

PENNSYLVANIA'S WILD SPECIES — THE BOX SCORE

GROUP OF ORGANISMS	SPECIES* OF IMMEDIATE CONCERN				TOTAL SPECIES*					
	ENDANGERED	THREATENED	RECOVERED & DOWNLISTED SINCE 1990	PRESUMED EXTIRPATED FROM PENNSYLVANIA	GLOBALLY EXTINCT	REPRODUCING HISTORICALLY IN PENNSYLVANIA	REPRODUCING CURRENTLY IN PENNSYLVANIA			NON-REPRODUCING ANNUAL MIGRANTS
							NATIVE	NON-NATIVE	TOTAL	
MAMMALS Rev. Sep. 2007 -- C. Mahan	4	3	1	8	0	70	62	3	65	0
BIRDS Rev. Jan. 2005 -- R. Ross	15	3	0	6	2	191	183	5	188	196
REPTILES Rev. Sep. 2007 -- T. Maret	4	1	0	2	0	38	35	1	36	0
AMPHIBIANS Rev. Sep. 2007 -- T. Maret	4	1	0	1	0	38	37	0	37	0
FISHES Rev. Oct. 2007 -- R. Criswell	28	17	0	16	2	182	164	18	182	26
INVERTEBRATES Rev. Nov. 2005 -- J. Rawlins	109 known	105 known	0	32 known	?	~13,000?	?	?	11,702 known (of ~13,000?)	?
VASCULAR PLANTS Rev. Sep. 2007 -- R. Latham & T. Block	294	86	0	108	2	2,058	1,945	922	2,867	n/a
BRYOPHYTES Rev. Sep. 2007 -- J. Lendemer	?	?	0	3	0	MOSSES ~350 LIVERWORTS ~150	presumed all	0 known	MOSSES ~350 LIVERWORTS ~150	n/a
LICHENS Rev. Sep. 2007 -- J. Lendemer	?	?	0	2 known	0	365 known	presumed all	0 known	363 known (of ~1,000?)	n/a
FUNGI Rev. Sep. 2007 -- J. Plischke III	?	2 known	0	0	?	?	7,483	7 known	>15,000?	n/a
PROTISTS Rev. Dec. 2006 -- J. Plischke III	?	?	0	?	?	?	?	?	SLIME MOLDS 185 known ALGAE 1,242 known others unknown	n/a

* Includes subspecies and varieties

The source for these figures, except as noted below, is: J. D. Hassinger, R. J. Hill, G. L. Storm and R. D. Yahner, 1998, Inventory and Monitoring of Biotic Resources in Pennsylvania, Pennsylvania Biological Survey, Harrisburg, 220 pp. Also see the Pennsylvania Natural Heritage Program (<http://www.naturalheritage.state.pa.us>) listings of global and state rarity ranks and current state and federal status.

Additional sources and details:

MAMMALS: Base figures are from M. A. Steele and G. Kwiecinski, Mammals of Pennsylvania Checklist, with adjustments by the PABS Mammal Technical Committee. **Details:** State endangered: least shrew, fox squirrel (Delmarva subspecies only – extirpated?), northern flying squirrel, Indiana bat. State threatened: water shrew, eastern small-footed myotis, Allegheny woodrat. Downlisted: fisher, to special concern (2006). Extirpated: marten, mountain lion, lynx, rice rat, gray wolf, wolverine, moose, bison. Non-native and reproducing: thirteen-lined ground squirrel, Norway rat, house mouse.

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BIRDS: Determinations based on internal PABS Ornithological Technical Committee deliberations and tracking memos and the Pennsylvania Society for Ornithology (PSO) Pennsylvania Ornithological Records Committee (PORC) official list (<http://www.pabirds.org>). **Details:** State endangered: short-eared owl, American bittern, great egret, black tern, sedge wren, blackpoll warbler, yellow-bellied flycatcher, peregrine falcon, least bittern, migrant loggerhead shrike, yellow-crowned night-heron, black-crowned night-heron, king rail, dickcissel, common tern. State threatened: upland sandpiper, bald eagle, osprey. Extirpated: greater prairie chicken, piping plover, Appalachian Bewick's wren, Bachman's sparrow. Extinct: passenger pigeon, Carolina parakeet. Non-native and reproducing: mute swan, ring-necked pheasant, rock pigeon, European starling, house finch, house sparrow.

REPTILES: Determinations by the PABS Amphibians and Reptile Technical Committee. **Details:** State endangered: bog turtle, Kirtland's snake, rough green snake, eastern massasauga. State threatened: redbelly turtle. Extirpated: smooth softshell, Blanding's turtle, eastern mud turtle. Non-native and reproducing: red-eared slider (turtle).

AMPHIBIANS: Determinations by the PABS Amphibians and Reptile Technical Committee. **Details:** State endangered: mud salamander, New Jersey chorus frog, coastal plain leopard frog, eastern spadefoot. State threatened: green salamander. Extirpated: tiger salamander.

FISHES: Determinations by the PABS Fish Technical Committee. Several known hybrids are excluded. "Annual migrants" are estuarine species, some of whose reproducing status in the state is unknown.

INVERTEBRATES: Based on J. Rawlins, 2005, Appendix 5: Pennsylvania priority invertebrates, in L. Williams (ed.), 2005, Pennsylvania Comprehensive Wildlife Conservation Strategy, Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission, Harrisburg, 762 pp + appendices. (<http://www.pgc.state.pa.us/pgc/lib/pgc/SWG/PAWAP.pdf>). Although these are the best counts available at present, the "endangered" and "threatened" categories are likely to be underestimates, perhaps by 50 species each. Likewise the actual number of extirpated species may be as high as 45.

VASCULAR PLANTS: From the Pennsylvania Flora Project database, Botany Department, Morris Arboretum of the University of Pennsylvania (<http://www.pafloora.org>). Details are in A. F. Rhoads and T. A. Block, 2007, The Plants of Pennsylvania: an Illustrated Manual (second edition), University of Pennsylvania Press, Philadelphia, 1,042 pp.

BRYOPHYTES: Based on records compiled by the PABS Bryophytes and Lichens Technical Committee. Estimated number of liverworts (hepatics) is based on G. C. Manville, 2001, An Annotated Checklist of Liverworts and Hornworts (Hepatics and Anthocerotales) of Pennsylvania, published by the author, 40 pp.

LICHENS: Based on records compiled by the PABS Bryophytes and Lichens Technical Committee and J. Lendemer. The above value is based only on examined vouchers; additional collecting as well as revision of herbarium specimens upon which historical reports have been based is expected to greatly increase the number of species.

FUNGI: Based on Pennsylvania records from the Mycological Herbarium of the Pennsylvania State University (PACMA), two PABS bioblitzes at Lake Erie, Western Pennsylvania Mushroom Club, Eastern Pennsylvania Mushroomers, North American Mycological Association, Northeast Mycological Federation, and Susquehanna Valley Mycological Society.

PENNSYLVANIA'S BEST-SURVEYED INVERTEBRATE GROUPS

GROUP OF ORGANISMS	SPECIES OF IMMEDIATE CONCERN				TOTAL SPECIES				
	ENDANGERED (OR RANKED S1*)	THREATENED (OR RANKED S2†)	RECOVERED & DOWNLISTED SINCE 1990	PRESUMED EXTIRPATED FROM PENNSYLVANIA	GLOBALLY EXTINCT	REPRODUCING HISTORICALLY IN PENNSYLVANIA	REPRODUCING CURRENTLY IN PENNSYLVANIA		
							NATIVE	NON-NATIVE	TOTAL
MOLLUSKS (mussels, clams, snails, slugs)									
MUSSELS (Unionidae)	17	3	0	14	0	65	41	3	44
TERRESTRIAL SNAILS, SLUGS (Stylommatophora)							111	13	124
CRUSTACEANS (scuds, shrimps, pillbugs, crayfish)									
CRAYFISHES (Crustacea: Decapoda)	2		0			13		2	
INSECTS									
CADDISFLIES (Trichoptera)	1		0	1		313	312	0	312
CRANE FLIES (Diptera: Tipulidae)									320
ANGEL INSECTS (Zoraptera)						1	1	0	1
DOBSONFLIES, FISHFLIES (Megaloptera: Corydalidae)									
PLANT BUGS (Hemiptera: Miridae)									350
STONEFLIES (Plecoptera)							135	0	135
MAYFLIES (Ephemeroptera)									230
DRAGONFLIES, DAMSELFLIES (Odonata)	24	17	0	5	0	182	177	0	177
BUTTERFLIES, MOTHS (Lepidoptera)	34	22	0	10	0				

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							NATIVE	NON-NATIVE	TOTAL
ARACHNIDS (spiders, ticks, mites, daddy-longlegs, scorpions)									
DADDY-LONGLEGS (Opiliones)							22	0	22
SCORPIONS (Scorpiones)						1	1	0	1
CNIDARIA (mostly marine animals: corals, jellyfish, sea anemones)									
FRESHWATER JELLYFISHES or MEDUSAS (Limnomedusae)						1	1	0	1

* Critically imperiled in the state because extreme rarity (generally one to five occurrences), steep decline, or some factor of its biology makes it particularly vulnerable to extirpation.

† Imperiled in the state because rarity (generally six to 20 occurrences), steep decline, or other factors demonstrably make it very vulnerable to extirpation.

The source for these figures, except as noted below, is: Rawlins, J. E. and C. W. Bier, 1998, Invertebrates: review of status in Pennsylvania, pp. 85-120 in J. D. Hassinger, R. J. Hill, G. L. Storm and R. H. Yahner (tech. coords.), Inventory and Monitoring of Biotic Resources in Pennsylvania, Pennsylvania Biological Survey, University Park and Harrisburg. Also see the Pennsylvania Natural Heritage Program (<http://www.naturalheritage.state.pa.us>) listings of global and state rarity ranks and current state and federal status.

UNIONID MUSSELS:

TERRESTRIAL SNAILS & SLUGS:

CRAYFISHES:

CADDISFLIES:

CRANE FLIES:

DOBSONFLIES & FISHFLIES:

PLANT BUGS:

STONEFLIES:

MAYFLIES:

DRAGONFLIES & DAMSELFLIES:

BUTTERFLIES & MOTHS:

DADDY-LONGLEGS: