

## CHAPTER THREE

### SPECIES OF GREATEST CONSERVATION NEED

#### Wildlife Species Considered by the IWAP

Federal guidelines require the IWAP to include information on the distribution and abundance of wildlife, including low and declining populations *as the IDNR deems appropriate*. The IDNR is the sole agency given the responsibility to manage Iowa's fish and wildlife resources and to protect their habitats (Code of Iowa, Chapter 455A). Iowa law defines *wildlife* as any species of wild mammal, fish, bird, reptile and amphibian (Code of Iowa sections 456.24, 481A.1, 481A.38, 481A.39, 481A.48). Authority to establish and protect state-listed endangered or threatened species is vested in Chapter 481B.4 and Iowa Administrative Code Chapter 571-77(481B). Butterflies, land snails and fresh water mussels were included in the Plan because these invertebrates are included on the state's endangered and threatened species list. Dragonflies and damselflies were later added when significant data were found that listed the distribution and status of species in these groups. A total of 999 species were considered by working groups (Table 3-1).

**Table 3-1. Number of species considered by the IWAP.**

<b>Taxonomic Class</b>	<b>Species</b>	<b>List location</b>
Breeding birds	206	Appendix 3
Migrant birds <sup>1</sup>	199	Appendix 4
All birds	405	
Mammals	82	Appendix 5
Fish	153	Appendix 6
Reptiles and Amphibians	71	Appendix 7
Freshwater mussels	55	Appendix 8
Land snails	8	Table 3-8
Butterflies	119	Appendix 9
Dragonflies and Damselflies	106	Appendix 10
Total species considered	999	

<sup>1</sup> Migrant species that do not nest in Iowa

#### Determining the Species of Greatest Conservation Need

A variety of data resources were utilized by working groups as they selected the SGCN:

- Iowa GAP -completed in 2003 with ongoing updates provided by Iowa Nature Mapping;

- Published historic and scientific literature;
- Unpublished reports, scientific surveys and databases maintained by the IDNR fisheries, wildlife and water quality bureaus;
- Personal research and survey data supplied by wildlife ecologists at Iowa educational institutions;
- Museum and personal specimen collections;
- State and regional databases maintained by other conservation organizations (e.g. NatureServe, PIF, PARC, TNC, USFWS, IOU, Audubon IBA, etc.);
- Personal expertise of working group members and consultants.

The procedures used to identify SGCN varied somewhat between Working Groups, but all followed a similar process. Working Group members reviewed the available information on species abundance and distribution in their assigned taxonomic class. The potential list of SGCN in each taxonomic class was then circulated to other experts for review and comment. The Working Group reviewed comments and prepared a recommended list that was presented to the Steering Committee for approval. In some cases additional species were added to the lists based on comments received later in the planning process.

**Game species.** Information on the current abundance and distribution of wildlife is most complete for major game species. IDNR has collected harvest statistics and conducted population surveys on some of these species for over half a century. This information is documented for terrestrial game and selected nongame species in *Trends in Iowa Wildlife Populations and Harvest 2004* (Iowa DNR 2004). *Fishing in Iowa: A Survey of 1994 Iowa Anglers* (Iowa DNR 1995) is the most recent survey of statewide fish harvest statistics. A compilation of population surveys is provided in Appendix 21 and summarized in Table 7-1.

**Birds.** The distribution and abundance of birds in Iowa is better understood than any other nongame taxa considered in the IWAP. As a result the Bird Working Group had many sources of information to consult. The working group used the bird list of the IOU to create separate state and national status lists for all nesting or migrant species that are found in Iowa. Other Iowa and national status lists were created using the NatureServe website, the NABCI 2002 Bird Conservation Region and the USFWS Region 3 Birds of Conservation Concern lists. Once completed, these lists were compared, reviewed by the working group and collated into final lists of Iowa breeding and migrant birds that were accepted by the Steering Committee.

To determine the bird SGCN, a subcommittee of the Bird Working Group classified breeding and migrant birds into one of 3 categories:

- 1 - SGCN (State Endangered, Threatened, or Special Concern);
- 2 - Strong candidate for SGCN;
- 3- Questionable candidate for SGCN.

This list was provided to the entire Bird Working Group for review. Then a second draft of was created in which birds were listed in one of two categories:

- 1 = SGCN (State Endangered, Threatened, and Special Concern);
- 2 = Proposed for SGCN by the Bird Working Group.

This second draft was reviewed by the entire working group and USFWS Region 3 biologists, resulting in a final list of 67 Iowa breeding birds (Table 3-2) and 18 migratory birds (Table 3-3) of greatest conservation need. Iowa has a responsibility to conserve these migrant species due to the state's geographical location on their migratory pathway, (e.g. rusty blackbird, greater and lesser yellowlegs), or because Iowa acts as important migration rest habitat (e.g. yellow rail).

There are several Iowa extirpated nesting bird species not included as birds of greatest conservation need e.g. swallow-tailed kite (*Elanoides forficatus*), merlin (*Falco columbarius*), and common loon (*Gavia immer*). Restoration programs for these species may be justified in the future, at which time their status will be reconsidered.

The Partners in Flight (PIF) Species Prioritization Scheme (1991) played a major role in determining which species ultimately made the bird list of SGCN. A number of the priority bird species lists used as references in this process were derived directly or indirectly from PIF. The PIF prioritizing system ranks each species of North American breeding bird based upon seven measures of conservation vulnerability:

- 1) Relative abundance (inter-specific);
- 2) Size of breeding range;
- 3) Size of non-breeding range;
- 4) Threats to the species in breeding areas;
- 5) Threats to the species in non-breeding areas;
- 6) Population trend;
- 7) Relative density (intra-specific) in a given planning unit compared to the maximum reached within its range.

Additional references utilized by the Bird Working Group include:

- NatureServe National and Sub-national Heritage Status Rankings;
- *Iowa Birds* (Dinsmore et. al.1984);
- *The Iowa Breeding Bird Atlas* (Jackson et. al. 1996);
- *Birds of Iowa* (Kent and Dinsmore 1996);
- USGS Breeding Bird Survey;
- Partners in Flight Bird Conservation Plans for Iowa Physiographic Areas;
- NABCI 2002 Bird Conservation Region
- USFWS Region 3 Birds of Conservation Concern;
- United States Shorebird Conservation Plan;
- Upper Mississippi-Great Lakes Shorebird Plan;
- Northern Plains/Prairie Potholes Regional Shorebird Plan;

- North American Waterbird Conservation Plan;
- The Prairie-Forest Border Ecoregion: A Conservation Plan (The Nature Conservancy);
- American Bird Conservancy Green List;
- Iowa Important Bird Area Priority Birds List (Audubon).

**Mammals.** The Mammal Working Group developed a complete list of mammals found in Iowa primarily based on Bowles *et al.* 1998. The SGCN list for mammals was developed by eliminating vagrant and extirpated species, which had little possibility for management. The working group then eliminated all species that had a NatureServe S + N status score of 9 or above (*secure* or *apparently secure*) at the state and national levels (Appendix 11). The proposed SGCN list was sent to individuals outside of the working group for comment and was reviewed by the entire Steering Committee. The final list of SGCN is comprised of 18 species (Table 3-4).

**Amphibians and reptiles.** This working group developed a complete list of Iowa amphibians and reptiles based primarily the work of Christiansen and Bailey (1986, 1988, and 1991). Those species with a NatureServe S plus N status score of 9 or above (*secure* or *apparently secure*) were eliminated if they were not on Iowa's T & E list or did not have a NatureServe trend listing of declining or unknown. The final list of amphibians and reptiles of greatest conservation need contains 31 species (Table 3-5).

**Land snails.** Comparatively little is known about the distribution and status of this group in Iowa and there is no comprehensive list of land snails for the state. For this reason, the Land Snails Working Group decided to list only those species on the state's T & E list (Appendix 12). This list was based largely on comprehensive surveys of algific slopes in NE Iowa conducted by Dr. Terrence Frest in the 1980's. Eight species were listed as Iowa land snails of greatest conservation need (Table 3-6).

**Butterflies.** The Butterfly Working Group first developed a complete list of Iowa butterflies (Appendix 9). Knowledge of butterfly abundance and distribution is not as complete as for other taxonomic groups considered in the Plan, so only Iowa listed T & E species were included on the SGCN list for butterflies. Both lists were reviewed by the working group and by the full Steering Committee. The final list of Iowa butterflies of greatest conservation need contains 30 species (Table 3-7).

**Fish.** The Fish Working Group first developed a complete list of 153 species of fish found in Iowa and the border rivers based primarily on Harlan and Speaker (1987). Species were placed on a list of greatest conservation need if they were Federal or state listed T and E species; species with recent, rapid and or widespread decrease in abundance or distribution; or species that are targets of regional or national conservation projects. Species with an S plus N NatureServe status score of 8 or greater (*secure* or *apparently secure*) were also eliminated.

This list was further refined through comments from IDNR fisheries supervisors and biologists. The complete list was ultimately reduced to 68 fish species of greatest conservation need (Table 3-8).

**Freshwater mussels.** The complete list of Iowa freshwater mussels (Appendix 6) was based primarily on Arbuckle and Downing (2000) and Heidebrink (2002). Since most Iowa mussel species are decreasing in abundance, additional information on regional abundance, trend, and listing was used to determine species of greatest conservation need. A list of SGCN was developed by eliminating species with an S plus N NatureServe status score of 9 or greater and species that are considered extirpated from this state (unless the species was on the T & E list). This list was reviewed by the working group and the Steering Committee. The final list of mussels of greatest conservation need contains 29 species (Table 3-9).

**Dragonflies and damselflies.** The Dragonfly and Damselfly Working Group listed 106 species that occur in Iowa (Appendix 8) based primarily on Cruden and Gode (2000) with updates by working group member Ann Johnson. The full list consists of 103 species reported by Cruden and Gode (2000) as having been collected in Iowa since 1985, plus two accidentals and one new species that has been recently described from northeast Iowa. The list does not include 15 species listed by NatureServe as occurring in Iowa for which Cruden and Gode (2000) have not confirmed recent specimens.

The list of SGCN (Table 3-10) consists of 28 species with a state NatureServe status of S1 or S2. Eight species listed as S1 are known to have range distributions in Iowa that are not continuous with the species range in neighboring states. This may indicate that the overall range of the species is contracting. The complete list of Iowa dragonflies and damselflies and the list of species of greatest conservation need were both reviewed by the full Steering Committee.

**2012 Update.** With the establishment of an IWAP Implementation Committee in 2008, a Wildlife Working Group was established that includes eight subcommittees to address the taxonomic groups covered by the Plan. These subcommittees are made up of individuals from around the state (and some neighboring states) with significant expertise on the ecology of these groups. These subcommittees reviewed the list of SGCN and some subcommittees recommended additions or removal of some species from the list. In some instances these recommendations were based upon updated survey information, in others they were based on corrections to the identification of historical specimens, and in several instances species were added due to the lack of available information about distribution and health of populations in Iowa. These recommendations were reviewed and approved by the Implementation Committee, and then underwent a public comment period before being submitted to the US Fish and Wildlife Service for approval.

As a result of the additions and removal of several species from the list of SGCN, the final lists no longer reflect exactly what the paragraphs above describe. For example, the bufferly list now consists of more species than only the Iowa listed T & E species. However, the overall criteria used to determine which species would be listed as SGCN has not changed through this process. Rather, the changes reflect the availability of information that was unavailable during the initial development of the Plan.

**Table 3-2. Breeding birds of greatest conservation need.**

**Iowa Abundance:** A = abundant, C = common, CL = common locally, U=uncommon, UL = uncommon locally, R = rare, SC = special concern, Th = threatened, En = endangered, X = extirpated. E = extinct.

**Iowa Trend:** D = decreasing, I = increasing, S = stable, K = unknown.

**Iowa Status:** B =breeding, N = non-breeding.

See Appendix 11for NatureServe codes used in Iowa Status and National Status columns.

Common Name	Scientific Name	Iowa Abundance	Iowa Trend	Iowa Status	National Status
Trumpeter Swan	<i>Cygnus buccinator</i>	R	I	S2B	N4B, N4N
Northern Pintail	<i>Anas acuta</i>	R	S	S2B, S5N	N5B, N5N
Canvasback	<i>Aythya valisineria</i>	R	S	S2B, S4N	N5B, N5N
Redhead	<i>Aythya americana</i>	U	S	S2B, S4N	N5B, N5N
Northern Bobwhite	<i>Colinus virginianus</i>	CL	D	S5B	N5
Ruffed Grouse	<i>Bonasa umbellus</i>	U	D	S4B	N5
Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	X	N/A	S1B	N4
Greater Prairie-Chicken	<i>Tympanuchus cupido</i>	R	S	S1B	N4
American White Pelican	<i>Pelecanus erythrorhynchos</i>	C	I	S4N	N3B, N3N
American Bittern	<i>Botaurus lentiginosus</i>	R	S	S2B	N4B, N4N
Least Bittern	<i>Ixobrychus exilis</i>	U	S	S3B, S2N	N5B, N5N
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	R	D	S3B, S3N	N5B, N5N
Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>	R	K	S3B, S3N	N5B, N5N
Osprey	<i>Pandion haliaetus</i>	R	I	SXC, S3N	N5B, N4N
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC	I	S3B, S3N	N4B, N4N
Northern Harrier	<i>Circus cyaneus</i>	En	I	S2B, S4N	N5B, N5N
Red-shouldered Hawk	<i>Buteo lineatus</i>	En	I	S2B	N5B, N5N
Broad-winged Hawk	<i>Buteo platypterus</i>	R	S	S3B	N5B
Swainson's Hawk	<i>Buteo swainsoni</i>	R	D	S3B, S3N	N5B
Peregrine Falcon	<i>Falco peregrinus</i>	SC	I	S1B	N4B, N4N
King Rail	<i>Rallus elegans</i>	En	K	SAB, S1N	N4B, N4N
Common Gallinule (formerly Moorhen)	<i>Gallinula galeata</i>	R	K	S2B, S2N	N5B, N5N
Sandhill Crane	<i>Grus canadensis</i>	R	I	S1B, S1N	N5B, N5N
Piping Plover	<i>Charadrius melodus</i>	En	S	S1B	N3B, N3N
Upland Sandpiper	<i>Bartramia longicauda</i>	U	S	S3B	N5B
American Woodcock	<i>Scolopax minor</i>	C	K	S4B, S5N	N5B, N5N
Wilson's Phalarope	<i>Phalaropus tricolor</i>	R	K	S3N	N5B
Least Tern	<i>Sterna antillarum</i>	En	S	S1B, S1N	N?
Black Tern	<i>Chlidonias niger</i>	SC	D	S1B, S4N	N4B
Forster's Tern	<i>Sterna forsteri</i>	SC	D	S2B, S3N	N5B, N5N

Common Name	Scientific Name	Iowa Abundance	Iowa Trend	Iowa Status	National Status
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	C	D	S3B	N5B
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	C	D	S3B	N5B
Barn Owl	<i>Tyto alba</i>	En	S	S1B	N5
Burrowing Owl	<i>Athene cunicularia</i>	R	K	S1B	N4B, N4N
Long-eared Owl	<i>Asio otus</i>	Th	K	S2B, S3N	N5B, N5N
Short-eared Owl	<i>Asio flammeus</i>	En	S	S1B, S2N	N5B, N5N
Common Nighthawk	<i>Chordeiles minor</i>	C	D	S5B	N5B
Eastern Whip-poor-will	<i>Caprimulgus vociferus</i>	CL	D	S5B	N5B
Chimney Swift	<i>Chaetura pelagica</i>	C	K	N5B	S5B
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	C	D	S5B	N5B, N5N
Acadian Flycatcher	<i>Empidonax virescens</i>	R	S	S3B, S3N	N5B
Willow Flycatcher	<i>Empidonax traillii</i>	C	S	S4B, S4N	N5B
Least Flycatcher	<i>Empidonax minimus</i>	R	K	S1B, S4N	N5B
Loggerhead Shrike	<i>Lanius ludovicianus</i>	U	D	S3B, S3N	N4
White-eyed Vireo	<i>Vireo griseus</i>	R	K	S2B, S3N	N5B, N5N
Bell's Vireo	<i>Vireo bellii</i>	U	S	S3B, S4N	N4B
Brown Creeper	<i>Certhia americana</i>	R	S	S3B	N5
Bewick's Wren	<i>Thryomanes bewickii</i>	R	K	S2B, S2N	N5B
Sedge Wren	<i>Cistothorus platensis</i>	U	I	S4B, S4N	N4B, N5N
Veery	<i>Catharus fuscescens</i>	R	D	S2B, S3N	N5B
Wood Thrush	<i>Hylocichla mustelina</i>	U	D	S4B, S4N	N5B
Northern Mockingbird	<i>Mimus polyglottos</i>	R	K	S3B	N5
Blue-winged Warbler	<i>Vermivora cyanoptera</i>	R-W/U-E	S	S3B, S4N	N5B
Cerulean Warbler	<i>Setophaga cerulea</i>	R	D	S2B, S3N	N4B
Hooded Warbler	<i>Setophaga citrina</i>	R	K	S1B, S2N	N5B
Black-and-white Warbler	<i>Mniotilta varia</i>	R	K	S5N	N5B, N4N
Prothonotary Warbler	<i>Protonotaria citrea</i>	R	S	S3B, S3N	N5B
Worm-eating Warbler	<i>Helmitheros vermivorus</i>	R	K	S2B, S2N	N5B
Louisiana Waterthrush	<i>Parkesia motacilla</i>	R	K	S3B, S4N	N5B
Kentucky Warbler	<i>Geothlypis formosus</i>	R	K	S1B, S3N	N5B
Yellow-breasted Chat	<i>Icteria virens</i>	R	S	S3B, S3N	N5B
Field Sparrow	<i>Spizella pusilla</i>	C	D	S5B, S5N	N5
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	C	D	S4B, S4N	N5B, N5N
Henslow's Sparrow	<i>Ammodramus henslowii</i>	Th	I	S3B, S2N	N3B, N4N
Dickcissel	<i>Spiza americana</i>	A	D	S4B, S4N	N5B

Common Name	Scientific Name	Iowa Abundance	Iowa Trend	Iowa Status	National Status
Bobolink	<i>Dolichonyx oryzivorus</i>	C	D	S4B	N5B
Eastern Meadowlark	<i>Sturnella magna</i>	C	D	S4B, S4N	N5

**Table 3-3. Migratory birds of greatest conservation need.**

**Iowa Abundance:** R = rare, U = uncommon, C = common

See Appendix 11 for NatureServe codes used in Iowa Status and National Status columns.

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Yellow Rail	<i>Coturnicops noveboracensis</i>	R	SNA	N3B, N4N
Whooping Crane	<i>Grus americana</i>	R	SXB	N1N
American Golden-Plover	<i>Pluvialis dominica</i>	U	S5N	N5B, N5N
American Avocet	<i>Recurvirostra americana</i>	R	S3N	N5B, N5N
Solitary Sandpiper	<i>Tringa solitaria</i>	C	S5N	N4B, N5N
Greater Yellowlegs	<i>Tringa melanoleuca</i>	C	S5N	N5B, N5N
Lesser Yellowlegs	<i>Tringa flavipes</i>	C	S5N	N5B, N5N
Hudsonian Godwit	<i>Limosa haemastica</i>	U	S3N	N3?B
Marbled Godwit	<i>Limosa fedoa</i>	R	SXB	N5B, N5N
Stilt Sandpiper	<i>Calidris himantopus</i>	U	S4N	N3B, N4N
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>	R	S3N	N4B
Short-billed Dowitcher	<i>Limnodromus griseus</i>	U	S4N	N5B, N5N
Olive-sided Flycatcher	<i>Contopus cooperi</i>		S3N	N4B
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	U	S1N	N4B
Canada Warbler	<i>Cardellina canadensis</i>	U	S3N	N5B
Le Conte's Sparrow	<i>Ammodramus leconteii</i>	U	SNA	N3B, N4N
Nelson's Sparrow	<i>Ammodramus nelsoni</i>	R	SNA	N3B, N5N
Rusty Blackbird	<i>Euphagus carolinus</i>	U	S3N	N5B, N5N

**Table 3-4. Mammals of greatest conservation need.**

**Iowa Abundance:** CL = common locally, U = uncommon, R = rare,  
I = re-introduced.

**Iowa Trend:** K = unknown, D = decreasing, S = stable, I = increasing.

See Appendix 11 for NatureServe codes used in Iowa Status and National Status columns

Common Name	Scientific Name	Iowa Abundance	Iowa Trend	Iowa Status	National Status
Elliot's Short-tailed Shrew	<i>Blarina hylophaga</i>	CL	K	S4	N5
Least Shrew	<i>Cryptotis parva</i>	R	K	S3 Threatened	N5
Hayden's Shrew	<i>Sorex haydeni</i>	CL	K	S4-Apparently secure	N4
Northern Myotis	<i>Myotis septentrionalis</i>	CL	K	S4-Apparently secure	N4
Indiana Bat	<i>Myotis sodalis</i>	R	K	S1 Endangered	N2
Evening Bat	<i>Nycticeius humeralis</i>	CL	K	S3	N5
Gray Fox	<i>Urocyon cinereoargenteus</i>	U	K	S4-Apparently secure	N5
Bobcat	<i>Lynx rufus</i>	U	I	S3	N5
Spotted Skunk	<i>Spilogale putorius</i>	R	D	S1 Endangered	N5
Franklin's Ground Squirrel	<i>Spermophilus franklinii</i>	R	D	S3	N5
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	CL	S	S3	N5
Southern Flying Squirrel	<i>Glaucomys volans</i>	U	K	S4 Special Concern	N5
Plains Pocket Gopher	<i>Geomys bursarius</i>	CL	D	S5-Secure	N5
Plains Pocket Mouse	<i>Perognathus flavescens</i>	R	K	S2	N5
Southern Red-backed Vole	<i>Myodes gapperi</i>	R	D	S2 Endangered	N5
Prairie Vole	<i>Microtus ochrogaster</i>	U	S	S3	N5
Woodland Vole	<i>Microtus pinetorum</i>	R	K	S3	N5
Southern Bog Lemming	<i>Synaptomys cooperi</i>	R	D	S3 Threatened	N5
White-tailed Jackrabbit	<i>Lepus townsendii</i>	R	D	S3	N5

**Table 3-5. Reptiles and amphibians of greatest conservation need.**

**Iowa Listing:** T = Threatened, E = Endangered

**Iowa Trend:** K = unknown, D = decreasing, S = stable.

See Appendix 11. for NatureServe codes used in Iowa Status and National Status columns

Common Name	Scientific Name	Iowa Listing	Iowa Trend	Iowa Status	National Status
Mudpuppy	<i>Necturus maculosus</i>	T	D	S2	N5
Central Newt	<i>Notophthalmus viridescens</i>	T	S	S2	N5
Tiger Salamander	<i>Ambystoma tigrinum</i>		D	S5	N5
Smallmouth Salamander	<i>Ambystoma texanum</i>		S	S3	N5
Blue-spotted Salamander	<i>Ambystoma laterale</i>	E	S	S1	N5
Crawfish Frog	<i>Lithobates areolata</i>	E	D	S1	N4
Cricket Frog	<i>Acris crepitans</i>		D	S3	N5
Great Plains Toad	<i>Anaxyrus cognatus</i>		D	S3	N5
Plains Spadefoot	<i>Spea bombifrons</i>			S4	N5
Ornate Box Turtle	<i>Terrapene ornata</i>	T	S	S2	N5
Blanding' Turtle	<i>Emydoidea blandingii</i>	T	D	S2	N4
Wood Turtle	<i>Glyptemys insculpta</i>	E	K	S1	N4
Yellow Mud Turtle	<i>Kinosternon flavescens</i>	E	D	S1	N5
Common Musk Turtle	<i>Sternotherus odoratus</i>	T	D	S2	N5
Smooth softshell	<i>Apalone mutica</i>			S4	N5
Slender Glass Lizard	<i>Ophisaurus attenuatus</i>	T	D	S2	N5
Six-Lined Racerunner	<i>Aspidocelis sexlineatus</i>		D	S3	N5
Northern Prairie Skink	<i>Plestiodon septentrionalis</i>		D	S3	N5
Great Plains Skink	<i>Plestiodon obsoletus</i>	E	D	S1	N5
Diamondback Water Snake	<i>Nerodia rhombifer</i>	T	D	S2	N5
Copperbelly Water Snake	<i>Nerodia erythrogaster neglecta</i>	E	D	S1	N5
Smooth Earthsnake	<i>Virginia valeriae</i>		S	S3	N5
Western Wormsnake	<i>Carphophis amoenus</i>	T	D	S2	N5
Smooth Greensnake	<i>Opheodrys vernalis</i>	Special Concern	S	S3	N5
Prairie Kingsnake	<i>Lampropeltis calligaster</i>		D	S3	N5
Speckled Kingsnake	<i>Lampropeltis getula holbrooki</i>	T	D	S1	N5
Bullsnake	<i>Pituophis catenifer sayi</i>	Special Concern	D	S3	N5
Western Hog-nosed Snake	<i>Heterodon nasicus</i>	E	K	S1	N5
Eastern Massasauga Rattlesnake	<i>Sistrurus catenatus catenatus</i>	E (Fed. Candidate Sp.)	D	S1	N3, N4
Timber Rattlesnake	<i>Crotalus horridus</i>		D	S3	N5
Prairie Rattlesnake	<i>Crotalus viridis</i>	E	K	S1	N5
Copperhead	<i>Agkistrodon contortrix</i>	E	D	S1	N5

**Table 3-6. Land snails of greatest conservation need.**

**Iowa and Federal Listing:** T = T, E = E.

**Iowa Abundance:** R = Rare

**Iowa Trend:** K = unknown, S = stable, D = decreasing.

See Appendix 11 for NatureServe codes used in Iowa Status and National Status columns

<b>Common Name</b>	<b>Scientific Name</b>	<b>Iowa Listing</b>	<b>Federal Listing</b>	<b>Iowa Abundance</b>	<b>Iowa Trend</b>	<b>National Status</b>
Iowa Pleistocene Snail	<i>Discus macclintocki</i>	E	E	R	S	N1
Frigid Ambersnail	<i>Catinella gelida</i>	E		R	D	N1
Minnesota Pleistocene Succinea	<i>Novasuccinea n. Sp. Minnesota a</i>	E		R	D	NNR
Iowa Pleistocene Succinea	<i>Novasuccinea n. Sp. Minnesota b</i>	E		R	D	NNR
Briarton Pleistocene Snail	<i>Vertigo brierensis</i>	E		R	K	N1
Hubricht's Vertigo	<i>Vertigo hubrichti</i>	T		R	K	N3
Iowa Pleistocene Vertigo	<i>Vertigo iowaensis</i>	E		R	K	N3
Bluff Vertigo	<i>Vertigo occulta</i>	T		R	K	N2

**Table 3-7. Butterflies of greatest conservation need.**

**Iowa Listing:** E = Endangered, T = Threatened, SC = Special Concern

**Iowa Abundance:** K = unknown, R = rare, C = common, LC = locally common.

**Iowa Trend:** K = unknown, S = stable, D = decreasing.

See Appendix 11 for NatureServe codes used in Iowa Status and National Status columns

Common Name	Scientific Name	Iowa Listing	Iowa Abundance	Iowa Trend	Iowa Status	National Status
Pipevine Swallowtail	<i>Battus philenor</i>	SC	R	K	S3	N5
Zebra Swallowtail	<i>Eurytides marcellus</i>	SC	R	K	S1	N5
Olympia Marble	<i>Euchloe olympia</i>	SC	R	K	S3	N4
Purplish Copper	<i>Lycaena helloides</i>	SC	R	D	S3	N5
Acadian Hairstreak	<i>Satyrium acadica</i>	SC	LC	S	S3	N5
Edward's Hairstreak	<i>Satyrium edwardsii</i>	SC	K	K	S3	N5
Hickory Hairstreak	<i>Satyrium caryaevorum</i>	SC	R	K	S3	N4
Striped Hairstreak	<i>Satyrium liparops</i>	SC	K	K	S3	N5
White M Hairstreak	<i>Parrhasius m-album</i>		R	K	S?	N5
Reakirt's Blue	<i>Echinargus (Hemiargus) isola</i>		K	K	SNR	N5
Silvery Blue	<i>Glaucopsyche lygdamus</i>	T	R	K	S2	N5
Melissa Blue	<i>Plebejus (Lycaeides) melissa</i>		K	K	S3	N5
Aphrodite Fritillary	<i>Speyeria aphrodite</i>		LC	S	S4	N5
Regal Fritillary	<i>Speyeria idalia</i>	SC	LC	S	S2	N3
Baltimore Checkerspot	<i>Euphydryas phaeton</i>	T	LC	K	S2	N4
Ozark Baltimore Checkerspot	<i>Euphydryas phaeton ozarkae</i>	T	R	K	S?	N3
Compton Tortoiseshell	<i>Nymphalis vaualbum (l-album)</i>		R	K	S?	N5
Common Ringlet	<i>Coenonympha tullia</i>	E	R	D	S1	N5
Hayhurst's Scallopwing	<i>Staphylus hayhurstii</i>		R	K	SNR	N5

<b>Common Name</b>	<b>Scientific Name</b>	<b>Iowa Listing</b>	<b>Iowa Abundance</b>	<b>Iowa Trend</b>	<b>Iowa Status</b>	<b>National Status</b>
Dreamy Duskywing	<i>Erynnis icelus</i>	SC	R	K	S3	N5
Sleepy Duskywing	<i>Erynnis brizo</i>	SC	R	K	S3	N5
Mottled Duskywing	<i>Erynnis martialis</i>		R	K	S3	N3
Columbine Duskywing	<i>Erynnis lucilius</i>	SC	R	K	S3	N4
Wild Indigo Duskywing	<i>Erynnis baptisiae</i>	SC	K	K	S3	N5
Powesheik Skipperling	<i>Oarisma powesheik</i>	T	R	D	S2	N2
Ottoo Skipper	<i>Hesperia ottoe</i>	SC	R	D	S2	N3
Leonardus Skipper	<i>Hesperia leonardus</i>	SC	R	K	S2	N4
Dakota Skipper	<i>Hesperia dacotae</i>	E	R	D	S1	N2
Arogos Skipper	<i>Atrytone arogos</i>	SC	R	D	S2	N3
Byssus Skipper	<i>Problema byssus</i>	T	R	K	S2	N3
Mulberry Wing	<i>Poanes massasoit</i>	T	R	K	S2	N4
Zabulon Skipper	<i>Poanes zabulon</i>	SC	LC	K	S3	N5
Broad-winged Skipper	<i>Poanes viator</i>	SC	LC	K	S3	N5
Dion Skipper	<i>Euphyes dion</i>	SC	K	K	S3	N4
Two-spotted Skipper	<i>Euphyes bimacula</i>	SC	R	K	S2	N4
Dusted Skipper	<i>Atrytonopsis hianna</i>	SC	R	D	S3	N4
Pepper and Salt Skipper	<i>Amblyscirtes hegon</i>	SC	R	K	S?	N5
Common Roadside-skipper	<i>Amblyscirtes vialis</i>		K	K	S3	N4

**Table 3-8. Fish of greatest conservation need.**

**Iowa Abundance:** A = abundant, C = common, U = uncommon, R = rare, K = unknown, X = possibly extirpated.

**Iowa Trend:** K = unknown, I = increasing, D = decreasing, S = stable.

See Appendix 11 for NatureServe codes used in Iowa Status and National Status columns

Common Name	Scientific Name	Iowa Abundance	Iowa Trend	Iowa Status	National Status
Chestnut lamprey	<i>Ichthyomyzon castaneus</i>	R	K	S2	N4
Northern brook lamprey	<i>Ichthyomyzon fossor</i>	R	K	S3	N4
Silver lamprey	<i>Ichthyomyzon unicuspis</i>	U	K	S3	N5
American brook lamprey	<i>Lampetra appendix</i>	C	K	S3	N4
Lake sturgeon	<i>Acipenser fulvescens</i>	R	K	S1	N3N4
Pallid sturgeon	<i>Scaphirhynchus albus</i>	R	D	S1	N1
Shovelnose sturgeon	<i>Scaphirhynchus platyrhynchus</i>	C	S	S4	N4
Paddlefish	<i>Polyodon spathula</i>	C	S	S3	N4
Spotted gar	<i>Lepisosteus oculatus</i>	K	K	S3	N5
Longnose gar	<i>Lepisosteus osseus</i>	C	S	S3	N5
Bowfin	<i>Amia calva</i>	C	S	S3	N5
Goldeye	<i>Hiodon alosoides</i>	U	K	S3	N5
American eel	<i>Anguilla rostrata</i>	R	D	S2	N5
Skipjack herring	<i>Alosa chrysochloris</i>	U	K	S3	N5
Largescale stoneroller	<i>Campostoma oligolepis</i>	U	K	S3	N5
Gravel chub	<i>Erimystax x-punctatus</i>	U	K	S3	N4
Western silvery minnow	<i>Hybognathus argyritis</i>	K	K	S1	N4
Mississippi silvery minnow	<i>Hybognathus nuchalis</i>	U	K	S3	N5
Plains minnow	<i>Hybognathus placitus</i>	C	S	S4	N4
Pallid shiner	<i>Hybopsis amnis</i>	R	D	S2	N4
Redfin shiner	<i>Lythrurus umbratilis</i>	U	D	S2	N5
Shoal chub	<i>Macrhybopsis hyostomus</i>	C	S	S3	N5
Sturgeon chub	<i>Macrhybopsis gelida</i>	R	K	SH	N3
Sicklefin chub	<i>Macrhybopsis meeki</i>	R	K	S1?	N3
Pearl dace	<i>Margariscus margarita</i>	X		S1	N5
Pugnose shiner	<i>Notropis anogenus</i>	R	K	S1	N3
Ghost shiner	<i>Notropis buchani</i>	R	D	S2	N5
Ironcolor shiner	<i>Notropis chalybaeus</i>	X	K	SX	N4
Blackchin shiner	<i>Notropis heterodon</i>	X	K	SX	N5
Blacknose shiner	<i>Notropis heterolepis</i>	R	K	S2	N4
Spottail shiner	<i>Notropis hudsonius</i>	C	S	S?	N5
Ozark minnow	<i>Notropis nubilus</i>	U	K	S3	N5
Silverband shiner	<i>Notropis shumardi</i>	X	K	SX	N5
Weed shiner	<i>Notropis texanus</i>	R	D	S2	N5
Topeka shiner	<i>Notropis topeka</i>	R	D	S3	N3
Pugnose minnow	<i>Opsopoeodus emiliae</i>	U	K	S3	N5
Southern redbelly dace	<i>Phoxinus erythrogaster</i>	C	D	S4	N5
Flathead chub	<i>Platygobio gracilis</i>	C	D	S3	N5
Longnose dace	<i>Rhinichthys cataractae</i>	C	K	S3	N5

<b>Common Name</b>	<b>Scientific Name</b>	<b>Iowa Abundance</b>	<b>Iowa Trend</b>	<b>Iowa Status</b>	<b>National Status</b>
Blue sucker	<i>Cycleptus elongatus</i>	C	D	S3	N3
Black buffalo	<i>Ictiobus niger</i>	U	K	S3	N5
Spotted sucker	<i>Minytrema melanops</i>	C	K	S3	N5
River redhorse	<i>Moxostoma carinatum</i>	R	K	S1	N4
Black redhorse	<i>Moxostoma duquesnei</i>	U	K	S3	N5
Greater redhorse	<i>Moxostoma valenciennesi</i>	X	K	SX	N4
Brown bullhead	<i>Ameiurus nebulosus</i>	R	D	S2	N5
Blue catfish	<i>Ictalurus furcatus</i>	U	S/D	S3	N5
Slender madtom	<i>Noturus exilis</i>	U	S	S3	N5
Tadpole madtom	<i>Noturus gyrinus</i>	U	D	S3	N5
Freckled madtom	<i>Noturus nocturnus</i>	R	K	S2	N5
Grass (Redfin) pickerel	<i>Esox americanus</i>	U	S	S3	N5
Central mudminnow	<i>Umbra limi</i>	U	K	S3	N5
Brook Trout	<i>Salvelinus fontinalis</i>	U	S	S3	N5
Trout perch	<i>Percopsis omiscomaycus</i>	U	D	S3	N5
Pirate perch	<i>Aphredoderus sayanus</i>	R	D	S3	N5
Burbot	<i>Lota lota</i>	U	D	S3	N5
Banded killifish	<i>Fundulus diaphanus</i>	U	D	S2	N5
Starhead topminnow	<i>Fundulus dispar</i>	X	K	SX	N4
Blackstripe topminnow	<i>Fundulus notatus</i>	U	D	S3	N5
Plains topminnow	<i>Fundulus sciadicus</i>	R	K	SH	N4
Mottled sculpin	<i>Cottus bairdii</i>	R	K	S2	N5
Slimy sculpin	<i>Cottus cognatus</i>	U	K	S3	N5
Western sand darter	<i>Ammocrypta clara</i>	U	S	S2	N3
Crystal darter	<i>Crystallaria asprella</i>	R	K	S1	N3
Mud darter	<i>Etheostoma asprigene</i>	U	S	S3	N4N5
Bluntnose darter	<i>Etheostoma chlorosomum</i>	R	K	S1	N5
Iowa darter	<i>Etheostoma exile</i>	C	K	S4	N5
Least darter	<i>Etheostoma microperca</i>	R	K	S1	N5
Orangethroat darter	<i>Etheostoma spectabile</i>	U	K	S2	N5
Banded darter	<i>Etheostoma zonale</i>	U	K	S3	N5
Northern logperch	<i>Percina caprodes</i>	C	S	S3	N5
Blackside darter	<i>Percina maculata</i>	C	D	S3	N5
Slenderhead darter	<i>Percina phoxocephala</i>	U	K	S3	N5
River darter	<i>Percina shumardi</i>	C	S	S3	N5

**Table 3-9. Mussels of greatest conservation need.**

Iowa Abundance: A = abundant, C = common, U = uncommon, R = rare, K = unknown, X = possibly extirpated.

Iowa Trend: K = unknown, I = increasing, S = stable, D = decreasing.

Iowa Listing: SC = Special Concern, T = Threatened, E = Endangered, X = extirpated.

See Appendix 11 for NatureServe codes used in Iowa Status and National Status columns

Common Name	Scientific Name	Iowa Abundance	Iowa Trend	Iowa Listing	State Status	National Status
Elktoe	<i>Alasmidonta marginata</i>	U	D		S3	N4
Slippershell	<i>Alasmidonta viridis</i>	R	D	E	S1	N4
Flat Floater	<i>Anodonta suborbiculata</i>	R	D		S1	N5
Cylinder (Cylindrical Papershell)	<i>Anodontoides ferussacianus</i>	R	D	T	S2	N5
Rock Pocketbook	<i>Arcidens confragosus</i>	U	D		S3	N4
Spectacle Case	<i>Cumberlandia monodonta</i>	R	D	E	S1	N2N3
Purple Pimpleback (Purple Wartyback)	<i>Cyclonaias tuberculata</i>	R/X	D	T	S1	N5
Butterfly	<i>Ellipsaria lineolata</i>	U	K	T	S2S3	N4
Spike	<i>Elliptio dilatata</i>	U	D		S2	N5
Ebonyshell	<i>Fusconaia ebena</i>	R	D	X	S1	N4N5
Ozark Pigtoe	<i>Fusconaia ozarkensis</i>	X	N/A	E	SX	N3
Higgins' Eye Pearlymussel	<i>Lampsilis higginsii</i>	R	D	E	S1	N1
Yellow Sandshell	<i>Lampsilis teres anodontoides</i>	R	D	E	S1	N5
Slough Sandshell	<i>Lampsilis teres teres</i>	R	D	E	S1	N5
Creek Heelsplitter	<i>Lasmigona compressa</i>	R	D	T	S1	N5
Fluted Shell	<i>Lasmigona costata</i>	R	D		S2	N5
Pondmussel	<i>Ligumia subrostrata</i>	X	N/A	X	SX?	N4N5
Hickorynut	<i>Obovaria olivaria</i>	U	D		S3	N4
Bullhead (Sheepnose)	<i>Plethobasus cyphus</i>	R	D	E	S1	N3
Round Pigtoe	<i>Pleurobema sintoxia</i>	R	D	E	S2	N4
Monkeyface	<i>Quadrula metanevra</i>	U	D		S3	N4
Wartyback	<i>Quadrula nodulata</i>	U	D		S3	N4
Strange Floater (Creeper, Formerly Squawfoot)	<i>Strophitus undulatus</i>	R	D	T	S2	N5

<b>Common Name</b>	<b>Scientific Name</b>	<b>Iowa Abundance</b>	<b>Iowa Trend</b>	<b>Iowa Listing</b>	<b>State Status</b>	<b>National Status</b>
Lilliput	<i>Toxolasma parvus</i>	R	D		S2	N5
Pistolgrip	<i>Tritogonia verrucosa</i>	R	D	E	S1	N4
Fawnsfoot	<i>Truncilla donaciformis</i>	R	D		S2	N5
Pondhorn	<i>Unio merus tetralasmus</i>	R	K		S1	N4
Paper Pondshell	<i>Utterbackia imbecillis</i>	R	D		S2	N5
Ellipse	<i>Venusta concha ellipsiformis</i>	R	D	T	S1	N3/4

**Table 3-10. Dragonflies and damselflies of greatest conservation need.**

**Iowa Abundance:** R = rare, ER = extremely rare.

See Appendix 11 for NatureServe codes used in Iowa Status and National Status columns

Common Name	Scientific Name	Iowa Abundance	Iowa Status	National Status
Canada Darner	<i>Aeshna canadensis</i>	R	S2	N5
Variable Darner	<i>Aeshna interrupta</i>	R	S2	N5
Green-striped Darner	<i>Aeshna verticalis</i>	R	S2	N5
Blue-eyed Darner	<i>Rhionaeshna multicolor</i>	R	S2	N5
Cyrano Darner	<i>Nasiaeschna pentacantha</i>	ER	S2	N5
Sulphur-tipped Clubtail	<i>Gomphus militaris</i>	ER	S1S2	N5
Rapids Clubtail	<i>Gomphus quadricolor</i>	ER	S1	N3N4
Brimstone Clubtail	<i>Stylurus intricatus</i>	ER	S1	N4
Rusty Snaketail	<i>Ophiogomphus rupinsulensis</i>	ER	S1	N5
Sioux Snaketail	<i>Ophiogomphus smithi</i>	ER	S1	not recorded
Royal River Cruiser	<i>Macromia taeniolata</i>	R	S2	N5
Smoky Shadowdragon	<i>Neurocordulia molesta</i>	R	S2	N4
Stygian Shadowdragon	<i>Neurocordulia yamaskanensis</i>	ER	S1	N5
Mocha Emerald	<i>Somatochlora linearis</i>	ER	S1	N5
Spangled Skimmer	<i>Libellula cyanea</i>	ER	S1	N5
Slaty Skimmer	<i>Libellula incesta</i>	ER	S1	N5
Four-spotted Skimmer	<i>Libellula quadrimaculata</i>	R	S2	N5
Blue-faced Meadowhawk	<i>Sympetrum ambiguum</i>	ER	S1	N5
Carolina Saddlebags	<i>Tamea carolina</i>	ER	S1	N5
Spotted Spreadwing	<i>Lestes congener</i>	R	S2	N5
Sweetflag Spreadwing	<i>Lestes forcipatus</i>	R	S2	N5
Elegant Spreadwing	<i>Lestes inaequalis</i>	ER	S1	N5
Paiute Dancer	<i>Argia alberta</i>	R	S2	N4
Emma's Dancer	<i>Argia emma</i>	ER	S1	N5
Prairie Bluet	<i>Coenagrion angulatum</i>	R	S2	N3?
Boreal Bluet	<i>Enallagma boreale</i>	R	S2	N5
Alkali Bluet	<i>Enallagma clausum</i>	ER	S1	N5
Vesper Bluet	<i>Enallagma vesperum</i>	R	S2	N5

## SGCN in each Taxonomic Class

Table 3-11 compares the total number of species considered in each taxonomic class with the number of SGCN in each class. Birds and fish had the greatest number of species on the list, but each taxonomic class had some representatives. The classes with the highest percentage of species listed are those utilizing aquatic or semi-aquatic habitats – fish, mussels and dragonflies and damselflies.

Nearly all SGCN are nongame wildlife whose status is imperiled by lack or degradation of habitat. A few game animals with declining habitats or with declining trends nationally are listed e, g, ruffed grouse, woodcock, white-tailed jackrabbit, and bobwhite quail.

*Nearly one third of all the wildlife considered by this Plan are considered to be in need of conservation to protect them from declining further into Threatened or Endangered status.*

**Table 3-11. Percent of Iowa species in each taxonomic class listed as a SGCN (updated in 2012).**

Group	Total Iowa Species Considered	Number with Greatest Need	Percent of Group Total
Fish	153	75	49
Breeding Birds	206	66	32
Butterflies	119	37	31
Mussels	55	29	53
Migratory Birds	199	19	10
Mammals	82	19	23
Land Snails <sup>1</sup>	8	8	100
Amphibians and Reptiles	71	32	45
Dragonflies and Damselflies	106	28	26
<b>TOTALS</b>	<b>999</b>	<b>313</b>	<b>31</b>

<sup>1</sup> Only Iowa T and E species are listed.