

**PLANT AND ANIMAL  
SURVEY  
IN  
CHEROKEE MARSH  
1973**

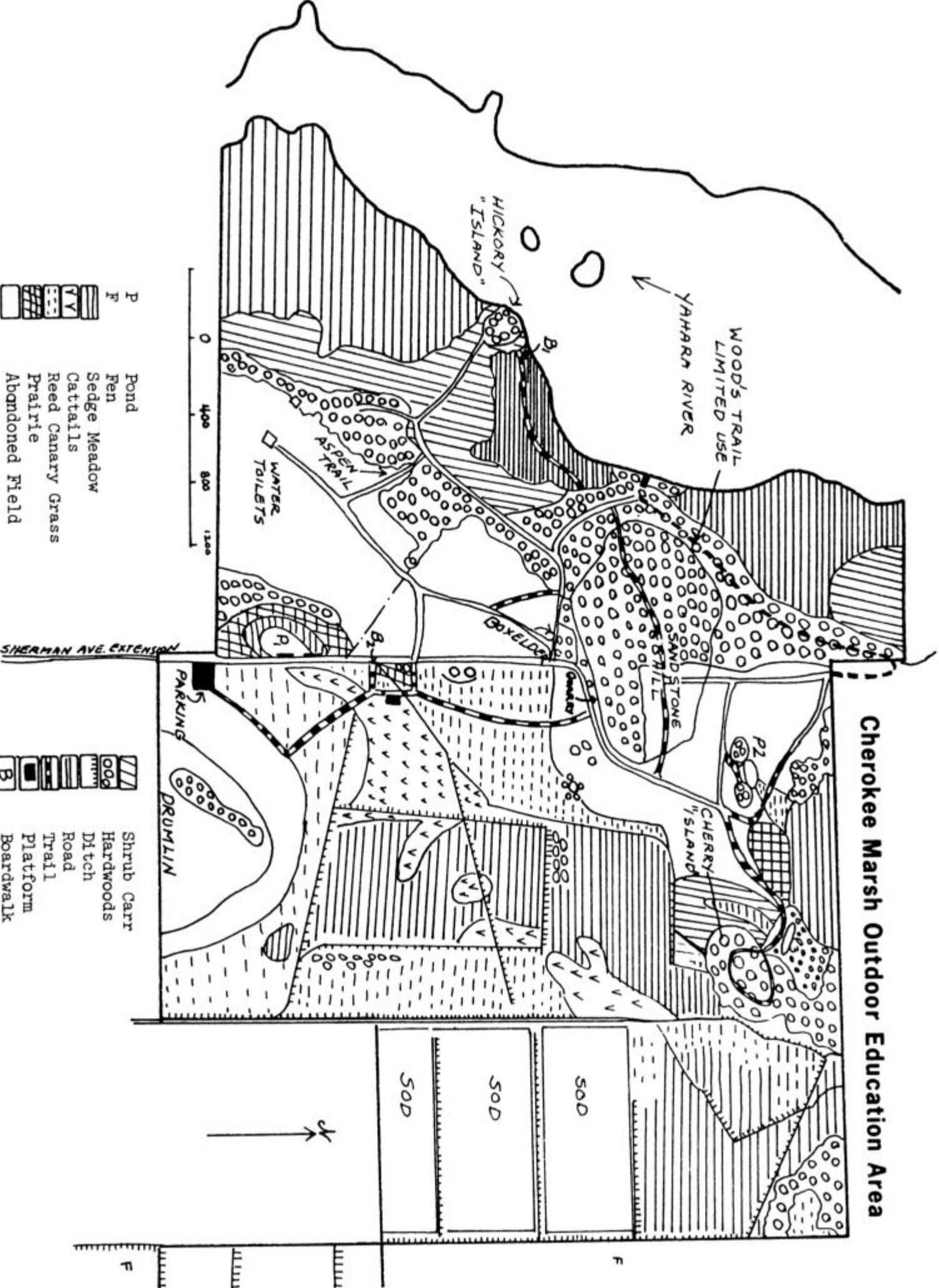
**A Preliminary Report**

This report is a result of a voluntary project  
done during 1969-73 to determine what actually  
is in Cherokee Marsh.

Madison, Wisconsin  
June, 1973

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# Cherokee Marsh Outdoor Education Area



THE FOLLOWING ANIMALS AND PLANTS IN CHEROKEE MARSH  
 ARE LISTED BY THE DEPARTMENT OF NATURAL RESOURCES AS  
ENDANGERED, THREATENED OR WATCH STATUS SPECIES  
IN WISCONSIN IN 1975

ANIMALS:

|   |                       |  |
|---|-----------------------|--|
| E | Osprey                | <u>Pandion haliaetus</u><br>Do not nest in Cherokee, but are occasionally seen in<br>spring migration. |
| W | Butler's Garter Snake | <u>Thamnophis butleri</u>  |
| W | Blanding's Turtle     | <u>Emydoidea blandingi</u>   |

PLANTS:

|   |                           |  |
|---|---------------------------|--|
| E | White Lady Slipper        | <u>Cypripedium candidum</u><br>Fen   |
| E | Marsh St. John's Wort     | <u>Triadenum virginicum</u><br>( <u>Hypericum virginicum</u> )<br>Sedge meadow |
| T | Small Yellow Lady Slipper | <u>Cypripedium calceolus</u> var.<br><u>parviflorum</u><br>Shrub carr          |
| T | Lesser Fringed Gentian    | <u>Gentiana procera</u><br>River sedge meadow, fen                             |
| T | Glade Mallow              | <u>Napaea dioica</u><br>River  |
| T | Ginseng                   | <u>Panax quinquefolius</u><br>Sand Hill Woods                                  |
| T | Arrow Grass               | <u>Triglochin maritimum</u>  |
| W | Water Parsnip             | <u>Berula pusilla</u><br>DNR area  |
| W | Yellow Monkey Flower      | <u>Mimulus glabratus</u><br>DNR area   |

E - Endangered  
 T - Threatened  
 W - Watch Status

SUMMARY of NESTING BIRDS and SUMMER VISITANTS of  
CHEROKEE MARSH

Nesting Pairs in Teaching Area, Cherokee Marsh, 1971

|                        |    |                         |     |
|------------------------|----|-------------------------|-----|
| Green Heron            | 1  | House Wren              | 23  |
| American Bittern       | 1  | Long-billed Marsh Wren  | 3   |
|                        |    | Short-billed Marsh Wren | 19  |
| Mallard                | 1  |                         |     |
| Blue-winged Teal       | 1  | Brown Thrasher          | 1   |
| Red-tailed Hawk        | 4  | Robin                   | 11  |
|                        |    | Wood Thrush             | 2   |
| Sandhill Crane ?       | 1  | Veery                   | 4   |
| Virginia Rail          | 1  | Cedar Waxwing           | 6   |
| Sora Rail              | 5  | Starling                | 15  |
| Common Snipe           | 2  | Red-eyed Vireo          | 7   |
| Mourning Dove          | 12 | Warbling Vireo          | 2   |
| Black-billed Cuckoo    | 1  | Blue-winged Warbler     | 2   |
|                        |    | Yellow Warbler          | 20  |
| Flicker                | 15 | Yellowthroat            | 49  |
| Red-bellied Woodpecker | 3  |                         |     |
| Downy Woodpecker       | 4  | Bobolink                | 5   |
|                        |    | Eastern Meadowlark      | 19  |
| Eastern Kingbird       | 5  | Red-winged Blackbird    | 156 |
| Crested Flycatcher     | 12 | Baltimore Oriole        | 8   |
| Phoebe                 | 2  | Grackle                 | 17  |
| Trail's Flycatcher     | 6  | Brown-headed Cowbird    | 7   |
| Wood Peewee            | 9  |                         |     |
|                        |    | Cardinal                | 5   |
| Tree Swallow           | 2  | Rose-breasted Grosbeak  | 1   |
| Barn Swallow           | 2  | Indigo Bunting          | 13  |
|                        |    | Goldfinch               | 37  |
| Blue Jay               | 2  |                         |     |
| Crow                   | 10 | Savannah Sparrow        | 4   |
|                        |    | Henslow's Sparrow       | 1   |
| Black-capped Chickadee | 3  | Field Sparrow           | 4   |
|                        |    | Swamp Sparrow           | 37  |
| Catbird                | 22 | Song Sparrow            | 17  |

Species listed in the description of nesting birds and visitors, and not in the above list were missed in the census but observed later during the nesting period. Many birds such as Mallards, Rails, Snipe, Swallows, Jays, Crows, Chickadees, Starlings and Grosbeaks are more numerous than happened to be seen when the census was done.

THE FOLLOWING ANIMALS AND PLANTS  
IN CHEROKEE MARSH ARE LISTED AS  
ENDANGERED SPECIES IN WISCONSIN IN 1973  
BY DEPARTMENT OF NATURAL RESOURCES

ANIMALS:

- |                          |   |
|--------------------------|---|
| 1. Butler's Garter Snake | <u>Thamnophis butleri</u><br>River Board Walk |
|--------------------------|---|

PLANTS:

- |                              |   |
|------------------------------|---|
| 1. Water Parsnip             | <u>Berula pusilla</u><br>DNR - Area                         |
| 2. Small Yellow Lady Slipper | <u>Cypripedium calceolus var. parviflorum</u><br>Shrub Carr |
| 3. White Lady Slipper        | <u>Cypripedium candidum</u><br>Fen                          |
| 4. Lesser Fringed Gentian    | <u>Gentiana procera</u><br>River Sedge Meadow, Fen          |
| 5. Yellow Monkey Flower      | <u>Mimulus glabratus</u><br>DNR - Area                      |
| 6. Glade Mallow              | <u>Napaea dioica</u><br>River Board Walk                    |
| 7. Ginseng                   | <u>Panax quinquefolius</u><br>Sand Hill Woods               |
| 8. Marsh St. John's Wort     | <u>Triadenum virginicum</u><br>Sedge Meadow                 |

ANIMAL KINGDOM  
(According to Keaton and Buchsbaum)

Phyla having both fresh water and marine representatives

| <u>PHYLA</u>                        | <u>PAGE</u> |
|-------------------------------------|-------------|
| Protozoa                            | 2           |
| Porifera - Sponges                  | 2           |
| Coelenterata                        | 2           |
| Platyhelminthes - Flatworms         | 2           |
| Nemertea - Proboscis Worms          | 3           |
| Nematoda - Roundworms               | 3           |
| Rotifera - Wheel Bearers            | 3           |
| Gastrotricha                        | 3           |
| Entoprocta (Not found in Wisconsin) | -           |
| Nematomorpha - Horsehair Worms      | 3           |
| Bryozoa - Moss Animals              | 3           |
| Mollusca - Soft Bodied Animals      | 5-7         |
| Annelida - Segmented Worms          | 3-4         |
| Arthropoda - Joint-Legged Animals   |             |
| Class - Crustacea                   | 8-9         |
| Class - Insecta                     | 10-12       |
| Chordata                            |             |
| Subphylum Vertebrata or Craniata    |             |
| Class Osteichthyes - Bony Fishes    | 13-15       |
| Class Amphibia - Frogs              | 16-18       |
| Class Reptilia - Reptiles           | 19-20       |
| Class Aves - Birds                  | 26-         |
| Class Mammalia - Mammals            | 21-25       |

sp. - Species (Singular)

spp.- Species (Plural)

### AQUATIC BACTERIA - THE DECOMPOSERS

Many scums, odors, gases and oily films are bacterial in origin. These microscopic "bugs" often grow and live in groups of species and are hard to identify. However, one kind, the filamentous iron bacteria Sphaerotilus discophorus is growing in the Fen and other areas and looks like rust (Bog iron).

If one disturbs the bottom of a pond, anaerobically (without air) formed gases will rise as by-products of bacterial action.

1. Methane gas - produced by Methanobacterium sp. has been used in the Netherlands for cooking and heat. The Madison sewage plant uses this gas from the bacteria to heat itself.
2. Hydrogen Sulfide - (rotten egg smell) is produced anaerobically in protein degradation.

Sulfur bacteria may be seen in shady places under water growing on blackened leaves. It forms a whitish-tan, powdery substance on the leaves.

Bacteria are important in breaking down dead plants and animals, thus forming chemicals and nutrients which may be reused by other organisms.

### INVERTEBRATES IN CHEROKEE MARSH

Many freshwater invertebrates are adapted to withstand adverse conditions such as drought, freezing, and salinity changes. They may have resting eggs, bury themselves, or incapsulate themselves in cysts. Freshwater invertebrates produce much fewer eggs than their marine counterparts. For example, freshwater snails have only about 20-50 eggs as opposed to thousands or tens of thousands in marine species. In freshwater, eggs are heavy and sink, or are commonly carried by the parent until they hatch. Floating and planktonic eggs are an exception. While vast oceans require and can support multitudes of larvae necessary in colonizing or finding suitable habitats, freshwater invertebrates have relatively few larval forms since they are less likely to be carried away from favorable habitats by tides, storms etc.



PHYLUM PROTOZOA - One-celled Animals

CLASS MASTIGOPHORA (Flagellata)

Poteriodendron sp.

With naked eye looks like whitish, stalked and fan-like branched fuzz on snail shells, aquatic vegetation and detritus. (Pond 1).

Volvox sp.

With naked eye looks like tiny green spheres suspended in the water. It is sometimes classified with algae. (Pond 1 and 2).

PHYLUM PORIFERA - Sponges

Meyenia sp. Family Spongillidae (Only freshwater family).

Forms colonies on submerged sticks and boards in Yahara River and in brooks. Filter feeder.<sup>1</sup> Normally tan-colored except when algae are growing in it.

PHYLUM COELENTERATA - Hydroids and Jellyfishes

Hydra sp. Family Hydridae, Order Hydroida

A whitish hydra, attached to vegetation, found in Pond 1.

The only N.A. freshwater jellyfish is sporadic in appearance. In Wisconsin it was reported from a single location near Baraboo, Sauk County in 1969 and 1970. (Transactions of Wis. Acad. 1970).

PHYLUM PLATYHELMINTHES - Flat Worms, Tape Worms and Trematodes

CLASS CESTOIDEA (Tapeworms)

entirely parasitic

CLASS TREMATODA (Flukes)

CLASS TURBELLARIA (Flatworms) Mostly free living,

Stay under objects in bright light. Except for Planarians, most are microscopic.

Planarians, Family Planaridae, Order Tricladida

One species of Planaria (Whitish) found in Pond 1.

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<sup>1</sup> Filter Feeder is an animal with special body adaptations for straining plankton or minute particles of detritus from the water.

PHYLUM NEMERTEA - Proboscis Worms (Not in Cherokee Marsh)

The only well known freshwater Nemerterea in the U.S. was found in Wisconsin in Ripon, Fond du Lac Co. (Trans. Wis. Acad. 1970) and in Horicon Marsh (Don Samuelsen).

PHYLUM NEMATODA

Minute, round, smooth, sometimes coiled worms with somewhat tapered ends and whip-like movements are found in the substrate in the entire area. The encystments and dessication of aquatic nematodes are poorly known.

PHYLUM ROTIFERA - Wheelbearers

PHYLUM GASTROTRICHA

PHYLUM TARDIGRADA - Waterbears

Sometimes placed in Phylum Arthropoda.

American species  
poorly known

Microscopic

PHYLUM NEMATOMORPHA - Horsehair or Gordian Worms

Not found in Cherokee yet, but are likely to be there in Stagnant pools.

PHYLUM BRYOZOA - Moss animals

CLASS PHYLACTOLAEMATA (Freshwater Bryozoa)

The freshwater species in Cherokee is one found growing on turtle skin and shells.

PHYLUM ANNELIDA - Segmented Worms

CLASS OLIGOCHAETA (Aquatic Earthworms)

(Poorly studied class). Feed on bottom mud and mix it as terrestrial earthworms do.

Order Plesiopora - Several species in Cherokee.

Tubifex tubifex - Family Tubificidae

In Yahara River.

Limnodrilus sp. - Family Tubificidae

Delicate reddish worms with posterior end sticking out of mud and waving in water. (Pond 1).

PHYLUM ANNELIDA (cont)

CLASS HIRUDINAE (Leeches)

Leeches are usually found in protected, shallow non-acid water. They are sensitive to most pollutants and chiefly nocturnal. Egg cocoons (2-15 mm.) are fastened to substrate, except Glossiphonidae.



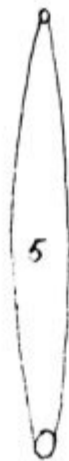
ORDER RHYNCHOBDELLIDA

Mouth a small pore through which a proboscis can be protruded; blood colorless.

Family Glossiphonidae

Poor swimmers; body flattened; eggs and young cling on ventral side of adult.

1. Placobdella rugosa  
Temporary parasite on turtles. Brownish.
2. Placobdella parasitica  
Parasitic on snapping turtle, free living during breeding season.
- 3, 4. Helobdella spp.  
Two species; all clear, internal organs visible; 5-20 mm. long. One found parasitic on fish, the other on crayfish.



ORDER ARHYNCHOBDELLIDA

Mouth medium to large; no proboscis; blood red.

Family Erpobdellidae

Excellent swimmers; body linear.

5. Erpobdella punctata  
Brownish with reddish hue; has four irregular rows of Black dots; feeds on aquatic invertebrates, fish and frogs, sometimes a scavenger. Biggest leech in Cherokee, up to 3-4 inches.
  6. Dina parva  
Up to 25 mm.
  7. Dina sp.
- } Feed mostly on aquatic invertebrates.  
Brownish.

MOLLUSKS IN CHEROKEE MARSH  
According to Don Samuelsen and Jackie Kallunki

CLASS GASTROPODA (Snails)

Have a spiral shell except limpets; eat soft plant parts and algae with their flexible, file-like, rasping tongue, or radula. Eggs layed on submerged plant parts and stones in drops of clear jelly. When a shell is held with its opening toward the observer (Apex up), the opening will be at the observers right in a right-handed (dextral) (D) shell and left in a left-handed (sinistral) (S) shell. Important food of many fishes. Many species serve as intermediate hosts of trematodes ("swimmers' itch"). Baker in 1928 lists 95 freshwater mollusks in Wisconsin.

ORDER PULMONATA - Lung Snails

Aquatic Snails

1. Aplexa (S) hypnorum (Family Physidae - Tadpole Snails)  
Found on plants in fen or sedge meadows; common, but hard to see. Color dark brownish; shell elongated, thin, glistening. Size: 3/8-inch or less.
2. Physa (S) integra (Family Physidae)  
Found everywhere. Light brown with spots: thin shelled. Size: 1/2-inch.
3. Lymnaea (D) sp. (family Lymnaeidae - Pond Snails)  
Dark brown; shell elongated, spire attenuated, shell thin and brittle usually. In Pond and River. Size: 3/4-inch or less, smaller than #4.
4. Lymnaea sp.  
Dark brown. In Pond and River. Size: 1-inch or more.
5. Helisoma sp. Usually (S) - Orb Snail or Ram's Horn  
(Family Planorbidae - Wheel Snails)  
Medium brown, varies; shell flattened. Size: 5/8-inch or less. Found in Pond 1.
6. Gyraulus sp. - Wheel Snail (D) (Family Planorbidae)  
Found in Pond #1. Very Common. Brown. Size: Small, Flat, 3/8-inch.
7. Promenetus sp. (D) (Family Planorbidae)  
Found on cattails. Dark Brown. Size: 1/4-inch.

Land Snails (Nocturnal)

8. Succinea ovalis (D)  
Found in river flood plains. Has eye stalk parasite in the fall causing the eye to vibrate so that birds, the alternate hosts, can find it. Looks like Physa except (D). Color whitish to tan. Size: 3/4-inch.
9. Oxyloma retusa (D)  
Found in wet marshes on sticks and water plants. Bright amber colored.
10. Vertigo sp. (D)  
Found in sedge tussocks and leaves of Polygonum coccineum. Color dark brown. Size: Tiny, 1/8-inch.
11. Strobilops sp. (D)  
Found in fens. Color dark brown. Size: Tiny, 1/8 - 1/16-inch.
12. Zonitoides sp.  
Found mainly in sedge meadows. Looks like Gyrillus. Shell light brown, body black. Size: 1/4 - 1/8-inch.
13. Carychium (D)  
Found in sedge meadows. Shiny, waxy white shell. Size: Tiny, less than 1/8-inch.
14. Triodopsis multilineata (D)  
Longitudinal, red lines on darker shell. Size: Under 3/4-inch.
15. Triodopsis profunda (D)  
Tan colored, no lines. Size: Large, over 3.4-inch.
16. Anguispira alternata - Striped Wood Snail  
Very common, mainly in woodlands, also in open. Light whitish brown with red crosswise bands. Common on white oak (observation by Marsha Lisitza)
17. Stenotrema sp.
18. Four or five tiny (under 5 mm) unidentified snails.

Limpets - Family Ancyliidae

19. Ferrisia (Ancylus) sp. - Freshwater Limpet  
Found under an old board in the "Bullhead Nest" Creek behind "Black Cherry Island". Single genus in Wisconsin. Tiny: 1/8-inch wide, 1/16-inch high.

## ORDER CTENOBRANCHIATA - Gilled Snails.

Old shells only have been found on "Hickory Island", in drainage ditches and springs.

20. Pleurocera acuta (D) (Family Pleuroceridae - Shell elongated, conic)  
Dark brown. Size: 3/4-inch.
21. Valvata tricarinata (D) (Family Valvatidae)  
Size: 1/2-inch.

## CLASS PELECYPODA (Clams or Mussels)

Have two shells hinged near bump called umbo. Filter feeders. Female's gills used also as a brood pouch - "marsupial gill". Muskrat the most important mammalian predator. Often rare clam species are found in muskrat mounds.

Family Sphaeridae - Free living. Serve as food for Yellow Perch, Pumpkin seed, Bullhead.

22. Musculium sp.  
Found in pond #2. Umbo in the Center. Size: Tiny, up to 3/8-inch.
23. Sphaerium sp. - Finger-nail Clams  
Found in Yahara River in mud. Umbo in the Center. Size: Tiny, up to 1/2-inch.
24. Pisidium sp. - Pill Clams  
Found in Yahara River. Umbo off-center. Size: Tiny, 3/8-inch.

Family Unionidae - Larvae are parasites on fish

25. Anodonta grandes - Floater  
Found in Yahara River. Size: Big, Up to 4-inches.  
Larvae are parasites on Carp, Yellow Perch, Bluegill, Rock Bass, White Crappie.

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 REFERENCES ON MOLLUSKS:

- Baker, F. C. THE FRESH WATER MOLLUSCA OF WISCONSIN. Wisconsin Geologic and Natural History Survey Bulletin, 1928, No. 70.
- Baker, F. C. THE LAND SNAILS OF ILLINOIS. Illinois Natural History Survey Bulletin.

## CRUSTACEANS IN CHEROKEE MARSH

## PHYLUM ARTHROPODA

## CLASS CRUSTACEA

1. Fairy Shrimps (Order Anostraca)

Found in temporary ponds in Spring. Never present with carnivorous fish. Predators: amphibia, dytiscid and caddish larvae, ducks. Food: algae, bacteria, protozoa, rotifers, detritus. Resting eggs need either freezing or drying or both for further development.

Eubbranchipus ornatus } Chirocephalidae  
Chirocephalopsis bundui } Pond 2

Tadpole shrimps (Order Notostraca) not found East of Mississippi.

2. Clam Shrimps (Order Conchostraca)

Look like minute light colored clams. Pond 1.

3. Water Fleas (Order Cladocera)

Food: Same as Fairy Shrimps' but detritus important. Population peak in spring and early summer. Important fish food because almost universally distributed in the plankton.

Chydorus sp. (Chydoridae)

The most abundant kind of cladocera in Cherokee Ponds in spring. Also several other species.

4. Copepods (Order Copepoda)

Several species in Cherokee Ponds. More tolerant of O<sub>2</sub> deficiency than Cladocera. Almost universally distributed in fresh water plankton.

5. Seed Shrimps (Order Ostracoda)

Found in substrate in Pond 1 and 2. With naked eye look like minute seeds up to 3 mm long. Rather hard to separate from debris.

In the following two orders the female has a marsupium on the ventral side of the thorax formed by appendices on several front legs for carrying eggs and young. Mostly confined to substrate in unpolluted water.

6. Aquatic Sow Bugs (Isopoda)

Found under rocks, vegetation and debris in Pond 1 and River. Scavengers. Compressed dorsoventrally.

Asellus sp. (Asellidae)

7. Scuds, Side Swimmers (Order Amphipoda)

Gammarus sp. (Gammaridae) in springy areas  
Hyalella sp. (Talitridae) in river in coontail

Scuds are sometimes called "Fresh Water Shrimps".

8. Crayfishes, Shrimps (Order Decapoda)

Primarily Nocturnal. Actually omnivorous but eat mainly succulent aquatic vegetation. Predators: fish, birds, raccoons. Female carries eggs and young under abdomen.

Family Cambarinae

Cambarus diogenes - Chimney Crayfish.  
"Chimneys" found especially around Pond 3. Comes out on land at night.

Orconectes propinquus - Stream crayfish in Springs.

Orconectes virilis - Pond crayfish in ditches and river.

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REFERENCES ON ALL INVERTEBRATES (INCLUDING INSECTS):

- Reid, G. K., H. S. Zim and G. S. Fichter. POND LIFE. 1967.  
Golden Press. New York.  
Pennak, Robert W. FRESH-WATER INVERTEBRATES OF THE UNITED STATES.  
1953. New York.  
Amos, W. H. THE LIFE OF THE POND. 1967. New York.

Species identified by Don Samuelson.



AQUATIC INSECTS OF CHEROKEE MARSH

Compiled by L. Severson, M. Threlfall and D. Samuelsen, 1973

ORDER COLLEMBOLA - Springtails (Semi-aquatic)

Minute, jumping insects found on surface film of ponds, ditches and moist places, especially in early spring.

Aquatic Orders - In orders 1, 2, 3 nymph<sup>1</sup> aquatic, adult terrestrial and metamorphosis incomplete (No pupal stage).

1. EPHEMEROPTERA - Mayflies

Leaf-like gills along abdomen and 2 or 3 tail-filaments  
Family Baetidae - Small Mayflies

2. PLECOPTERA - Stoneflies

Found in Wisconsin only in cool, unpolluted streams. No such habitat in Cherokee.

3. ODONATA - Dragonflies and Damselflies

Scooplike lip (labium) serves as a grasping organ for prey: It is folded beneath the head and thorax when at rest.

Dragonflies

Nymphs broad with no caudal appendices (gills inside body)

Family Aeshnidae - Darners

Anax junius - Green Darner

Aeshna sp. - Blue Darner

Family Libellulidae - Common Skimmers

Libellula pulchella - Tenspot

Libellula lydia - White-Tailed Skimmer

Perithemis tenera - Amber-Winged Skimmer

Sympetrum sp. - (4 spp.)

Pantala sp.

Leucorrhinia sp.

And probably several other species

Damselflies

Nymphs slender with 3 leaf-like caudal gills

Family Agrionidae - Broad-Winged Damselflies

Agrion (Calopteryx) maculata - Blackwinged Damselfly

Hetaerina americana - Ruby Spot

Family Coenagrionidae - Narrow-Winged Damselfly

Ischnura sp.

(Chromagrion) sp.

Family Lestidae - Spread-Winged Damselflies

Lestes sp. (In Spring)

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<sup>1</sup> An immature stage of an insect lacking pupal stage

## 4. HEMIPTERA - Bugs

No gills at any stage, get air at surface with "snorkle" system or use bubble-like air stores. Mouth parts piercing and sucking in the form of a slender beak folded along abdomen when at rest. Both nymphs and adults may be aquatic.

MOST AQUATIC BUGS CAN GIVE MAN A VERY PAINFUL STING

Family Corixidae - Water Boatmen (Back Flat and Brown)

Scoop algae with spatulate, hair-fringed front legs.

Exception: Water boatman will not bite man

The following families are predators and have raptorial front legs fitted for grasping pray.

Family Notonectidae - Back Swimmers

Notonecta sp. - Back Swimmer (Back Keeled and Light)

Plea sp. - Pigmy Backswimmer

Family Nepidae - Water Scorpions

Ranatra sp. - Water Scorpion (Long caudal breathing tube)

Family Belostomatidae - Giant Waterbugs

Belostoma sp. - "Common" Giant Waterbug, About 1-inch.

Lethocerus sp. - Giant Waterbug, 1.5 - 2.5-inch

Family Gerridae - Water Striders

Gerris sp. - Water Strider (Very long-legged insect on surface film)

All the Following Orders have Complete Metamorphosis:

## 5. MEGALOPTERA - Alder Flies, Fish Flies, Dobson Flies

Family Corydalidae (Larva with Lateral Gill Filaments)

Chauloides sp. - Fish Fly (Adult Big, Soft 1.5 - 2-inch, nocturnal)

## 6. NEUROPTERA - Nerve-Winged Insects

One family has a few aquatic species with larvae parasitic on sponges (Spongilla). Not in Cherokee.

## 7. TRICHOPTERA - Caddish Flies

Larva and pupa aquatic, adult terrestrial.

Several species in Cherokee. Most larvae build cases of grass, twigs, etc.

## 8. LEPIDOPTERA - Butterflies and Moths

One family, family Pyralidae has aquatic larvae in at least 2 genera in Wisconsin. Cherokee?

## 9. COLEOPTERA - BEETLES

12 families have aquatic forms; larva or adult is aquatic, but almost never the pupa. Most larvae come to surface for air, some have gills.

The following families, at least, are represented in Cherokee:

Family Haliplidae - Crawling Water Beetles (2 - 5 mm)

Family Dytiscidae - Predaceous Diving Beetles (1 - 40 mm)

Have long, filiform antennae; carry air under front wings

Family Gyrinidae - Whirligig Beetles (3 - 15 mm)

Often seen in groups moving around on the surface of ponds.

Family Hydrophilidae - Water Scavenger Beetles (1 - 40 mm)

Have short, clubbed antennae, otherwise look like dytiscidae.

Carry air as a silvery film over the ventral side of the body.

Family Elmidae - Riffle Beetles (About 3 mm)

Cling to substrate. Stream species. Rare in Cherokee.

## 10. DIPTERA - Flies, Mosquitoes, Midges (Respiratory Structure Diverse)

Adult never aquatic, but many have aquatic larvae and pupae.

Family Tipulidae - Crane Flies

Adult like an over-sized mosquito. Most larvae aquatic or semi-aquatic and feed on decaying vegetable matter.

Family Ptychopteridae - Phantom Crane Flies

Bittacomorpha sp.

Family Culicidae - Mosquitoes

Larvae and pupae aquatic.

Aedes spp. - Biting kinds in Madison.

Family Chironomidae - Midges

Most larvae and pupae aquatic. Important food for fish and other aquatic animals

Family Rhagionidae - Snipe Flies

One aquatic genus; Atherix sp.

Family Syrphidae - Flowerflies

Many adults brightly colored, feed on nectar and pollen.

Some larvae live in aquatic habitats (Rat Tailed maggot).

## REFERENCES:

Hilsenhoff, William L. GENERA OF AQUATIC INSECTS IN WISCONSIN.

Borror, D. J. and R. E. White. A FIELD GUIDE TO THE INSECTS. Boston.  
1970,

FISHES IN CHEROKEE MARSH  
According to Don Samuelson, Summer 1972

A = Abundant    C = Common    U = Uncommon

Order Semionotiformes

GARS (Lepisosteidae)

1. Longnose Gar (Lepisosteus osseus)

Order Amiiformes

BOWFINS (Amiidae)

2. Bowfin (Amia calva)

Order Salmoniformes

PIKES (Esocidae)

3. Northern Pike (Esox lucius)

MUDMINNOWS (Umbridae)

- C 4. Central Mudminnow (Umbra limi) - Found in the creeks coming into Yahara River. Aver. 3-inches.

Predators, keep panfish populations under control.

Order Cypriniformes

MINNOWS AND CARPS (Cyprinidae)

- A 5. Carp (Cyprinus carpio) - Keeps the mud in the river stirred. Abundant in Cherokee Marsh area. Introduced in Wisconsin through plantings in 1881-1895.

- C 6. Golden Shiner (Notemigonus crysoleucas) over 12-in

- U 7. Emerald Shiner (Notropis atherinoides)

- C 8. Common Shiner (Notropis cornutus) } 4-5 inches

- U 9. Spottail Shiner (Notropis hudsonius) }

- U 10. Bluntnose Minnow (Pimephales notatus) 3 1/2-inches

- C 11. Flathead Minnow (Pimephales promelas) 3-inches

12. Pugnose Shiner (Notropis anogenus) - Very rare, collected at mouth of river in 1958.

SUCKERS (Catostomidae)

- C 13. White Sucker (Catostomus commersoni)

Largest fish family.  
Scavengers; no teeth on jaws, only on throat.

Order Siluriformes

FRESHWATER CATFISHES (Ictaluridae)

- A 14. Black Bullhead (Ictalurus melas)      Bullheads

- C 15. Yellow Bullhead (Ictalurus natalis)      up to 12-15

- U 16. Brown Bullhead (Ictalurus nebulosus)      inches

- U 17. Channel Catfish (Ictalurus punctatus)

- C 18. Tadpole Madtom (Noturus gyrinus)      3-4 inches

Nest builders.  
No scales:  
have "whiskers";  
smell feeders.

## Order Gadiformes

## CODFISHES AND HAKES (Gadidae)

19. Burbot (Lota lota) - Rare

## Order Atheriniformes

## KILLIFISHES (Cyprinodontidae)

- U 20. Banded Killifish (Fundulus diaphanus) 3-inches  
 U 21. Blackstripe Topminnow (Fundulus notatus) - In  
 ditches. Possibly introduced by limnology lab.

## SILVERSIDES (Atherinidae)

22. Brook Silverside (Labidesthes sicculus)

## Order Gasterosteiformes

## STICKLEBACKS (Gasterosteidae)

- C 23. Brook Stickleback (Culaea or Eucalia inconstans)  
 River and Ditches

## Order Perciformes - The following three families have spiny fins.

## SEA BASSES (Serranidae)

- 2 1/2 spines  
on anal fin
24. White Bass (Roccus chrysops)  
 25. Yellow Bass (Roccus mississippiensis) - Introduced  
 into the Madison lakes (Dane Co.) from the Mississippi  
 River during fish transfer operations of 1930's and  
 1940's.

## SUNFISHES (Centrarchidae) - Nest Builders

- 3 or more  
strong spines  
on anal fin.  
Spiny and soft  
part not separated  
on dorsal fin
- U 26. Rock Bass (Ambloplites rupestris)  
 C 27. Green Sunfish (Lepomis cyanellus) 4-6 inch  
 C 28. Pumpkin Seed (Lepomis gibbosus) Aver. 7-inch  
 A 29. Bluegill (Lepomis macrochirus) - Abundant, 8-17 inch  
 U 30. Largemouth Bass (Micropterus salmoides) Up to 24 inch  
 C 31. White Crappie (Pomoxis annularis) Up to 14 inch  
 C 32. Black Crappie (Promoxis nigromaculatus) Up to 14 inch

## PERCHES (Percidae)

- Predators.  
1 or 2 spines on  
anal fin. Dorsal  
fin completely  
divided into soft  
and spiny portions.
- C 33. Johnny Darter (Etheostoma nigrum)  
 U 34. Iowa Darter (Etheostoma exile)  
 U 35. Yellow Perch (Perca flavescens)  
 U 36. Log Pech (Percina caprodes)  
 U 37. Walleye (Stizostedion vitreum)

Order Perciformes (cont)

DRUMS (Sciaenidae)

38. Freshwater Drum (Aplodinotus grunniens)  
"Drums" during spawning season in June.

Unless otherwise mentioned, all fish were found in the Yahara River.

There were no fish in the pond near the parking lot because it dries up in dry summers and freezes in the winter.

This information is based on actual catches by seine and nets.

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REFERENCES ON FISH:

Marlin Johnson and George B. Becker: ANNOTATED LIST OF THE FISHES OF WISCONSIN. Transactions of the Wisconsin Academy of Sciences, Arts and Letters, Vol. 58, 1970.

Order Salientia - FROGS and TOADS, the jumping amphibians. Also, called Anurans (tailless). Partially or exclusively insectivorous as adults; tadpoles vegetarian and omnivorous. Eggs may float or be attached to objects, must be fertilized (and develop) in water. Tadpoles grow legs in first year except green and bull frogs.

Family Bufonidae - TOADS

Cutting tubercles,  
rather dry skin.

- Bufo americanus

Family Hylidae - TREE FROGS

Toe pads; arboreal,  
but usually call from  
water; 1 - 2" long  
(H. versicolor may be  
larger).

- Acris crepitans  
- Hyla crucifer  
- Hyla versicolor (two subspecies)  
- Pseudacris triseriata

Family Ranidae - TRUE FROGS

No pads; aquatic

- Rana pipiens  
- Rana clamitans  
- Rana palustris  
- Rana catesbeiana  
- Rana sylvatica  
- Rana septentrionalis

Order Caudata - SALAMANDERS, the tailed amphibians

Nocturnal, rarely seen, hide under bark, logs, rocks.

1 & 2 in  
Cherokee  
Marsh,  
3 in  
Teal Pond,  
Arboretum

1. Tiger Salamander
2. Mudpuppy (aquatic)
3. Central Newt
4. Four-Toed Salamander
5. Red-Backed Salamander
6. Yellow-Spotted Salamander
7. Blue-Spotted Salamander

- Ambystoma tigrinum  
- Necturus maculosus  
- Notophthalmus viridescens  
- Hemidactylium scutatum  
- Plethodon cinereus  
- Ambystoma maculatum  
- Ambystoma laterale

REFERENCES:

Illinois Natural History Survey Bulletin, Nov. 1961: "THE AMPHIBIANS AND REPTILES OF ILLINOIS" by Philip W. Smith (Natural History Bldg, Urbana, IL.)  
 Passenger Pigeon, 1950, 7 (4) 150-152, and 1951 8 (1) 9-14 "OUTDOOR CALENDAR"  
 by James H. Zimmerman (Wisconsin Society for Ornithology).  
 Trans. Wisconsin Academy, 1951, 40 (2): 215-234: "RECENT ADDITIONS TO DISTRIBUTION OF AMPHIBIANS IN WISCONSIN" by H. K. Suzuki (Includes distribution maps).  
VOICES OF THE NIGHT-The Calls of Frogs and Toads of Eastern United States (Cornell). Available from Wis. Society for Ornithology, Ed Peartree, 16356 Lisbon Road, Oconomowoc, WI. (Price list on bird song records avail from him, too (W.S.O. Nature Books and Supplies available at 10% discount to teachers, members. Catalog from Harold Kruse, Hickory Hill Farm, Loganville, Wisconsin).

ARBORETUM AND MADISON AREA FROGS

Information according to Don Samuelsen except for the song descriptions by Ken Lange. Compiled by M. Threlfall and J. Zimmerman, 1970-71.

Frogs are listed in the order their song is first heard in the spring.

1-2-3-4  
start  
in  
March,  
peak  
in  
April

1. Western Chorus Frog - Pseudacris triseriata

Tiny, brownish, with lengthwise stripes on back. The first frog song in the spring. The most commonly heard frog all over Wisconsin, calling loudly from the water - very hard to see, hidden among the debris at surface. Sings day and night but calls in chorus mainly during the day. \*Single call: like rubbing fingers over a comb. Choruses resume, after rains, into July; faint "dry" calls in late fall on warm days. Develops in a month, breeds in temporary pools.

2. Northern Leopard Frog - Rana pipiens

The most commonly seen frog. At first calls mainly at nights, but later by day and night. \*Call: It chuckles and "grunts" or "snores". Call is not nearly as loud as #1, 3, 4.

3. Spring Peeper - Hyla crucifer

Tiny, brown or gray, with "X" on back. Sings in chorus mainly during the night unless the day is overcast or there is a warm rain. More likely to be near trees than chorus frog; more common in north and east Wisconsin. \*Chorus sounds like sleight bells. Individual whistles painful to hear when close. Considerable calling by individuals from trees in Aug.-Sept. Declining in Lake Wingra and Teal Pond recently.

4. Wood Frog - Rana sylvatica

Medium-sized frog with black eye mask; of woods, congregating in pools along woodland streams for brief early chorus or "talking". \*Call: like quacking of mallards or rubbing wet balloons. Streams, Baraboo Hills, Wisconsin River? Calls day and night.

5. Pickerel Frog - Rana palustris

5  
peak  
April  
into  
May

Spots squarer than leopard's, and thighs yellow on inside. Likes only cold water. \*Call: A low snore several seconds in duration given irregularly and does not carry far. Skin distasteful to predators. Found in Arboretum East Marsh, Fish Hatchery, Nine-Springs Marsh.



- 6  
peak  
May or  
early  
June
6. American Toad - Bufo americanus
- Calls mostly at night. First call when water is 55-60°F. \*Call: A pleasing trill up to twenty, sometimes thirty seconds in duration, carrying up to 1 mile in evening breeze. Our most abundant and conspicuous tadpoles in summer. Ranges a mile from water, burrows in soil in dry spells.
- 7-8  
May,  
June,  
July
7. Blanchard's Cricket Frog - Acris crepitans blanchardii
- Tiny, dark brown; sings through May-July. \*Call: A series of rapid clicking notes like two stones being hit together very rapidly, first accelerating, then decelerating. Found in Dunn's Marsh, East Marsh, Lake Wingra outlet. Starts at dusk, stops at about 1 to 1 a.m.
8. (a) Eastern Gray Tree Frog - Hyla versicolor versicolor (ref. LeConte)
- It is gray with patches and is found in woods and flood plains. \*Call: often from trees on humid afternoons as well as nights, a soft laugh or trill. Mazomanie in Dane County; Baraboo Hills and Wisconsin River.
8. (b) Western Green Tree Frog, Prairie Tree Frog - Hyla versicolor crysasilis (ref. Strecker 1880)
- It has no patches and it is almost always solid green. \*Call: a low buzz, mostly at night, sometimes from trees. Prefers treeless marsh and prairie, incl. Dunn's Marsh, Grady Tract, Upper Mud Lake, Schoernberg Marsh.
9. Green Frog - Rana clamitans
- Mid-May  
until  
late  
summer
- The big brown frog with green lips, often concealed along banks, and definitely territorial. Lakes, rivers, marshes. The last frog heard in the summer. \*Call: sounds like the twangs of a banjo, occasional at anytime; occasional choruses on warm nights.
10. Bull Frog - Rana catesbeiana
- 10  
May-June
- The big green frog that floats on lily pads, yellow beneath like spatterdock flowers. Males very tame while calling. \*Call like mooing of a cow. Also squawks when flushed. A few might still be found around Lake Wingra; numbers occur at Marx Pond and Fish Lake, NW Dane County; and Hope Lake, Cambridge. Needs protection from poachers.

Note: Mink Frog (Bogs in N. Wis.) is Wisconsin's only other salient amphibian.

1, 2, 3, 6, 7, 8(b), 9 - Found in Cherokee Marsh.

REPTILES  
TURTLES OF CHEROKEE MARSH  
 According to Don Samuelsen

CLASS REPTILIA - Turtles, Lizards and Snakes

Skin dry with scales or plates, or both; eggs with tough membranous or limy covering; no larval stage.

Order Testudines - Turtles

Body enclosed in a shell. Typically, eggs are deposited in early summer in soil away from water. The hatching turtles emerge from the ground in early fall or the following spring.

Family Chelydridae

1. Common Snapping Turtle - Chelydra serpentina  
 An aquatic turtle. The upper shell or carapace in adults is often covered with algal growth. The lower shell or plastron is cruciform, does not conceal legs. Omnivorous. Found all over Wisconsin.

Family Testudinae

2. Blanding's Turtle - Emys blandingi  
 A medium-sized aquatic and terrestrial turtle. Plastron hinged so the turtle can completely conceal himself in his shell when not too fat. Adult carapace blackish. Omnivorous.
3. Painted Turtle - Chrysemys picta  
 Primarily aquatic and omnivorous.

The following subspecies are in Cherokee Marsh:

- Western Painted Turtle - Chrysemys picta subsp. belli
- Midland Painted Turtle - Chrysemys picta subsp. marginata
- Hybrid Painted Turtle - Chrysemys picta subsp. belli X Chrysemys picta subsp. marginata

The most common turtle in Cherokee Marsh.

On June 26 and 27, 1971 during the summer work-study program, 37 Painted Turtles were caught in the Yahara River with two Fike-nets left overnight. Don Samuelsen estimated that the youngest turtles caught were at least 4 years old. This lack of young turtles indicates recent disturbance on nesting sites on shores: predation by raccoons, dogs; excavation for sewers, housing developments, etc.

Family Trionychidae

4. (Eastern) Spiny Softshell - Trionyx spinifer  
 Aquatic, carnivorous.

Other Wisconsin Turtles:

Musk Turtle or Stinkpot - Sternotherus odoratus  
 Arboretum, Duck Pond

Along Rivers:

Eastern Box Turtle - Terrapene carolina

Mississippi and

True Map Turtle - Graptemys geographica

Wisconsin Rivers:

False Map Turtle - Graptemys pseudogeographica

Wood Turtle - Clemmys insculpta

From Richland and Sauk Counties Northward

REPTILES  
SNAKES OF CHEROKEE MARSH  
According to Don Samuelsen

Order Serpentes - Snakes

Body completely scaled.

External ears and movable eyelids absent; no limbs. Predators.

1. Fox Snake (Elaphe vulpina)  
When angered, vibrates the tip of its tail silently.  
Food: Mainly small mammals and birds.
2. Bull Snake (Pituophis melandoleucus)  
Powerful constrictor.  
Food: Mammals, birds, eggs.
3. Milk Snake (Lampropeltis triangulum)  
Food: Small mammals and snakes
4. Plains Garter Snake (Thamnophis radix)  
Food: Mainly earthworms.  
Habitat: Vacant lots, meadows, pastures.
5. Eastern Garter Snake (Thamnophis sirtalis)  
Food: Amphibians, worms, fish, leeches  
Habitat: Forest edge.
6. DeKay's Snake (Storeria dekayi)  
Small  
Food: Primarily earthworms and slugs.
7. Red Bellied (Storeria occipitomaculata)  
Very small, pencil thick.  
Food: Slugs, small snails and worms.
8. Water Snake (Natrix sipedon)  
Food: Fish, frogs, young birds.
9. Butler's Garter Snake (Thamnophis butleri)  
Caught October 1971 at east end of River Boardwalk.

All snakes in Cherokee Marsh are beneficial. They are important in controlling rodents and insects. Snakes should not be killed or taken out of the Cherokee Marsh area.

Other Wisconsin Snakes:

- Ringneck Snake - Diadophis punctatus
- Hognose Snake - Heterodon platyrhinos
- Smooth Green Snake - Opheodrys vernalis
- Blue Racer - Coluber constrictor
- Pilot Black Snake - Elaphe obsoleta
- Ribbon Snake - Thamnophis sauritus  
(Illinois Border)
- Massasauga - Sistrurus catenatus
- Timber Rattlesnake - Crotalus horridus

MAMMALS OF CHEROKEE MARSH  
According to Don Samuelson  
Compiled by L. Severson and M. Threlfall, 1973

Order Marsupalia (opossums, kangaroos and allies)

Family Diadelphidae (American opossums)

1. COMMON OPOSSUM (*Didelphis marsupialis*)  
Female has marsupium or pouch to suckle and raise young.  
Size: Domestic cat. Color: Dirty white.  
Habitat: Woodlands, dense hedgerows.  
Food: Rabbits, mice, often as carrion, insects, berries, sprouting acorns, et

Order Insectivora (Insect eaters)

Family Soricidae (Shrews)

Shrews are frequently seen at daytime and are often mistaken for moles which are rarely seen. Shrews resemble mice, but have a long, pointed snout and velvety fur.

2. LONG-TAILED SHREW or CINEREOUS SHREW (*Sorex cinereus*)  
Habitat: Moist woods.  
Food: All kinds of insects, both adults and larvae. Voracious eaters. Considered a very beneficial mammal for insect control. Preyed upon by owls and hawks.
3. SHORT-TAILED SHREW (*Blarina brevicauda*)  
Larger, more robust than Cinereus Shrew. Teeth pigmented deep chestnut at the tip. Very common.  
Habitat: Brushy woods, old fields, lawns. Commonly makes runways in snow.  
Food: Snails, especially in winter, meadow voles, insects, earthworms, any small vertebrates. Insatiable appetite. Considered a very useful animal; helps to keep insect and meadow mice populations in balance. Preyed upon by hawks, owls and shrikes.

Family Talpidae (Moles)

4. COMMON MOLE (*Scalopus aquaticus*)  
Forefeet big, strong and hand-like, the palms broader than long.  
Habitat: In sandy and light loam soil in woods and open areas.  
Food: Earthworms, insects, insect larvae, centipedes, millipedes, etc. This is the animal which makes the ridges seen on lawns, in meadows and woods.

## Order Chiroptera (Bats)

Family Vespertilionidae (Common Bats)

Food: Insects, especially nocturnal. Few enemies, occasionally hawks, owls, cats. Considered very beneficial mammals.

5. LITTLE BROWN BAT (*Myotis lucifugus*)  
Around buildings and the first one to be seen in spring. Possibly the most abundant bat in Wisconsin.
6. PIPISTREL or GEORGIAN BAT (*Pipistrellus subflavus*)  
Hibernates longer than Little - or Big Brown Bats.
7. BIG BROWN BAT (*Eptesicus fuscus*)
8. RED BAT (*Lasiurus borealis*)  
Migrates South.

## Order Lagomorpha (Hares and Rabbits)

Family Leporidae

9. COTTONTAIL RABBIT (*Sylvilagus floridanus*)  
Cottontail serves as a buffer food supply for predators, like foxes, who otherwise might prey on domestic and other game animals. The browsing pressure by rabbits on native shrubs is increasing as the introduced, non-palatable, Eurasian shrubs (Buckthorn, Honeysuckle, etc.) are replacing our native vegetation. (James H. Zimmerman)

## Order Rodentia (Rodents or Gnawing Animals)

Family Sciuridae (Squirrels and Allies)"Ground Squirrels"

10. WOODCHUCK or GROUND HOG (*Marmota monax*)  
Habitat: Forest border, fence rows, fields, pastures.  
Food: Grass, seeds, berries, insects, bark. Its burrows are utilized by rabbits, skunks etc. It buries its waste and keeps its burrows clean and odorless. Chief enemies are man, dog, red fox, badger. Hibernates.
11. STRIPED GROUND SQUIRREL or GOPHER (*Citellus tridecemlineatus*)  
Habitat: Grassy open areas.  
Food: Seeds, insects, especially grasshoppers.  
Predators: Fox, weasel, house cat, badger and hawks.  
Hibernates.
12. FRANKLIN'S GROUND SQUIRREL or GRAY GOPHER (*Citellus franklinii*)  
Bigger than common gopher, not striped. Very adept at concealing itself.  
Habitat: Dense, grassy and shrubby, near-dry marshland.  
Food: Herbage, seeds, berries, insects, some frogs.  
Predators: Badger, mink, Long-tailed weasel and skunk.  
Hibernates. Several sightings of crossing main road in Spring 1973.

"Tree Squirrels" - The following live in wooded areas and do not hibernate:

13. CHIPMUNK (*Tamias striatus*)  
Primarily a ground dweller.  
Food: Nuts, fruit, seeds, young birds, eggs, insects.  
Predators: Hawks, foxes, owls.  
May be dormant for considerable periods but not a true hibernator.  
Very abundant in Cherokee Woods.
14. GRAY SQUIRREL (*Sciurus carolinensis*)  
Food: Nuts, seeds, buds, fungi, insects and insect galls.  
Man's activities (e.g. road kills) chief enemy.
15. FOX SQUIRREL (*Sciurus niger*)  
Bigger than gray squirrel, underparts orange-colored. Few Natural enemies
16. FLYING SQUIRREL (*Glaucomys volans*)  
Skin fold extending from wrist to ankle is used for gliding. Strictly nocturnal  
Home a hole in a tree. Main enemy the domestic cat, sometimes weasels, owls

Family Cricetidae (Deer Mice, Harvest Mice, Muskrat, Voles, Etc.)

17. PRAIRIE DEER MOUSE or WHITEFOOTED MOUSE (*Peromyscus maniculatus bairdii*)  
Habitat: Open, well-drained areas with sparse grass.  
Food: Weed seeds, fruit, some insects.  
Prefers to build its nest under some object like a board.  
Predators: Skunk, weasel, raccoon, fox.
18. WOODLAND DEER MOUSE or WHITEFOOTED MOUSE (*Peromyscus leucopus*)  
Larger than prairie deermouse, head longer.  
Habitat: Very common in wooded areas.  
Food: Seeds, acorns, hickory nuts. Stores food.  
Prefers a hole in a tree for its nest.  
Predators: Owls important.  
Nos. 17 & 18, both are nocturnal, have big eyes, ears.
19. MEADOW MOUSE or VOLE (*Microtus pennsylvanicus*)  
Ears almost concealed in loose fur; eyes small, black.  
Habitat: Abundant in open lowland areas with rank grass, sedge and weed cover. Tunnels in grass. The most abundant mammal in Cherokee.  
Food: Fresh grass, sedges and other herbage, and seeds.  
Predators: Hawks, owls, red fox and other predatory mammals, also fox snake.
20. MUSKRAT (*Ondatra zibethicus*)  
The size of a small cat with long scaly tail. Excellent swimmer and diver. Chiefly nocturnal. Since the wet fall of '72 there has been an abundance of muskrat houses in Cherokee. In addition to building houses for nest, muskrats build other shelters and platforms, dig underwater channels to the chamber inside their house and deepen the bottom around the house. In dry years nests are dug in banks.  
Habitat: Almost any water with vegetation.  
Food: Cattail and other water plants thus keeping the marsh open for ducks, fish etc.  
Predators: Mink, Great Horned Owl.

Family Muridae (Old World rats and mice)

21. COMMON RAT (*Rattus norvegicus*)  
 22. HOUSE MOUSE (*Mus musculus domesticus*)

Old Farm Sites

Family Zapodidae (Jumping Mice)

23. MEADOW JUMPING MOUSE (*Zapus hudsonius*)

Small, yellowish-brown mouse with very long tail.

Habitat: Seed eater.

Predators: Weasels, minks, foxes, owls, and hawks. Hibernates.

## Order Carnivora (Carnivores or Flesh-Eaters)

Have a wide home range.

Family Canidae (Wolves, Coyotes, and Foxes)

24. RED FOX (*Vulpes fulva*)

Resembles a small dog. Reddish brown fur, long bushy tail with distinctive white tip. Often seen in daytime.

Habitat: Forest edge and open areas.

Food: Especially rabbits and meadow mice; fruits, buds, insects.

Predators: Man; few natural enemies.

25. GRAY FOX (*Urocyon cinereoargenteus*)

Slightly shorter than red fox but more robust. Fur gray, tail black-tipped, distinctive black main on upper tail. More secretive than red; less often seen.

Habitat: Woods and brushland.

Food: Similar to red fox.

Family Procyonidae (Raccoons)

26. RACCOON (*Procyon lotor*)

Fur gray with black tips, paler below; bushy banded tail, black mask ringed with white.

Habitat: Wooded areas near water. Has adapted to city life.

Food: Anything available including garbage.

Predators: Man, a few taken by owls.

Family Mustelidae (Martens, Weasels, Badgers, Skunks, Otters and Allies)

27. LEAST WEASEL (*Mustela rixosa*)

Tiny weasel, smallest of Wisconsin's carnivores; 7.5-8 ins. including tail. Fur rich chocolate brown, white in winter.

Habitat: Mostly marshes, meadows.

Food: Chiefly mice, especially meadow voles.

Predators: Owls, foxes, cats.

28. LONG-TAILED WEASEL (*Mustela frenata*)

Large weasel, males 14-17 in., with dark brown back and white belly; some change toward white pelage in winter.

Habitat: Woodlands, brushlands, especially near water.

Food: Mammals, chiefly mice, chipmunks, gophers, shrews.

Predators: Great horned owl, hawks.

29. MINK (*Mustela vison*)  
 Larger than weasels. Male 23-29 in. Fur dense and glossy, all dark brown except throat; tail more bushy and darker than weasels.  
Habitat: Woods, streams, lakes and marshes.  
Food: Mice, moles, shrews, frogs, fish, crustaceans, insects, muskrats.  
Predators: Man, Great Horned Owl.
30. BADGER (*Taxidea taxus*) Uncommon  
 Heavy, low, wide-bodied with short neck and flat head. Silver-gray fur with a mixture of white, black and brown. Distinguished by white cheek mark and white stripe from nose to shoulder. Name from the "badge" or marking on face. Wisconsin was not named after this animal, but after early miners and their digging and burrowing activities.  
Habitat: Originally a prairie species. Grasslands, fields, pastures, open woodlots.  
Food: Digs for most of its prey; ground squirrels, woodchucks, other rodents, also rabbits.
31. STRIPED SKUNK (*Mephitis mephitis*) Very Common  
Habitat: Brushy areas, abandoned fields.  
Food: Eats fruits, buds in season; mice, shrews, moles; digs especially for insects.  
Predators: Great Horned Owl and Barred Owl.

Order Artiodactyla (Even-toed, Hoofed Mammals)

Family Cervidae (Deer and Allies)

32. WHITE-TAILED DEER (*Odocoileus virginianus*)  
 The only native hoofed mammal now found regularly in Wisconsin. Coat is reddish brown, changing to light gray in winter.  
Habitat: Brushlands, marshes, farmland with woods.  
Food: Primarily a browsing animal.  
 Natural predators no longer a factor, mainly, destruction is due to hunting, starvation, accidents. Resident deer population in Cherokee 30 to 40 with annual hunting toll 10 to 12 in recent years. Bigger population would spill over to neighboring gardens and cause overbrowsing Cherokee. (Information: Earl Loyster)

The following mammals may be in Cherokee Marsh, but their presence has not been substantiated by trappings or by other evidence:

- Otter - (*Lutra canadensis*)  
 Saddle-backed Shrew - (*Sorex arcticus*) Specimens found. (Schorger)  
 Smoky Shrew - (*Sorex fumeus*) or closely related species  
 Pigmy Shrew - (*Microsorex hoyi*) 1 specimen in 1965. (Schorger)  
 Harvest Mouse - (*Reithrodontomys megalotis*)  
 Prairie Vole - (*Microtus ochrogaster*)

REFERENCES ON MAMMALS:

- Jackson, Hartley H. T., MAMMALS OF WISCONSIN. The University of Wisconsin Press, Madison, Wisconsin, 1961.  
 Schorger, A. W. THE MAMMALS OF DANE COUNTY. Transactions of the Wisconsin Academy. Vol. 61, 1973.