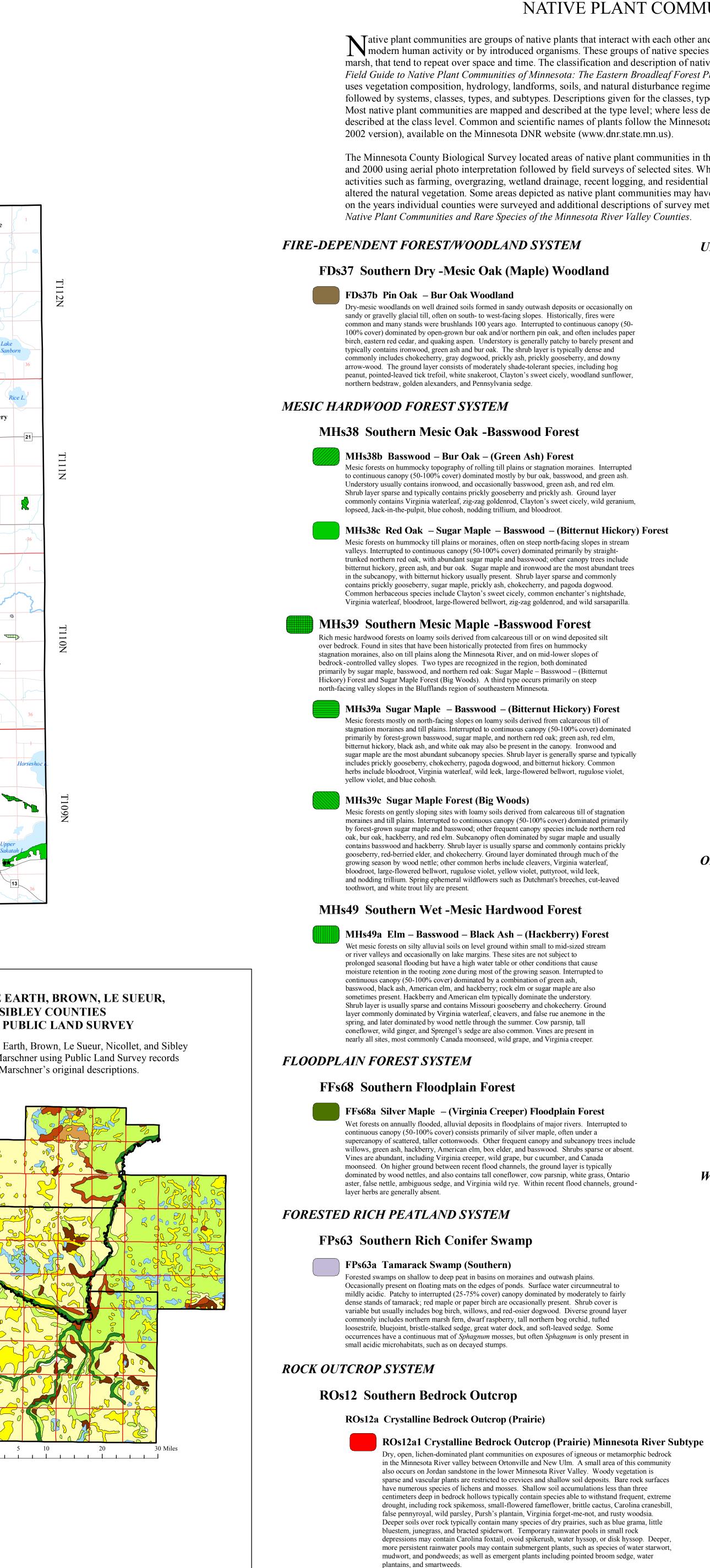


# NATIVE PLANT COMMUNITIES AND RARE SPECIES OF BLUE EARTH, BROWN, LE SUEUR, NICOLLET, AND SIBLEY COUNTIES

### by the Minnesota County Biological Survey



## NATIVE PLANT COMMUNITIES

MARSH SYSTEM MRn83 Northern Mixed Cattail Marsh Tative plant communities are groups of native plants that interact with each other and with their environment in ways not greatly altered by N modern human activity or by introduced organisms. These groups of native species form recognizable units, such as oak forest, prairie, or MRn83a Cattail – Sedge Marsh (Northern) marsh, that tend to repeat over space and time. The classification and description of native plant communities depicted on this map are based on the ben emergent marshes in shallow wetland basins or along lake shores and river valleys where tanding water is present most of the year. Found on floating mats or mineral or shallow organic Field Guide to Native Plant Communities of Minnesota: The Eastern Broadleaf Forest Province (MNDNR 2005). This hierarchical classification uses vegetation composition, hydrology, landforms, soils, and natural disturbance regimes to categorize plant communities first into system groups, followed by systems, classes, types, and subtypes. Descriptions given for the classes, types, and subtypes on this map are typical of the area mapped. Most native plant communities are mapped and described at the type level; where less detailed data were available, communities are mapped and described at the class level. Common and scientific names of plants follow the Minnesota DNR's Vascular Plants of Minnesota checklist (Sept. 25, The Minnesota County Biological Survey located areas of native plant communities in the counties bordering the Minnesota River between 1987 and 2000 using aerial photo interpretation followed by field surveys of selected sites. White areas on the map represent land where modern human activities such as farming, overgrazing, wetland drainage, recent logging, and residential and commercial development have destroyed or greatly altered the natural vegetation. Some areas depicted as native plant communities may have been destroyed since they were mapped. For information on the years individual counties were surveyed and additional descriptions of survey methods, please see the companion report for this map entitled **UPLAND PRAIRIE SYSTEM UPs13** Southern Dry Prairie **UPs13b** Dry Sand – Gravel Prairie (Southern) Dry prairies on coarse-textured, usually gravelly soils formed in outwash. On nearly level to steeply sloping sites on glacial river terraces or glacial ice-contact deposits such as kames or eskers. Dominant grasses are little bluestem, porcupine grass, prairie dropseed, and side-oats grama; junegrass and plains muhly are also abundant. Sand reed grass, hairy grama, and sometimes needle-and-thread grass are prevalent in xeric areas of loose sand. Common shrubs include leadplant, sage wormwood, and smooth sumac; prairie rose and sand cherry are occasionally present. Some of the forbs occurring more frequently in sand-gravel prairie than WETLAND PRAIRIE SYSTEM other dry prairie types include Missouri goldenrod, aromatic aster, bastard toadflax, silky aster, pasqueflower, slender beard tongue, white beard tongue, Missouri milk vetch, narrow-leaved WPs54 Southern Wet Prairie puccoon, and bluets. **UPs13d Dry Hill Prairie (Southern)** Dry to dry-mesic prairies on well drained soils formed in glacial till on slopes and hilltops on tagnation moraines and steep slopes in large river valleys. Dominant grasses are little bluestem, side-oats grama, porcupine grass, and prairie dropseed, with much Indian grass, big bluestem, and Leiberg's panic grass in dry-mesic areas such as mid-slopes. Other common graminoids include plains multy, junegrass, sun-loving sedge, and Scribner's panic grass. Leadplant, wolfberry, and prairie rose are common shrubs. Common forbs include rough blazing star, alumroot, silverleaf scurfpea, heart-leaved alexanders, prairie milk vetch, purple prairie clover, hoary puccoon, heath aster, prairie smoke, Flodman's thistle, and hairy golden aster. **UPs14 Southern Dry Savanna** UPs14b Dry Sand – Gravel Oak Savanna (Southern) Dry savannas on coarse-textured, usually gravelly soils formed in outwash. On nearly **PWL CX Prairie Wetland Complex** level to steeply sloping sites on glacial river terraces or glacial ice-contact features such as kames or eskers. Open canopy (10-50% cover) dominated by open-grown bur oak or northern pin oak; eastern red cedar may also be present. Shrubs are commonly moderate to dense in cover and include smooth sumac, leadplant, prairie rose, juneberries, American hazelnut, and American plum. Herbaceous species of dry sand-gravel prairie are present in open areas. Patches of clustered trees are commonly present and contain plant species adapted to partial shade, such as white snakeroot, Pennsylvania sedge, woodland sunflower, and starry false Solomon's seal. UPs14c Dry Hill Oak Savanna (Southern) Dry-mesic savannas on well-drained soils formed in glacial till on slopes and hilltops on stagnation moraines and steep valley slopes. Open canopy (10-50% cover) dominated by opengrown bur oak; quaking aspen may also be present. Shrubs are commonly dense in cover and include smooth sumac, leadplant, chokecherry, wolfberry, prickly ash, black raspberry, and prairie rose. Herbaceous species of dry hill prairie are present in open areas. Patches of clustered trees are commonly present and contain plant species adapted to partial shade such as white snakeroot, Pennsylvania sedge, woodland sunflower, hog peanut, and northern bedstraw. **UPs23** Southern Mesic Prairie UPs23a Mesic Prairie (Southern) Dry-mesic to wet-mesic prairies on level to undulating terrain on glacial till or outwash. Soils are moderately well-drained to moist loams with deep, dark, organic-enriched upper horizons. Dominated mostly by big bluestem, prairie dropseed, and Indian grass, in combination with Minnesota Statute. porcupine grass and little bluestem on drier sites, and with prairie cordgrass and switchgrass on wetter sites. Other typical graminoids include Leiberg's panic grass, slender wheatgrass, Kalm's Plants. federally or state-listed brome, and Mead's sedge. Shrubs are sparse but leadplant and prairie rose are usually present on dry-mesic sites; willows may be present on wet-mesic sites. Typical forbs on dry-mesic to mesic sites include smooth aster, purple prairie clover, white sage, black-eyed Susan, white camass, heath aster, heart-leaved alexanders, and stiff goldenrod; on wetter sites, giant sunflower, great blazing star, Maximilian's sunflower, northern plains blazing star, smooth rattlesnakeroot, and Virginia mountain mint are common. **OPEN RICH PEATLAND SYSTEM OPn92** Northern Rich Fen (Basin) **OPn92a** Graminoid Rich Fen (Basin) Deen peatlands on deep, well-decomposed peat or floating peat mats in basins, often adjacent to lakes and ponds. These sites receive enough groundwater flow to maintain circumneutral pH (>5.5). Dominated most commonly by wiregrass sedge; other frequent graminoids include tussock sedge, clustered muhly grass, and tall cottongrass. Shrubs may be scattered or codominant, including slender willow, pussy willow, Bebb's willow, red-osier dogwood, bog willow, and bog birch. Typical forbs include spotted Joe pye weed, common boneset, cut-leaved bugleweed, Labrador bedstraw, northern marsh fern, marsh cinquefoil, and great water dock. When present, *Sphagnum* mosses cover less than 25% of the community. **OPp93** Prairie Extremely Rich Fen **OPp93c** Calcareous Fen (Southeastern) Open peatlands continuously saturated by upwelling, calcium-rich groundwater; typically at bases of steep slopes formed in calcareous till on rolling moraines or the sides of the Glacial River Warren valley. Deep deposits of peat, accumulated over thousands of years, often form elevated mounds or broad shelves. Low shrubs are often common and typically include sage-leaved willow, bog birch, and red-osier dogwood; shrubby cinquefoil is present in a few places. Areas of greatest groundwater flow have soils containing marl deposits and are dominated by low sedges and grasses including prairie sedge, sterile sedge, clustered muhly grass, and mat muhly grass. Other typical forb and graminoid species include American grass-of-Parnassus, lesser fringed gentian, Kalm's lobelia, marsh arrowgrass, seaside arrowgrass, porcupine sedge, prairie loosestrife swamp thistle, flat-topped aster, swamp saxifrage, and Riddell's goldenrod; a few sites also have edible valerian, beaked spikerush, whorled nutrush, and twig rush. Margins of seepage zones are dominated by other wetland species, most commonly hardstem bulrush and tussock sedge. WET MEADOW/CARR SYSTEM WMn82 Northern Wet Meadow/Carr WMn82a Willow – Dogwood Shrub Swamp Open wetlands on mineral to sapric peat soils in basins or along streams. Trees are sometimes present, mostly as scattered saplings of American elm, black ash, or red maple. Tall shrub layer greater than 25% cover and includes a mix of pussy willow, Bebb's willow, slender willow, redosier dogwood, and speckled alder; occasionally bog birch, meadowsweet, swamp gooseberry, and red raspberry are also present. Dominant graminoids are bluejoint, tussock sedge, beaked sedge, or lake sedge. Common forbs include marsh bellflower, tufted loosestrife, marsh skullcap, great water dock, northern marsh fern, common boneset, spotted Joe pye weed, willow herbs, bulb-bearing water hemlock, water smartweed, and marsh cinquefoil. WMn82b Sedge Meadow Open wetlands on mineral to sapric peat soils in basins or along streams. Trees are sometimes present, mostly as scattered saplings of American elm, black ash, or red maple. Tall shrub layer has greater than 25% cover and includes a mix of pussy willow, Bebb's willow, slender willow, redosier dogwood, and speckled alder; occasionally bog birch, meadowsweet, swamp gooseberry, and red raspberry are also present. Dominant graminoids are bluejoint, tussock sedge, beaked sedge, or lake sedge. Common forbs include marsh bellflower, tufted loosestrife, marsh skullcap, great water dock, northern marsh fern, common boneset, spotted Joe pye weed, willow herbs, A Jumping Spider bulb-bearing water hemlock, water smartweed, and marsh cinquefoil. Animals, previously state-listed WMs83 Southern Seepage Meadow/Carr Mammals Western Harvest Mouse WMs83a Seepage Meadow/Carr Birds Open wetlands on peat or mucky peat soils continuously saturated by upwelling, calcium-rich Sandhill Crane groundwater; typically at bases of steep slopes formed in calcareous till on rolling moraines or Upland Sandpiper the sides of the Glacial River Warren Valley. Sometimes occurring adjacent to areas of Calcareous Fen (OPp93c). Shrub cover varies and includes bog birch, pussy willow, Reptiles slender willow, and red-osier dogwood. Dominated by sedges and grasses, including tussock Bullfrog Eastern Fox Snake sedge, prairie sedge, hardstem bulrush, woolly sedge, bluejoint, and mat muhly grass. Common forbs include many species of wet meadows and some of calcareous fens, such as spotted Joe pye Milk Snake weed, willow herbs, flat-topped aster, bog aster, marsh bellflower, swamp thistle, giant sunflower, and prairie loosestrife. Shovelnose Sturgeon WMp73 Prairie Wet Meadow/Carr

WMp73a Prairie Meadow/Carr

cut-leaved bugleweed.

Open wetlands on muck or shallow mucky peat soils in shallow basins or swales on rolling moraines and till plains. Commonly dominated by woolly sedge, Sartwell's sedge, narrow reedgrass, prairie cordgrass, and baltic rush. Shrub cover is generally sparse to patchy and

includes red-osier dogwood, pussy willow, and slender willow. Common forbs include eastern

panicled aster, swamp milkweed, rough bugleweed, spotted Joe pye weed, common mint, and

Animal Aggregations Colonial waterbird nesting site

Rare Species Cluster



a complex of Prairie Meadow/Carr (WMp73a), Wet Prairie (WPs54b), Mesic Prairie (UPs23a), and Prairie Mixed Cattail Marsh (MRp83) where the individual plant community types occur in a mosaic of patches that are too small to map individually. Occurs in broad stream valleys within till plains and outwash plains in areas with poorlydrained soils in low areas and better-drained soils on rises.

# RARE SPECIES AND ANIMAL AGGREGATIONS

ocations of rare plants, rare animals, and selected animal aggregations are maintained in the Natural Heritage Information System. The following rare species and animal aggregations (which include rare and common species) have been found in Blue Earth, Brown, Le Sueur, Nicollet, and Sibley counties. Mapped locations include both historical records and the results of field surveys conducted by the Minnesota County Biological Survey from 1987 to 2000. Many of these species are protected under the provisions of the Federal Endangered Species Act of 1973, as amended, or the Minnesota Endangered Species Statute (Minnesota Statutes, Section 84.0895), or both. The common and scientific names of plant species listed below have been updated to follow the Minnesota DNR's 2002 checklist of vascular plants and may differ slightly from names published in the

*	Plants, federally or state-listed	
~	American Ginseng	(Panax quinquefolius)
	Beaked Spike Rush	(Eleocharis rostellata)
	Buffalo Grass	(Buchloe dactyloides)
	Eared False Foxglove	(Agalinis auriculata)
	Hair-like Beak Rush	(Rhynchospora capillacea)
	Plains Prickly Pear	(Opuntia macrorhiza)
	Prairie Bush Clover	(Lespedeza leptostachya)
	Rattlesnake Master	(Eryngium yuccifolium)
	Short-pointed Umbrella Sedge	(Cyperus acuminatus)
	Small White Lady's Slipper	(Cypripedium candidum)
	Snow Trillium	(Trillium nivale)
	Sterile Sedge	(Carex sterilis)
	Sullivant's Milkweed	(Asclepias sullivantii)
	Three-leaved Coneflower	(Rudbeckia triloba var. triloba)
	Tuberous Indian Plantain	(Cacalia plantaginea)
	Tumble Grass	(Schedonnardus paniculatus)
	Twig Rush	(Cladium mariscoides)
	Whorled Nut Rush	(Scleria verticillata)
	Yellow-fruited Fox Sedge	(Carex vulpinoidea var. ambigua)
	renow-numed fox Sedge	(Curex vulpinoided val. amoigua)
☆	Plants, previously state-listed	
	Carolina Foxtail	(Alopecurus carolinianus)
	Kentucky Coffee Tree	(Gymnocladus dioica)
	Lotus Milk Vetch	(Astragalus lotiflorus)
	Marsh Arrowgrass	(Triglochin palustris)
	Mouse-ear Chickweed	(Cerastium vulgatum)
	Smoothish Orach	(Atriplex glabriuscula)
	Virginia Forget-me-not	(Myosotis verna)
	Mammals Eastern Pipistrelle Eastern Spotted Skunk Elk	(Pipistrellus subflavus) (Spilogale putorius) (Cervus elaphus)
	Birds	(Cervus cruprus)
	Acadian Flycatcher	(Empidonax virescens)
	Bald Eagle	(Haliaeetus leucocephalus)
	Cerulean Warbler	(Dendroica cerulea)
	Common Moorhen	(Gallinula chloropus)
	Forster's Tern	(Gattinua Entoropus) (Sterna forsteri)
	Franklin's Gull	(Sterna forsteri) (Larus pipixcan)
	Henslow's Sparrow	(Larus pipixcan) (Ammodramus henslowii)
	Loggerhead Shrike	(Ammoaramus nenstowit) (Lanius ludovicianus)
	Louisiana Waterthrush	(Lantus tuaovicianus) (Seiurus motacilla)
	Marbled Godwit	(Limosa fedoa)
	Red-shouldered Hawk	(Limosa Jedod) (Buteo lineatus)
	Trumpeter Swan	(Buleo linealus) (Cygnus buccinator)
	Wilson's Phalarope	(Cygnus buccinator) (Phalaropus tricolor)
	-	(1 naturopus tricotor)
	Reptiles	
	Blanding's Turtle	(Emydoidea blandingii)
	Eastern Racer	(Coluber constrictor)
	Smooth Softshell	(Apalone mutica)
	Fish	
	Black Buffalo Blue Suster	(Ictiobus niger)
	Blue Sucker	(Cycleptus elongatus)
	Lake Sturgeon	(Acipenser fulvescens)
	Least Darter	(Etheostoma microperca)
	Paddlefish Bugnaga Shinar	(Polyodon spathula)
	Pugnose Shiner	(Notropis anogenus)

(Reithrodontomys megalotis)

(Habronattus texanus)

(Grus canadensis) (Bartramia longicauda)

(Rana catesbeiana) (Elaphe vulpina) (Lampropeltis triangulum)

(Scaphirhynchus platorynchus)