

DRAFT AMENDMENTS TO MINNESOTA'S LIST OF
ENDANGERED, THREATENED,
AND SPECIAL CONCERN SPECIES

(MOSSES AND LIVERWORTS)

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Minnesota Department of Natural Resources

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This document contains the Minnesota Department of Natural Resources' ("DNR") draft amendments to Minnesota's List of Endangered, Threatened, and Special Concern Species ("List"). The DNR maintains the List under the authority of Minnesota's Endangered and Threatened Species Statute (Minnesota Statutes, Section 84.0895; "MESA"). The List is codified as Minnesota Rules, Chapter 6134. Amendments to the List will be made in accordance with the provisions of the Minnesota Administrative Procedures Act (Minnesota Statutes, Chapter 14).

The DNR wishes to provide you with an opportunity to comment on these draft amendments early in the administrative rulemaking process. Later in administrative rulemaking, you will have additional opportunities to review and comment on amendments to the List.

Copies of this document and related materials are available at <http://www.dnr.state.mn.us/ets/rulesrevision.html>, or by contacting the DNR (above).

NUMERICAL SUMMARY OF DRAFT AMENDMENTS

	CURRENT LIST				TOTAL CHANGES	DRAFT AMENDMENTS					
						CHANGES IN PROTECTED (E/T) STATUS			CHANGES IN LISTED (E/T/SC) STATUS		
	E	T	SC	TOTAL		PROTECTION REMOVED (E/T to SC/N)	PROTECTIO N ADDED (SC/N to E/T)	PROTECTION UNAFFECTED	DELISTED	LISTED	NO EFFECT IN LISTED STATUS
ALL SPECIES	96	101	242	439	273	16	93	164	25	170	78
VASCULAR PLANTS	57	66	133	256	130	9	64	57	9	65	56
LICHENS	8	3	6	17	24	1	2	21	1	22	1
MOSSES AND LIVERWORTS	1	0	2	3	27	0	3	24	0	26	1
FUNGI	3	0	3	6	2	0	0	2	0	2	0
MAMMALS	0	1	14	15	7	0	1	6	1	5	1
BIRDS	7	6	15	28	12	2	1	9	3	6	3
REPTILES AND AMPHIBIANS	2	3	9	14	3	0	1	2	1	1	1
FISH	0	1	20	21	5	0	0	5	0	5	0
MUSSELS	8	12	5	25	12	0	2	10	2	4	6
SNAILS	2	3	0	5	6	3	1	2	3	3	0
JUMPING SPIDERS	0	0	8	8	4	0	1	3	1	2	1
LEAFHOPPERS	0	0	1	1	2	0	0	2	0	2	0
DRAGONFLIES	0	0	2	2	8	0	0	8	0	8	0
BUTTERFLIES AND MOTHS	5	3	8	16	6	0	1	5	0	3	3
CADDISFLIES	1	0	12	13	23	0	15	8	4	16	3
TIGER BEETLES	2	3	4	9	2	1	1	0	0	0	2

EXPLANATION OF FORMAT

Scientific Name: All scientific names used in this document reflect current scientific knowledge regarding the relationships between species. Where the scientific name of a listed species has changed since the last revision of the List, a parenthetical notation in the form of “(Δ to *Xxx xxx*)” indicates that a change in the scientific name used in Minnesota Rules, Chapter 6134 accompanies its draft change in status. Page 34 lists cases in which a species’ scientific name will be changed without a change in its status. Page 35 identifies the references that provide the source of scientific names used in the List.

Common Name: Although common names are not standardized in general use, they are provided in this document for convenience. However, the DNR intends to remove common names from Minnesota Rules, Chapter 6134. Common names may continue to appear in documents designed for use by the general public.

Current Status/Draft Status: The following abbreviations are used in the Current Status and the Draft Status columns. For legal definitions, see MESA.

- E** Endangered (threatened with extinction throughout all or a significant portion of its range within Minnesota; protected under MESA; location records maintained by DNR)
- T** Threatened (likely to become endangered within the foreseeable future throughout all or a significant portion of its range within Minnesota; protected under MESA; location records maintained by DNR)
- SC** Special Concern (extremely uncommon in Minnesota, or with unique or highly specific habitat requirements and deserving careful monitoring of its status, or on the periphery of its range, or once threatened or endangered but now have increasing or protected, stable populations; *not* protected under MESA; location records maintained by DNR)
- N** No Legal Status (location records maintained by DNR, in most cases)
- N (X)** No Legal Status, and probably extirpated from Minnesota (location records maintained by DNR, in most cases)
- No Legal Status (location records *not* yet maintained by DNR)

Explanation: The explanation column contains up to three lines of information supporting each draft change in status. The explanation for each species will be expanded upon in a Statement of Need and Reasonableness that will be available later in the administrative rulemaking process.

The first two lines of each species’ explanation may include a description of the species’ distribution in the state, its habitat, and the completeness of the survey effort for the species. For any species about which information is maintained by the Minnesota DNR’s Natural Heritage Information System (NHIS), these two lines usually end with “(# EOs),” the number of Element Occurrences (i.e., areas in which a local population of the species has been documented to occur in the past or at present) for which the NHIS has records. Note that some EOs may no longer support the species. If the DNR does not currently maintain records on the species, the explanation will, in most cases, either describe the known location/s or include “# sites represented by collections.” This is an estimate of the number of local populations for which museums or other biological collections are known to have specimens in their holdings.

The final line of each explanation (“Adjacent SRank/Status:”) summarizes the conservation status of the species in the states and provinces that are adjacent to Minnesota (WI = Wisconsin; IA = Iowa; SD = South Dakota; ND = North Dakota; MB = Manitoba; ON = Ontario). A dash (“-”) indicates that the species is not known to occur in that state or province. “US” indicates that the species has the indicated status under the federal Endangered Species Act.

“**SRank**” (Subnational Status Rank) is assigned by each state or province, using standardized assessment methodology developed by NatureServe, the international network of Natural Heritage Programs. SRank is expressed with the following numerical rankings:

- S1 = critically imperiled
- S2 = imperiled
- S3 = vulnerable to extirpation or extinction
- S4 = apparently secure
- S5 = demonstrably widespread, abundant, and secure

Combined codes (e.g., “S3S4”) indicate that the numerical ranking falls between the two ranks. Additional codes used in this field may include:

- S#? = SRank is inexact
- SNR = present in the state or province, but no SRank is available
- SNA = not applicable because species is not a suitable candidate for conservation action
- SU = unranked due to lack of information or conflicting information
- SH = possibly extirpated (“historical”)

In Minnesota, SRank reflects Current Status. Thus, E = S1, T = S2, and SC = S3.

“**Status**” indicates the legal status (if any) of the species within the state or province, using the same codes as those used in the Current Status and Draft Status fields. Note that SD and ND do not maintain state lists, and no legal status is available for those states. MB and ON rarely assign a provincial status to a species. A “C” after “US:” indicates that the species is a candidate for federal status. A comment at the end of the final line reading “(1996: X to X)” indicates that the species’ status in Minnesota was changed in 1996 (the most recent revision of the List) as noted.

MOSSES AND LIVERWORTS

<u>Scientific Name</u>	<u>Common Name</u>	<u>Current Status</u>	<u>Draft Status</u>	<u>Explanation</u>
<i>Aphanorrhagma serratum</i>	a species of moss	--	SC	This moss grows on river banks and areas prone to flooding, and has been found at only one site in MN, along the bank of the St. Croix River in Chisago County; surveys extensive. Adjacent SRank/Status: WI:S3S4; IA:-; SD:-; ND:-; MB:-; ON:S1
<i>Atrichum crispum</i>	wave-leaved crane's-bill moss	--	SC	This species is found on wet soils in woods; occurs in MN in hummocky seepage fens; known from two sites in MN, in Lake County and Rice County; surveys extensive. Adjacent SRank/Status: WI:S3S4; IA:-; SD:-; ND:-; MB:-; ON:S3
<i>Atrichum tenellum</i>	little saw moss	--	SC	This moss lives on wet soils in open hardwood forests, and is known from only one site in MN, a woodland in Fillmore County; surveys have been extensive. Adjacent SRank/Status: WI:S3S4; IA:-; SD:-; ND:-; MB:SNR; ON:S2
<i>Aulacomnium androgynum</i>	bud-headed thread moss	--	SC	Habitat for this moss species includes sedge meadows, treed fens, and conifer forests. In MN, it is known only from three sites in the Susie Islands of Cook County; surveys extensive. Adjacent SRank/Status: WI:S2/SC; IA:-; SD:-; ND:-; MB:-; ON:S3
<i>Aulacomnium heterostichum</i>	differential branched crease capsule moss	--	SC	This moss species occurs on soil or rocks in open, deciduous woods and along creeks, and in MN, is known only from a single site on Big Trout Creek, Winona County; surveys extensive. Adjacent SRank/Status: WI:S3S4; IA:-; SD:-; ND:-; MB:SNR; ON:S2
<i>Bryum cyclophyllum</i>	egg-leaf true moss	--	SC	Known only from one site in MN, on Big Susie I., this poorly known moss occurs on wet soils subject to inundation. It is sparsely distributed in eastern NA, but found widely in western NA. Adjacent SRank/Status: WI:S2?; IA:-; SD:-; ND:-; MB:-; ON:S1
<i>Buxbaumia aphylla</i>	bug-on-a-stick moss	--	SC	This moss species is found on disturbed soils or old logs in hardwood forests at the edge of creeks; within MN, known only from a single site on Big Trout Creek, Winona County. Adjacent SRank/Status: WI:S1/SC; IA:-; SD:-; ND:-; MB:-; ON:S2S3
<i>Cirriphyllum piliferum</i>	hair-pointed feather moss	--	SC	Grows on soil and decayed wood in moist, shady places; known only from an algific slope in Fillmore County and from a small area of valley-bottom wetlands and forest in Washington Co. Adjacent SRank/Status: WI:-; IA:-; SD:-; ND:-; MB:-; ON:S2
<i>Cryptocolea imbricata</i>	a species of liverwort	--	T	The type locality of this recently-described liverwort is from moist soil on Susie Is.; known only from eastern NA, one site on Isle Royale, Greenland, and Ellesmere I.; surveys extensive. Adjacent SRank/Status: WI:-; IA:-; SD:-; ND:-; MB:-; ON:-
<i>Cynodontium schisti</i>	mowed mosquito moss	--	SC	This moss inhabits shaded crevices of cliffs and bounders; known in MN from sheltered rock ledge and forest edge habitat on Little Brick Island, Cook County; surveys extensive. Adjacent SRank/Status: WI:-; IA:-; SD:-; ND:-; MB:-; ON:-
<i>Cyrto-hypnum pygmaeum</i>	pigmy plume moss	--	SC	This moss occurs on mesic forest, cliff, and rocky creek-bed habitat, and has been found at only two sites in MN, in Houston and Wabasha Counties; surveys extensive. Adjacent SRank/Status: WI:SNR; IA:-; SD:-; ND:-; MB:-; ON:S2
<i>Encalypta procera</i>	extinguisher moss	--	SC	This moss is a calciphile found on rock or soil in moist crevices, talus, and cliff ledges; known from only two sites in MN, along creeks in Cook and Lake Counties; surveys extensive. Adjacent SRank/Status: WI:S2/SC; IA:-; SD:-; ND:-; MB:SNR; ON:S5
<i>Frullania selwyniana</i>	a species of liverwort	--	T	After not having been collected in MN in over 60 yrs, extensive surveys in 2001 found this rare liverwort at a single humid, cedar/ash swamp in Lake Co.; restricted to the bark of white cedar. Adjacent SRank/Status: WI:S1/SC; IA:-; SD:-; ND:-; MB:-; ON:S1S2

<u>Scientific Name</u>	<u>Common Name</u>	<u>Current Status</u>	<u>Draft Status</u>	<u>Explanation</u>
<i>Heterocladium dimorphum</i>	spaced-out tangle moss	--	SC	This moss species grows along moist streambanks; known from only one Cook County location in MN, where it grows on bedrock within the Lake Superior splash zone; surveys extensive. Adjacent SRank/Status: WI:-; IA:-; SD:-; ND:-; MB:-; ON:S2
<i>Hyophila involuta</i>	rolled-leaf wet-ground moss	--	SC	An inhabitant of wet rocks, often in streams, this moss species has been found in only one location in MN, on rocks in an intermittent streambed in Houston county; surveys extensive. Adjacent SRank/Status: WI:S2/SC; IA:-; SD:-; ND:-; MB:-; ON:S3
<i>Jaffuelobryum wrightii</i>	Wright's blunt leaved bryum	--	SC	A moss of dry, sandstone outcrops, this species is known from a single location along the Minnesota River, near Kasota, Le Seuer County; surveys incomplete. Adjacent SRank/Status: WI:S2/SC; IA:-; SD:-; ND:-; MB:-; ON:S1
<i>Lescurea saxicola</i>	a species of moss	--	T	First discovered in MN in 2001; rare, montane species otherwise known only from eastern and western North America; disjunct MN pop'n is in a black ash swamp along Brule R., Cook Co. Adjacent SRank/Status: WI:-; IA:-; SD:-; ND:-; MB:-; ON:-
<i>Marsupella emarginata</i>	high mountain ditch liverwort	--	SC	This liverwort typically occurs on wet, acidic rocks near mountain streams and waterfalls. In MN, known from two Cook County sites near the shore of Lake Superior; surveys extensive. Adjacent SRank/Status: WI:-; IA:-; SD:-; ND:-; MB:-; ON:S3?
<i>Meesia uliginosa</i>	swan moss	--	SC	This moss species prefers calcium-rich fens and swamps; in MN, it is has only been found in 4 spring fens and thickets of the Net Lake Peatland in Koochiching County; surveys extensive. Adjacent SRank/Status: WI:S3; IA:-; SD:-; ND:-; MB:SNR; ON:S3
<i>Pogonatum urnigerum</i>	urn-bearing hair moss	--	SC	A species of roadbanks and cliff crevices, in MN, this moss is known only from the Lake Superior shore, Sugar Loaf Cove, Cook County, where it is peripheral to its eastern U.S. range. Adjacent SRank/Status: WI:S2/SC; IA:-; SD:-; ND:-; MB:-; ON:S1
<i>Schistostega pennata</i>	cave moss	E	T	This luminous moss inhabits caves and other dark recesses; known from only two sites in MN, both small populations on cliff faces along lakeshores in Cook and Lake Cos.; surveys extensive. Adjacent SRank/Status: WI:S1/SC; IA:-; SD:-; ND:-; MB:-; ON:S2
<i>Sphagnum compactum</i>	cushion peat moss	--	SC	This moss occurs in dry margins of open bogs, and pioneers sand, rock, and bare peat; poor competitor; known from only a single logged jack pine stand in St. Louis County, MN. Adjacent SRank/Status: WI:S4; IA:-; SD:-; ND:-; MB:SNR; ON:S3
<i>Sphagnum lescurii</i>	red twisted bog moss	--	SC	This moss of pond margins under coniferous forests is known from one Lake County location in MN, where it is associated with black spruce forest at the edge of Edward Lake. Adjacent SRank/Status: WI:S4; IA:-; SD:-; ND:-; MB:-; ON:S1
<i>Splachnum rubrum</i>	red parasol moss	--	SC	Known from only three Cook County forested fen sites in MN, this rare moss species grows exclusively on old moose dung; surveys extensive. Adjacent SRank/Status: WI:-; IA:-; SD:-; ND:-; MB:SNR; ON:S2
<i>Thelia hirtella</i>	common thelia	--	SC	This species tends to grow on bark near the base of hardwood trees; known from only 2 MN sites near Hoyt Lakes, St. Louis County, which is at the western edge of its N.A. range. Adjacent SRank/Status: WI:S4; IA:-; SD:-; ND:-; MB:-; ON:S2

<u>Scientific Name</u>	<u>Common Name</u>	<u>Current Status</u>	<u>Draft Status</u>	<u>Explanation</u>
<i>Tortella inclinata</i>	shortleaf chalk moss	--	SC	In MN, this moss is known from a single, Cook County location in the vicinity of Grand Marais; prefers calcareous habitats, stabilized dune sand and gravel; surveys extensive. Adjacent SRank/Status: WI:S3?; IA:-; SD:-; ND:-; MB:SNR; ON:S1S2
<i>Trichocolea tomentella</i>	common down liverwort	--	SC	Known from only one Lake County location in MN, a black ash/conifer swamp in Tettegouche State Park; surveys extensive. (1EO) Adjacent SRank/Status: WI:S4?; IA:-; SD:-; ND:-; MB:-; ON:S5

DRAFT CHANGES IN SCIENTIFIC NAME **NOT ACCOMPANIED BY A CHANGE IN STATUS**

<u>Taxonomic Group</u>	<u>Old Scientific Name</u>	<u>New Scientific Name</u>	<u>Status</u>
Vascular Plants	<i>Eleocharis olivacea</i>	<i>Eleocharis flavescens</i> var. <i>olivacea</i>	T
	<i>Psoralidium tenuiflora</i>	<i>Psoralidium tenuiflorum</i>	E
	<i>Ruppia maritima</i>	<i>Ruppia cirrhosa</i>	SC
Fungi	<i>Fuscoboletinus weaverae</i>	<i>Suillus weaverae</i>	E
Mammals	<i>Cervus elaphus</i>	<i>Cervus canadensis</i>	SC
	<i>Phenacomys intermedius</i>	<i>Phenacomys ungava</i>	SC
Reptiles and Amphibians	<i>Clemmys insculpta</i>	<i>Glyptemys insculpta</i>	T
	<i>Emydoidea blandingii</i>	<i>Emys blandingii</i>	T
Fish	<i>Ammocrypta asprella</i>	<i>Crystallaria asprella</i>	SC
	<i>Erimystax x-punctata</i>	<i>Erimystax x-punctatus</i>	SC
	<i>Notropis amnis</i>	<i>Hybopsis amnis</i>	SC
Mussels	<i>Pleurobema coccineum</i>	<i>Pleurobema sintoxia</i>	T
Caddisflies	<i>Setodes gutatus</i>	<i>Setodes oligius</i>	SC
Butterflies and Moths	<i>Atrytone aragos</i>	<i>Atrytone aragos</i> subsp. <i>iowa</i>	SC

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