List published in the Federal Register; or 2) have been declared by the Pennsylvania Fish Commission, Executive Director to be threatened with extinction and appear on the Pennsylvania Endangered Species List published by the Pennsylvania Bulletin.
PT	Pennsylvania Threatened	All species declared by: 1) the Secretary of the United States Department of the Interior to be in such small numbers throughout their range that they may become endangered if their environment worsens, and appear on a Threatened Species List published in the Federal Register; or 2) have been declared by the Pennsylvania Fish Commission Executive Director to be in such small numbers throughout their range that they may become endangered if their environment worsens and appear on the Pennsylvania Threatened Species List published in the Pennsylvania Bulletin.
PC		Animals that could become endangered or threatened in the future. All of these are uncommon, have restricted distribution or are at risk because of certain aspects of their biology.
N		No current legal status, but is under review for future listing.

Pennsylvania State Status - Invertebrates

Status	Description	Definition
N		No current legal status but is under review for future listing.

Pennsylvania Biological Survey Suggested Status Definitions

Status	Description	Definition
PE	Pennsylvania Endangered	Species in imminent danger of extinction or extirpation throughout their range in Pennsylvania if the deleterious factors affecting them continue to operate. These are: 1) species whose numbers have already been reduced to a critically low level or whose habitat has been so drastically reduced or degraded that immediate action is required to prevent their extirpation from the Commonwealth; or 2) species whose extreme rarity or peripherality places them in potential danger of precipitous declines or sudden extirpation throughout their range in Pennsylvania; or 3) species that have been classified as "Pennsylvania Extirpated", but which are subsequently found to exist in Pennsylvania as long as the above conditions 1 or 2 are met; or 4) species determined to be "Endangered" pursuant to the Endangered Species Act of 1973, Public Law 93 205 (87 Stat. 884), as amended.
PT	Pennsylvania Threatened	Species that may become endangered within the foreseeable future throughout their range in Pennsylvania unless the casual factors affecting the organism are abated. These are: 1) species whose populations within the Commonwealth are decreasing or have been heavily depleted by adverse factors and while not actually endangered, are still in critical condition; 2) species whose populations may be relatively abundant in the Commonwealth but are under severe threat from serious adverse factors that have been identified and documented; or 3) species whose populations are rare or peripheral and in possible danger of severe decline throughout their range in Pennsylvania; or 4) species determined to be "Threatened" pursuant to the Endangered Species Act of 1973, Public Law 93205 (87 Stat. 884), as amended, that are not listed as "Pennsylvania Endangered".
PR	Pennsylvania Rare	Plant species which are uncommon within this Commonwealth. All species of the native wild plants classified as Disjunct, Endemic, Limit of Range and Restricted are included within the Pennsylvania Rare classification.
	Disjunct	Significantly separated from their main area of distribution
	Endemic	Confined to a specialized habitat.
	Limit of Range	At or near the periphery of their natural distribution
CP	Candidate Proposed	Species comprising taxa for which the Pennsylvania Biological Survey (PBS) currently has substantial information on hand to support the biological appropriateness of proposing to list as Endangered or Threatened.
CA	Candidate at Risk	Species that although relatively abundant now are particularly vulnerable to certain types of exploitation or environmental modification.
CR	Candidate Rare	Species which exist only in one of a few restricted geographic areas or habitats within Pennsylvania, or they occur in low numbers over a relatively broad area of the Commonwealth.
CU	Condition Undetermined	Species for which there is insufficient data available to provide an adequate basis for their assignment to other classes or categories.

Pennsylvania Biological Survey Suggested Status Definitions (continued)

Status	Description	Definition
PX	Pennsylvania Extirpated	Species that have disappeared from Pennsylvania since 1600 but still exist elsewhere.
DL	Delisted	Species which were once listed but are now cited for delisting.
N		No current legal status, but is under study for future listing.

Federal Status Codes and Definitions

LE	Listed Endangered	A species which is in danger of extinction throughout all or a significant portion of its range.
LT	Listed Threatened	Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
LELT	Listed Endangered in part of range; listed Threatened in the remaining part.	
PE	Proposed Endangered	Taxa proposed to be listed as endangered.
PT	Proposed Threatened	Taxa proposed to be listed as threatened
PEPT		Proposed Endangered in part of range; proposed Threatened in the remaining part.
C	Candidate for listing.	
E(S/A)		Treat as Endangered because of similarity of appearance.
T(S/A)		Treat as Threatened because of similarity of appearance.
XE	Essential Experimental population	
XN	Nonessential Experimental population	
"xy" (mixed status)		Status varies for different populations or parts of range.
"x" NL		Status varies for different populations or parts of range with at least one part not listed.