

**ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
AMENDING AND CREATING RULES**

The Wisconsin Natural Resources Board proposes an order to **amend** NR 27.03(2) and NR 27.03(3) relating to revising Wisconsin's endangered and threatened species list.

ER-27-11

Analysis Prepared by Department of Natural Resources

- 1. Statutes Interpreted:** In promulgating this rule, s. 227.11(2)(a), Wis. Stats., has been interpreted as allowing the department the authority to create and amend rules. Section 29.604 (3)(b), Wis. Stats., has been interpreted as allowing the department the authority to create and amend the list of Wisconsin's endangered and threatened species, NR 27.03, Wis. Admin. Code.
- 2. Statutory Authority:** The state statutes that authorize the promulgation of this rule include ss. 29.604 227.11, Wis. Stats.
- 3. Explanation of Agency Authority:** These sections grant rule-making authority for the establishment of an endangered and threatened species list to the department.
- 4. Related Statutes or Rules:** Section 29.604 (3), Wis. Stats., requires the Department to establish an endangered and threatened species list. Chapter NR 27, Wis. Admin. Code, provides the list of endangered and threatened species.
- 5. Plain Language Analysis:** The department's Bureau of Endangered Resources initiated and completed a review of Wisconsin's rare species, and now proposes changes to Ch. NR 27, Wis. Admin. Code, which will add 8 species and remove 16 species in Wisconsin to the Wisconsin endangered and threatened species list, and will update 20 scientific names.

The 8 species the state proposes to add to the endangered and threatened list are:

Upland Sandpiper (*Bartramia longicauda*), a bird, is found primarily in the southwest, northwest sands, and northeastern part of the state. Other secondary areas are in the central, southeast, and western parts of the state. This species prefers large, open landscapes with short to mid-height grassy vegetation, including remnant prairie, lightly grazed pastures, barrens, old fields, and other idle grasslands, and hay fields. This species is in decline in Wisconsin, some of the largest declines in its range; once reported at 55 sites. It may disappear from Wisconsin without large blocks of idle and/or grazed grasslands. Add to threatened list [NR27.03(3)].

Black Tern (*Chlidonias niger*), a bird, is found in found in northern, eastern, and central Wisconsin in marshes, river sloughs, rivers, lakeshores, impoundments, and wet meadows, typically in sites with mixture of emergent vegetation and open water. The species is in decline in Wisconsin. Surveys indicate declines as much as 36% in recent years and a 78% decline over 30 years. Once reported at 79 sites, was found only at 7 breeding colonies in 2010. Add to endangered list [NR27.03(2)].

Kirtland's Warbler (*Dendroica (=Setophaga) kirtlandii*), a bird, is found in Adams and Marinette counties in areas at least 30 hectares in size, where scrubby jack pine (2 to 6 meters high) is interspersed with many small openings and minimal ground cover. This species is considered to be "critically imperiled" globally and is currently on the Federal list of endangered species. This species has nested in Wisconsin consistently since 2007; twelve new populations are now known. There are historic records of individuals in the state. Add to endangered list [NR27.03(2)].

Beach-dune Tiger Beetle (*Cicindela hirticollis rhodensis*), a beetle also known as the “hairy-necked tiger beetle”, is found on beaches of Lakes Superior and Michigan. This species is rare and declining in Wisconsin (30%). Once reported from 9-10 sites statewide, now only one known viable population remains. Add to endangered list [NR27.03(2)].

Fawnsfoot (*Truncilla donaciformis*), a freshwater mussel, is only known from the Mississippi River and portions of its major tributaries in Wisconsin (St. Croix and Wisconsin River). This species is in decline in Wisconsin. Populations are disappearing range wide. Once widespread and abundant, this species is rarely found in recent years. Numbers have greatly declined in WI's remaining viable populations (St. Croix and Lower Wisconsin Rivers). Add to threatened list [NR27.03(3)].

Ottoo Skipper (*Hesperia ottoe*), a butterfly, is found in nine counties in the southwestern corner of the state on dry to dry-mesic hill prairies, sand prairies, and sand barrens. This species is very rare and in decline in Wisconsin. Once known to 16 sites; as of 2011 only 4 are extant (a 75% decline since the mid-1990s). Many populations are gone range wide. Very few sites have the size, quality, structure, or connectivity to sustain this species. Add to endangered list [NR27.03(2)].

A Leafhopper (*Attenuipyga vanduzeei*), a small terrestrial insect also known as “a prairie leafhopper” or “shovel-headed leafhopper”, is found in the highest quality prairie remnants near the Mississippi and Lower Wisconsin Rivers. This species is very rare in Wisconsin. Only 4 extant populations are known. This species has poor dispersal ability and is sensitive to management and woody encroachment. Add to endangered list [NR27.03(2)].

An Issid Planthopper (*Fitchiella robertsoni*), a small terrestrial insect also known as “Fitch's Elephanthopper” or “Robertson's Flightless Planthopper” or “Fitch's Planthopper”, is found in high quality remnant dry to dry-mesic grasslands in the bluffs along the Mississippi River and in the sand country of northwest Wisconsin. This species is very rare in Wisconsin. Only 4 extant populations are known. Add to threatened list [NR27.03(3)].

The 16 species the state proposes to remove from the endangered and threatened list are:

Barn Owl (*Tyto alba*), an owl, has a scattered and irregular distribution in the state, mostly the southern half. The species has always been on the edge of its range in Wisconsin and is not considered a regular breeder. In their range, they are found in rural lands or grasslands with some combination of wet meadows, wetland edges, pastures, old-fields, grain crops, hayfields, hedges, and fencerows; usually within 1-2km of permanent water and adjacent to woodlot edge. Nest sites include concrete-domed silos, barns, tree cavities, abandoned farm buildings, church steeples, bank or cliff cavities, and barn owl nest boxes. Remove from the endangered list [NR27.03(2)].

Bewick's Wren (*Thryomanes bewickii*), a small migratory bird, has not been observed breeding in Wisconsin or neighboring states for over 40 years; it is extirpated. Remove from the endangered list [NR27.03(2)].

Snowy Egret (*Egretta thula*), a waterbird, utilizes a wide variety of wetland habitats in their range, but does not breed in Wisconsin. The species has always been on the edge of its range in Wisconsin and is not considered a regular breeder in the state. Remove from the endangered list [NR27.03(2)].

Greater Redhorse (*Moxostoma valenciennesi*), a large fish, is found in widely scattered locations in the Lake Michigan and Mississippi River basins. The species appears stable in WI; found consistently in multiple watersheds. Remove from the threatened list [NR27.03(3)].

Blanding's Turtle (*Emydoidea blandingii*), a turtle, is often found in slow moving rivers, streams, ponds, lakes, marshes, swamps, sloughs, and backwater areas, as well as adjacent terrestrial habitats found in the majority of Wisconsin's counties, except for the north-central tier. Species still slightly declining in WI, however large population numbers and wide distribution. Species is not imperiled in the state. Remove from the threatened list [NR27.03(3)].

Butler's Gartersnake (*Thamnophis butleri*), a snake, is found in open to semi-open canopy wetland and upland habitat, including prairies, sedge meadows, shrub carr, wet meadows, marshes, grasslands, savannas, old fields, pastures, grassy roadsides, and vacant lots in Dodge, Fond du Lac, Milwaukee, Ozaukee, Sheboygan, Washington, and Waukesha counties. Species appears stable in WI. New information on abundance, range, and hybridization support delisting. Remove from the threatened list [NR27.03(3)].

Pygmy Snaketail (*Ophiogomphus howei*), a small dragonfly, is found in clean, fast flowing, medium to large streams with abundant gravel or sand substrates in northern Wisconsin. These streams are also in largely forested watersheds. Species appears stable in the state. New populations found using modeling of habitat and targeted surveys. Remove from the threatened list [NR27.03(3)].

American Fever-few (*Parthenium integrifolium*), a composite plant also known as Wild Quinine, is found in dry-mesic to mesic (sometimes wet-mesic) prairie and savanna in mostly loamy to moderately sandy soils in the southwest and southeast corners of the state. The population in Wisconsin appears stable. It is reproducing well on managed and restored sites, and on newly planted sites. Remove from the threatened list [NR27.03(3)].

Bog Bluegrass (*Poa paludigena*), a grass, is found most often growing on banks and atop hummocks, tussocks, and moss-covered logs along small creeks, rivulets, and pools in black ash/yellow birch, black ash/red maple, and black ash/elm swamps throughout the state, perhaps most common in west-central and northwestern Wisconsin in areas bordering the driftless region. Population in Wisconsin appears stable. New records have resulted from inventories. Remove from the threatened list [NR27.03(3)].

Canada Horse-balm (*Collinsonia canadensis*), is a plant in the mint family is also known as Stoneroot, and is considered extirpated in Wisconsin. Elsewhere in its range it has been found in rich beech-maple deciduous forests, as well as occasionally in swampy deciduous forests or oak-hickory and sassafras forests. Documented at only 2 locations in Wisconsin; one is presumed extirpated and the other has not been observed for 150 years. This species is conspicuous and easy to identify. Remove from the endangered list [NR27.03(2)].

Drooping Sedge (*Carex prasina*), a plant in the sedge family, is found in good-quality, mesic hardwood forests encompassing seepages, spring heads, and streamlets and has been found in 11 counties mostly representing widely scattered populations. The population in Wisconsin is stable. It has a narrow habitat preference; however it has a fairly wide distribution and is found regularly in suitable habitat. Remove from the threatened list [NR27.03(3)].

Hemlock Parsley (*Conioselinum chinense*), a plant in the parsley family is considered extirpated. It was found in low, springy, marly ground and old tamarack bogs in Waukesha, Walworth, and Milwaukee counties. Only six native occurrences were known in the state; All are presumed extirpated or historical. Species is conspicuous and easy to identify. Remove from the endangered list [NR27.03(2)].

Prairie Indian-Plantain (*Arnoglossum plantagineum* = *Cacalia tuberosa*), a plant in the aster family, is found in open, deep-soiled wet to wet-mesic to dry prairies that are usually calcareous; has been reported from the southern two tiers of counties in Wisconsin, including Grant, Crawford, Lafayette, Iowa, Green, Dane, Rock, Jefferson, Walworth, Waukesha, Kenosha, and Racine counties. It inhabits moist prairies on lakeplains, outwash plains and low moraines in southeastern Wisconsin as well as dry oak openings and bluff prairies in central and southwestern Wisconsin. The population in Wisconsin is stable to increasing; It has responded well to prairie management. Remove from the threatened list [NR27.03(3)].

Snowy Campion (*Silene nivea*), a plant in the pink family, is found in rich woods and alluvial, disturbed floodplains and streambanks, old grasslands, sand prairie, and roadsides. Primarily known from the Driftless area in south-central, southwestern, and western portion of the state. The population in Wisconsin appears stable. It is able to persist with reed canary grass and in degraded streamside habitats and roadside, railroad and utility rights-of-way. Species no longer considered imperiled. Remove from the threatened list [NR27.03(3)].

Yellow Gentian (*Gentiana alba*), a plant in the gentian family is also known as Yellowish Gentian, and is found in dry to moist prairies, savannas and open woods in a wide variety of soil types. In Wisconsin it has been found in 32 counties, mostly in the south-central portion of the state. The population in Wisconsin is increasing. Most of the population expansion and increases have occurred in old fields. Remove from the threatened list [NR27.03(3)].

Yellow Giant Hyssop (*Agastache nepetoides*), a plant in the mint family, is found in areas with partial sun within dry and dry mesic forests, oak woodlands, oak openings, alluvial forests, as well as the edges of meadows, fencerows, and thickets; primarily found in southern Wisconsin in Crawford, Grant, Lafayette, Green, Rock, Walworth, Racine, Jefferson, Dane, and Columbia counties. The population in Wisconsin is stable to increasing. It has responded well to savanna management and restoration. Remove from the threatened list [NR27.03(3)].

The 20 species the state proposes for a scientific name change are:

- Northern Cricket Frog also known as Blanchard's Cricket Frog (*Acris blanchardii* change to *Acris crepitans*), endangered
- Worm-eating Warbler (*Helmitheros vermivorus* change to *Helmitheros vermivorum*), endangered
- Pallid Shiner (*Notropis annis* change to *Hybopsis amnis*), endangered
- Shoal Chub also known as Speckled Chub (*Macrhybopsis aestivalis* change to *Macrhybopsis hyostoma*), threatened
- Spatterdock Darner Dragonfly (*Aeshna mutata* change to *Rhionaeschna mutata*), threatened
- Obovate Beak Grass (*Diarrhena americana* change to *Diarrhena obovata*), endangered
- Canada Gooseberry also known as Hawthorn-leaved Gooseberry (*Ribes oxycanthoides* change to *Ribes oxycanthoides* ssp. *oxycanthoides*), threatened
- Cliff Cudweed (*Gnaphalium saxicola* change to *Pseudognaphalium saxicola*), threatened
- Early Anemone (*Anemone multifida* change to *Anemone multifida* var. *multifida*), endangered
- Forked Aster (*Aster furcatus* change to *Eurybia furcata*), threatened
- Green Spleenwort (*Asplenium trichomanes-namosum* change to *Asplenium trichomanes-ramosum*), endangered
- Hall's Bulrush (*Scirpus hallii* change to *Schoenoplectus hallii*), endangered
- Hoary Whitlow-cress (*Draba lanceolata* change to *Draba cana*), endangered
- Large-leaved Sandwort (*Moehringia macrophylla* change to *Arenaria macrophylla*), endangered
- Long-beaked Baldrush also known as Bald Rush (*Rhynchospora scirysoides* change to *Rhynchospora scirpoides*), threatened
- Plains Ragwort (*Senecio indecorus* change to *Packera indecora*), threatened
- Sticky False-asphodel also known as False Asphodel (*Tofieldia glutinosa* change to *Triantha glutinosa*), threatened
- Tea-leaved Willow also known as Flat-leaved Willow (*Salix planifolia* change to *Salix planifolia* ssp. *planifolia*), threatened
- Thickspike also known as Thickspike Wheatgrass (*Elymus lonceolatus* ssp. change to *Elytrigia dasystachya* ssp. *psammophilus*), threatened
- Tufted Bulrush also known as Tussock Bulrush (*Scirpus cespitosus* change to *Trichophorum cespitosum*), threatened

6. Summary of, and Comparison with, Existing or Proposed Federal Regulations: The United States Fish and Wildlife Service maintains the list of Federal endangered and threatened species. The Kirtland's Warbler (*Dendroica kirtlandii* = *Setophaga kirtlandii*) is the only Federally Listed species that is being proposed for state listing in Wisconsin under this proposal.

7. Comparison with Rules in Adjacent States: Minnesota, Illinois, Iowa, and Michigan all have an endangered species law and maintain a state list of endangered and threatened plants and animals. Below are links to their laws and lists, as well as species being proposed under this rule change that are currently listed as endangered or threatened in those states.

- Illinois (1972 law, list last revised in 2009/2010): <http://www.dnr.illinois.gov/ESPB/Pages/default.aspx>.
- Iowa (1975 law, list last amended in 2009): <http://www.iowadnr.gov/environment/threatenedendangered.aspx>.
- Michigan (1974/1994 law, list last revised in 2009): http://www.michigan.gov/documents/dnr/2007-007_NR_Threatened_Endangered_Species_nonstrike_9-12_274586_7.pdf.
- Minnesota (1972 law, list last revised in 1996): <http://www.dnr.state.mn.us/rsg/laws.html>. Minnesota is currently undergoing a formal rule revision process to update the list; Over 270 changes have been proposed: <http://files.dnr.state.mn.us/input/rules/ets/all.pdf>.

Species currently on Wisconsin's adjacent states' endangered and threatened lists that will be revised in Wisconsin under this proposed rule change:

Species	WI Proposed Rule Change	Adjacent States' status [IA, IL, MI, MN]
Upland Sandpiper (<i>Bartramia longicauda</i>)	List	▪ IL endangered
Black Tern (<i>Chlidonias niger</i>)	List	▪ IL endangered
Kirtland's Warbler (<i>Dendroica kirtlandii</i>)	List	▪ MI endangered
Snowy Egret (<i>Egretta thula</i>)	Delist	▪ IL endangered
Bewick's Wren (<i>Thryomanes bewickii</i>)	Delist	▪ IL endangered
Barn Owl (<i>Tyto alba</i>)	Delist	▪ IA endangered ▪ IL endangered ▪ MI endangered
Greater Redhorse (<i>Moxostoma valenciennesi</i>)	Delist	▪ IL endangered
Blanding's Turtle (<i>Emydoidea blandingii</i>)	Delist	▪ IA threatened ▪ IL endangered ▪ MN threatened
Fawnsfoot (<i>Truncilla donaciformis</i>)	List	▪ MI threatened ▪ MN special concern; proposed threatened
Ottoe Skipper (<i>Hesperia ottoe</i>)	List	▪ IL endangered ▪ MI threatened ▪ MN threatened list; proposed endangered
Pygmy Snaketail (<i>Ophiogomphus howei</i>)	Delist	▪ MI threatened
Beach-dune Tiger Beetle (<i>Cicindela hirticollis rhodensis</i>)	List	▪ MN special concern; proposed endangered
Bog Bluegrass (<i>Poa paludigena</i>)	Delist	▪ MI threatened ▪ MN threatened
Drooping Sedge (<i>Carex prasina</i>)	Delist	▪ IL threatened
Hemlock Parsley (<i>Conioselinum chinense</i>)	Delist	▪ IL endangered
Snowy Campion (<i>Silene nivea</i>)	Delist	▪ MI threatened ▪ MN threatened

8. Summary of Factual Data and Analytical Methodologies:

The department's Bureau of Endangered Resources (ER) initiated and completed a review of Wisconsin's endangered and threatened species list, culminating in a list of recommended revisions. The proposed rule is related to the addition of eight (8) species and removal of sixteen (16) species from the state's endangered and threatened species list, and the updating of 20 scientific names.

Guiding the list review was the Endangered and Threatened List Revision Process document which was developed and approved in 2006 by the ER Policy Team. This guidance document recommends conducting a list-wide review at least every 5 years and earlier as needed, based on changes in species population condition. "As needed" triggers include significant change in the state or global conservation rank, taxonomic change, recovery goals met, immediate need for protection, or significant new data on a single species or group of species.

Per the revision process document, the international Natural Heritage Inventory (NHI) system of global and state conservation ranks is the primary trigger for initiating a comprehensive assessment of a species. NHI Programs and NatureServe, the NHI umbrella organization, use a suite of factors to assess the extinction or extirpation risk of plants, animals, and ecosystems, and to assign conservation ranks at global, national, and state levels. In 2009, NatureServe developed a rank calculator tool to support the process of assigning conservation status ranks. NatureServe's Element Rank Calculator Tool was used to update state conservation ranks and is used by NatureServe to update Global and National Conservation Ranks. The category of factors used to assess conservation status are rarity, trends, and threats.

Because state conservation ranks are dynamic and can reflect changes in population condition and new information quickly, they have proven useful in directing action toward species most in need of conservation. Updates to conservation ranks for Wisconsin's endangered, threatened, and special concern species are published almost annually in the NHI Working List. The most recent version of the NHI Working List was last published on 6/1/2011 and incorporates many of the results of the review process.

Biologists from a variety of state and national agencies, organizations, and universities, as well as naturalists throughout the state with taxonomic expertise provided new or updated information on the population condition and distribution of rare species in the state. Department biologists focused attention and resources on species that are most at risk of extirpation in the state and where application of Wisconsin's Endangered Species Law would be effective in their protection.

Status assessments were conducted and resulted in the proposed list changes. A database was created to capture information received and decisions made to promote consistency and transparency in the process. Details on the process and the results, including species distribution maps and status reviews can be found on the department's website (keywords "ET List").

These rule changes were developed with the assistance of the Bureaus of Endangered Resources, Science Services, Wildlife Management, and Legal Services.

9. Analysis and supporting documents used to determine effect on small business or in preparation of economic impact report:

Pursuant to s. 227.137, Wis. Stats., the department is required to solicit comments on the economic impact of proposed rule. Small businesses, as defined in s. 227.114(1), Wis. Stats., are asked to identify themselves as a small business in their comments. Following the public comment period for the EIA, a revised "Fiscal Analysis and Economic Impact Analysis" will be prepared containing relevant information that the department receives. Once the EIA process is completed, the department will submit the rule package and economic impact analysis to the Wisconsin Legislative Council under s. 227.15, Wis. Stats., and hearings on the proposed rule will be held by the department after proper notice in accordance with ss. 227.17 and 227.18, Wis. Stats. If the EIA indicates that the proposed rule is reasonably expected to have a total impact of \$20,000,000 in implementation and compliance costs, the department shall submit the rule to the Department of Administration in accordance with s. 227.137(6), Wis. Stats.

A small business regulatory flexibility analysis that contains the following provisions in s. 227.19(3)(e), Stats., will be included in the final rule order:

1. The agency's reason for including or failing to include in the proposed rule any of the methods specified under s. [227.114 \(2\)](#) for reducing its impact on small businesses.
2. A summary of issues raised by small businesses during the hearings on the proposed rule, any changes in the proposed rule as a result of alternatives suggested by small businesses and the reasons for rejecting any alternatives suggested by small businesses.
3. The nature of any reports and the estimated cost of their preparation by small businesses that must comply with the rule.
4. The nature and estimated cost of other measures and investments that will be required of small businesses in complying with the rule.
5. The additional cost, if any, to the agency of administering or enforcing a rule which includes any of the methods specified under s. [227.114 \(2\)](#).
6. The impact on public health, safety and welfare, if any, caused by including in the rule any of the methods specified under s. [227.114 \(2\)](#).

The Department's email distribution list used to solicit comments includes small businesses and small business associations. The distribution list will be submitted to the Governor's Office of Regulatory Compliance.

10. Effect on small business: Affected constituencies include agricultural and forestry industries, commercial and development businesses, natural resources consultants, utilities, road builders and wildlife rehabilitators.

Most often the public and small businesses become aware of the endangered species law through one of DNR's permitting processes. Wisconsin's endangered species law is implemented by the department in that any activity that the department conducts, funds or approves must consider impacts to listed species (s.29.604 Wis. Stats.). Both endangered and threatened species have the same level of legal protection. Under Wisconsin's law listed animals are protected on all public and private land. Plants are only protected on public land and agricultural, forestry, and utility activities are exempt from this protection (s. 29.604 Wis. Stats.)

In most instances, a permit applicant provides a description of the proposed project. Department staff perform an endangered resources review utilizing the Natural Heritage Inventory database to determine if 1) there is a listed species that may be present, and if 2) the project area has suitable habitat for that species. If either of these criteria are not present the applicant is informed that there is no potential impact and the project proceeds. Over 2/3 of projects fall into this category. If **both** the species is known to be in the area **and** there is suitable habitat on the project site, the department works with the applicant to see if impacts to a listed species may be avoided through seasonal adjustments, temporary removals or barriers. If it can, the project proceeds. If impacts can't be avoided, an incidental take permit is issued to the applicant that allows take of the species. State law requires that all projects under an incidental take permit must minimize and mitigate these impacts. (s.29.604 Wis. Stats.). When the minimization and mitigation measures are in place, the permit is publicly noticed the project may proceed. Very few projects require an incidental take permit, typically fewer than 20 a year are issued.

The species being proposed for removal from the endangered and threatened species list have a total of 1055 records in the NHI database which is used for conducting an endangered resources review. There are a total of 217 records in the NHI database for the species being proposed for addition.

11. A copy of any comments and opinion prepared by the Board of Veterans Affairs under s. 45.03 (2m), Stats., for rules proposed by the Department of Veterans Affairs:
Not applicable.

12. Agency Contact Person:

Erin Crain, Department of Natural Resources, Endangered Resources – ER/6, P.O. Box 7921, Madison, WI 53707-792; Telephone: (608) 267-7479; Email: Erin.Crain@wisconsin.gov

13. Place where comments are to be submitted and deadline for submission.

Erin Crain
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Hearing dates and deadline for submission of comments are to be determined.

Section 1. NR 27.03(2) and NR 27.03(3) are amended to read:

(2) WISCONSIN ENDANGERED SPECIES LIST.

(a) *Mammals.*

1. Pine Marten — *Martes americana*.

(b) *Birds.*

1. Piping Plover — *Charadrius melodus*.

2. ~~Black Tern — *Chlidonias niger*~~

3. Yellow-Throated Warbler — *Denroica dominica*.

3l. ~~Kirtland's Warbler — *Dendroica*~~

~~*kirtlandii*. 3m. Snowy Egret — *Egretta thula*.~~

4. Peregrine Falcon — *Falco peregrinus* (also U.S. Endangered).

~~5. Worm-Eating Warbler — *Helmitheros vermivorus*.~~

5. ~~Worm-Eating Warbler — *Helmitheros vermivorum*.~~

6. Loggerhead Shrike — *Lanius ludovicianus*.

6m. Red-necked Grebe — *Podiceps grisegena*.

7. Caspian Tern — *Sterna caspia*.

8. Forster's Tern — *Sterna forsteri*.

9. Common Tern — *Sterna hirundo*.

~~10. Bewick's Wren — *Thyromanes*~~

~~*bewickii*. 11. Barn Owl — *Tyto alba*.~~

(c) *Reptiles.*

1. Ornate Box Turtle — *Terrapene ornata*.

2. Slender Glass Lizard — *Ophisaurus attenuatus*.

3. Queen Snake — *Regina septemvittata*.

4. Western Ribbon Snake — *Thamnophis proximus*.

5. Northern Ribbon Snake — *Thamnophis sauritus*.

6. Massasauga — *Sistrurus catenatus*.

(d) *Amphibians.*

~~1m. Blanchard's Cricket Frog — *Acris*~~

~~*blanchardii*. 1m. Northern Cricket Frog — *Acris*~~
~~*crepitans*.~~

(e) *Fishes.*

1. Skipjack Herring — *Alosa chrysochloris*.

2m. Crystal Darter — *Crystallaria asprella*.

- 2t. Gravel Chub — *Erimystox x-punctata*.
3. Bluntnose Darter — *Etheostoma chlorosomum*.
- 4m. Starhead Topminnow — *Fundulus disper*.
5. Goldeye — *Hiodon alosoides*.
- 5m. Pallid Shiner — *Hybopsis amnis*.
- 6g. Striped Shiner — *Luxilus chrysocephalus*.
- 6m. Black Redhorse — *Moxostoma duguensnei*.
- ~~7. Pallid Shiner — *Notropis annis*.~~
9. Slender Madtom — *Noturus exilis*.

(f) *Insects*.

1. Pecatonica River Mayfly — *Acanthametropus pecatonica*.
- 1m. Red-veined Prairie Leafhopper — *Aflexia rubranura*.
2. A Flat-headed Mayfly — *Anepeorus simplex*.
- 2g. A Leafhopper — *Attenuipyga vanduzeei*.
- 2m. Swamp Metalmark Butterfly — *Calephelis mutica*.
- 2r. Beach-dune Tiger Beetle — *Cicindela hirticollis rhodensis*.
3. Northern Blue Butterfly — *Lycaeides idas*.
4. Giant Carrion Beetle — *Nicrophorus americanus*.
5. Powesheik Skipper — *Oarisma powesheik*.
6. Extra-striped Snaketail Dragonfly — *Ophiogomphus anomalos*.
7. Saint Croix Snaketail Dragonfly — *Ophiogomphus susbecha*.
8. Silphium Borer Moth — *Papaipema silphii*.
9. Phlox Moth — *Schinia indiana*.
- 9g. Warpaint Emerald Dragonfly — *Somatochlora incurvata*.
- 9m. Hine's Emerald Dragonfly — *Somatochlora hineana*.
- 9t. Regal Fritillary — *Speyeria idalia*.
10. Knobel's Riffle Beetle — *Stenelmis knobeli*.
- 10m. Lake Huron Locust — *Trimerotropis huroniana*.

(g) *Mussels*.

1. Spectacle Case — *Cumberlandia monodonta*.
2. Purple Wartyback — *Cyclonaias tuberculata*.
3. Butterfly — *Ellipsaria lineolata*.
4. Elephant Ear — *Elliptio crassidens*.
5. Snuffbox — *Epioblasma triquetra*.
6. Ebonyshell — *Fusconaia ebena*.
7. Higgins Eye Pearly Mussel — *Lampsilis higginsii* (also U.S. Endangered).
8. Yellow and Slough Sandshell — *Lampsilis teres*.
9. Bullhead — *Plethobasus cyphus*.
10. Winged Mapleleaf — *Quadrula fragosa*.
11. Rainbow Shell — *Villosa iris*.

(h) *Snails*.

1. Hubricht's Vertigo — *Vertigo hubrichti*.
2. Occult Vertigo — *Vertigo occulta*. (*th*— not a valid sp, delist)

(i) *Plants*.

1. Anemone caroliniana — Carolina Anemone (Ranunculaceae: Crowfoot Family).
- ~~2. Anemone multifida — no common name (Ranunculaceae: Crowfoot family).~~
2. Anemone multifida var. multifida — Early Anemone (Ranunculaceae: Crowfoot family).
3. Arenaria macrophylla — Large-leaved Sandwort (Caryophyllaceae: Pink Family).
4. Armoracia aquatica — Lake Cress (Brassicaceae: Mustard Family).
- 4m. Asclepias purpurascens — Purple Milkweed (Asclepiadaceae: Milkweed Family).
- ~~5m. Asplenium trichomanes — namosum — Green Spleenwort (Polypodiaceae: Fern Family).~~
- 5m. Asplenium trichomanes — ramosum — Green Spleenwort (Polypodiaceae: Fern Family).
6. Astragalus alpinus — Alpine Milk Vetch (Fabaceae: Bean Family).

7. *Astragalus crassicaarpus* — Prairie Plum (Fabaceae: Bean Family).
7m. *Astragalus neglectus* — Coppers Milk Vetch (Fabaceae: Bean Family).
7t. *Botrychium campestre* — Prairie Moonwort (Ophioglossaceae: Adder's-tongue Family).
8. *Botrychium lunaria* — Moonwort (Ophioglossaceae: Adder's-tongue Family).
8m. *Botrychium mormo* — Goblin Fern (Ophioglossaceae: Adder's-tongue Family).
9. *Caltha natans* — a Marsh Marigold (Ranunculaceae: Crowfoot Family).
9m. *Camassia scilloides* — Wild Hyacinth (Liliaceae: Lily Family).
10. *Carex crus-corvi* — no common name (Cyperaceae: Sedge Family).
10m. *Carex laevivaginata* — Smooth-sheathed Sedge (Cyperaceae: Sedge Family).
11. *Carex lupuliformis* — no common name (Cyperaceae: Sedge Family).
12. *Carex media* — no common name (Cyperaceae: Sedge Family).
12m. *Carex schweinitzii* — Schweinitz's Sedge (Cyperaceae: Sedge Family).
13. *Catabrosa aquatica* — Brook Grass (Poaceae: Grass Family).
14. *Collinsonia canadensis* — Stoneroot (Lamiaceae: Mint Family).
15. ~~*Conioselinum chinense* — Hemlock-parseley (Apiaceae: Parsley Family).~~ 16. ~~*Diarrhena americana* — Beak Grass (Poaceae: Grass Family).~~
16. *Diarrhena obovata* — Obovate Beak Grass (Poaceae: Grass Family). 17. ~~*Draba lanceolata* — no common name (Brassicaceae: Mustard Family).~~ 17. *Draba cana* — Hoary Whitlow-crest (Brassicaceae: Mustard Family). 17g. *Eleocharis nitida* — Neat Spike-rush (Cyperaceae: Sedge Family). 17m. *Eleocharis wolfi* — Wolf Spike-rush (Cyperaceae: Sedge Family).
18. *Eleocharis quadrangulata* — a Spike-rush (Cyperaceae: Sedge Family).
19. *Erigenia bulbosa* — Harbinger-of-Spring (Apiaceae: Parsley Family).
20. *Fimbristylis puberula* — no common name (Cyperaceae: Sedge Family).
21. *Fuirena pumila* — Umbrella Sedge (Cyperaceae: Sedge Family).
22. *Geocaulon lividum* — Northern Comandra (Santalaceae: Sandal-wood Family).
22m. *Gerardia skinneriana* — Pale False Foxglove (Scrophulariaceae: Fig Wort Family).
22p. *Juncus stygius* — Bog Rush (Juncaceae: Rush Family).
22t. *Lespedeza leptostachya* — Prairie Bush Clover (Fabaceae: Bean Family).
23. *Liatris punctata* — Dotted Blazing Star (Asteraceae: Composite Family).
24. *Listera auriculata* — Auricled Twayblade (Orchidaceae: Orchid Family).
24m. *Lonicera involucrata* — Fly Honeysuckle (Caprifoliaceae: Honeysuckle Family).
25. *Melica smithii* — Smith Melic Grass (Poaceae: Grass Family).
25d. ~~*Moerhingia macrophylla* — no common name (Caryophyllaceae: Pink Family).~~
25g. *Muhlenbergia richardsonis* — Mat Muhly (Poaceae: Grass Family).
25j. *Orobanche ludoviciana* — Louisiana Broomrape (Orobanchaceae: Broomrape Family).
25m. *Oxytropis campestris* — Fassett's Locoweed (Fabaceae: Bean Family).
26. *Parnassia parviflora* — a Grass-of-Parnassus (Saxifragaceae: Saxifrage Family).
27. *Phlox glaberrima* — Smooth Phlox (Polemniaceae: Phlox Family).
28. *Pinguicula vulgaris* — Butterwort (Lentibulariaceae: Bladderwort Family).
29. *Plantago cordata* — Heart-leaved Plantain (Plantaginaceae: Plantain Family).
29m. *Platanthera leucophaea* — Prairie White-Fringed Orchid (Orchidaceae: Orchid Family).
29t. *Polemonium occidentale* ssp. *lucustre* — Western Jacob's Ladder (Polemoniaceae: Phlox Family).
30. *Polygala incarnata* — Pink Milkwort (Polygalaceae: Milkwort Family).
30m. *Potamogeton pulcher* — Spotted Pond Weed (Potamogetonaceae: Pond Weed Family).
31. *Prenanthes aspera* — Rough White Lettuce (Asteraceae: Composite Family).
32. *Prenanthes crepidinea* — Great White Lettuce (Asteraceae: Composite Family).
33. *Pterospora andromedea* — Pine-drops (Pyrolaceae: Wintergreen Family).
34. *Pyrola minor* — Small Shinleaf (Pyrolaceae: Wintergreen Family).
36. *Ranunculus gmelinii* — Small Yellow Water Crowfoot (Ranunculaceae: Crowfoot Family).
36m. *Ranunculus lapponicus* — Lapland Buttercup (Ranunculaceae: Crowfoot Family).
37. *Rhododendron lapponicum* — Lapland Rosebay (Ericaceae: Heath Family).
38. *Ruellia humilis* — Wild Petunia (Acanthaceae: Acanthus Family).
39. *Salix cordata* — Sand Dune Willow (Salicaceae: Willow Family).

39m. *Salix pellita* — Satiny Willow (Salicaceae: Willow Family).
~~40d. *Scirpus hallii* — Hall's bulrush (Cyperaceae: Sedge
Family).~~

- 40d. Schoenoplectus hallii — Hall's burrush (Cyperaceae: Sedge Family).
 40h. Scleria reticularis — Netted Nut-rush (Cyperaceae: Sedge Family).
 40q. Scutellaria parvula — Small Skullcap (Lamiaceae: Mint Family).
 41. Selaginella selaginoides — no common name (Selaginellaceae: Selaginella Family).
 41m. Silene virginica — fire pink (Caryophyllaceae: Pink Family).
 42. Solidago caesia — Blue-stemmed Goldenrod (Asteraceae: Composite Family).
 43m. Tanacetum bipinnatum spp. huronense — Lake Huron Tansy (Asteraceae: Composite Family).
 44. Thaspium barbinode — Hairy Meadow Parsnip (Apiaceae: Parsley Family).
 45. Tiarella cordifolia — Foamflower (Saxifragaceae: Saxifrage Family).
 45m. Trisetum melicoides — Purple False Oats (Poaceae: Grass Family).
 46. Vaccinium cespitosum — Dwarf Bilberry (Ericaceae: Heath Family).
 47. Vaccinium vitis-idaea — Mountain Cranberry (Ericaceae: Heath Family).
 48. Viburnum edule — Squashberry (Caprifoliaceae: Honeysuckle Family).
 49. Viola fimbriatula — a Violet (Violaceae: Violet Family).

(3) WISCONSIN THREATENED SPECIES LIST.

(a) *Mammals.*

1. Little brown bat — *Myotis lucifugus*.
2. Big brown bat — *Eptesicus fuscus*.
3. Northern long-eared bat — *Myotis septentrionalis*.
4. Eastern pipistrelle — *Perimyotis subflavus*.

(b) *Birds.*

1. Henslow's sparrow — *Ammodramus henslowii*.
- 1g. Upland Sandpiper — *Bartramia longicauda*.
- 1m. Red-shouldered Hawk — *Buteo lineatus*.
2. Great Egret — *Casmerodius albus*.
- 2m. Yellow Rail — *Coturnicops noveboracensis*.
- 2t. Spruce Grouse — *Dendragapus canadensis*.
3. Cerulean Warbler — *Dendroica cerulea*.
4. Acadian Flycatcher — *Empidonax virescens*.
- 6m. Yellow-Crowned Night Heron — *Nyctanassa violaceus*.
7. Kentucky Warbler — *Oporornis formosus*.
10. Greater Prairie Chicken — *Tympanuchus cupido pinnatus*.
11. Bell Vireo — *Vireo bellii*.
12. Hooded Warbler — *Wilsonia citrina*.

(c) *Reptiles.*

1. Wood Turtle — *Clemmys insculpta*.
- ~~2. Blanding's Turtle — *Emydoidea blandingi*.~~
- ~~3. Butler's Garter snake — *Thamnophis butleri*.~~

(d) *Amphibians.* — None.

(e) *Fishes.*

1. Blue Sucker — *Cycoreptus elongatus*.
4. Black Buffalo — *Ictiobus niger*.
5. Longear Sunfish — *Lepomis megalotis*.
- 5m. Redfin Shiner — *Lythrurus umbratilis*.
- ~~5t. Speckled Chub — *Macrhybopsis aestivalis*.~~
- 5t. Shoal Chub — *Macrhybopsis hyostoma*.
6. River Redhorse — *Moxostoma carinatum*.
- ~~7. Greater Redhorse — *Moxostoma valenciennesi*.~~
8. Pugnose Shiner — *Notropis anogenus*.
- 9m. Ozark Minnow — *Notropis nubila*.

10. Gilt Darter — *Percina evides*.

11. Paddlefish — *Polyodon spathula*.

(f) *Insects*.

1. ~~Spatterdock darner dragonfly — *Aeshna mutata*.~~

1. Spatterdock darner dragonfly — *Rhionaeschna mutata*. 1m. An Issid Planthopper — *Fitchiella robertsoni*.

2. Frosted Elfin — *Incisalia irus*.

2m. A Prairie Leafhopper — *Polyamia dilata*.

2t. Pygmy Snaketail Dragonfly — *Ophiogomphus howei*.

(g) *Mussels*.

2. Slippershell — *Alasmodonta viridis*.

3. Rock Pocketbook — *Arcidens confragosus*.

4. Monkeyface — *Quadrula metanevra*.

5. Wartyback — *Quadrula nodulata*.

6. Salamander Mussel — *Simpsonaias ambigua*.

7. Buckhorn — *Tritogonia verrucosa*.

7m. Fawnsfoot — *Truncilla donaciformis*.

8. Ellipse — *Venustaconcha ellipsiformis*.

(h) *Snails*.

1. Wing Snaggletooth — *Gastrocopta procera*.

2. Cherrystone Drop — *Hendersonia occulta*.

(i) *Plants*.

1. Aconitum novaboracense — Northern Monkshood (Ranunculaceae: Crowfoot Family) (also U.S. Threatened).

2. Adoxa moschatellina — Muskroot (Adoxaceae: Moschatel Family).

3. ~~Agastache nepetoides — Yellow Giant Hyssop (Lamiaceae: Mint Family).~~

4g. ~~Arnoglossum plantagineum — Prairie Indian Plantain (Asteraceae: Aster Family).~~

4m. Asclepias ovalifolia — Dwarf Milkweed (Asclepiadaceae: Milkweed Family).

5. Asclepias lanuginosa — Woolly Milkweed (Asclepiadaceae: Milkweed Family).

6. Asclepias sullivantii — Prairie Milkweed (Asclepiadaceae: Milkweed Family).

7. Asplenium pinnatifidum — Pinnatifid Spleenwort (Polypodiaceae: Fern Family).

8. ~~Aster furcatus — Forked Aster (Asteraceae: Aster Family).~~

9. Besseyia bullii — Kitten Tails (Scrophulariaceae: Fig Wort Family).

11. Calamovilfa longifolia — Sand Reed (Poaceae: Grass Family).

11m. Callitriche heterophylla — Large Water Starwort (Callitrichaceae: Water Starwort Family).

12. Calypso bulbosa — Calypso Orchid (Orchidaceae: Orchid Family).

13. Carex careyana — Carey's Sedge (Cyperaceae: Sedge Family).

14. Carex concinna — no common name (Cyperaceae: Sedge Family).

15. Carex exilis — Coast Sedge (Cyperaceae: Sedge Family).

16. Carex formosa — Handsome Sedge (Cyperaceae: Sedge Family).

17. Carex garberi — Garbers Sedge (Cyperaceae: Sedge Family).

18. Carex lenticularis — Lenticular Sedge (Cyperaceae: Sedge Family).

19. Carex michauxiana — no common name (Cyperaceae: Sedge).

20. ~~Carex prasina — Drooping Sedge (Cyperaceae: Sedge Family).~~

21. Cirsium hillii — Prairie Thistle (Asteraceae: Aster Family).

22. Cirsium pitcheri — Dune Thistle (Asteraceae: Composite Family).

23. Cypripedium arietinum — Ram's-head Lady's-slipper (Orchidaceae: Orchid Family).

24. Cypripedium candidum — White Lady's slipper (Orchidaceae: Orchid Family).

25. Drosera anglica — a Sundew (Droseraceae: Sundew Family).

26. Drosera linearis — a Sundew (Droseraceae: Sundew Family).

27. Echinacea pallida — Purple Coneflower (Asteraceae: Composite Family).

28. Eleocharis rostellata — Beaked Spike Rush (Cyperaceae: Sedge Family).

28m. ~~Elymus lonceolatus ssp. — Thickspike Wheatgrass (Poaceae: Grass Family).~~

- 28m. Elytrigia dasystachya ssp. psammophila — Thickspike Wheatgrass (Poaceae: Grass Family).
- 28t. Eurybia furcata — Forked Aster (Asteraceae: Aster Family).
29. *Festuca occidentalis* — Western Fescue (Poaceae: Grass Family).
30. *Fraxinus quadrangulata* — Blue Ash (Oleaceae: Olive Family).
- ~~31. *Gentiana alba* — Yellowish Gentian (Gentianaceae: Gentian Family).~~
32. *Gerardia gattingeri* — Round Stemmed False Foxglove (Scrophulariaceae: Fig Wort Family).
- ~~32m. *Gnaphalium saxicola* — Cliff Cudweed (Asteraceae: Aster Family).~~
33. *Habenaria flava* var. *herbiola* — Tubercled Orchid (Orchidaceae: Orchid Family).
34. *Hypericum sphaerocarpum* — Round Fruited St. Johns Wort (Hypericaceae: St. Johns Wort Family).
35. *Iris lacustris* — Dwarf Lake Iris (Iridaceae: Iris Family).
36. *Lespedeza virginica* — Slender Bush Clover (Fabaceae: Bean Family).
37. *Lesquerella ludoviciana* — Bladderpod (Brassicaceae: Mustard Family).
38. *Listera convallarioides* — Broad-leaved Twayblade (Orchidaceae: Orchid Family).
39. *Opuntia fragilis* — Brittle Prickly Pear (Cactaceae: Cactus Family).
40. *Orchis rotundifolia* — Small Round-leaved Orchis (Orchidaceae: Orchid Family).
41. *Orobanche fasciculata* — Clustered Broomrape (Orobanchaceae: Broomrape Family).
- 41m. *Packera indecora* — Plains Ragwort (Asteraceae: Aster Family).
42. *Parnassia palustris* — a Grass-of-Parnassus (Saxifragaceae: Saxifrage Family).
- ~~43. *Parthenium integrifolium* — Wild Quinine (Asteraceae: Composite Family).~~
44. *Petasites sagittatus* — Sweet Coltsfoot (Asteraceae: Composite Family).
- ~~45. *Poa paludigena* — Bog Bluegrass (Poaceae: Grass Family).~~
46. *Polystichum braunii* — Braun's Holly Fern (Polypodiaceae: Fern Family).
47. *Potamogeton confervoides* — no common name (Potamogetonaceae: Pondweed Family).
48. *Potamogeton vaginatus* — Sheathed Pond Weed (Potamogetonaceae: Pond Weed Family).
49. *Polytaenia nuttallii* — Prairie-parsley (Apiaceae: Parsley Family).
- 49m. *Pseudognaphalium saxicola* — Cliff Cudweed (Asteraceae: Aster Family).
- 50m. *Ranunculus cymbalaria* — Seaside Crowfoot (Ranunculaceae: Crowfoot Family).
- ~~50p. *Rhynchospora scirysoides* — Bald Rush (Cyperaceae: Sedge Family).~~
- 50p. *Rhynchospora scirpoides* — Long-beaked Baldrush (Cyperaceae: Sedge Family).
- ~~51. *Ribes oxycanthoides* — Hawthorn-leaved Gooseberry (Saxifragaceae: Saxifrage Family).~~
51. *Ribes oxycanthoides* ssp. *oxycanthoides* — Canada Gooseberry (Saxifragaceae: Saxifrage Family).
- ~~51m. *Salix planifolia* — Flat-leaved willow (Salicaceae: Willow Family).~~
- 51m. *Salix planifolia* ssp. *planifolia* — Tea-leaved willow (Salicaceae: Willow Family).
- ~~51p. *Scirpus cespitosus* — Tussock Bulrush (Cyperaceae: Sedge Family).~~
- ~~51t. *Senecio indecorus* — Plains Ragwort (Asteraceae: Aster Family).~~
- 51w. *Silene nivea* — Snowy Campion (Caryophyllaceae: Pink Family).
52. *Solidago simplex* var. *Gillmanii* — Dune Goldenrod (Asteraceae: Composite Family).
- 52m. *Sparganium glomeratum* — Clustered Bur Reed (Sparganiaceae: Bur Reed Family).
- ~~53. *Tofieldia glutinosa* — False Asphodel (Liliaceae: Lily Family).~~
- ~~53. *Triantha glutinosa* — False Asphodel (Liliaceae: Lily Family).~~
- 53m. *Trichophorum cespitosum* — Tussock Bulrush (Cyperaceae: Sedge Family).
54. *Trillium nivale* — Snow Trillium (Liliaceae: Lily Family).
55. *Trisetum spicatum* — Spike Trisetum (Poaceae: Grass Family).
56. *Valeriana sitchensis* — Marsh Valerian (Valerianaceae: Valerian Family).

Section 2. EFFECTIVE DATE. The rule contained herein shall take effect on the first day of the month following publication in the Wisconsin administrative register, as provided in s. 227.22 (2), Stats.

Section 3. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on _____.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Cathy Stepp, Secretary

(SEAL)