

## Turkey Run State Park

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Last year we took an 8-day trip to Calloway gardens in Southwest Georgia and along the way made many stops visiting zoos, botanical gardens, caves, sandstone canyons and arboretums. But our last stop on our return trip home encompassed all that we had seen at the prior stops and much more. We visited Turkey Run State Park near Terre Haute, Indiana only 6 hours from Madison.

As a child growing up in Champaign, Illinois, my family frequently visited the park. Forty years later, I wanted to return to see if childhood memories of this beautiful magnificent park had been exaggerated or altered with age. I was not disappointed. I remember deep cut-out Canyons and maneuvering around rocks and streams, but I don't recall that it required any athletic ability or endurance. Oh the suppleness and energy of youth.

The changes noted were the stone steps and hillside path that had been worn down by many a hiker and replaced by wooden stairs with hand rails. The treacherous loose rope ladders were now wooden ladders and crossing ditches on downed trees that required one to balance precariously or crawl across was replaced by wooden bridges. However, the hundreds of steps going down and up the ravines required physical stamina.

In my younger days, I was not intrigued with the diverse plant growth or the geology of the park. Climbing over the unusual rock formations, hiding in caverns, and sunning at the public pool where the boys hung out were my only interests.

A few years ago I was given the revised and expanded edition of **Reading the Landscape of America** by May Theilgaard Watts, Naturalist Emeritus at the Morton Arboretum, copyright 1957 & 1975 by Macmillan Publishing, Co. The book is out of print and Mrs. Watts has since passed away. I was thrilled when I found a whole chapter dedicated to the unusual landscape of Turkey Run State Park, and knew I wanted to return someday to see the Park through a different perspective. I re-read the chapter and then eagerly did as May T. Watts suggests in her preface: *I have offered my interpretations, in the hope that you will put the book down and go eagerly out...* Her insights and interpretations of the landscape of the park are still very pertinent today.

Following are some of the excerpts from her book and our experience.

Chapter 3: Canyon Story on following a stream in southern Indiana. *We had learned that the streams there at Turkey Run, Indiana, have it in their destiny to shape a ravine in their mud-pie childhood, and then knife out a canyon in their whittling youth, before their waters find middle-age spread in Sugar Creek, and old-age resignation in the Wabash.*

After obtaining a map of the trails, we decided upon Trail #3, considered rugged. It led us deep into the canyon, which attributed to most of those childhood memories. We marveled at the huge fallen slabs of rock and overhanging rocks that formed caverns and caves along the sandstone walls. When we started the trail above, the temperature was only 34 degrees, but deep into the canyon there were windless pockets of cool, damp air, where it actually felt warmer, or perhaps it was from our exertion of the hike.

As the canyon narrowed, there were no modern improvements of the trail. In reading her book I learned that in the canyon, the stream cuts through the soft shale and reaches the underlying Mansfield sandstone. To avoid wet feet from the trickling stream and carved out potholes we found we had to find footing on the sandstone, which actually was not slippery even with wet leaves and a recent rain. We crossed over and ducked under fallen beech trees, tramped through mud getting wet feet, and used fallen branches and broken off sand stone as stepping stones to step gingerly back and forth across the rivulets of the stream bed.

Along the sides of the canyon mosses grow. *Dominant among them were the liverworts. It was moist and new and young there in the steep-sided narrow canyon. Moist and new, like the conditions on the young earth when the first primitive plants came ashore. And there beside us, right at eye level were the plants that resemble, probably better than do any other living plants, those first land plants.*

She went on to describe they had no real roots, nor real leaves resembling plate-like alga. The first invasion of the land. Where the liverworts grew, the mosses grew explaining that like alga and liverworts, the mosses have not acquired tubes to carry water up through their structures, and their sperms must still swim in order to fertilize the ovum. This was the second invasion. The third chapter of the invasion were the ferns that grew where the mosses were thick. Ferns have developed a vascular system for carrying water. Above, the hemlocks represented the fourth chapter, the gymnosperms or the first naked-

seed plants, and beyond them closely followed the enclosed-seed plants, the angiosperms, of the Oaks, Beech and Maples, the fifth chapter of the invasion.

Their guide noted that the pages of a botany textbook and geological periods are prominent in the narrow canyons.

May T. Watts book and the State park brochure tells us the first invasion of the land by plants probably took place in the Silurian period, 400 million years ago when Turkey Run was under the Niagaran Sea, with trilobites and cephalopods. The first seed-bearing plant appeared in the Devonian period, with primitive fish swimming over head. The fern ancestors dominated the land in the Carboniferous period while sandstone that form the canyon wall was being laid down, compacted and cemented into solid rock. The swampy environment of this period gave birth to Pennsylvanian coal. The conifers appeared with the dinosaurs in the Triassic period about 200 million years ago. The enclosed seed plants appeared in the Cretaceous period about 120 million years ago and more recently during the Pleistocene Epoch the sandstone bedrock was carved into the canyons by the eroding action of glacial meltwaters.

*...Both sides of the young ravine (V-shaped) were rich in growth with shagbark hickory, linden, witchhazel, bedstraw and abundant Christmas fern. There seemed to be no difference between the vegetation of the two sides...*

*U-shaped stage,...There were more oaks on the south-facing and more sugar maples on the north-facing side.*

Further down the canyon as it becomes wider, the north and south facing walls have different plants. May T. Watts observed the north facing wall has the liverworts, mosses and bladder fern. The south facing wall is composed of lichens and mosses different from those growing with the liverworts and the first fern is a purple cliff brake, leathery and tough. On the south facing side is alum root, *Heuchera hispida*. As the canyon broadens, asters, goldenrod and other herbaceous plants move in. In dryer areas with better ground aeration the sycamores, cottonwoods and silver maples grow. This is followed by the walnuts and, eventually, young seedlings of beech and sugar maples.

At one point the trails crossed and we were above the canyon. We choose to take what we thought was an easier route. Trail 10 led us into a high canopy of trees. Pileated woodpeckers, chickadees, cardinals, blue jays, downy and hairy woodpeckers and many more we could not identify flitted and sang as we approached.

*Highest was the layered canopy of beeches and sugar maples, Beneath them were spread the red-fruited shelves of flowering dogwood. Farther down came the wine color of maple-leaved viburnum. And then there was the forest floor with its herbs and ferns among the fallen leaves.*

*We walked for a long time in that rich beech-maple forest. Then, abruptly, we found that we were under white oaks...the trees were of imposing age and size. No sooner had we commented on this change in the aspect of the canopy than we found ourselves in a belt of still more marked change. ...The four-layered aspect was gone. There was only one layer, the canopy of hemlock branches.*

*...It was as if, with a few mighty strides, we had stepped home to the woods of northern Illinois, and then had stepped further north, into a summer camp site in northern Wisconsin.*

*...Most of the hemlocks were astride its ( the canyons) very rim.*

*...the cold north had delivered them down here long, long ago, driving them south before the icy cold threat of the advancing glacier.*

*...As it grew warmer, the oaks and hickories began to come in...Some hemlocks survived this invasion. (Watts noted that it was drier near the canyon edge.)*

*...The wind had brought seeds of sugar maples and squirrels had brought beech nuts. The maple and beech seedlings thrive in the accumulated leaf mold and tolerated the heavy shade. The shade is too dense for its (white oak) survival. Hemlocks do not succeed in rooting in the thick ground cover of rotting leaves.*

Trail 10 intersected Trail 3, which came to the steep ladders. We instead chose to take Trail 5, considered moderate and described as with *fine trees and 140 steps going down from the west*. It was cloudy and overcast, so we only guessed we were heading west on this trail. Not so! As we ascended, Denny counted 144 steps—they lied!

Once on top, we marveled at the huge circumference of beech, maple and oak trunks and noted many beech seedlings in semi-open areas where trees had fallen and new growth was taking place. Unfortunately, it is difficult to find a beech tree that has not had initials carved into its trunk, and in fact one may still have mine from years past. I was fascinated with the leaf litter on the forest floor, trying to identify all the native trees that grew there. Suddenly, fallen leaves became more scarce and we found ourselves in a hemlock forest. which then opened up again to deciduous trees.

Back on Trail 3, we took a side trip to the bottom of the ladders (no need to climb up and retrace our steps) and back out to where the canyon meets Sugar Creek. We marveled at the hollows and ravines that the river had gorged out and the size and an abundance of huge Sycamores at the water's edge. Hours later, we found ourselves back at the suspension bridge that brings you back to the Nature Center across Sugar River. If memory serves me well, that suspension bridge used to have a rope strung across with a pommel seat you rode to the other side, or perhaps that was somewhere else.

There are 14 miles and 11 different trails designated as easy to very rugged. We only hiked 3.8 miles (not including back tracking). This park offers so much more, we both felt we must return.

From canyons, caves, streams, rivers, gardens of mosses and ferns, this native landscape is truly a great place to visit. Any plant lover interested in botany can marvel at the first beginnings of the plant kingdom to our present day growth all in one area.

—Sandra Allen