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A BIOLOGICAL RECONNAISSANCE OF THE  
MISSISSIPPI RIVER COUNTY PARK /

20 prepared by

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for the

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5 (Consultants report)

1A Natural Resources, Department of.

1B Heartland Environmental Education Council

environment  
parks and open space - trail systems

## I N T R O D U C T I O N

The Mississippi River County Park consists of 200 acres owned and maintained by Stearns County. There are three trails presently in existence, with the potential of accomodating an additional trail through acreage being restored to prairie (see figure 1). One-third of the park is composed of wooded flood-plain, while the remaining two-thirds is fallow cropland. When a river recedes after a flood it leaves behind a rich alluvial soil base which forms the basis for a flood plain ecology and vegetation. The fast moving water pick up these rich nutrients and minerals along the banks of its meandering paths and deposits it in the flood plain area. Moisture is high and the consequent vegetation is lush and thick with a vast variety of trees and shrubs. Pine seedlings have been planted at the entrance to the park. The Mississippi River borders most of the park and there are extensive reaches of Mississippi River backwater on the flood plain.

In addition to these natural features, recreational facilities such as an activity field, boat launch, picnic area, parking area, and a shelter are provided. A sanitary facility is present, and well water may be obtained at two locations.

This study was undertaken so that this park may be used and developed as an environmental learning project. The objective of this study was to create some interpretation of the park along existing trails, to be used by the public. This study also includes the inventory and identification of significant natural features,

suggestions for interpretive signposts to be placed along the trails, and recommendations for additional interpretive aids to be used along the trails.

#### PROCEDURE

Areas of important natural interest were identified on a map of the park, when the collection of plants was conducted in the late Spring and early Summer of 1978. Plant collections were made on each trail in the park and numbered stakes were placed at each Nature Study Station. Upon completion of the field trips, it was decided that the first step should be the segregation of the park into a strictly recreational area and an area exclusively set aside for nature study. The three existing trails were labeled the blue trail, yellow trail and green trail, in accordance with this concept.

#### The Blue Trail

This trail was designated as the recreational trail because of its location near the boat launch, picnic area, shelter, and parking area. This trail can be used for leisurely strolls along the Mississippi River, as well as providing an opportunity for persons in the creative arts to pursue their interests. Birds and animals are quite abundant along this trail which, when coupled to the scenic setting along the Mississippi, should provide poets, artists and photographers with much inspiration.

Motorized vehicles and horses are to be prohibited from this trail and it is suggested that proper barriers be erected at the entrances to restrict them. Since there will be no brochure for this trail, some nature study signage could be placed along the trail to provide the casual visitor with some knowledge of his surroundings. This signage would be in the form of a post with a board on top with the information printed on it. Since this type of sign is rather expensive and subject to vandalism perhaps, it may be decided to drop this approach. The area near the river would lend itself perfectly to a small amphitheatre for concerts, plays, etc.

#### The Yellow Trail

This is one of two trails set aside exclusively for nature study. It starts at the parking area (see figure 1), continues along the backwater where it abruptly turns up and goes by the pasture-flood plain border, terminating at the parking area near the activity field. An information board with a map (YOU ARE HERE information) proper warnings (such as TAKE ONLY PHOTOGRAPHS, LEAVE ONLY FOOTPRINTS) and an optional brochure dispenser (see recommendations section). Placement of proper toilet facilities and trash containers should be included here.

## The Green Trail

The green trail is more difficult to get to than the other trails. Access to this trail is reached through either the blue or yellow trail. (see figure 1). The trail meanders along the river, then bifurcates into a loop which runs by the backwater areas again by river on one side and the Mississippi River on the other side. Proper signage should be posted indicating direction of the trail, distance (miles) and directions to the other trails.

### TRAIL DESCRIPTIONS

Temporary numbered stakes have already been put along the trail indicating nature study stations. Permanent signposts are to be placed where the stakes are, and should be of the following type: a post approximately 5 feet in length with the top cut at a 45 degree angle and a number incised and painted yellow (to identify the trail) on this angled surface, and set at least 3 feet into the ground. The number on the post will correspond to a brochure to be distributed by the county. The numbers on the map (see figure 1), identify the following features on the color coded nature study trails.

1. This bog study area illustrates a succession from pasture to bog. The predominant trees are willows and cottonwoods.
2. Note the large, solitary dead tree. Dead trees are very important refuges for birds such as owls and woodpeckers and small mammals like chipmunks and squirrels.

3. The bench and table provided here can be used for aquatic life observation. Mallards and wood-ducks frequent this backwater and muskrats, beaver and racoons have been seen here. Along the edge of the water one sees frogs, water striders and, in the spring, carp wpaawn in the shallows.
4. Vegetation characteristic of a flood plain forest such as willow and poplar are found here.
5. This is a bank beaver lodge. Bank beaver differ from pond beaver primarily only in habit; they live along rivers.
6. This blind will facilitate wildlife observation by allowing a person or a group to watch from concealment without disturbing the animals. Enter the blind as quietly as possible and remain still once inside. To the left mounted on a tree is a wood-duck box. They nest in the box and can be seen swimming in the backwater eating insects and plants.
7. These tell-tale marks are evidence of beaver adtivity.
8. This area illustrates a change in forest type from lowland softwood to flood plain hardwood due to the change in nutrients and moisture content in the soil.
9. The abundance of wild grapes affords a delectable lunch for the playful racoons.
10. Here we have an edge effect where the prairie meets the flood plain. There is a great diversity in the flora and

fauna in this area due to the overlap in the bordering habitats.

11. Deer often come to this spot to drink from the backwater. Look to see if there are any traces of deer, such as droppings or matted down grass.
12. An example of a parasitic relationship is exhibited between witchhazel and cedar trees. The witchhazel taps into the cedar thereby taking its nourishment from the cedar.
13. This is an excellent area to study the wide assortment of trees. Aspens, elms, birch, basswood, maple and burr oak are some of the trees found here. There is also an abundant ground cover (ferns, shrubs, etc.) on the forest floor.
14. This station is a directional sign indicating a connection to the blue trail. Include how long each trail is in miles.
15. Another sign should be placed here informing visitors that the trail loops around and finishes in this same spot.
16. This is the beginning of yet another section of the Mississippi Backwater. Backwaters are standing areas of water left behind when a flooding river recedes. These areas have the same vegetation and aquatic insects as ponds.
17. The fallen birch tree shows that a beaver was at

work here. Also note the yellow birch and white birch next to each other.

18. Here is another spot that deer frequent. The dense underbrush provides shelter for the deer, as well as food.
19. This backwater area is beginning to fill in. Notice the encroachment of shrubs on the aquatic shore vegetation.
20. (Placement of a blind at this location). Use this blind to observe duck and heron and additional birds which feed in the backwater.
21. Many species of aquatic insects can be seen here throughout the Spring, Summer and early Fall. Insects which spend their immature life stages in the river, can be seen emerging from the water. Damselflies and dragonflies will be darting back and forth catching mosquitoes, and other flying insects.
22. There are a multitude of birds in the trees along the river.
23. Place a log bench here.



## MISSISSIPPI RIVER COUNTY PARK

### Recommendations for land use:

1. Restore the prairie land at the entrance of the park where seedlings have been planted, by burning.
2. Place proper toilet facilities at the parking entrance to trail areas and at the picnic area.
3. Reserve the area and trail near the boat launch for a picnic-play area, and keep the other two trails for nature study.
4. Post signs prohibiting horses and vehicles from the paths.
5. Label the trails and post signs indicating teaching areas.
6. Place blinds, benches, teaching stations according to the map.
7. Improve the trail where indicated, by placing floating boardwalks or gravel.
8. Place a permanent sign at the entrance to each trail telling how many miles long each trail is.
9. Identify the natural, burned and plowed strips in the prairie study project accordingly.
10. Distribute brochures to the trails only to interested groups or teachers, by either mailing the brochures or having interested party pick them up at the Court House.

## C O N C L U S I O N

Development and growth of the communities along the Mississippi River and surrounding the Mississippi River County Park, demonstrates that the preservation of this natural area is important. The 200 acres in the Mississippi River County Park will <sup>o</sup>pr<sub>λ</sub>vide recreation and also an opportunity for various levels and kinds of studies. Teachers can take their classes on tours of the trails, at all levels from college on down to nursery school children. The area also would lend itself to research conducted by advanced high school students, college undergraduates and graduate students.