

The Louisville Zoo Wetlands Trail



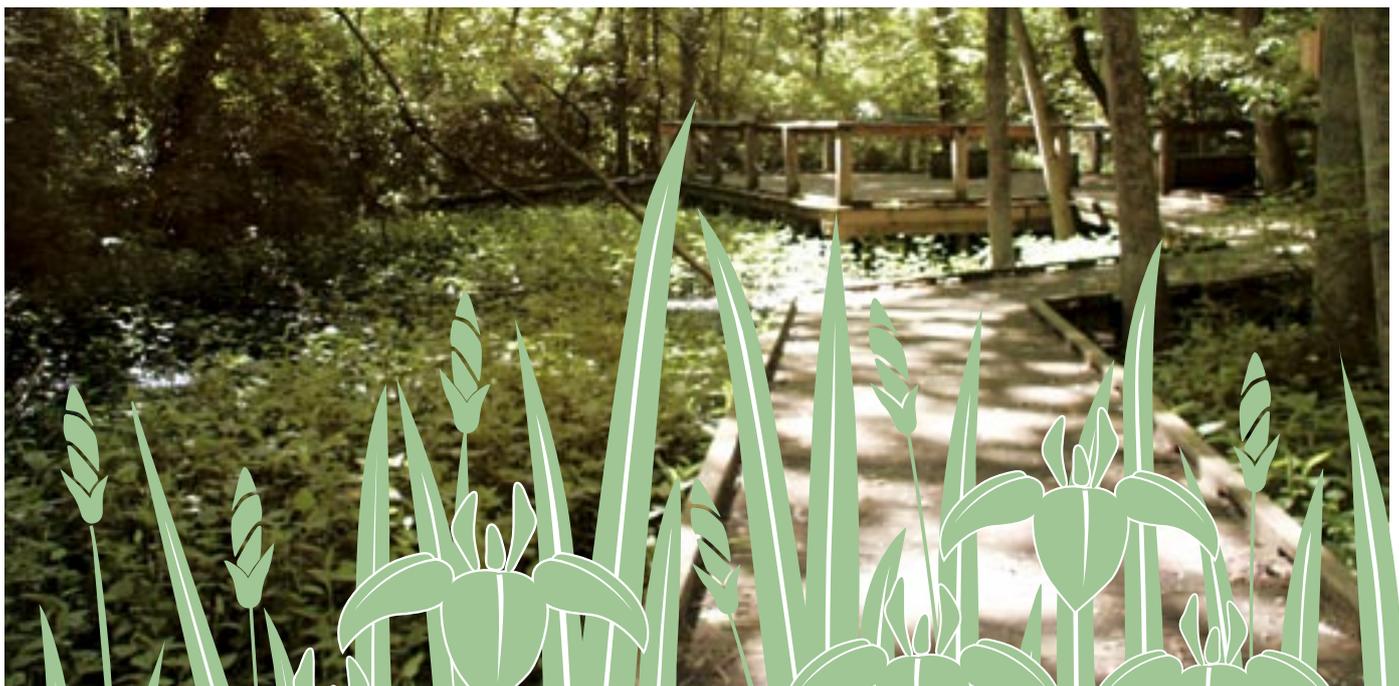
by **Doug McCoy** ASSISTANT CURATOR OF EDUCATION | THE LOUISVILLE ZOO | USA

The Louisville Zoo is a relatively young zoo, having opened its doors to the public in 1969. It has approximately 154 acres, of which only about 85 are developed into what the average person recognizes as 'the zoo'. Many of the 'undeveloped acres' consist of lowland hardwood forest containing a wide variety of plants, animals and fungi that provide the perfect educational opportunity for selected groups. One such area which has been taken advantage of for over 10 years is known as the Louisville Zoo Wetlands Trail.

I History

In 1995, the Louisville Zoo was looking into creating a wetlands exhibit. Under consideration at the time was a low-lying area that had been used in the past as a place for housing hoof stock. A well-known regional consultant with a company known as Ecotech was brought in to advise the zoo on where such an exhibit should be placed. The consultant began exploring an undeveloped section of the property in the southeast corner of the zoo that was adjacent to the hoof stock area.

The area in question stretches along the middle fork of a stream known as Beargrass Creek, a major watershed stream in Louisville. The property contained lowland hardwood trees such as American Elm, Tulip Polar, Cottonwood, Sycamore, Green and White Ash. It turned out that the area also contained a small flood-plain swamp that had survived in a place where most of the land had long since been put to agricultural use. This particular spot had been pretty much left alone for



about 80 years, as determined by the age of a number of trees. It was ultimately determined that it would not make sense for the zoo to create an artificial wetlands as a natural wetlands already existed on the zoo's property. The challenge was to make this natural area accessible for visitors and to use it as an educational facility focusing on the importance of wetland ecosystems. The challenge lay in the fact that the area stretched about a quarter of a mile along the stream and would require an ADA (American with Disabilities Act) accessible trail leading to a boardwalk, deck, and interpretive signage. Moreover, the wetland is located almost a quarter of a mile from the nearest paved zoo walkway.

It should also be noted that at that particular time there was no real funding for the project. The consultant from Ecotech had some connections and was able to introduce us to a local landowner who was faced with some mitigation decisions about some land he owned in the southwestern part of our county. This mitigation process made it possible to get an initial \$30,000 to help fund the project at the zoo.

Another consideration was the maintenance of the area's natural state. We did not want to disturb the native wildlife (i.e. numerous species of frogs, salamanders, waterfowl, song birds, raptors and various mammal species) that utilized the area throughout the year. As we were dealing with a sensitive wetland ecosystem, the materials to be used in the area and the amount of disturbance in getting everything in place also had to be kept to a minimum. Needless to say, the initial amount allotted for the development of this outdoor education

facility was barely enough to pay for the materials for the project, not to mention the labor involved and the interpretive materials.

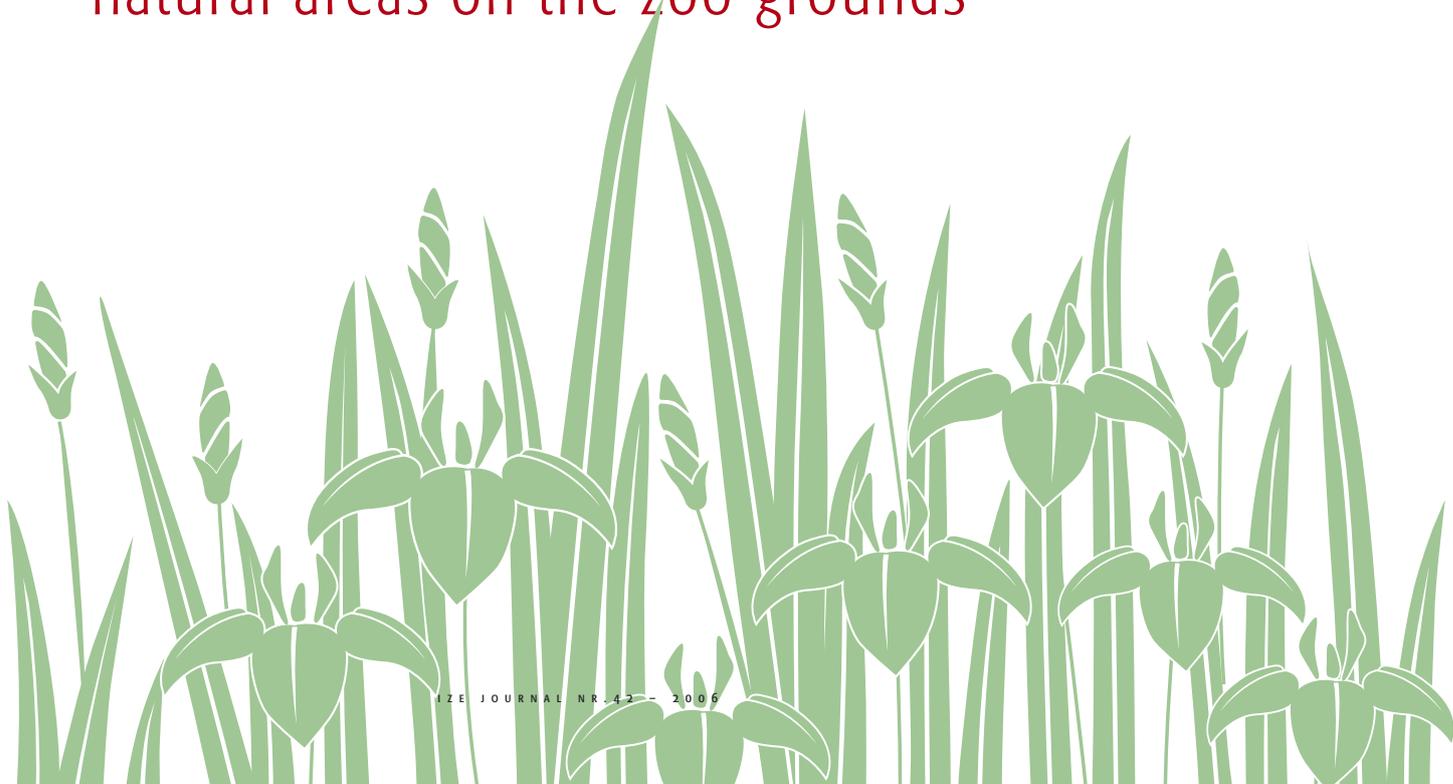
By the late summer of 1994, I soon found myself in the position of Project Manager. I was challenged to figure out how to get this area open with limited resources. I came to the task with some knowledge, having had a wetlands ecology course in graduate school. What became clear was that much of the work would have to be done by volunteers. As an educator, I also knew that this was going to be a learning opportunity for these volunteers and hopefully the knowledge gained working in the area would inspire them to 'spread the word' as to why we need to protect wetlands.

The project was planned out with the help and cooperation of a number of government agencies including the U.S. Fish & Wildlife Service, the Corp of Engineers, the Environmental Protection Agency (EPA), and Ecotech. The function of these groups was to make sure we met the criteria stated for proper use of the mitigation money as outlined in the mitigation contract that had been worked out with the landowner. I then began seeking volunteer help to get the project underway. The goal was to have the area open for educational programming by the spring of 1995.

Getting it done

In order to get the job done, volunteers would be needed to help layout and clear trail, remove exotic species and build a boardwalk and deck in the standing water area of the wetlands. A number of groups took on

ten years of Environmental Education utilizing natural areas on the zoo grounds



the challenge. The Kentucky State District Council of Carpenters was approached for the boardwalk and deck. This job would involve about 100 feet of elevated boardwalk leading to a 36' X 36' deck to be built in an area of the wetlands that at that time of year had as much as two foot of standing water in it. They had to accomplish this without the use of any heavy equipment that might damage the wetlands. No large equipment also meant that much of what would be needed had to be hand carried into the site from a staging area approximately a quarter of mile away. A creative group of members of the carpenters union designed and built a wonderful deck system that is still in use ten years later. Their initial contribution was close to 500 hours of volunteer time, which at normal rates would have far exceeded the budget for the entire project.

Trail clearing, surfacing, and exotic plant removal was and is an ongoing process. Initially over a quarter mile of trail had to be cleared through the lowland forest to get to the wetlands. This meant removing garbage from the area, clearing downed logs and exotic plants, and creating a flat trail that could be made ADA accessible for its entire length. This was accomplished by enlisting the help of the Louisville Zoo Youth Board, regular zoo volunteers, school groups, as well as boy and girl scouts.

These volunteers, with the aid of the zoo's horticulture department, have put in thousands of volunteer hours over the past ten years. Hundreds of tons of rock, gravel and stone dust were removed by wheelbarrow in order to create the ADA accessible trail that is still

in use today. Every time one of the volunteer groups comes to work in the area, it becomes an educational experience. While their ultimate goal may be to complete a certain task, we take the time to educate them about the importance of wetlands. We teach them how to identify many different native and exotic species of plants and animals, and point out the interactions that take place between the various organisms living in the area.

Hopefully by the end of the day the experience will not only leave them with the feeling of having accomplished their task, but they will have a better understanding of why the task was necessary and knowing that what they have done has made it possible for many others to learn about an ecosystem that can be found in their own backyard.

Educational Opportunities

Over the years, the Louisville Zoo's Education Department has tried to utilize the natural areas located on the zoo grounds in order to enhance the educational experiences that participants receive. Although the zoo is often referred to as a 'living classroom', the Louisville Zoo Wetlands Trail provides for an immersion experience unlike any other at the zoo. Most of the programs focus on wetlands ecosystems and their importance both ecologically and economically, but the area is utilized for so much more.

Yearly wildflower programs are conducted in the area. Over 80 species of wildflowers have been identified along the trail and the removal of exotics aids in their



propagation. Programs designed around identification of woodland plant species, seasonal identification of trees, plant adaptations to wetlands environments, understanding deciduous forest ecosystems and identifying non-native invaders are also enhanced by using this area.

Numerous professional development workshops for teachers have been conducted in the wetlands. Programs to help teachers learn about water testing, watersheds, the importance of wetland and deciduous forest ecosystems, plant and animal identification and other related topics are covered in these workshops. A wetlands teacher packet and booklet was printed to be used when visiting the area. 'The Wetlands Experience' packet has pre and post visit activities that can be used when planning an educational experience at the zoo as part of a field trip.

Programs for scout groups working on specific badges related to forest animals and plants are popular. Specific programs related to Kentucky animals, forest ecosystems, the importance of wetlands and simple tours also take place in the area. Wetlands workshops, which are extended programs normally taken by school groups and include plant and animal identification and study, soil testing, water testing, track identification and casting, and activities based on water and its role in the environment, are performed along the 8-10 acre site.

The wetlands pavilion that was constructed with a second set of mitigation moneys has made it possible to conduct evening programs. The pavilion is a covered structure with an opening in the center of the roof,

above a large fire hearth. An evening campfire provides heat and a place to roast marshmallows while conducting programs for the zoo's overnight programs. Family centered events featuring night hikes and Native American stories also work well there. The natural setting certainly helps make these experiences unique. The camps conducted at the zoo during the summer, public holidays and spring break, all use this forested area. Summer programs alone send over 800 campers into an area that many have never experienced. To be surrounded by 80 ft. trees, scrubs, vines and a variety of native wildlife has led to some interesting reactions by inner city students who think they have suddenly been thrust into some kind of primeval forest.

In Conclusion

The Louisville Zoo's mission statement is:

'To better the bond between people and the planet'.

All of the programs we conduct try to achieve this goal. However, there should always be efforts made to link people with the bigger picture. For those parks that have the luxury of having naturalized areas either on site or nearby, it can be a great asset to utilize those areas whenever possible. It may take some 'thinking out of the box', as the old cliché goes, but your programs will greatly benefit from their use. ◊

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