

1.1 **Department of Natural Resources**

1.2 **Adopted Permanent Rules Relating to Endangered, Threatened, and Special**
1.3 **Concern Species**

1.4 **6134.0170 SPECIES NAMES.**

1.5 Species designated as endangered, threatened, or of special concern in this chapter
1.6 are identified by the species' scientific (Latin) names. Common (English) names, when
1.7 available, follow the scientific names and are included for the convenience of the reader,
1.8 but do not reliably identify the species so designated.

1.9 **6134.0200 ANIMAL SPECIES.**

1.10 Subpart 1. **Mammals.** The following species of mammals are designated as:

1.11 A. Endangered: none.

1.12 B. Threatened:

1.13 (1) *Spilogale putorius*, eastern spotted skunk; and

1.14 (2) *Thomomys talpoides*, northern pocket gopher.

1.15 C. Of special concern:

1.16 (1) *Alces americanus*, moose;

1.17 (2) *Cervus canadensis*, elk;

1.18 (3) *Cryptotis parva*, North American least shrew;

1.19 (4) *Eptesicus fuscus*, big brown bat;

1.20 (5) *Lynx canadensis*, Canada lynx;

1.21 (6) *Microtus ochrogaster*, prairie vole;

1.22 (7) *Microtus pinetorum*, woodland vole;

1.23 (8) *Mustela nivalis*, least weasel;

- 2.1 (9) *Myotis lucifugus*, little brown ~~bat~~ myotis;
- 2.2 (10) *Myotis septentrionalis*, northern myotis;
- 2.3 (11) *Onychomys leucogaster*, northern grasshopper mouse;
- 2.4 (12) *Perognathus flavescens*, plains pocket mouse;
- 2.5 (13) *Perimyotis subflavus*, ~~eastern pipistrelle~~ tri-colored bat;
- 2.6 (14) *Phenacomys ungava*, eastern heather vole;
- 2.7 (15) *Puma concolor*, mountain lion;
- 2.8 (16) *Reithrodontomys megalotis*, western harvest mouse;
- 2.9 (17) *Sorex fumeus*, ~~smokey~~ smoky shrew;
- 2.10 ~~(18) *Spermophilus richardsonii*, Richardson's ground squirrel; and~~
- 2.11 ~~(19) (18) *Synaptomys borealis*, northern bog lemming; and~~
- 2.12 (19) *Uroditellus richardsonii*, Richardson's ground squirrel.

2.13 Subp. 2. **Birds.** The following species of birds are designated as:

2.14 A. Endangered:

- 2.15 (1) *Ammodramus bairdii*, Baird's sparrow;
- 2.16 (2) *Ammodramus henslowii*, Henslow's sparrow;
- 2.17 ~~(2) (3) *Anthus spragueii*, Sprague's pipit;~~
- 2.18 ~~(3) (4) *Athene cunicularia*, burrowing owl;~~
- 2.19 ~~(4) (5) *Calcarius ornatus*, chestnut-collared longspur;~~
- 2.20 ~~(5) (6) *Charadrius melodus*, piping plover;~~
- 2.21 ~~(6) (7) *Lanius ludovicianus*, loggerhead shrike;~~
- 2.22 ~~(7) (8) *Podiceps auritus*, horned grebe; and~~

- 3.1 ~~(8)~~ (9) *Rallus elegans*, king rail.
- 3.2 B. Threatened:
- 3.3 ~~(1)~~ *Ammodramus henslowii*, Henslow's sparrow;
- 3.4 ~~(2)~~ (1) *Phalaropus tricolor*, Wilson's phalarope; and
- 3.5 ~~(3)~~ (2) *Sterna hirundo*, common tern.
- 3.6 C. Of special concern:
- 3.7 (1) *Accipiter gentilis*, northern goshawk;
- 3.8 (2) *Aegolius funereus*, boreal owl;
- 3.9 (3) *Ammodramus nelsoni*, Nelson's ~~sharp-tailed~~ sparrow;
- 3.10 (4) *Asio flammeus*, short-eared owl;
- 3.11 (5) *Buteo lineatus*, red-shouldered hawk;
- 3.12 (6) *Chondestes grammacus*, lark sparrow;
- 3.13 (7) *Coturnicops noveboracensis*, yellow rail;
- 3.14 (8) *Cygnus buccinator*, trumpeter swan;
- 3.15 (9) *Empidonax virescens*, acadian flycatcher;
- 3.16 (10) *Falco peregrinus*, peregrine falcon;
- 3.17 (11) *Gallinula galeata*, common gallinule;
- 3.18 (12) *Leucophaeus pipixcan*, Franklin's gull;
- 3.19 (13) *Limosa fedoa*, marbled godwit;
- 3.20 (14) *Parkesia motacilla*, Louisiana waterthrush;
- 3.21 (15) *Pelecanus erythrorhynchos*, American white pelican;
- 3.22 (16) *Progne subis*, purple martin;

- 4.1 (17) *Setophaga cerulea*, cerulean warbler
4.2 (18) *Setophaga citrina*, hooded warbler;
4.3 (19) *Sterna forsteri*, Forster's tern;
4.4 (20) *Tympanuchus cupido*, greater prairie-chicken; and
4.5 (21) *Vireo bellii*, Bell's vireo.

4.6 Subp. 3. **Amphibians and reptiles.** The following species of amphibians and
4.7 reptiles are designated as:

4.8 A. Endangered:

- 4.9 (1) *Acris ~~erepitanus~~ blanchardi*, ~~northern~~ Blanchard's cricket frog; and
4.10 (2) *Sistrurus catenatus*, massasauga.

4.11 B. Threatened:

- 4.12 (1) *Crotalus horridus*, timber rattlesnake;
4.13 (2) *Emydoidea blandingii*, Blanding's turtle;
4.14 (3) *Glyptemys insculpta*, wood turtle; and
4.15 (4) *Pantherophis obsoletus*, western ratsnake.

4.16 C. Of special concern:

- 4.17 (1) *Ambystoma maculatum*, spotted salamander;
4.18 (2) *Anaxyrus cognatus*, Great Plains toad;
4.19 (3) *Apalone mutica*, smooth softshell;
4.20 (4) *Coluber constrictor*, North American racer;
4.21 (5) *Hemidactylium scutatum*, four-toed salamander;
4.22 (6) *Heterodon nasicus*, ~~western hognose~~ plains hog-nosed snake;

- 5.1 (7) *Necturus maculosus*, mudpuppy;
- 5.2 (8) *Pituophis catenifer*, gopher snake;
- 5.3 (9) *Plestiodon fasciatus*, common five-lined skink; and
- 5.4 (10) *Tropidoclonion lineatum*, lined snake.

5.5 Subp. 4. **Fish.** The following species of fish are designated as:

5.6 A. Endangered:

- 5.7 (1) *Alosa chrysochloris*, skipjack herring;
- 5.8 (2) *Crystallaria asprella*, crystal darter;
- 5.9 (3) *Hybopsis amnis*, pallid shiner; and
- 5.10 (4) *Noturus exilis*, slender madtom.

5.11 B. Threatened:

- 5.12 (1) *Erimystax x-punctatus*, gravel chub;
- 5.13 (2) *Fundulus sciadicus*, plains topminnow;
- 5.14 (3) *Ictiobus niger*, black buffalo;
- 5.15 (4) *Notropis anogenus*, pugnose shiner; and
- 5.16 (5) *Polyodon spathula*, paddlefish.

5.17 C. Of special concern:

- 5.18 (1) *Acipenser fulvescens*, lake sturgeon;
- 5.19 (2) *Anguilla rostrata*, American eel;
- 5.20 (3) *Aphredoderus sayanus*, pirate perch;
- 5.21 (4) *Clinostomus elongatus*, redbside dace;
- 5.22 (5) *Coregonus kiyi*, kiyi;

- 6.1 (6) *Coregonus nipigon*, nipigon cisco;
- 6.2 (7) *Coregonus zenithicus*, shortjaw cisco;
- 6.3 (8) *Couesius plumbeus*, lake chub;
- 6.4 (9) *Cycleptus elongatus*, blue sucker;
- 6.5 (10) *Etheostoma chlorosoma*, bluntnose darter;
- 6.6 (11) *Etheostoma microperca*, least darter;
- 6.7 (12) *Hybognathus nuchalis*, Mississippi silvery minnow;
- 6.8 (13) *Ichthyomyzon fossor*, northern brook lamprey;
- 6.9 (14) *Ichthyomyzon gagei*, southern brook lamprey;
- 6.10 (15) *Lepomis gulosus*, warmouth;
- 6.11 (16) *Lepomis peltastes*, northern longear sunfish;
- 6.12 (17) *Lythrurus umbratilis*, redfin shiner;
- 6.13 (18) *Morone mississippiensis*, yellow bass;
- 6.14 (19) *Moxostoma duquesnei*, black redhorse;
- 6.15 (20) *Notropis nubilus*, Ozark minnow;
- 6.16 (21) *Notropis topeka*, Topeka shiner;
- 6.17 (22) *Percina evides*, gilt darter;
- 6.18 (23) *Phenacobius mirabilis*, suckermouth minnow;
- 6.19 (24) *Platygobio gracilis*, flathead chub; and
- 6.20 (25) *Prosopium coulterii*, pygmy whitefish.

6.21 Subp. 5. [Repealed, 20 SR 2782]

6.22 Subp. 6. **Mollusks.** The following species of mollusks are designated as:

- 7.1 A. Endangered:
- 7.2 (1) *Arcidens confragosus*, rock pocketbook;
- 7.3 (2) *Cumberlandia monodonta*, spectaclecase;
- 7.4 (3) *Cyclonaias tuberculata*, purple wartyback;
- 7.5 (4) *Elliptio crassidens*, elephant-ear;
- 7.6 (5) *Epioblasma triquetra*, snuffbox;
- 7.7 (6) *Fusconaia ebena*, ebonyshell;
- 7.8 (7) *Lampsilis higginsii*, Higgins eye;
- 7.9 (8) *Lampsilis teres*, yellow sandshell;
- 7.10 (9) *Megalonaias nervosa*, washboard;
- 7.11 (10) *Plethobasus cyphyus*, sheepnose;
- 7.12 (11) *Quadrula fragosa*, winged mapleleaf;
- 7.13 (12) *Simpsonaias ambigua*, salamander mussel; and
- 7.14 (13) *Tritogonia verrucosa*, pistolgrip.
- 7.15 B. Threatened:
- 7.16 (1) *Actinonaias ligamentina*, mucket;
- 7.17 (2) *Alasmidonta marginata*, elktoe;
- 7.18 (3) *Ellipsaria lineolata*, butterfly;
- 7.19 (4) *Elliptio dilatata*, spike;
- 7.20 (5) *Lasmigona costata*, fluted-shell;
- 7.21 (6) *Ligumia subrostrata*, pondmussel;
- 7.22 (7) *Quadrula metanevra*, monkeyface;

- 8.1 (8) *Quadrula nodulata*, wartyback;
- 8.2 (9) *Striatura ferrea*, black striate snail;
- 8.3 (10) *Truncilla donaciformis*, fawnsfoot;
- 8.4 (11) *Venustaconcha ellipsiformis*, ellipse; and
- 8.5 (12) *Vertigo meramecensis*, bluff vertigo.

8.6 C. Of special concern:

- 8.7 (1) *Anodonta suborbiculata*, flat floater;
- 8.8 (2) *Elliptio complanata*, eastern elliptio;
- 8.9 (3) *Gastrocopta rogersensis*, Rogers' snaggletooth snail;
- 8.10 (4) *Lasmigona compressa*, creek heelsplitter;
- 8.11 (5) *Ligumia recta*, black sandshell;
- 8.12 (6) *Planogyra asteriscus*, eastern flat-whorl snail;
- 8.13 (7) *Pleurobema sintoxia*, round pigtoe;
- 8.14 (8) *Striatura ferrea*, black striate snail; and
- 8.15 (9) *Zonitoides limatulus*, dull gloss.

8.16 Subp. 7. **Jumping spiders.** The following species of jumping spiders are designated
8.17 as:

- 8.18 A. Endangered: none.
- 8.19 B. Threatened: *Tutelina formicaria*.
- 8.20 C. Of special concern:
- 8.21 (1) *Habronattus calcaratus maddisoni*;
- 8.22 (2) *Habronattus texanus*;

- 9.1 (3) *Habronattus viridipes*;
- 9.2 (4) *Marpissa formosa*;
- 9.3 (5) *Paradamoetas fontana*;
- 9.4 (6) *Pelegrina arizonensis*;
- 9.5 (7) *Phidippus apacheanus*;
- 9.6 (8) *Phidippus pius*; and
- 9.7 (9) *Sassacus papenhoei*.

9.8 Subp. 8. **Butterflies and moths.** The following species of butterflies and moths
9.9 are designated as:

9.10 A. Endangered:

- 9.11 (1) *Erynnis persius persius*, persius dusky wing;
- 9.12 (2) *Hesperia assiniboia*, assiniboia skipper;
- 9.13 (3) *Hesperia dacotae*, Dakota skipper;
- 9.14 (4) *Hesperia ottoe*, ottoe skipper
- 9.15 (5) *Hesperia uncas*, uncas skipper;
- 9.16 (6) *Lycaeides melissa samuelis*, Karner blue;
- 9.17 (7) *Oarisma poweshiek*, poweshiek skipperling; and
- 9.18 (8) *Oeneis uhleri varuna*, Uhler's arctic.

9.19 B. Threatened: *Oarisma gratia*, gratia skipper.

9.20 C. Of special concern:

- 9.21 (1) *Atrytone arogos iowa*, arogos skipper;
- 9.22 (2) *Catocala abbreviatella*, abbreviated underwing;

- 10.1 (3) *Catocala whitneyi*, Whitney's underwing;
- 10.2 (4) *Erebia mancinus*, disa alpine;
- 10.3 (5) *Hesperia leonardus*, leonardus skipper;
- 10.4 (6) *Lycaeides idas nabokovi*, Nabokov's blue;
- 10.5 (7) *Pyrgus centaureae freija*, grizzled skipper;
- 10.6 (8) *Schinia indiana*, phlox moth;
- 10.7 (9) *Schinia lucens*, leadplant flower moth; and
- 10.8 (10) *Speyeria idalia*, regal fritillary.

10.9 Subp. 9. **Caddisflies.** The following species of caddisflies are designated as:

10.10 A. Endangered:

- 10.11 (1) *Hydroptila waskesia*, a species of purse casemaker caddisfly;
- 10.12 (2) *Limnephilus janus*, a species of northern caddisfly;
- 10.13 (3) *Limnephilus secludens*, a species of northern caddisfly;
- 10.14 (4) *Ochrotrichia spinosa*, a species of purse casemaker caddisfly; and
- 10.15 (5) *Polycentropus milaca*, a species of tube casemaker caddisfly.

10.16 B. Threatened:

- 10.17 (1) *Chilostigma itascae*, headwaters chilostigman caddisfly
- 10.18 (2) *Goera stylata*;
- 10.19 (3) *Hydroptila rono*, a species of purse casemaker caddisfly;
- 10.20 (4) *Ironoquia punctatissima*, a species of northern caddisfly;
- 10.21 (5) *Lepidostoma libum*;
- 10.22 (6) *Limnephilus rossi*, a species of northern caddisfly;

- 11.1 (7) *Oecetis ditissa*, a species of long-horned caddisfly;
- 11.2 (8) *Oxyethira ecornuta*, a species of purse casemaker caddisfly;
- 11.3 (9) *Parapsyche apicalis*, a species of nestspinning caddisfly;
- 11.4 (10) *Polycentropus glacialis*, a species of tube casemaker caddisfly; and
- 11.5 (11) *Ylodes frontalis*, a species of long-horned caddisfly.

11.6 C. Of special concern:

- 11.7 (1) *Agapetus tomus*;
- 11.8 (2) *Anabolia ozburni*, a species of northern caddisfly;
- 11.9 (3) *Hydroptila metoeca*, a species of purse casemaker caddisfly;;
- 11.10 (4) *Hydroptila quinola*, a species of purse casemaker caddisfly;
- 11.11 (5) *Hydroptila tortosa*, a species of purse casemaker caddisfly;
- 11.12 (6) *Oxyethira itascae*, a species of purse casemaker caddisfly;
- 11.13 (7) *Protoptila erotica*, a species of saddle casemaker caddisfly; and
- 11.14 (8) *Triaenodes flavescens*, a species of long-horned caddisfly.

11.15 Subp. 10. **Tiger beetles.** The following species of tiger beetles are designated as:

11.16 A. Endangered:

- 11.17 (1) *Cicindela fulgida fulgida*, crimson saltflat tiger beetle, fulgida
- 11.18 subspecies;
- 11.19 (2) *Cicindela hirticollis rhodensis*, hairy-necked tiger beetle; and
- 11.20 (3) *Cicindela limbata nympha*, sandy tiger beetle.

11.21 B. Threatened:

12.1 (1) *Cicindela fulgida westbournei*, crimson saltflat tiger beetle,
12.2 *westbournei* subspecies; and

12.3 (2) *Cicindela lepida*, ~~little white ghost~~ ghost tiger beetle.

12.4 C. Of special concern:

12.5 (1) *Cicindela denikei*, Laurentian tiger beetle;

12.6 (2) *Cicindela macra macra*, sandy stream tiger beetle;

12.7 (3) *Cicindela patruela patruela*, northern barrens tiger beetle; and

12.8 (4) *Cicindela splendida cyanocephalata*, splendid tiger beetle.

12.9 Subp. 11. **Leafhoppers.** The following species of leafhoppers are designated as:

12.10 A. Endangered: none.

12.11 B. Threatened: none.

12.12 C. Of special concern:

12.13 (1) *Aflexia rubranura*, red-tailed leafhopper;

12.14 (2) *Attenuipyga vanduzeei*, hill prairie shovelhead leafhopper; and

12.15 (3) *Macrosteles clavatus*, caped leafhopper.

12.16 Subp. 12. **Dragonflies.** The following species of dragonflies are designated as:

12.17 A. Endangered: none.

12.18 B. Threatened: *Ophiogomphus susbehcha*, St. Croix snaketail.

12.19 C. Of special concern:

12.20 (1) *Aeshna sitchensis*, zigzag darner;

12.21 (2) *Aeshna subarctica*, subarctic darner;

12.22 (3) *Boyeria grafiana*, ocellated darner;

- 13.1 (4) *Ophiogomphus anomalus*, extra-striped snaketail;
- 13.2 (5) *Ophiogomphus howei*, pygmy snaketail;
- 13.3 (6) *Somatochlora brevicincta*, Quebec emerald; and
- 13.4 ~~(7) *Somatochlora ensigera*, plains emerald; and~~
- 13.5 ~~(8)~~ (7) *Somatochlora forcipata*, forcipate emerald.

13.6 **6134.0300 VASCULAR PLANTS.**

13.7 The following species of vascular plants are designated as:

13.8 A. Endangered:

- 13.9 (1) *Achnatherum hymenoides*, Indian rice grass;
- 13.10 (2) *Agalinis auriculata*, eared false foxglove;
- 13.11 (3) *Agalinis gattingeri*, round-stemmed false foxglove;
- 13.12 (4) *Agrostis hyemalis*, winter bentgrass;
- 13.13 (5) *Allium schoenoprasum*, wild chives;
- 13.14 (6) *Aristida longespica* var. *geniculata*, slimspike three-awn;
- 13.15 (7) *Asclepias stenophylla*, narrow-leaved milkweed;
- 13.16 (8) *Astragalus alpinus* var. *alpinus*, alpine milk-vetch;
- 13.17 (9) *Bartonia virginica*, yellow bartonia;
- 13.18 (10) *Botrychium ascendens*, upswept moonwort;
- 13.19 (11) *Botrychium gallicomontanum*, Frenchman's bluff moonwort;
- 13.20 (12) *Botrychium lineare*, slender moonwort;
- 13.21 (13) *Botrychium spathulatum*, spatulate moonwort;
- 13.22 (14) *Calamagrostis purpurascens*, purple reedgrass;

- 14.1 (15) *Caltha natans*, floating marsh marigold;
- 14.2 (16) *Carex careyana*, Carey's sedge;
- 14.3 (17) *Carex formosa*, handsome sedge;
- 14.4 (18) *Carex pallescens*, pale sedge;
- 14.5 (19) *Carex plantaginea*, plantain-leaved sedge;
- 14.6 (20) *Carex supina* ssp. *spaniocarpa*, weak arctic sedge;
- 14.7 (21) *Castilleja septentrionalis*, northern paintbrush;
- 14.8 (22) *Chrysosplenium iowense*, Iowa golden saxifrage;
- 14.9 (23) *Commelina erecta*, slender dayflower;
- 14.10 (24) *Diarrhena obovata*, obovate beakgrass;
- 14.11 (25) *Dodecatheon meadia* var. ~~*meadia*~~, prairie shooting star;
- 14.12 (26) *Draba cana*, hoary whitlow grass;
- 14.13 (27) *Draba norvegica*, Norwegian whitlow grass;
- 14.14 (28) *Dryopteris marginalis*, marginal shield fern;
- 14.15 (29) *Eleocharis wolfii*, Wolf's spikerush;
- 14.16 (30) *Elodea bifoliata*, two leaf waterweed;
- 14.17 (31) *Empetrum atropurpureum*, purple crowberry;
- 14.18 (32) *Empetrum nigrum*, black crowberry;
- 14.19 (33) *Erigeron acris* var. *kamtschaticus*, bitter fleabane;
- 14.20 (34) *Erythronium propullans*, dwarf trout lily;
- 14.21 (35) *Escobaria vivipara*, ball cactus;
- 14.22 (36) *Fimbristylis puberula* var. *interior*, hairy fimbry;

- 15.1 (37) *Hasteola suaveolens*, sweet-smelling Indian plantain;
- 15.2 (38) *Hybanthus concolor*, eastern green-violet;
- 15.3 (39) *Hydrastis canadensis*, goldenseal;
- 15.4 (40) *Iodanthus pinnatifidus*, purple rocket;
- 15.5 (41) *Isoetes melanopoda*, prairie quillwort;
- 15.6 (42) *Juglans cinerea*, butternut;
- 15.7 (43) *Juncus articulatus*, jointed rush;
- 15.8 (44) *Juncus marginatus*, marginated rush;
- 15.9 (45) *Juncus subtilis*, slender rush;
- 15.10 (46) *Lechea tenuifolia* var. *tenuifolia*, narrow-leaved pinweed;
- 15.11 (47) *Listera auriculata*, auricled twayblade;
- 15.12 (48) *Lysimachia maritima*, sea milkwort;
- 15.13 (49) *Malaxis paludosa*, bog adder's mouth;
- 15.14 (50) *Marsilea vestita*, hairy waterclover;
- 15.15 (51) *Montia chamissoi*, montia;
- 15.16 (52) *Osmorhiza berteroi*, Chilean sweet cicely;
- 15.17 (53) *Oxytropis viscida*, sticky locoweed;
- 15.18 (54) *Packera cana*, gray ragwort;
- 15.19 (55) *Packera indecora*, elegant groundsel;
- 15.20 (56) *Paronychia canadensis*, Canada forked chickweed;
- 15.21 (57) *Paronychia fastigiata* var. *fastigiata*, forked chickweed;
- 15.22 (58) *Parthenium integrifolium*, wild quinine;

- 16.1 (59) *Phegopteris hexagonoptera*, broad beech fern;
- 16.2 (60) *Physaria ludoviciana*, bladderpod;
- 16.3 (61) *Platanthera praeclara*, western prairie fringed orchid;
- 16.4 (62) *Polanisia jamesii*, James' polanisia;
- 16.5 (63) *Polemonium occidentale* ssp. lacustre, western Jacob's ladder;
- 16.6 (64) *Polygala cruciata*, cross-leaved milkwort;
- 16.7 (65) *Polystichum acrostichoides*, Christmas fern;
- 16.8 (66) *Potamogeton bicupulatus*, snailseed pondweed;
- 16.9 (67) *Potamogeton confervoides*, algae-like pondweed;
- 16.10 (68) *Potamogeton diversifolius*, diverse-leaved pondweed;
- 16.11 (69) *Potamogeton oakesianus*, Oake's pondweed;
- 16.12 (70) *Potamogeton pulcher*, spotted pondweed;
- 16.13 (71) *Psoralidium tenuiflorum*, slender-leaved scurfpea;
- 16.14 (72) *Prosartes trachycarpa*, rough-fruited fairybells;
- 16.15 (73) *Rhodiola integrifolia* ssp. *leedyi*, Leedy's roseroot;
- 16.16 (74) *Rubus missouricus*, Missouri dewberry;
- 16.17 (75) *Rubus stipulatus*, bristle-berry;
- 16.18 (76) *Sagina nodosa* ssp. *borealis*, knotty pearlwort;
- 16.19 (77) *Sagittaria brevirostra*, short-beaked arrowhead;
- 16.20 (78) *Saxifraga cernua*, nodding saxifrage;
- 16.21 (79) *Scleria triglomerata*, tall nutrush;
- 16.22 (80) *Selaginella selaginoides*, northern spikemoss;

- 17.1 (81) *Stuckenia vaginata*, sheathed pondweed;
- 17.2 (82) *Tofieldia pusilla*, small false asphodel;
- 17.3 (83) *Tsuga canadensis*, eastern hemlock;
- 17.4 (84) *Utricularia purpurea*, purple-flowered bladderwort;
- 17.5 (85) *Vaccinium uliginosum*, alpine bilberry; and
- 17.6 (86) *Xyris torta*, twisted yellow-eyed grass.
- 17.7 B. Threatened:
- 17.8 (1) *Achillea alpina*, Siberian yarrow;
- 17.9 (2) *Ammophila breviligulata* ssp. *breviligulata*, beachgrass;
- 17.10 (3) *Aristida tuberculosa*, seaside three-awn;
- 17.11 (4) *Arnica lonchophylla*, long leaved-arnica;
- 17.12 (5) *Arnoglossum plantagineum*, tuberous Indian plantain;
- 17.13 (6) *Arnoglossum reniforme*, great Indian plantain;
- 17.14 (7) *Asclepias amplexicaulis*, clasping milkweed;
- 17.15 (8) *Asclepias hirtella*, prairie milkweed;
- 17.16 (9) *Asclepias sullivantii*, Sullivant's milkweed;
- 17.17 (10) *Asplenium trichomanes* ssp. *trichomanes*, maidenhair spleenwort;
- 17.18 (11) *Aureolaria pedicularia*, fernleaf false foxglove;
- 17.19 (12) *Bacopa rotundifolia*, water hyssop;
- 17.20 (13) *Berula erecta*, stream parsnip;
- 17.21 (14) *Besseya bullii*, kitten-tails;
- 17.22 (15) *Bistorta vivipara*, alpine bistort;

- 18.1 (16) *Boechnera retrofracta*, Holboell's rock cress;
- 18.2 (17) *Botrychium lanceolatum* ssp. *angustisegmentum*, narrow triangle
- 18.3 moonwort;
- 18.4 (18) *Botrychium lunaria*, common moonwort;
- 18.5 (19) *Botrychium mormo*, goblin fern;
- 18.6 (20) *Botrychium oneidense*, blunt-lobed grapefern;
- 18.7 (21) *Callitriche heterophylla*, larger water starwort;
- 18.8 (22) *Cardamine pratensis*, cuckoo flower;
- 18.9 (23) *Carex conjuncta*, jointed sedge;
- 18.10 (24) *Carex davisii*, Davis' sedge;
- 18.11 (25) *Carex festucacea*, fescue sedge;
- 18.12 (26) *Carex garberi*, Garber's sedge;
- 18.13 (27) *Carex jamesii*, James' sedge;
- 18.14 (28) *Carex laevivaginata*, smooth-sheathed sedge;
- 18.15 (29) *Carex laxiculmis*, loose-culmed sedge;
- 18.16 (30) *Carex novae-angliae*, New England sedge;
- 18.17 (31) *Carex rossii*, Ross' sedge;
- 18.18 (32) *Carex sterilis*, sterile sedge;
- 18.19 (33) *Crassula aquatica*, pygmyweed;
- 18.20 (34) *Cyperus acuminatus*, short-pointed umbrella sedge;
- 18.21 (35) *Cypripedium arietinum*, ram's head orchid;
- 18.22 (36) *Deschampsia flexuosa*, slender hair grass;

- 19.1 (37) *Desmodium cuspidatum* var. *longifolium*, big tick trefoil;
- 19.2 (38) *Desmodium nudiflorum*, stemless tick trefoil;
- 19.3 (39) *Diplazium pycnocarpon*, narrow-leaved spleenwort;
- 19.4 (40) *Eleocharis flavescens* var. *olivacea*, olivaceous spikerush;
- 19.5 (41) *Eleocharis robbinsii*, Robbins' spikerush;
- 19.6 (42) *Eleocharis rostellata*, beaked spikerush;
- 19.7 (43) *Erigeron lonchophyllus*, short ray fleabane;
- 19.8 (44) *Eupatorium sessilifolium*, upland boneset;
- 19.9 (45) *Floerkea proserpinacoides*, false mermaid;
- 19.10 (46) *Gaylussacia baccata*, black huckleberry
- 19.11 (47) *Hamamelis virginiana*, witch-hazel;
- 19.12 (48) *Heteranthera limosa*, mud plantain;
- 19.13 (49) *Hudsonia tomentosa*, beach heather;
- 19.14 (50) *Huperzia porophila*, rock fir moss;
- 19.15 (51) *Leersia lenticularis*, catchfly grass;
- 19.16 (52) *Lespedeza leptostachya*, prairie bush clover;
- 19.17 (53) *Luzula parviflora*, small-flowered woodrush;
- 19.18 (54) *Melica nitens*, three-flowered melic;
- 19.19 (55) *Minuartia dawsonensis*, rock sandwort;
- 19.20 (56) *Moehringia macrophylla*, large-leaved sandwort;
- 19.21 (57) *Napaea dioica*, glade mallow;
- 19.22 (58) *Nymphaea leibergii*, small white waterlily;

- 20.1 (59) *Orobanche fasciculata*, clustered broomrape;
- 20.2 (60) *Orobanche ludoviciana* var. *ludoviciana*, Louisiana broomrape;
- 20.3 (61) *Orobanche uniflora*, one-flowered broomrape;
- 20.4 (62) *Phacelia franklinii*, Franklin's phacelia;
- 20.5 (63) *Phemeranthus rugospermus*, rough-seeded fameflower;
- 20.6 (64) *Piptatherum canadense*, Canadian ricegrass;
- 20.7 (65) *Platanthera flava* var. *herbiola*, tubercled rein orchid;
- 20.8 (66) *Poa paludigena*, bog bluegrass;
- 20.9 (67) *Polystichum braunii*, Braun's holly fern;
- 20.10 (68) *Rhynchospora capillacea*, hair-like beak rush;
- 20.11 (69) *Rotala ramosior*, toothcup;
- 20.12 (70) *Rubus chamaemorus*, cloudberry;
- 20.13 (71) *Rubus fulleri*, bristle-berry;
- 20.14 (72) *Rubus semisetosus*, swamp blackberry;
- 20.15 (73) *Rudbeckia triloba* var. *triloba*, three-leaved coneflower;
- 20.16 (74) *Sagittaria calycina* var. *calycina*, hooded arrowhead;
- 20.17 (75) *Salix pellita*, satiny willow;
- 20.18 (76) *Salicornia rubra*, red saltwort;
- 20.19 (77) *Scleria verticillata*, whorled nutrush;
- 20.20 (78) *Scutellaria ovata* var. *versicolor*, ovate-leaved skullcap;
- 20.21 (79) *Shinnersoseris rostrata*, annual skeletonweed;
- 20.22 (80) *Silene nivea*, snowy campion;

- 21.1 (81) *Spiranthes casei* var. *casei*, Case's ladies' tresses;
- 21.2 (82) *Subularia aquatica* ssp. *americana*, awlwort;
- 21.3 (83) *Sullivantia sullivantii*, reniform sullivantia;
- 21.4 (84) *Trichophorum clintonii*, Clinton's bullrush;
- 21.5 (85) *Utricularia geminiscapa*, hidden-fruit bladderwort;
- 21.6 (86) *Utricularia resupinata*, lavender bladderwort;
- 21.7 (87) *Valeriana edulis* var. *ciliata*, edible valerian;
- 21.8 (88) *Viola lanceolata* var. *lanceolata*, lance-leaf violet;
- 21.9 (89) *Viola nuttallii*, yellow prairie violet;
- 21.10 (90) *Vitis aestivalis* var. *bicolor*, silverleaf grape;
- 21.11 (91) *Woodsia alpina*, alpine woodsia;
- 21.12 (92) *Woodsia glabella*, smooth woodsia; and
- 21.13 (93) *Woodsia scopulina* ssp. *laurentiana*, Rocky Mountain woodsia.
- 21.14 C. Of special concern:
- 21.15 (1) *Adlumia fungosa*, Allegheny vine;
- 21.16 (2) *Alisma gramineum*, narrow-leaved water plantain;
- 21.17 (3) *Allium cernuum*, nodding wild onion;
- 21.18 (4) *Androsace septentrionalis*, northern androsace;
- 21.19 (5) *Antennaria parvifolia*, small-leaved pussytoes;
- 21.20 (6) *Arabis laevigata* var. *laevigata*, smooth rock cress;
- 21.21 (7) *Arisaema dracontium*, green dragon;
- 21.22 (8) *Aristida purpurea* var. *longiseta*, red three-awn;

- 22.1 (9) *Asplenium platyneuron*, ebony spleenwort;
- 22.2 (10) *Astragalus flexuosus* var. *flexuosus*, slender milk-vetch;
- 22.3 (11) *Astragalus missouriensis* var. *missouriensis*, Missouri milk-vetch;
- 22.4 (12) *Avenula hookeri*, spike oat;
- 22.5 (13) *Baptisia bracteata* var. *glabrescens*, plains wild indigo;
- 22.6 (14) *Baptisia lactea* var. *lactea*, white wild indigo;
- 22.7 (15) *Bidens discoidea*, discoid beggarticks;
- 22.8 (16) *Botrychium acuminatum*, tailed grapefern;
- 22.9 (17) *Botrychium campestre*, prairie moonwort;
- 22.10 (18) *Botrychium minganense*, Mingan moonwort;
- 22.11 (19) *Botrychium pallidum*, pale moonwort;
- 22.12 (20) *Botrychium rugulosum*, St. Lawrence grapefern;
- 22.13 (21) *Botrychium simplex*, least moonwort;
- 22.14 (22) *Buchloe dactyloides*, buffalo grass;
- 22.15 (23) *Calamagrostis lacustris*, narrow reedgrass;
- 22.16 (24) *Calamagrostis montanensis*, Plains reedgrass;
- 22.17 (25) *Carex annectens*, yellow-fruit sedge;
- 22.18 (26) *Carex exilis*, coastal sedge;
- 22.19 (27) *Carex flava*, yellow sedge;
- 22.20 (28) *Carex grayi*, Gray's sedge;
- 22.21 (29) *Carex hallii*, Hall's sedge;
- 22.22 (30) *Carex hookerana*, Hooker's sedge;

- 23.1 (31) *Carex media*, intermediate sedge;
- 23.2 (32) *Carex michauxiana*, Michaux's sedge;
- 23.3 (33) *Carex muskingumensis*, Muskingum sedge;
- 23.4 (34) *Carex obtusata*, blunt sedge;
- 23.5 (35) *Carex ormostachya*, necklace sedge;
- 23.6 (36) *Carex praticola*, prairie-dweller sedge;
- 23.7 (37) *Carex scirpoidea*, northern single-spike sedge;
- 23.8 (38) *Carex typhina*, cattail sedge;
- 23.9 (39) *Carex xerantica*, dry sedge;
- 23.10 (40) *Chamaesyce missurica*, Missouri spurge;
- 23.11 (41) *Cirsium pumilum* var. *hillii*, Hill's thistle;
- 23.12 (42) *Cladium mariscoides*, twig rush;
- 23.13 (43) *Crataegus calpodendron*, late hawthorn;
- 23.14 (44) *Crataegus douglasii*, black hawthorn;
- 23.15 (45) *Crotalaria sagittalis*, rattlebox;
- 23.16 (46) *Cymopterus glomeratus*, plains spring parsley;
- 23.17 (47) *Cypripedium candidum*, small white lady's slipper;
- 23.18 (48) *Dalea candida* var. *oligophylla*, western white prairie clover;
- 23.19 (49) *Decodon verticillatus*, water willow;
- 23.20 (50) *Deparia acrostichoides*, silvery spleenwort;
- 23.21 (51) *Desmanthus illinoensis*, prairie mimosa;
- 23.22 (52) *Dicentra canadensis*, squirrel corn;

- 24.1 (53) *Draba arabisans*, Arabian whitlow grass;
- 24.2 (54) *Drosera anglica*, English sundew;
- 24.3 (55) *Drosera linearis*, linear-leaved sundew;
- 24.4 (56) *Dryopteris goldiana*, Goldie's fern;
- 24.5 (57) *Elatine triandra*, three-stamened waterwort;
- 24.6 (58) *Eleocharis coloradoensis*, dwarf spikerush;
- 24.7 (59) *Eleocharis nitida*, neat spikerush;
- 24.8 (60) *Eleocharis quinqueflora*, few-flowered spikerush;
- 24.9 (61) *Eryngium yuccifolium*, rattlesnake master;
- 24.10 (62) *Euphrasia hudsoniana* var. *ramosior*, Hudson Bay eyebright;
- 24.11 (63) *Fimbristylis autumnalis*, autumn fimbry;
- 24.12 (64) *Gaillardia aristata*, blanket flower;
- 24.13 (65) *Gentiana affinis*, northern gentian;
- 24.14 (66) *Gentianella amarella*, felwort;
- 24.15 (67) *Gymnocarpium robertianum*, northern oak fern;
- 24.16 (68) *Gymnocladus dioica*, Kentucky coffee tree;
- 24.17 (69) *Helianthemum canadense*, Canada frostweed;
- 24.18 (70) *Helianthus nuttallii* ssp. *rydbergii*, Nuttall's sunflower;
- 24.19 (71) *Huperzia appalachiana*, Appalachian fir moss;
- 24.20 (72) *Hydrocotyle americana*, American water-pennywort;
- 24.21 (73) *Jeffersonia diphylla*, twinleaf;
- 24.22 (74) *Juncus stygius* var. *americanus*, bog rush;

- 25.1 (75) *Juniperus horizontalis*, creeping juniper;
- 25.2 (76) *Limosella aquatica*, mudwort;
- 25.3 (77) *Listera convallarioides*, broad-leaved twayblade;
- 25.4 (78) *Littorella americana*, American shore plantain;
- 25.5 (79) *Lysimachia quadrifolia*, whorled loosestrife;
- 25.6 (80) *Malaxis monophyllos* var. *brachypoda*, white adder's mouth;
- 25.7 (81) *Muhlenbergia uniflora*, one-flowered muhly;
- 25.8 (82) *Myriophyllum heterophyllum*, broadleaf water milfoil;
- 25.9 (83) *Najas gracillima*, slender naiad;
- 25.10 (84) *Najas guadalupensis* ssp. *olivacea*, southern naiad;
- 25.11 (85) *Najas marina*, sea naiad;
- 25.12 (86) *Nuttallanthus canadensis*, old field toadflax;
- 25.13 (87) *Oenothera rhombipetala*, rhombic evening primrose;
- 25.14 (88) *Opuntia macrorhiza*, devil's tongue;
- 25.15 (89) *Osmorhiza depauperata*, blunt-fruited sweet cicely;
- 25.16 (90) *Panax quinquefolius*, American ginseng;
- 25.17 (91) *Pellaea atropurpurea*, purple cliff brake;
- 25.18 (92) *Persicaria careyi*, Carey's smartweed;
- 25.19 (93) *Phlox maculata*, wild sweet William;
- 25.20 (94) *Pinguicula vulgaris*, butterwort;
- 25.21 (95) *Plagiobothrys scouleri* var. *penicillatus*, Scouler's popcornflower;
- 25.22 (96) *Plantago elongata*, slender plantain;

- 26.1 (97) *Platanthera clavellata*, small green wood orchid;
- 26.2 (98) *Poa wolfii*, Wolf's bluegrass;
- 26.3 (99) *Polytaenia nuttallii*, prairie parsley;
- 26.4 (100) *Pyrola minor*, small shinleaf;
- 26.5 (101) *Quercus bicolor*, swamp white oak;
- 26.6 (102) *Ranunculus lapponicus*, Lapland buttercup;
- 26.7 (103) *Rorippa sessiliflora*, sessile-flowered yellow cress;
- 26.8 (104) *Rubus multiflorus*, Kinnickinnick dewberry;
- 26.9 (105) *Rubus quaeisitus*, Prince Edward Island blackberry;
- 26.10 (106) *Rubus vermontanus*, Vermont blackberry;
- 26.11 (107) *Ruellia humilis*, wild petunia;
- 26.12 (108) *Ruppia cirrhosa*, spiral ditchgrass;
- 26.13 (109) *Salix maccalliana*, McCalla's willow;
- 26.14 (110) *Salix pseudomonticola*, false mountain willow;
- 26.15 (111) *Sanicula trifoliata*, beaked snakeroot;
- 26.16 (112) *Saxifraga paniculata*, encrusted saxifrage;
- 26.17 (113) *Schedonnardus paniculatus*, tumble grass;
- 26.18 (114) *Shepherdia canadensis*, soapberry;
- 26.19 (115) *Silene drummondii* ssp. *drummondii*, Drummond's campion;
- 26.20 (116) *Solidago mollis*, soft goldenrod;
- 26.21 (117) *Stellaria longipes* ssp. *longipes*, long-stalked chickweed;
- 26.22 (118) *Symphotrichum shortii*, Short's aster;

- 27.1 (119) *Taenidia integerrima*, yellow pimpernel;
- 27.2 (120) *Tephrosia virginiana*, goat's rue;
- 27.3 (121) *Thaspium barbinode*, hairy-jointed meadow-parsnip;
- 27.4 (122) *Torreyochloa pallida*, Torrey's mannagrass;
- 27.5 (123) *Trillium nivale*, snow trillium;
- 27.6 (124) *Triplasis purpurea* var. *purpurea*, purple sandgrass;
- 27.7 (125) *Trisetum spicatum*, spike trisetum;
- 27.8 (126) *Verbena simplex*, narrow-leaved vervain;
- 27.9 (127) *Waldsteinia fragarioides* var. *fragarioides*, barren strawberry;
- 27.10 (128) *Woodsia oregana* ssp. *cathcartiana*, Oregon woodsia;
- 27.11 (129) *Xanthisma spinulosum* var. *spinulosum*, cutleaf ironplant; and
- 27.12 (130) *Xyris montana*, montane yellow-eyed grass.

27.13 **6134.0400 LICHENS; MOSSES; LIVERWORTS; FUNGI.**

27.14 Subpart 1. **Lichens.** The following species of lichens are designated as:

27.15 A. Endangered:

- 27.16 (1) *Caloplaca parvula*;
- 27.17 (2) *Dermatocarpon moulinsii*;
- 27.18 (3) *Leptogium apalachense*;
- 27.19 (4) *Lobaria scrobiculata*;
- 27.20 (5) *Parmelia stictica*;
- 27.21 (6) *Pseudocyphellaria crocata*; and
- 27.22 (7) *Umbilicaria torrefacta*.

- 28.1 B. Threatened:
- 28.2 (1) *Allocetraria oakesiana*;
- 28.3 (2) *Arthrorhaphis citronella*, golden-dot lichen;
- 28.4 (3) *Coccocarpia palmicola*;
- 28.5 (4) *Lecanora epanora*, a species of rim lichen;
- 28.6 (5) *Parmelia stuppea*;
- 28.7 (6) *Peltula bolanderi*, Bolander's peltula lichen;
- 28.8 (7) *Protopannaria pezizoides*, brown-gray moss-shingle lichen;
- 28.9 (8) *Ramalina roesleri*, frayed ramalina lichen; and
- 28.10 (9) *Usnea mutabilis*, bloody beard lichen.
- 28.11 C. Of special concern:
- 28.12 (1) *Ahtiana aurescens*;
- 28.13 (2) *Amygdalaria panaeola*, powdery almond lichen;
- 28.14 (3) *Anaptychia crinalis*;
- 28.15 (4) *Arctoparmelia centrifuga*, concentric ring lichen;
- 28.16 (5) *Arctoparmelia subcentrifuga*, a species of ring lichen;
- 28.17 (6) *Bryoria fuscescens*, pale-footed horsehair lichen;
- 28.18 (7) *Buellia nigra*, black disk lichen;
- 28.19 (8) *Caloplaca stellata*, a species of firedot lichen;
- 28.20 (9) *Cladonia pseudorangiformis*;
- 28.21 (10) *Heterodermia obscurata*, orange-tinted fringe lichen;
- 28.22 (11) *Melanelia subolivacea*, brown-eyed camouflage lichen;

- 29.1 (12) *Menegazzia terebrata*, port-hole lichen;
- 29.2 (13) *Ochrolechia androgyna*, powdery saucer lichen;
- 29.3 (14) *Peltigera venosa*;
- 29.4 (15) *Platismatia glauca*, ragbag lichen;
- 29.5 (16) *Ramalina thrausta*, Angel's hair lichen;
- 29.6 (17) *Stereocaulon pileatum*, pixie foam lichen;
- 29.7 (18) *Sticta fuliginosa*;
- 29.8 (19) *Thelocarpon epibolum*, a species of thelocarpon lichen;
- 29.9 (20) *Usnea longissima*, Methusela's beard lichen; and
- 29.10 (21) *Usnea rubicunda*, red beard lichen.

29.11 Subp. 2. **Mosses and liverworts.** The following species of mosses and liverworts
29.12 are designated as:

29.13 A. Endangered:

- 29.14 (1) *Bryoxiphium norvegicum*, sword moss;
- 29.15 (2) *Schistostega pennata*, luminous moss; and
- 29.16 (3) *Splachnum rubrum*, red parasol moss.

29.17 B. Threatened:

- 29.18 (1) *Cirriphyllum piliferum*, hair-pointed feather moss;
- 29.19 (2) *Cryptocolea imbricata*, hidden perianth liverwort;
- 29.20 (3) *Cynodontium schisti*, mowed mosquito moss;
- 29.21 (4) *Lescurea saxicola*, lustrous bow moss;
- 29.22 (5) *Sphagnum compactum*, cushion peat moss;

- 30.1 (6) *Sphagnum lescurii*, red twisted peat moss; and
- 30.2 (7) *Trichocolea tomentella*, down liverwort.
- 30.3 C. Of special concern:
- 30.4 (1) *Aphanorrhagma serratum*, lidden earth moss;
- 30.5 (2) *Atrichum crispum*, wave-leaved crane's-bill moss;
- 30.6 (3) *Atrichum tenellum*, little saw moss;
- 30.7 (4) *Aulacomnium androgynum*, bud-headed thread moss;
- 30.8 (5) *Aulacomnium heterostichum*, differential branched crease capsule moss;
- 30.9 (6) *Bryum cyclophyllum*, egg-leaf true moss;
- 30.10 (7) *Buxbaumia aphylla*, bug-on-stick moss;
- 30.11 (8) *Cyrto-hypnum pygmaeum*, pygmy plume moss;
- 30.12 (9) *Encalypta procera*, tall extinguisher moss;
- 30.13 (10) *Frullania selwyniana*, Selwyn's ear-leaf liverwort;
- 30.14 (11) *Heterocladium dimorphum*, spaced-out tangle moss;
- 30.15 (12) *Hyophila involuta*, rolled-leaf wet-ground moss;
- 30.16 (13) *Jaffueliobryum wrightii*, Wright's blunt-leaved true moss;
- 30.17 (14) *Meesia uliginosa*, swan moss;
- 30.18 (15) *Pogonatum urnigerum*, urn-bearing hair moss;
- 30.19 (16) *Thelia hirtella*, nipple moss; and
- 30.20 (17) *Tortella inclinata*, shortleaf chalk moss.

30.21 Subp. 3. **Fungi.** The following species of fungi are designated as:

30.22 A. Endangered:

- 31.1 (1) *Psathyrella cystidiosa*;
- 31.2 (2) *Psathyrella rhodospora*; and
- 31.3 (3) *Suillus weaverae*.
- 31.4 B. Threatened: none.
- 31.5 C. Of special concern:
- 31.6 (1) *Boletus subcaerulescens*, a species of Porcini mushroom;
- 31.7 (2) *Laccaria trullisata*;
- 31.8 (3) *Lactarius fuliginellus*;
- 31.9 (4) *Lysurus cruciatus*; and
- 31.10 (5) *Sarcosoma globosum*, a species of cup fungus.