

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

(TIGER BEETLES)

January 2, 2007

Minnesota Department of Natural Resources

Division of Ecological Services

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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.

TIGER BEETLES

<u>Scientific Name</u>	<u>Common Name</u>	<u>Current Status</u>	<u>Draft Status</u>	<u>Explanation</u>
<i>Cicindela denikei</i>	Laurentian tiger beetle	T	SC	Prior to 1996, this species was known from only 5 locations; extensive surveys since 2000 have discovered many additional pop'ns in Lake, St. Louis, and Koochiching Counties. (48 EOs) Adjacent SRank/Status: WI:-; IA:-; SD:-; ND:-; MB:SNR; ON:S3? (1996: -- to T)
<i>Cicindela hirticollis rhodensis</i>	hairy-necked tiger beetle	SC	E	Known only from Minn. Point, Duluth, this tiger beetle was relocated there in very low numbers during intensive 2003 surveys; its beach habitat is heavily impacted by foot traffic. (2 EOs) Adjacent SRank/Status: WI:S2/SC; IA:-; SD:-; ND:-; MB:-; ON:S2? (1996: -- to SC)

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

REFERENCES USED AS SOURCES OF SCIENTIFIC NAMES

Vascular Plants

Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 12+ vols. New York and Oxford.

Lichens

Esslinger T. L., Egan R.S. 1995. A sixth checklist of the lichen-forming, lichenicolous, and allied fungi of the continental United States and Canada. The Bryologist 98(4):467-549.

Mosses and Liverworts

Anderson L. E. 1990. A checklist of sphagnum in North America north of Mexico. The Bryologist 93(4):500-501.

Anderson L. E., Crum H.A., Buck W.R. 1990. List of the mosses of North America north of Mexico. The Bryologist 93(4):448-499.

Stotler R., Crandall-Stotler B. 1977. A checklist of the liverworts and hornworts of North America. The Bryologist 80(3):405-428.

Fungi

Farr D. F., Bills G. F., Chamuris G. P., Rossman A. Y. 1989. Fungi on plants and plant products in the United States. St. Paul, MN: APS Press.

Mammals

Wilson, D. E., and D. M. Reeder (editors). 2005. Mammal species of the world: a taxonomic and geographic reference. Third edition. The Johns Hopkins University Press, Baltimore. Two volumes. 2,142 pp.

Birds

American Ornithologists' Union (AOU). 1998. Check-list of North American birds. Seventh edition. American Ornithologists' Union, Washington, D.C. [as modified by subsequent supplements and corrections published in The Auk].

Reptiles and Amphibians

Collins, J. T., and T. W. Taggart. 2002. Standard common and current scientific names for North American amphibians, turtles, reptiles, and crocodilians. Fifth edition. The Center for North American Herpetology, Lawrence, Kansas. iv + 44 pp.

Fish

Nelson, J. S., E. J. Crossman, H. Espinosa-Perez, L. T. Findley, C. R. Gilbert, R. N. Lea, and J. D. Williams. 2004. Common and scientific names of fishes from the United States, Canada, and Mexico. American Fisheries Society, Special Publication 29, Bethesda, Maryland. 386 pp.

Mussels

Turgeon, D. D., J. F. Quinn, A. E. Bogan, E. V. Coan, F. G. Hochberg, W. G. Lyons, P. M. Mikkelsen, R. J. Neves, C. F. E. Roper, G. Rosenberg, B. Roth, A. Scheltema, F. G. Thompson, M. Vecchione, and J. D. Williams. 1998. Common and scientific names of aquatic invertebrates from the United States and Canada: mollusks. Second edition. American Fisheries Society Special Publication 26: 1-509.

Snails

Hubricht, L. 1985. The distributions of the native land mollusks of the eastern United States. Fieldiana, n.s. 24:1-191.

Jumping Spiders

Platnick, N. I. 2002. The world spider catalog, Version 2.5. The American Museum of Natural History. Online. Available at: <http://research.amnh.org/entomology/spiders/catalog81-87/index.html>

Leafhoppers

Arnett, R. H. 2000. American insects: A handbook of the insects of America north of Mexico. Second edition. CRC Press, New York.

Dragonflies

Paulson, D. R., and S. W. Dunkle. July 2004. A checklist of North American Odonata including English name, etymology, type locality, and distribution. Slater Museum of Natural History Occasional Papers 56. Available online at: <http://www.ups.edu/biology/museum/NAdragons.html>.

Butterflies and Moths

Opler, P. A., and A. D. Warren. 2002. Butterflies of North America. 2. Scientific Names List for Butterfly Species of North America, north of Mexico. C.P Gillette Museum of Arthropod Diversity, Department of Bioagricultural Sciences and Pest Management, Colorado State University, Fort Collins, Colorado. 79 pp.

Caddisflies

Morse, J. C. 2004. Trichoptera World Checklist online. Available at: <http://entweb.clemson.edu/database/tricopt/>

Tiger Beetles

Freitag, R. 1999. Catalogue of the tiger beetles of Canada and the United States. NRC Research Press, Ottawa, Ontario, Canada K1A 0R6.