(Photo by Adele Hodde.)

As one of only four designated Illinois forests, not only does Big River State Forest offer visitors plenty of park activities, but also a rich history lesson.

Towering Pines

Story and Photos
By Kathy Andrews

Big River State Forest lives up to its name.

Located on the banks of the mighty Mississippi, the Henderson County facility provides visitors with miles of river-front for fishing, birding, boating and watching barges. And turning away from the river, stands of towering pines mark one of four properties owned by the state with the designation of state forest.

But beyond the obvious, Big River holds an interesting history.

Sac and Fox Indians frequented the area known as Oquawkiek, or Yellow Banks, a term memorialized today in the name of Oquawka, the community 9 miles south of the forest. Ma-ka-tai-me-she-kia-kiak, or Chief Black Hawk, also claimed the land as his home ground.

Local tradition holds that in May 1832, Captain Abraham Lincoln led nearly 2,000 mounted men through the area on their march to the Black Hawk War. Lincoln's connection to the area continued in October 1858 when he and Stephan A. Douglass visited Oquawka, four days apart, during their now-famous Lincoln-Douglass Debates.

Pines, now towering 30 to 50 feet over Big River State Forest, were planted during the Depression to stabilize the sandy soils.

Despite determined attempts, early pioneers found the shifting, sandy soils held little promise for making a living. So poor were the soils that by the Great Depression young men hired through the Civilian Conservation Corps were brought to the area to plant pine trees to stabilize the soils. In 1928, the state of Illinois purchased land to establish Big River State Forest as one of the first state forests. Subsequent land purchases in the 1940s and in 1969, plus leases on U.S. Army Corps of Engineers land, bring the total acreage managed by the Department of Natural Resources to approximately 3,100 acres.

Today, historical remnants await park visitors.

At the park headquarters, one of two fire towers remaining in Illinois reminds us of a day when communication of eminent fire hazards required dedicated staff perched high above the forest canopy. Constructed in 1941, the 60-foot steel tower is listed on the National Historic Lookout Register. An adjacent windmill, and four additional windmills along Windmill Road Scenic Auto Trail (a 15-mile gravel drive providing great

Big River State Forest boasts miles of river front for fishing, birding, boating and barge-watching.

Constructed in 1941 and standing at a height of 60 feet, the fire tower overlooks the forest canopy. At the time, four windmills also provided water for protection against forest fires.

viewing of white-tailed deer, wild turkeys and fall colors), were constructed by the CCC to provide water for young seedlings, and now provide water for fire protection purposes and watering holes for wildlife.

Big Pines Hiking Trail, a 1.4-mile moderate to easy hike, traverses through the oldest pines in the forest. At 1.6 miles, Lincoln Hiking Trail also is rated a moderate to easy trail and follows the route Lincoln's militia men reportedly traveled. This trail passes a pioneer cemetery with sandstone markers dating to the 1700s.

As rich as the forest is in history, Big River visitors will not be disappointed by the site's natural history.

At the forefront of the sand community is the Big River Natural Area, a 535 acre tract identified by the Illinois Natural Areas Inventory in 1976. Composed of dry sand savanna, dry-mesic sand prairie and dry sand habitats, the area is significant because of the natural quality and size of these communities, and because it is contiguous with other similar habitat in the state forest.

Michelle Simone, district heritage biologist, explained how management of the area emphasizes the need to provide habitat for two state-endangered plants, the large-flowered beard tongue (*Penstemon grandiflorus*) and Patterson's bindweed (*Stylisma pickeringii*), and a state-threatened snake, the western hognose snake (*Heterodon nasicus*).

"Management of this natural area includes prescribed burning, removal of woody plants from the prairie and exotic species control," Simone said. "These practices are critical for maintaining the high-quality habitat that these unique species require to survive."

Prior to the CCC tree planting program, a mix of prairie and blackjack oak scrub forest once covered a considerable portion of the area. Natural fires, and those ignited by the railroad lines running through the area, helped maintain the communities.

At a glance

Address: Big River State Forest, R.R. 1, Box 118, Keithsburg, IL 61442.
Telephone: (309) 374-2496.
Website: www.dnr.state.il.us/lands/landmgt/PARKS/R1/BIGRIVER.HTM.
Directions: From the south, east or west, Big River State Forest can be reached from Highway 164, taking the Oquawka-Keithsburg blacktop road for 9 miles north of Oquawka.
Satellite Facilities: The 89-acre **Delebar State Park** is 1.5 miles north of Oquawka near Illinois Route 164 and has a boat launch, fishing docks, camping area (75 total sites), picnic shelters, playground and trails. The 28-acre Gladstone Lake is the hub of the 85-acre **Henderson County Conservation Area**, offering bank anglers and boaters with electric trolling motors the chance to haul in a stringer of bluegill, redear sunfish, largemouth bass, crappie or channel catfish. Camping (35 Class C sites), picnicking, hiking, ice fishing and ice skating are among the other activities available at Henderson County. Both sites are managed through Big River State Forest. Near Lock and Dam 18, the **Henderson Creek Access Area** is a 500-acre waterfowl refuge with a boat launch and picnic area. Twenty-five miles north of the park office, **Crosses Corner** provides additional boat access above Lock and Dam 17.

(Photo by Barrie McVey/DNR.)

Built using the tools and techniques of the late 1800s, replica cabins were from pine trees harvested from the forest.

(Photo by Adele Hodde.)

Spanning approximately 3,100 acres, Big River State Forest is known for its nature preserve and diversity of sand-community plants, including several rare species.

Today, much of the forest management plan focuses on a slow reversion back to original habitats.

"Our focus has shifted from annual replanting of large numbers of pine seedlings to thinning out 5- to 20-acre stands each year," said district forester Barrie McVey. "It is amazing to watch prairie plant seeds, dormant in the soil under the shade of pine trees for more than 70 years, germinate and begin the process of restoring these native communities."

Additionally, firewood cutters are allowed to obtain a permit from the park office to harvest wood in designated areas in the forest for $10 a pickup load and approximately 200-300 logs are harvested each year for construction purposes. In 1999, volunteers with the Nauvoo Restoration project cut pine logs, hauling them from the forest using horses and chains, for the construction of replica cabins within the nearby Mormon settlement.

Even with annual timber stand improvement projects, large expanses of pines remain, providing scenic backdrops for overnight and day-use visitors.

Big River provides diverse, year-round camping opportunities. Near the north boundary of the facility, 20 equestrian camp sites provide easy access to 28 miles of designated horse trails, and an additional 40 miles of fire lanes are open for trail riders. At Riverview Campground, visitors may opt for one of the 15 tent (Class D) sites situated on a sandy beach of the Mississippi, or one of 32 Class C sites. Adjacent to that campground and situated under the pines, the Shady Pines Campground contains 21 Class C sites, two picnic shelters (may be reserved by calling the park office after January 1 each year), a horseshoe pit and a playground. Additional Class B/E, D and tent camp sites are available at Delabar State Park, 7.5 miles south of Big River. Some sites at each park may be reserved by contacting the Big River office. Water is shut off at the campgrounds in winter months, and hardy visitors are advised to call to the park office to ensure weather conditions have not closed campground roads.

Five picnic areas, including one each at Campbell Slough and Putney's Landing, provide tables, camp stoves, drinking water, scenic forest or river vistas and easy trail access for the day visitor. A second playground is available at Big River Shady Pines Campgrounds.

Boating, fishing and hunting also are popular with park visitors. Whether to enjoy the sights along the river, water

ski or to spend a day angling for sunfish, bass or catfish, boaters will find boat access areas at Riverview Campground (low water can make access difficult part of the year) or a mile south of the campground at Putney's Landing.

According to Tony Newton, Big River site superintendent, sportsmen have ample opportunity to visit the forest throughout the year.

"During the winter months, upland game and raccoon hunters sign in at the park headquarters before venturing afield, and return to report their harvest at the end of their hunts," Newton explained. "In the spring, the forest is divided into six sections, with turkey hunters who have received a site-specific permit trying their luck at calling a gobbler into range."

Early fall has 100 dove hunters drawing for a numbered post on opening day, after which they need only stop by the office daily to sign in and out. Fall turkey and archery and shotgun deer hunting round out the offerings.

Big River State Forest holds seasonal variety for visitors. In the fall, scrub oaks set the prairie ablaze with color. Winter visitors find quiet trails for cross-country skiing through snow-draped pine boughs, bald eagles perched in a riverside tree, or, if snow levels permit, a site for an exhilarating snowmobile ride. Spring wildflowers bring color to the prairie, and the heat of summer finds visitors enjoying cooling breezes from the deck of a boat or under fragrant pines.

Whether exploring the region for its history or natural resources, a stop at Big River State Forest will be a highlight of your next trip.

A Brief Geologic History of the Area of Big River State Forest

Driving along or floating down the Mississippi River, you may think of past cultures that relied on the river for food, shelter and transportation. This rich cultural history of the Mississippi River Valley is the most recent reflection of the complex and intriguing geologic history of the river and the area. The area of Big River State Forest, with its peaceful pine forests and riverside campgrounds, provides and excellent opportunity to see the variety of geologic materials and landforms that have developed from the forces of the mighty Mississippi. Engineered levees, locks, and dams contain the river in many places, but they are ultimately no match for the relentless earth-moving power of the Mississippi River through geologic time.

Almost all of what we see on the land surface near Big River State Forest today is a result of geologic processes that occurred during the Quaternary Period. During this time, continental-scale glaciers repeatedly covered the area of Big River State Forest and altered the course of the Mississippi River several times. The river was one of the major outlets for glacial meltwater, and the river's course today is very different from what it has been in the past. Prior to the most recent glaciation (about 21,000 years ago) and during the times between older glaciations (120-150,000 years ago and >500,000 years ago), the ancient Mississippi River flowed southward toward the area of the Quad Cities but turned southeastward near Clinton, Iowa and flowed across the Green River lowlands to join what is now the Illinois River near the great bend of the Illinois above Peoria. So, the valley of the lower part of the modern Illinois River through central Illinois was originally covered by the ancient Mississippi River. During these times, the ancient Iowa/Cedar river flowed southeastward through Iowa and entered what is now the modern Mississippi River valley just south of Muscatine, Iowa. This river flowed through what is now the area of Big River State Forest and joined the ancient Mississippi River near St. Louis. During the most recent glaciation (about 21,000 years ago), glaciers moved across Illinois from the Lake Michigan basin and dammed the Ancient Mississippi River near Hennepin in Marshall County. When this happened, a large lake formed in the Green River lowlands between the Quad Cities and Hennepin. This lake ultimately spilled over into the ancient Iowa/Cedar river valley and re-routed the Mississippi River into its current path and through the area of Big River State Forest.

Sand dunes created by glacial deposits from the ancient Mississippi River are readily evident throughout the area.

Today in the Mississippi River Valley, most of the landforms are associated with events during and after the most recent glaciation and studying these landforms can help unravel the geologic history. For example, terraces are the remains of ancient floodplains formed at higher elevations when the river was choked with the sediment and water gushing from the melting glaciers. When the river lost its abundant sediment supply, due to glacier retreating, the river downcut and left behind terraces that reveal the former river level. These flat, continuous surfaces are easy to see near and in the forest. Parts of an old terrace are located high in the river valley along the eastern bluff, particularly just north of Bald Bluff. This terrace is thought to be associated with the re-routing of the Ancient Mississippi River about 21,000 to 18,000 years ago. Big River State Forest is situated on a large, younger terrace of the Mississippi River, which formed between 18,000 to 12,000 years ago. This terrace likely formed as the continental glaciers melted back from Illinois, Wisconsin and Minnesota for the last time, and the sediment supply to the Mississippi River decreased. The terrace is about 30 feet above the current river level and is composed of thick, sandy, river deposits that are capped by large, wind-blown dunes that trend northwest-southeast. These dunes likely formed when large quantities of silt and sand were transported within the river valley during the waning stages of glaciation. Look for these dunes on the east side of the Oquawka-Keithsburg blacktop just south of the ranger station and you will see an undulating, sandy surface overlain by the pine forest. Approximately 20 feet of the same wind-blown silt and sand deposits also lie atop Bald Bluff to the east of the forest, and wood and other organic materials in these deposits have been radiocarbon dated to be about 13,700 years old.

Another geologic feature, preserved as a broad, low-lying valley located between the dune-covered terrace and the eastern valley wall, is visible when traveling from the state forest toward Bald Bluff. This valley, called the Edwards River paleochannel, is an abandoned stream channel that was active between 12,000 and 10,000 years ago. It is filled with sandy stream deposits that include layers of reddish-brown clay. Remarkably, these clay beds reflect flooding events that originated from the Lake Superior region during the last glacier retreat. Ultimately, as glaciers retreated further north out of Illinois and beyond the Great Lakes Region about 12,000 to 10,000 years ago, the Mississippi River likely began its transition from a glacial meltwater braided-river system to an island braided system, and by about 7,000 years ago, the river had likely attained a channel pattern similar to the modern river.

The complex history of the Mississippi River and its valley is difficult to unravel, but it helps us understand the origins of the beauty that we see in Big River State Forest and the surrounding area. So, while hunting, camping, boating or hiking in Big River State Forest look for the evidence of an exciting geologic history that made the park what it is today.

— Compiled by Jason Thomason and Joan Jach of the Illinois State Geological Survey