

## RAGBRAI Geo-pedia

### The Ottumwa Coal Palace

While in Ottumwa, take a moment to remember Iowa's dominance in the coal mining industry in the later part of the 19<sup>th</sup> century. In 1890, twelve counties and various businesses banded together to build the Coal Palace in Ottumwa, Iowa. Together, they hosted an exposition there to promote Iowa coal and other Iowa products.

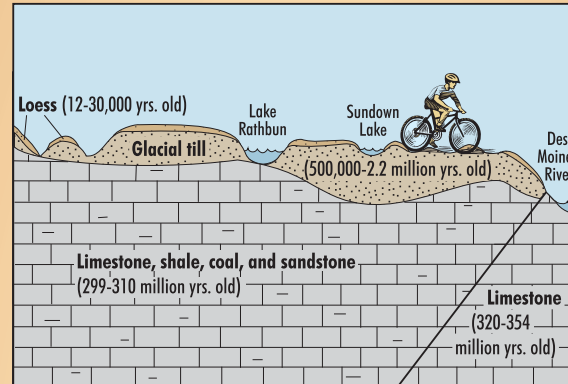
The Coal Palace was a unique and imaginative example of geologic materials used as building stone in Iowa. Completely veneered with blocks of coal, it was built to honor area miners and to publicize the coal resources of southern Iowa. These coal deposits are the carbonized remains of plants that flourished in tropical coastal lowlands that were present here about 300 million years ago (Pennsylvanian age).

The lavish palace-like building displayed a lofty 200-foot tower, with a dance floor near the top. In contrast to its dark exterior, the interior was bright, with vast rooms decorated with colorful displays made of wheat, oats, corn, sorghum and cattails, including a wall-sized portrait of Chief Wapello. There was a large auditorium for concerts, plays and speeches, and even a 30-foot tall waterfall. A reconstructed coal mine, complete with a functional shaft and hoist, was featured beneath the structure so that visitors could experience being lowered into a coal mine.

The Ottumwa Coal Palace was dismantled following the 1891 exposition season.

COVER PHOTO: *Coal Palace, Ottumwa, Iowa 1890.*  
*Photo courtesy of State Historical Society of Iowa – Iowa City.*

### Day 5 Milestones



**Start:** Chariton

**Chariton River:** 1.7 miles

**Pin Oak Wetland:** 0.1 mile after Chariton River

**Confidence:** 21.9 miles after Chariton River

**Lake Rathbun:** 5 miles after Confidence

**Des Moines River:** Downtown Ottumwa

**Finish:** Ottumwa – 74 miles

#### For more information...

about Honey Creek Resort or to make online reservations, visit: <http://honeycreekresort.com>

The USGS operates and maintains the streamflow gage at Rathbun in cooperation with the U.S. Core of Engineers. Real-time discharge and water-quality data can be found at: <http://ia.water.usgs.gov/>

A replica of the Iowa Coal Palace is housed at the Wapello County Historical Museum in Ottumwa. The website, which shows photos of the replica, can be visited at: <http://wapellocountymuseum.com>

# RAGBRAI 2009

## Learn about the Land

# Thursday, July 23 Day 5



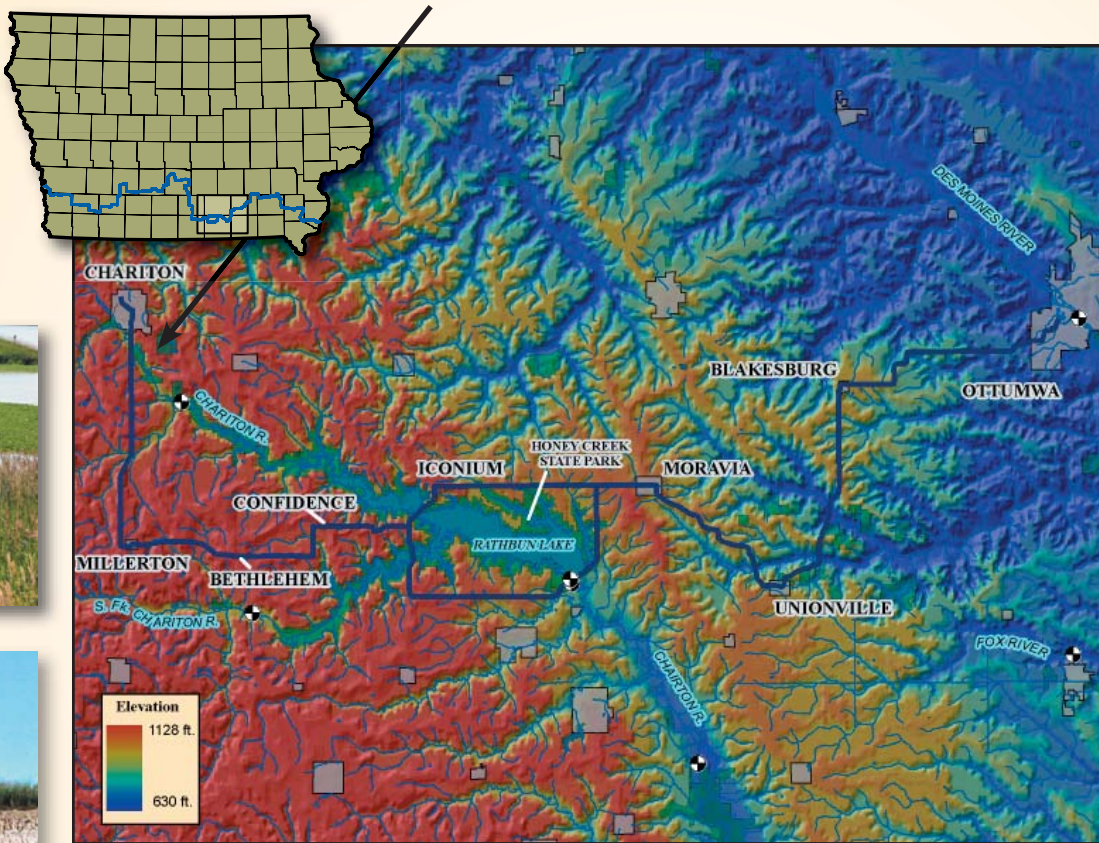
### Iowa DNR – Geological and Water Survey

109 Trowbridge Hall  
Iowa City, IA 52242-1319  
(319)-335-1575  
[www.igsb.uiowa.edu](http://www.igsb.uiowa.edu)

### US Geological Survey

Iowa Water Science Center  
400 S. Clinton St.  
Iowa City, IA 52240  
(319) 337-4191  
<http://ia.water.usgs.gov>

Today, as you begin biking south from Chariton, you'll see **Pin Oak Marsh** (photo below, left). Pin Oak Marsh is a haven for wildlife, and is part of nearly 2,000 acres of land in the Chariton River watershed protected by the Lucas County Conservation Board. Species you may see in this area include ducks, Canada geese, great blue herons, and several species of songbirds. This time of year marshes are alive with activity, from the chorus of frogs, to bird-life busy with raising their broods. Additionally, Pin Oak Marsh and other marshes you see along the way provide beautiful outdoor venues for hiking, birding, and hunting. These marshes also help improve the quality of our water by allowing it to pool. Pooling gives contaminants time to break down, surface water time to filter as it percolates into the ground water, and flood waters somewhere to go, instead of our homes.



● USGS streamflow station  
■ Parks and Preserves

See if you can spot a feature geologists call the **Late Sangamon Paleosol** on RAGBRAI today. This paleosol (ancient soil) is frequently found as a red exposure along the side slopes of a hill. When the soil was originally exposed 130,000 to 30,000 years ago, it was continually eroded and weathered, giving it a distinct red color. As time progressed, a thin mantle of loess was deposited and stripped away. Today the paleosol is recognizable as red zones on the hillsides and is often identified by the presence of red cedar groves.

According to comprehensive state-level damage data, Iowa has had the largest flood losses of any state in the nation from 1983-2008. To reduce flood damage to communities located along the Des Moines River, the construction of the Red Rock and Saylorville dams and flood storage reservoirs was initiated in the 1960s upstream from Ottumwa. The construction of **Rathbun Dam & Reservoir** upstream of Centerville (Rathbun Reservoir shown above) was authorized by the Flood Control Act of 1954. Construction of the dam and embankment began in September 1964 and was completed in 1969. The U.S. Army Corps of Engineers manages all three dams and lakes to benefit the nation by providing flood damage reduction, recreation, water supply storage, fish and wildlife management, and downstream water quality improvement.



Lake Rathbun is one of the largest lakes in Iowa, covering 11,000 acres with an additional 23,000 acres of land sur-

rounding it. **Honey Creek Resort** on Lake Rathbun (photo right) is Iowa's first state park "destination resort." Recently opened in 2008, the resort overlooks the 11,000-acre lake and has a variety of fun activities for the whole family, including bike trails, an 18-hole golf course, boat rentals, and a pirate themed water park!

