

Appendix 18. Habitat Preferences for SGCN

Appendix Table 18-1. Habitat Preferences of SGCN Amphibians

	Common Name	Scientific Name	Habitat Preference	Distribution
1	Great Plains Toad	<i>Anaxyrus cognatus</i>	Grasslands & Savanna	Western border Loess Hills
2	Crawfish Frog	<i>Lithobates areolatus</i>	Prairies, pastures, occasionally floodplains	Five southeastern counties
3	Plains Spadefoot	<i>Spea bombifrons</i>	Grassland	Western border
4	Blue-spotted Salamander	<i>Ambystoma laterale</i>	Forested - wooded wetlands	Cedar River Basin - Linn & Blackhawk Counties
5	Smallmouth Salamander	<i>Ambystoma texanum</i>	Woodlands, wetlands	Southern 1/3
6	Tiger Salamander	<i>Ambystoma tigrinum</i>	All aquatic habitat types, esp. lentic wetlands	Statewide
7	Mudpuppy	<i>Necturus maculosus</i>	Rivers, streams	Mississippi, Cedar, Wapsipinicon, Des Moines, Skunk, Raccoon, Boone, Shell Rock, Upper Iowa Rivers
8	Eastern Newt	<i>Notophthalmus viridescens</i>	Woodland wetlands	Cedar and Wapsipinicon Basins

Appendix Table 18-2. Habitat Preferences of SGCN Reptiles

	Common Name	Scientific Name	Habitat Preference	Distribution
1	Slender Glass Lizard	<i>Ophisaurus attenuatus</i>	Prairie, pastures, woodland edge, savanna	South
2	Common Five-lined Skink	<i>Plestiodon fasciatus</i>	Deciduous forests along blufflands of Mississippi & large eastern Iowa rivers	East
3	Great Plains Skink	<i>Plestiodon obsoletus</i>	Loess Hills/prairie	Three counties along southwest border
4	Prairie Skink	<i>Plestiodon septentrionalis</i>	Grasslands with loose soil and rocky areas adjacent to marshes or lakes	West and Central
5	Six-Lined Racerunner	<i>Aspidocelis sexlineatus</i>	Sand/loess prairie, savanna	East and Southwest
6	Western Worm Snake	<i>Carphophis vermis</i>	Savanna & woodlands near rivers, creeks, or streams	Southern 1/3 (Records from 13 counties)
7	North American Racer	<i>Coluber constrictor</i>	Grasslands, wetlands, wooded edges	Southern ¾ and Northeast
8	Ring-necked Snake	<i>Diadophis punctatus</i>	Woodlands, savanna, and adjacent grasslands	Scattered throughout state except in north-central
9	Western Hog-nosed Snake	<i>Heterodon nasicus</i>	Shortgrass prairie with sandy/gravelly soils	Clinton, Muscatine, and Louisa Counties
10	Eastern Hog-nosed Snake	<i>Heterodon platirhinos</i>	Woodland, savanna, grassland	Eastern and western borders, and south
11	Prairie Kingsnake	<i>Lampropeltis calligaster</i>	Sand prairie, grasslands, savanna & woodland edge	Southern 1/3
12	Speckled Kingsnake	<i>Lampropeltis holbrooki</i>	Grasslands near lakes or large ponds, savanna	South-eastern 1/3 (Records from 15 counties)
13	Plain-bellied Watersnake	<i>Nerodia erythrogaster</i>	Mississippi River and associated backwaters and wet woodland	South-east near Mississippi River (Scott, Muscatine, Louisa counties)
14	Diamond-backed Watersnake	<i>Nerodia rhombifer</i>	Rivers, ponds, backwaters, oxbows	Southeast (records from 6 counties)

	Common Name	Scientific Name	Habitat Preference	Distribution
15	Smooth Greensnake	<i>Opheodrys vernalis</i>	Wet prairie and grasslands adjacent to lakes and impoundments, savanna	Scattered throughout the state
16	Gophersnake (Bullsnake)	<i>Pituophus catenifer</i>	Sand and bluff prairie, savanna, pasture	Statewide
17	Western Ratsnake	<i>Pantherophus obsoletus</i>	Heavily wooded bluffslands along rivers	Mississippi River and south
18	Graham's Crayfish Snake	<i>Regina grahamii</i>	Ponds, sloughs, marshes, floodplains, creeks	South and central
19	Western Ribbonsnake	<i>Thamnophis proximus</i>	Herbaceous wetland, ponds, streams, rivers	Southern half
20	Lined snake	<i>Tropidoclonion lineatum</i>	Grassland, pasture, woodland edge	Northwest and south
21	Smooth Earthsnake	<i>Virginia valeriae</i>	Wet woodland in river valleys	Along Des Moines and Chariton Rivers in southeast and central
22	Eastern Copperhead	<i>Agkistrodon contortrix</i>	Forested, rocky hillsides	Des Moines, Lee, Van Buren and Davis counties
23	Timber Rattlesnake	<i>Crotalus horridus</i>	Forested areas with rock outcrops, esp. woodland, bluff prairie	Northeast, southeast, and Madison County
24	Prairie Rattlesnake	<i>Crotalus viridis</i>	Prairie	Plymouth County
25	Eastern Massasauga	<i>Sistrurus catenatus</i>	Prairie wetland close to rivers and adjacent upland prairie	Wapsipinicon and Iowa Rivers in east
26	Prairie (Western) Massasauga	<i>Sistrurus turgeminus</i>	Prairie wetland close to rivers and adjacent upland prairie	Mills County
27	North American Snapping Turtle	<i>Chelydra serpentina</i>	All aquatic habitat types, wetlands	Statewide
28	Blanding's Turtle	<i>Emydoidea blandingii</i>	Shallow, well-vegetated permanent wetlands & marshes	Statewide
29	Wood Turtle	<i>Glyptemys insculpta</i>	Floodplain forest, rivers, riparian savanna	North-central (only found in Eastern IA Drift Plains ecoregion)
30	Northern Map Turtle	<i>Graptemys geographica</i>	Rivers and streams	Eastern border
31	Ouachita Map Turtle	<i>Graptemys ouachitensis</i>	Mississippi River and associated oxbows	Mississippi River
32	False Map Turtle	<i>Graptemys pseudogeographica</i>	Slow portions of large rivers	Mississippi and Missouri Rivers (occasionally move west from Mississippi)
33	Ornate Box Turtle	<i>Terrapene ornata</i>	Sand/loess prairie, savanna	Records from 36 counties in East and southwest
34	Yellow Mud Turtle	<i>Kinosternon flavescens</i>	Shallow, ephemeral pools/herbaceous wetlands near sand soils	Southeast
35	Eastern Musk Turtle	<i>Sternotherus odoratus</i>	Herbaceous wetlands, backwaters, and spring fed ponds adjacent to sandy uplands	East
36	Smooth Softshell	<i>Apalone mutica</i>	Boundary rivers, large rivers in south	South

Appendix Table 18-3. Habitat Preferences of SGCN Breeding Birds

	Common Name	Scientific Name	Habitat Preference	Distribution
1	American Wigeon	<i>Mareca americana</i>	Wetland	Statewide
2	American Black Duck	<i>Anas rubripes</i>	Wetlands, shallow lakes	
3	Northern Pintail	<i>Anas acuta</i>	Wetland, grassland	Northern half
4	Canvasback	<i>Aythya valisineria</i>	Wetland	Northwest and north-central
5	Lesser Scaup	<i>Aythya affinis</i>	Wetland, grassland	Statewide
6	Northern Bobwhite	<i>Colinus virginianus</i>	Grassland, shrubland	Southern 3/4
7	Ruffed Grouse	<i>Bonasa umbellus</i>	Open woodland, dense forest	Northeast, southeast, and south-central
8	Greater Prairie-Chicken	<i>Tympanuchus cupido</i>	Large, landscape-scale grassland	Southwest, south-central
9	Red-necked Grebe	<i>Podiceps grisegena</i>	Wetland, hemi-marsh	Scattered statewide except southwest
10	Western Grebe	<i>Aechmophorus occidentalis</i>	Large lakes & wetlands	
11	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Forest, shrubland, open riparian woodland	Statewide
12	Common Nighthawk	<i>Chordeiles minor</i>	Grassland, savanna, bluffland with flat rock outcrops, nests primarily on flat pea-gravel roof-tops in larger towns and cities with rivers	Statewide
13	Chuck-will's-widow	<i>Antrostomus carolinensis</i>	Open woodland, savanna	Southern Iowa
14	Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Deciduous forest, open woodland with grass component	Statewide
15	Chimney Swift	<i>Chaetura pelagica</i>	Older growth forests, woodlands, savanna, towns	Statewide
16	King Rail	<i>Rallus elegans</i>	Sedge meadow, wetland	East and Prairie Pothole Region
17	Black-necked Stilt	<i>Himantopus mexicanus</i>	Shallow wetlands, mudflats	
18	Piping Plover	<i>Charadrius melodus</i>	Rivers, sandbars	Missouri River
19	Wilson's Snipe	<i>Gallinago delicata</i>	Hemi-marsh, rivers	Statewide
20	Wilson's Phalarope	<i>Phalaropus tricolor</i>	Wetland, grassland	Northern half
21	Franklin's Gull	<i>Leucophaeus pipixcan</i>	Wetland	Prairie Pothole Region
22	Least Tern	<i>Sterna antillarum</i>	Wetland, rivers with sandbars	Missouri River
23	Black Tern	<i>Chlidonias niger</i>	Wetland	Statewide
24	Forster's Tern	<i>Sterna forsteri</i>	Permanent wetland, hemi-marsh	Prairie Pothole Region & Missouri River floodplain
25	American White Pelican	<i>Pelecanus erythrorhynchos</i>	Wetlands and lakes, riparian areas	Statewide
26	American Bittern	<i>Botaurus lentiginosus</i>	Wetland, grassland	Northern 2/3
27	Yellow-crowned Night Heron	<i>Nyctanassa violacea</i>	Wooded riparian wetlands	Scattered, along major rivers
28	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	Wetland, wet shrubland	Statewide, esp. in Prairie Pothole Region
29	White-faced Ibis	<i>Plegadis chihi</i>	Marsh	Prairie Pothole Region and Fremont County
30	Swainson's Hawk	<i>Buteo swainsoni</i>	Grassland, savannah, ag	Statewide except SE

	Common Name	Scientific Name	Habitat Preference	Distribution
31	American Barn Owl	<i>Tyto furcata</i>	Savanna, prairie-grassland with trees	Statewide, primarily southern Iowa
32	Eastern Screech-owl	<i>Megascops asio</i>	Riparian forest/ woodland, savanna, suburban areas	Statewide
33	Burrowing Owl	<i>Athene cunicularia</i>	Grassland	Statewide
34	Long-eared Owl	<i>Asio otus</i>	Open woodland, savanna, coniferous & deciduous forest	Statewide
35	Short-eared Owl	<i>Asio flammeus</i>	Very large grassland	Scattered statewide
36	American Kestrel	<i>Falco calumbarius</i>	Savanna, open woodland	Statewide
37	Scissor-tailed Flycatcher	<i>Tyrannus forficatus</i>	Savanna, open areas with patchy trees/shrubs	Scattered statewide
38	Say's Phoebe	<i>Sayornis saya</i>	Grassland	Nested in Sioux and Plymouth counties
39	Loggerhead Shrike	<i>Lanius ludovicianus</i>	Grassland-shrub, savannas	Scattered statewide
40	Bank Swallow	<i>Riparia riparia</i>	Rivers and streams with cutbanks	Statewide
41	Purple Martin	<i>Progne subis</i>	Towns, parks, ponds	Statewide
42	Bewick's Wren	<i>Thryomanes bewickii</i>	Savanna, open woodland, shrubland	Southern Iowa, esp. Southeast
43	Veery	<i>Catharus fuscescens</i>	Shrubby riparian forest	Scattered statewide (less common in southwest)
44	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Short grassland	Statewide
45	Bobolink	<i>Dolichonyx oryzivorus</i>	Medium height grassland	Statewide
46	Western Meadowlark	<i>Sturnella neglecta</i>	Grassland	Statewide (most abundant in west)
47	Blue-winged Warbler	<i>Vermivora cyanoptera</i>	Open woodland, shrubland, thicket	
48	Cerulean Warbler	<i>Setophaga cerulea</i>	Large older-growth deciduous forest	Primarily in eastern IA and along Des Moines River in central IA

Appendix Table 18-4. Habitat Preferences of SGCN Non-Breeding Birds (habitat preferences listed are for migratory or wintering periods in Iowa rather than breeding ground habitat associations)

	Common Name	Scientific Name	Habitat Preference	Distribution
1	Greater scaup	<i>Aythya marila</i>	Lakes, rivers, wetlands	Scattered statewide
2	Horned Grebe	<i>Podiceps auritus</i>	Lakes, ponds, rivers	
3	Yellow Rail	<i>Coturnicops noveboracensis</i>	Wetland, grassland	Scattered statewide
4	Black Rail	<i>Laterallus jamaicensis</i>	Marsh	East central, central, and northwest
5	Whooping Crane	<i>Grus americana</i>	Wetland, grassland	Northeast/north-central, southwest, and Polk County
6	Black-bellied Plover	<i>Pluvialis squatarola</i>	Wet prairie, shorelines, flooded fields	Scattered statewide
7	American Golden-Plover	<i>Pluvialis dominica</i>	Grasslands, mudflats, shorelines	Scattered statewide
8	Semipalmated Plover	<i>Charadrius semipalmatus</i>	Wetland	Statewide
9	Whimbrel	<i>Numenius phaeopus</i>	Wetland, shorelines, beaches	West, central, and three counties in east
10	Long-billed Curlew	<i>Numenius americanus</i>	Grassland-wetland	Western half and Jefferson County

	Common Name	Scientific Name	Habitat Preference	Distribution
11	Hudsonian Godwit	<i>Limosa haemastica</i>	Wetland, moderately vegetated marsh shorelines	Scattered statewide (less common in eastern ¼)
12	Marbled Godwit	<i>Limosa fedoa</i>	Wetland, mudflats, beaches	Scattered statewide
13	Ruddy Turnstone	<i>Arenaria interpres</i>	Grassland - wetland, shorelines	Scattered statewide (more common in north-central)
14	Red Knot	<i>Calidris canutus</i>	Wetland, shorelines	Southern half and Kossuth and Dickinson Counties
15	Stilt Sandpiper	<i>Caladris himantopus</i>	Wetland, shorelines	Scattered statewide
16	Sanderling	<i>Calidris alba</i>	Wetland, shorelines	Scattered statewide
17	Dunlin	<i>Calidris alpina</i>	Shallow edges of lakes, rivers and in wet, harvested fields	Scattered statewide
18	White-rumped Sandpiper	<i>Calidris fuscicollis</i>	Wetland, shorelines	Scattered statewide
19	Buff-breasted Sandpiper	<i>Calidris subruficollis</i>	Wetland and short grassland, shorelines	Scattered statewide
20	Pectoral Sandpiper	<i>Calidris melanotos</i>	Wetland, grassland, shorelines	Statewide
21	Short-billed Dowitcher	<i>Limnodromus griseus</i>	Marsh, shorelines	Scattered statewide
22	Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>	Marsh, shorelines	Scattered statewide
23	Bonaparte's Gull	<i>Chroicocephalus philadelphia</i>	Variety of aquatic areas	
24	Herring Gull	<i>Larus argentatus</i>	Variety of aquatic areas	
25	Common Tern	<i>Sterna hirundo</i>	Shorelines	
26	Common Loon	<i>Gavia immer</i>	Clear, large, open water, lakes	Scattered statewide
27	Olive-sided Flycatcher	<i>Contopus cooperi</i>	Coniferous forests, openings and edges	Statewide
28	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	Deciduous forests, thickets	
29	Philadelphia Vireo	<i>Vireo philadelphicus</i>	Early successional, thickets, riparian areas	
30	Northern Shrike	<i>Lanius borealis</i>	Patchy open areas with thickets, edges	
31	Bohemian Waxwing	<i>Bombycilla garrulus</i>	Coniferous or mixed forest	Scattered statewide
32	Sprague's Pipit	<i>Anthus spragueii</i>	Grassland	Northwest, southwest, central
33	Redpoll	<i>Acanthis flammea</i>		
34	White-winged Crossbill	<i>Loxia leucoptera</i>	Coniferous forest	Scattered statewide (less common in southwest corner)
35	Lapland Longspur	<i>Calcarius lapponicus</i>	Open areas, short grass	
36	Golden-winged Warbler	<i>Vermivora chrysoptera</i>		
37	Connecticut Warbler	<i>Oporornis agilis</i>		
38	Bay-breasted Warbler	<i>Setophaga castanea</i>	Forest/woodland	Scattered statewide
39	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>		

Appendix Table 18-5. Habitat Preferences of SGCN Mammals

	Common Name	Scientific Name	Habitat Preference	Distribution
1	White-tailed Jackrabbit	<i>Lepus townsendii</i>	Short grasslands, hayfields, esp. cultivated areas	Historically nearly statewide, now in Central/north-central
2	Franklin's Ground Squirrel	<i>Spermophilus franklinii</i>	Tallgrass prairie, savanna and roadsides	Statewide (all recent documentation in southern IA)
3	Plains Pocket Gopher	<i>Geomys bursarius</i>	Open grassy areas with well-drained soil	Statewide
4	Plains Pocket Mouse	<i>Perognathus flavescens</i>	Prairie, sand and loess	West (Loess Hills), disjunct in east
5	Woodland Vole	<i>Microtus pinetorum</i>	Deciduous riparian forests with ground layer of leaf litter	Southern and eastern
6	Southern Bog Lemming	<i>Synaptomys cooperi</i>	Moist grassland, sedge meadow, bog, woodland, shrubland	Probably statewide, primarily southern Iowa
7	Common Muskrat	<i>Ondrata zibethicus</i>	Wetland	
8	North American Least Shrew	<i>Cryptotis parva</i>	Woodland, savanna, grassland, riparian	Southern and eastern
9	Prairie Shrew	<i>Sorex haydeni</i>	Grasslands, wetlands, riparian	West
10	Little Brown Myotis	<i>Myotis lucifigus</i>	Woodland near waterways; readily rears young in buildings & bat houses	Statewide
11	Northern Myotis (Northern Long-eared Bat)	<i>Myotis septentrionalis</i>	Forest, woodlands	Statewide
12	Indiana myotis (Indiana Bat)	<i>Myotis sodalis</i>	Forest, upland and riparian	Southeast two-thirds
13	Tricolored bat	<i>Perimyotis subflavus</i>	Woodland edge, riparian	East
14	Plains spotted skunk	<i>Spilogale interrupta</i>	Oak savanna, grassland, open woodland, and farmsteads	Statewide historically (most recent documentation in Webster, Ringgold, Pole and Marion counties)
15	Long-tailed Weasel	<i>Mustela frenata</i>	Generalist; found in all habitats near water	Statewide – sparse distribution
16	Least Weasel	<i>Mustela nivalis</i>	Meadows, fields, shrubby areas, and open woodlands	Statewide – most common in northeast
17	American ermine	<i>Mustela ermine</i>	Shrubby or woodland areas, usually near water	Northern half of state
18	Northern gray fox	<i>Urocyon cinereoargenteus</i>	Mixed forests and open woodlands/savanna	Statewide, primarily in southern 1/3

Appendix Table 18-6. Habitat Preferences of SGCN Fishes

	Common Name	Scientific Name	Habitat Preference	Substrate	Flow	Distribution
1	Chestnut Lamprey	<i>Ichthyomyzon castaneus</i>	Rivers	Sand, silt		Miss., Chariton
2	Lake Sturgeon	<i>Acipenser fulvescens</i>	Large rivers and lakes	Sand, gravel, rock		Miss.
3	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	Large, turbid rivers	Gravel, sand	Fast	Mo.
4	Paddlefish	<i>Polyodon spathula</i>	Medium to large rivers, backwater, and impoundments		Slow	Miss., Mo., DM, Cedar, Iowa, Skunk

	Common Name	Scientific Name	Habitat Preference	Substrate	Flow	Distribution
5	Emerald Bowfin	<i>Amia ocellicauda</i>				Miss and some interior
6	American Eel	<i>Anguilla rostrata</i>	Rivers, large streams and lakes	Mud		Miss., Mo., and larger tributaries
7	Skipjack Herring	<i>Alosa chrysochloris</i>	Medium to large rivers and large impoundments	Sand and gravel		Miss., Mo.
8	Blue Sucker	<i>Cycleptus elongatus</i>	Large rivers	Sand, gravel, rock	Mod to fast	Miss., Mo., and large tributaries
9	Lake Chubsucker	<i>Erimyzon sucetta</i>	Heavily vegetated oxbows & sloughs of large rivers, backwaters	Sand, fine gravel	Slow	
10	Black Buffalo	<i>Ictiobus niger</i>	Backwaters, rivers, and impoundments	Gravel	Fast	Miss. and large tributaries
11	Spotted Sucker	<i>Minytrema melanops</i>	Small to medium rivers	Firm	Slow	Miss.
12	Silver Redhorse	<i>Moxostoma anisurum</i>	Lakes & rivers	Gravel, rock, sand	Mod to fast	Miss. and some interior streams
13	River Redhorse	<i>Moxostoma carinatum</i>	Large creeks and river with clear water	Gravel, rock		Upper pools of Miss.
14	Black Redhorse	<i>Moxostoma duquesnei</i>	Creeks and small to medium rivers	Gravel, Rock	Fast	Turkey, Upper Iowa, Cedar, Wapsi, drainages
15	Golden Redhorse	<i>Moxostoma erythrurum</i>	Small rivers, streams	Gravel, rock	Mod	Miss.
16	Pealip Redhorse	<i>Moxostoma pisolabrum</i>	Rivers			One record in Southern IA
17	Greater Redhorse	<i>Moxostoma valenciennesi</i>	Large rivers and lakes	Sand, gravel, rubble		Cedar, Shell Rock
18	River Shiner	<i>Alburnops blennius</i>				
19	Weed Shiner	<i>Alburnops texanus</i>	Vegetated rivers	Sand	Slow	Miss, eastern
20	Laregescale Stoneroller	<i>Camptostoma oligolepis</i>	Medium to large clear streams	Gravel		Northeast 1/3
21	Southern Redbelly Dace	<i>Chrosomus erythrogaster</i>	Headwaters of small streams, cool water	Gravel		Northeast & Little Sioux
22	Gravel Chub	<i>Erimystax x-punctatus</i>	Large streams and rivers	Gravel		Northern ½
23	Western Silvery Minnow	<i>Hybognathus argyritis</i>	Backwater	Sand, muck		Mo. Drainage
24	Mississippi Silvery Minnow	<i>Hybognathus nuchalis</i>	Large, deep rivers		Mod	Eastern Miss. drainage
25	Plains Minnow	<i>Hybognathus placitus</i>	Streams, rivers	Silt	Slow	Mo. drainage
26	Pallid Shiner	<i>Hybopsis amnis</i>	Medium to large rivers	Sand, muck		Upper. Miss.
27	Redfin Shiner	<i>Lythrurus umbratilis</i>	Rivers, streams, and creeks w/ veg			Northeast ⅓
28	Sturgeon Chub	<i>Macrhybopsis gelida</i>	Warm, turbid rivers			Eastern half and Mo.
29	Shoal Chub	<i>Macrhybopsis hyostoma</i>	Rivers	Sand, cobble	Mod to fast	Large interior rivers statewide

	Common Name	Scientific Name	Habitat Preference	Substrate	Flow	Distribution
30	Sicklefin Chub	<i>Macrhybopsis meeki</i>	Large, turbid rivers	Gravel, sand		Mo.
31	Northern Pearl Dace	<i>Margariscus nachtriebi</i>	Ponds and small lakes	Sand, gravel		Worth County
32	Pugnose Shiner	<i>Miniellus anogenus</i>	Clear, vegetated lakes	Silt, sand, gravel		West Okoboji Lake
33	Ozark Minnow	<i>Miniellus nubilus</i>	Creeks and small to medium rivers	Gravel, rock	Fast	Northeast ¼
34	Topeka Shiner	<i>Miniellus topeka</i>	Oxbows, creeks, streams, and rivers with clear water	Sand	Slow	DM, Boone, Raccoon, Rock drainages
35	Blacknose Shiner	<i>Notropis heterolepis</i>	Creeks, small rivers and lakes with clear water	Sand		Northwest
36	Pugnose Minnow	<i>Opsopoeodus emiliae</i>	Vegetated lakes, impoundments and streams		Slow	Miss.
37	Ghost Shiner	<i>Paranotropis buchanani</i>	Large creeks and small to medium rivers		Slow	Miss.
38	Mimic Shiner	<i>Paranotropis volucellus</i>	Clear rivers & streams	Firm, sand	Slow to Mod	Scattered
39	Suckermouth Minnow	<i>Phenacobius mirabilis</i>	Large creeks to small rivers	Gravel, sand, bedrock		Scattered
40	Flathead Chub	<i>Platygobio gracilis</i>	Turbid rivers & streams	Sand	Mod to fast	Mo. drainage
41	Longnose Dace	<i>Rhinichthys cataractae</i>	Clear, small to medium rivers	Gravel, rock	Fast	Northeast corner
42	Brown Bullhead	<i>Ameiurus nebulosus</i>	Ponds, lakes, backwaters, impoundments, and streams		Slow	Northern 1/3
43	Tadpole Madtom	<i>Noturus gyrinus</i>	Vegetated lakes, impoundments, backwaters, creeks, and rivers	Muck	Slow	Statewide
44	Redfin Pickerel	<i>Esox americanus</i>	Vegetated backwaters, ponds, and small lakes		Slow	Miss. and tributaries
45	Northern Pike	<i>Esox lucius</i>	Natural lakes, large rivers		Slow	Northern ½, Miss.
46	Central Mudminnow	<i>Umbra limi</i>	Vegetated streams and backwaters		Slow	Northern 1/3
47	Trout-perch	<i>Percopsis omiscomaycus</i>	Streams and rivers	Sand		Northwest ¼, Miss., Grand, Chariton
48	Brook Silverside	<i>Labidesthes sicculus</i>	Clear, warm backwaters and oxbows, sparsely vegetated	Sand, gravel, muck	Slow to mod	East
49	Banded Killifish	<i>Fundulus diaphanus</i>	Lakes, ponds, streams		Slow	Natural lakes in northwest Mo.
50	Starhead Topminnow	<i>Fundulus dispar</i>	Creeks and backwaters	Muck	None	Little Sioux and Iowa
51	Plains Topminnow	<i>Fundulus sciadicus</i>	Creeks, streams, and backwaters		Mod	Rock River basin
52	Warmouth	<i>Lepomis gulosus</i>	Lakes & ponds, with dense aquatic veg	Silt-free	Slow to none	Eastern Iowa

	Common Name	Scientific Name	Habitat Preference	Substrate	Flow	Distribution
53	Northern Sunfish	<i>Lepomis peltastes</i>				
54	Mottled Sculpin	<i>Cottus bairdii</i>	Clear, cool, creeks and small rivers	Sand, gravel, rock		Lower Bear Creek
55	Slimy Sculpin	<i>Cottus cognatus</i>	Cold streams	Rock	Fast	Northeast corner
56	Western Sand Darter	<i>Ammocrypta clara</i>	Medium to large rivers	Sand	Slow to mod	Miss.
57	Crystal Darter	<i>Crystallaria asprella</i>	Small to medium rivers	Sand, gravel		Miss., Turkey
58	Mud Darter	<i>Etheostoma asprigene</i>	Backwaters and rivers	Sand, muck	Slow	Miss. and tributaries
59	Rainbow Darter	<i>Etheostoma caeruleum</i>	Streams & small rivers	Coarse gravel	Mod	Cedar River basin
60	Bluntnose Darter	<i>Etheostoma chlorosoma</i>	Small to medium rivers, creeks, and backwaters	Sand, muck	Slow	Miss.
61	Iowa Darter	<i>Etheostoma exile</i>	Cool creeks, ponds, and lakes	Muck, sand	None or slow	Northern ½
62	Least Darter	<i>Etheostoma microperca</i>	Vegetated creeks		Slow	Maquoketa, tributaries to Otter Creek
63	Orangethroat Darter	<i>Etheostoma spectabile</i>	Creeks and small rivers	Sand, cobble, gravel, bedrock	Moderate to fast	Southeast ¼
64	Blackside Darter	<i>Percina maculata</i>	Creeks, and small to medium rivers	Sand, gravel	Slow	Northern 2/3
65	River Darter	<i>Percina shumardi</i>	Large rivers	Gravel, rock	Fast	Miss.

Appendix Table 18-7. Habitat Preferences of SGCN Mussels

	Common Name	Scientific Name	Habitat Preference	Substrate	Flow	Distribution
1	Mucket	<i>Actinonaias ligamentina</i>	Medium to large rivers	Firm gravel		Cedar River
2	Elktoe	<i>Alasmidonta marginata</i>	Medium streams	Sand, gravel	Mod	Northeast ¾
3	Slippershell	<i>Alasmidonta viridis</i>	Creeks, streams	Sand, muck		East
4	Three ridge	<i>Amblema plicata</i>	Small to large rivers and lakes	Gravel, sand, mud		Miss. and Iowa Rivers
5	Cylinder (Cylindrical papershell)	<i>Anodontoides ferussacianus</i>	Small creeks	Sand, muck		North-central
6	Rock pocketbook	<i>Arcidens confragosus</i>	Medium to large rivers	Sand, muck		Miss. River
7	Spectaclecase	<i>Cumberlandia monodonta</i>	Large rivers	Sand, muck	Fast	Miss. River
8	Wartyback	<i>Cyclonaias nodulata</i>	Large rivers	Sand, gravel		Miss. & Skunk River
9	Pimpleback	<i>Cyclonaias pustulosa</i>	Small streams to large rivers			Scattered
10	Purple wartyback	<i>Cyclonaias tuberculata</i>	Medium to large rivers	Gravel		Southeast
11	Butterfly	<i>Ellipsaria lineolata</i>	Large rivers	Sand, gravel		Miss. and Cedar Rivers

	Common Name	Scientific Name	Habitat Preference	Substrate	Flow	Distribution
12	Elephant ear	<i>Elliptio crassidens</i>	Large rivers	Mud, sand, gravel		Upper Cedar and Miss. Rivers
13	Snuffbox	<i>Epioblasma triquetra</i>	Medium to large rivers	Gravel		
14	Spike	<i>Eurynia dilatata</i>	Streams and lakes	Firm, sand, gravel		Northeast ¾
15	Wabash pigtoe	<i>Fusconaia flava</i>	Creeks to large rivers	Gravel, sand		Scattered statewide
16	Higgins' eye pearlymussel	<i>Lampsilis higginsii</i>	Large rivers	Gravel, sand		Miss. River
17	Canary kingshell	<i>Lampsilis sietmani</i>				
18	Fatmucket	<i>Lampsilis siliquioidea</i>	Small streams to large rivers, lakes, reservoirs			Miss., Cedar, Shell Rock, & D.M. Rivers
19	Yellow sandshell	<i>Lampsilis teres anodontoides</i>	Medium to large rivers	Sand, gravel		Northeast 2/3
20	White heelsplitter	<i>Lasmigona camplanata</i>	Medium to large rivers	Mud, mud-gravel		
21	Creek heelsplitter	<i>Lasmigona compressa</i>	Creeks, streams	Sand, gravel		Northeast 2/3
22	Flutedshell	<i>Lasmigona costata</i>	Medium to large rivers	Sand, gravel, muck		Northeast ¾
23	Black sandshell	<i>Ligumia recta</i>	Medium to large rivers	Gravel, firm sand		
24	Washboard	<i>Megaloniais nervosa</i>	Large rivers	Gravel, gravel-mud	Fast	Miss. River
25	Threehorn wartyback	<i>Obliquaria reflexa</i>	Medium to large rivers	Gravel		Skunk, Iowa, DM River
26	Hickorynut	<i>Obovaria olivaria</i>	Large rivers	Sand, gravel		Miss. & Iowa Rivers
27	Sheepnose	<i>Plethobasus cyphus</i>	Medium to large rivers	Sand, gravel		Miss. and DM Rivers
28	Round pigtoe	<i>Pleurobema sintoxia</i>	Streams and rivers	Firm, sand, gravel		Northeast ¾
29	Pink heelsplitter	<i>Potamilus alatus</i>	Medium to large rivers			Cedar, Iowa Rivers
30	Fat pocketbook	<i>Potamilus capax</i>				
31	Scaleshell	<i>Potamilus leptodon</i>				
32	Lake floater	<i>Pyganodon lacustris</i>				
33	Winged mapleleaf	<i>Quadrula fragosa</i>				
34	Mapleleaf	<i>Quadrula quadrula</i>	Medium to large rivers	Gravel, sand		
35	Ebonyshell	<i>Reginaia ebena</i>				
36	Pondmussel	<i>Saggitunio subrostratus</i>				
37	Salamander mussel	<i>Simpsonia ambigua</i>				
38	Monkeyface	<i>Theliderma metanevra</i>	Medium to large rivers	Gravel		Eastern 2/3
39	Gulf mapleleaf	<i>Tritogonia nobilis</i>				

	Common Name	Scientific Name	Habitat Preference	Substrate	Flow	Distribution
40	Pistolgrip	<i>Tritogonia verrucosa</i>	Medium to large rivers	Sand, gravel, muck		Miss., Iowa, and DM Rivers
41	Fawnsfoot	<i>Truncilla donaciformis</i>	Medium to large rivers	Sand, gravel		East
42	Deertoe	<i>Truncilla truncata</i>	Medium streams to large rivers	Mud, gravel, sand		Skunk, Wapsi, Little Sioux
43	Pondhorn	<i>Uniomereus tetralasmus</i>	Ponds, creeks, streams, rivers	Muck, sand		South-central
44	Flat floater	<i>Utterbackiana suborbiculata</i>				
45	Ellipse	<i>Venustaconcha ellipsiformis</i>	Small to medium streams	Sand, gravel		Eastern 2/3

Appendix Table 18-8. Habitat Preferences of SGCN Terrestrial Snails

	Common Name	Scientific Name	Habitat	Distribution
1	Midwest Pleistocene Vertigo	<i>Vertigo arthuri</i>	Forest, algific slopes	NE
2	Bluff Vertigo	<i>Vertigo meramecensis</i>	Mesic, shaded cliffs	NE & possibly other areas
3	Iowa Pleistocene Snail	<i>Discus macclintocki</i>	Forested algific slopes	NE

Appendix Table 18-9. Habitat Preferences of SGCN Bumble Bees

	Common Name	Scientific Name	Habitat Preference	Distribution
1	Rusty Patched Bumble Bee	<i>Bombus affinis</i>	Close to or within woodland, urban parks and gardens	NE & Central Iowa
2	Black and Gold Bumble Bee	<i>Bombus auricomus</i>	Open farmlands and fields	WC and far NE, and scattered NE, EC, & SE
3	Ashton's Cuckoo Bumble Bee	<i>Bombus bohemicus</i>	Close to or within woodland, urban parks and gardens	Isolated C & NE
4	Northern Amber Bumble Bee	<i>Bombus borealis</i>	Close to or within wooded areas	Far NE Iowa
5	Lemon Cuckoo Bumble Bee	<i>Bombus citrinus</i>	Close to or within wooded areas	Far NE and Scattered C & NW
6	Yellow Bumble Bee	<i>Bombus fervidus</i>	Open grassland, farmland, urban parks and gardens	NE, scattered EC, and isolated C
7	Southern Plains Bumble Bee	<i>Bombus fraternus</i>	Grasslands, urban gardens	W and scattered SC & EC
8	American Bumble Bee	<i>Bombus pensylvanicus</i>	Open farmlands and fields	Statewide
9	Red-belted Bumble Bee	<i>Bombus rufocinctus</i>	Close to or within wooded areas, urban parks and gardens	Far NE and isolated EC
10	Tri-colored Bumble Bee	<i>Bombus ternarius</i>	Close to or within woodland, wetlands	Far NE
11	Half-black Bumble Bee	<i>Bombus vagans</i>	Wide variety, incl. forests, wetlands, urban parks and gardens	Far NE and scattered NE, NW, WC, C & SE
12	Variable Cuckoo Bumble Bee	<i>Bombus variabilis</i>	Relies on <i>B. pensylvanicus</i>	Scattered historic records

Appendix Table 18-10. Habitat Preferences of SGCN Butterflies

	Common Name	Scientific Name	Habitat Preference	Distribution
1	Southern Cloudywing	<i>Cecropterus bathyllus</i>	Xeric prairie	Scattered statewide except far north and north-central
2	Hayhurst's Scallopwing	<i>Staphylus hayhurstii</i>	Floodplain and Loess Hills forests	Scattered within southern half
3	Dreamy Duskywing	<i>Erynnis icelus</i>	Woodland or edge	Allamakee County
4	Mottled Duskywing	<i>Gesta martialis</i>	Xeric prairie	Scattered (more common in west)
5	Columbine Duskywing	<i>Gesta lucilius</i>	Rocky, wooded ravines	Eastern ¼
6	Dion Skipper	<i>Euphyes dion</i>	Sedge wetlands	Statewide
7	Two-spotted Skipper	<i>Euphyes bimacula</i>	Sedge meadows and marshes	Scattered
8	Arogos Skipper	<i>Atrytone arogos</i>	Prairies and grasslands	Western half
9	Byssus Skipper	<i>Atrytone byssus</i>	Tallgrass prairie	Southern half
10	Crossline Skipper	<i>Limochares origenes</i>	Xeric prairie	Scattered
11a	Leonard's Skipper	<i>Hesperia leonardus leonardus</i>	Xeric prairie	Southern Loess Hills and Driftless Area
11b	Leonard's Pawnee Skipper	<i>Hesperia leonardus pawnee</i>	Xeric prairie	Loess Hills
12	Ottoe Skipper	<i>Hesperia ottoe</i>	Xeric prairie	Loess Hills and northeast
13	Dakota Skipper (extirpated)	<i>Hesperia dacotae</i>	Prairie	Historically in Dickinson County
14	Mulberry Wing	<i>Poanes massasoit</i>	Wetlands, fens	Northwest ¼
15	Broad-winged Skipper	<i>Poanes viator</i>	Wetlands, fens	North-central
16	Dusted Skipper	<i>Atrytonopsis hianna</i>	Bluestem grasslands and oldfields	Loess Hills, Dickinson, Palo Alto, Allamakee, and Jackson
17	Pepper and Salt Skipper	<i>Amblyscirtes hegon</i>	Woodland edge and grass waterways	Northeast and Southeast corners
18	Swarthy skipper	<i>Nastra lherminier</i>		Southern Iowa, Stray
19	Poweshiek Skipper (extirpated)	<i>Oarisma poweshiek</i>	High quality tallgrass prairie	Northern ¼
20	Olympia Marble	<i>Euchloe Olympia</i>	Open woodland, river bluffs, areas of poor soil, and grasslands	Western 1/3 and far eastern
21	Edward's Hairstreak	<i>Satyrium edwardsii</i>	Woodlands, clearings, and areas of poor soil	Scattered statewide except north-central
22	Acadian Hairstreak	<i>Satyrium acadica</i>	Riparian areas, woodlands, prairies	Scattered
23	Silvery Blue	<i>Glaucopteryx lygdamus</i>	Prairie, open fields, and woodland openings	Northern half and Lee County
24	Monarch	<i>Danaus plexippus</i>	Open habitat and disturbed areas	Statewide
25	Silver-bordered Fritillary	<i>Boloria myrina</i>	Fens, wet prairie, and meadows	Northeast ¼ and northwest corner
26	Regal Fritillary	<i>Argynnis idalia</i>	Prairie and open grassland	Statewide
27	Aphrodite Fritillary	<i>Argynnis aphrodite</i>	High quality prairie, wetlands, and fens	Scattered (more common in northern half)
28	Milbert's Tortoiseshell	<i>Aglais milberti</i>	Wet areas, woodland edges	Northeast Iowa
29	Compton Tortoiseshell	<i>Nymphalis l-album</i>	Large tracts of forest	Eastern half and Pocahontas County
30a	Baltimore Checkerspot	<i>Euphydryas phaeton</i>	Wetlands, fens, and bogs	Eastern half

	Common Name	Scientific Name	Habitat Preference	Distribution
30b	Baltimore Checkerspot 'Ozark'	<i>Euphydryas phaeton ozarkae</i>	Dry woodlands	Lee and Henry Counties
31	Eyed Brown	<i>Lethe eurydice</i>	Fens, wet prairies, and marshes	Northern 2/3

Appendix Table 18-11. Habitat Preferences of SGCN Moths

	Common Name	Scientific Name	Habitat Preference	Distribution
1	Eastern buckmoth	<i>Hemileuca maia</i>	Loess Hills Prairie	WC in Loess Hills, Monona Co
2	A grass miner moth	<i>Agonopterix lythrella</i>	Unknown, Hostplant St. John's Wort?	EC, Linn Co
3	Early leadplant leaf-twirler moth	<i>Anacamptis wikeri</i>	Prairie	Allamakee County
4	Marbleseed leafminer	<i>Acrocercops pnosmodiella</i>	Prairie	NE (Allamakee)
5	Abbreviated underwing	<i>Catocala abbreviatella</i>	Prairie	WC (Woodbury Co), NE (Allamakee)
6	Whitney's underwing	<i>Catocala whitneyi</i>	Prairie	WC (Woodbury & Pottawattamie Co), NC (Kossuth Co), NE (Howard Co)
7	A noctuid moth	<i>Bagisara gulfare</i>	Floodplain forest, native gardens	C (Story Co)
8	Grote's black-tipped quaker	<i>Dichagyris grotei</i>	Xeric/Sand Prairie	Statewide Scattered
9	Red sedge borer moth	<i>Globia laeta</i>	Wetland	NC (Kossuth Co)
10	The starry campion moth	<i>Hadena ectypa</i>	Where native or introduced Starry Campion found	Statewide Scattered
11	Fingered lemmeria moth	<i>Lemmeria digitalis</i>	Prairie; Where Sedges occur	Statewide Scattered
12	Franclemont's lithophane	<i>Lithophane franclemonti</i>	Driftless Area dry oak woodland and prairie	NE (Allamakee Co)
13	Newman's brocade	<i>Meropleon ambifusca</i>	Fens, Marshes, Prairie, Woodland Openings	Statewide Scattered
14	Blazing star stem borer	<i>Papaipema beeriana</i>	Prairie	NW
15	Golden borer moth	<i>Papaipema cerina</i>	Woodland	Eastern
16	Rattlesnake-master borer moth	<i>Papaipema eryngii</i>	Prairie	No listed records
17	Eupatorium borer moth	<i>Papaipema eupatorii</i>	Wet prairie or riparian areas	NW
18	Ash tip borer moth	<i>Papaipema furcata</i>	Associated with ash (host plant)	Statewide
19	Turtle head borer moth	<i>Papaipema nepheleptena</i>	Wetland/Fen (host turtle head)	Eastern Half Scattered
20	Culvers root borer moth	<i>Papaipema sciata</i>	Wet-mesic Prairie (host culver's root)	Eastern Half Scattered
21	Silphium borer moth	<i>Papaipema silphii</i>	Prairie	Eastern Half Scattered
22	None	<i>Plagiomimicus heitzmani</i>	Prairie	Eastern Half, Scattered
23	Bina flower moth	<i>Schinia bina</i>	Prairie	C (Polk & Jasper Co)
24	Leadplant flower moth	<i>Schinia lucens</i>	Prairie	Northern
25	Bleeding flower moth	<i>Schinia sanguinea</i>	Prairie (host <i>Liatris</i>)	Possibly Statewide Scattered
26	Northern flower moth	<i>Schinia septentrionalis</i>	Prairie (host Asters)	Statewide, Scattered
27	Marked noctuid	<i>Tricholita notata</i>	Prairie (host <i>Solidago</i>)	Statewide Scattered

	Common Name	Scientific Name	Habitat Preference	Distribution
28	A prairie sedge moth	<i>Neodactria murellus</i>	Unknown	C, EC
29	Sand dune panic grass moth	<i>Coenochroa bipunctella</i>	Sand Prairie	EC (Linn Co)
30	An aethes moth	<i>Aethes patricia</i>	Prairie	NE (Winneshie Co)
31	A tortricid moth	<i>Ancylis semiovana</i>	Prairie	Statewide Scattered
32	Two-lined eucosma	<i>Eucosma bilineana</i>	Prairie	Statewide Scattered

Appendix Table 18-12. Habitat Preferences of SGCN Dragonflies and Damselflies

	Common Name	Scientific Name	Habitat Preference	Distribution
1	Sweetflag Spreadwing	<i>Lestes forcipatus</i>	Ponds and lakes with emergent vegetation	Scattered localities across northern, eastern, and southern, Iowa
2	Eastern Red Damsel	<i>Amphiagrion saucium</i>		
3	Paiute Dancer	<i>Argia alberta</i>	Small streams, marshy springs	Western 1/3 and Polk County
4	Prairie Bluet	<i>Coenagrion angulatum</i>	Prairie lakes, ponds, sloughs, and slow streams with much vegetation	Northwest 1/4 into central
5	Taiga Bluet	<i>Coenagrion resolutum</i>	Ponds and wetlands	Northern 2/3
6	Boreal Bluet	<i>Enallagma boreale</i>	Fishless ponds, lakes, and slow flow streams	Northeast of line from Dickinson to Muscatine Counties
7	Alkali Bluet	<i>Enallagma clausum</i>	Ponds and lakes	Western side of northern border and Dallas County
8	Western Forktail	<i>Ischnura perparva</i>	Heavily vegetated ponds, lakes, and slow flow streams with mud substrate	Sac County
9	Skillet Clubtail	<i>Gomphurus ventricosus</i>		
10	Sioux Snaketail	<i>Ophiogomphus smithi</i>	Sand bottomed streams with gravel beds	Northeast ¼
11	Westfall's Snaketail	<i>Ophiogomphus westfalli</i>	Clear forest streams with strong riffles and cobble substrate	Hamilton County
12	Rapids Clubtail	<i>Phanogomphus quadricolor</i>	Rocky creeks and rivers with mud for nymphs	Fayette and Winneshiek Counties
13	Brimstone Clubtail	<i>Stylurus intricatus</i>	Strong-flowing, open streams and rivers	Audubon, Page, and Woodbury County
14	Arrow Clubtail	<i>Stylurus spiniceps</i>	Rivers with sandy substrate	Bremer and Clayton Counties
15	Racket-tailed Emerald	<i>Dorocordulia libera</i>		
16	Stygian Shadowdragon	<i>Neurocordulia yamaskanensis</i>	Mississippi River	Allamakee and Clayton Counties
17	Plains Emerald	<i>Somatochlora ensigera</i>	Prairie Streams	Northwest ¼ and Winneshiek and Delaware Counties
18	Mocha Emerald	<i>Somatochlora linearis</i>		
19	Carolina Saddlebags	<i>Tramea carolina</i>	Marsh	Mahaska county

Appendix Table 18-13. Habitat Preferences of SGCN Crayfish

	Common Name	Scientific Name	Habitat Preference	Distribution
1	Golden Crayfish	<i>Faxonius luteus</i>	Rivers, streams, creeks	
2	Northern Clearwater Crayfish	<i>Faxonius propinquus</i>	Cool water streams	
3	Great Plains Mudbug	<i>Lacunicambarus nebrascensis</i>	Streams, creeks	
4	Prairie Crayfish	<i>Procambarus gracilis</i>	Grasslands	