

Iowa Rocks!!!



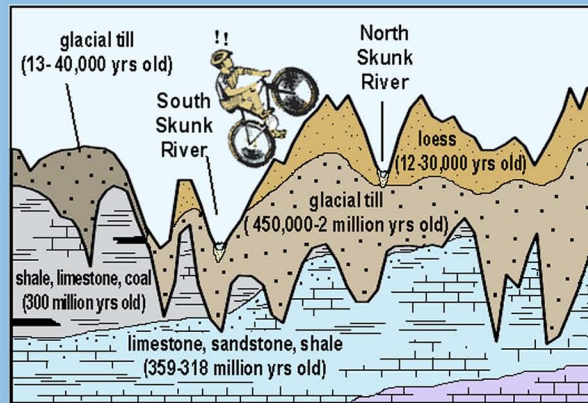
Imagine life in Iowa without structure – impassable roads and new homes without a foundation of concrete. These are only two of many countless uses of crushed limestone, perhaps Iowa's most forgotten natural resource. Each year, Iowans use over 32 million tons of crushed limestone! It impacts the lives of every Iowan every single day. It is a key ingredient in the construction of our infrastructure, roads, commercial buildings, and bike paths. It even purifies our drinking water, increases crop production by neutralizing acid soil in our farm fields, and is the key ingredient in antacids.

Employing over 1,800 people, the limestone industry in Iowa is very conscious of its impact on the land and has a long history of working to protect the environment and ensure proper reclamation of mined lands.



COVER PHOTO: Bison grazing at Neil Smith National Wildlife Refuge.

Day 5 Milestones



Start: Altoona

Off Des Moines Lobe

on to Southern Iowa Drift Plain: mile 10

South Skunk River: mile 21

North Skunk River: mile 38

Finish: Grinnell, mile 55

For More Information...

The history of coal mining in Iowa can be found at:

www.uni.edu/iowahist/Social_Economic/CoalMining_inIowa/coal_mining_in_Iowa.htm

Underground coal mining information in Iowa see:

www.igsb.uiowa.edu/Browse/coalmine/coalmine.htm

Iowa's State Parks and Recreation Areas can be found at:

www.iowadnr.gov/Destinations/StateParksRecAreas/IowaStateParks.aspx

Up-to-the-minute information on all of Iowa's 171 stream flow gages can be found at:

<http://waterdata.usgs.gov/ia/nwis/current/?type=flow>

RAGBRAI 2011

Learn about the Land

Thursday, July 28

Day 5



Iowa DNR -Geological and Water Survey

109 Trowbridge Hall

Iowa City, IA 52242

www.igsb.uiowa.edu

US Geological Survey - IA Water Science Center

400 S. Clinton St.

Iowa City, IA 52240

<http://ia.water.usgs.gov>

Iowa Limestone Producers Association

5907 Meredith Dr.

Des Moines, IA 50322

www.limestone.org

Rock Creek State Park

Rock Creek, one of central Iowa's major State Parks, was officially dedicated on August 24, 1952. Located near Kellogg, the 1,697-acre park includes Rock Creek Lake. At 602 acres, it is the third largest state operated artificial impoundment. The lake has 15 miles of shoreline and its beach provides an excellent spot for sunbathing. Anglers troll or cast for such species as bass, crappie, catfish, walleye, tiger muskie, and bullhead. The park is a haven for many different species of wildlife. At the lake's far north end, the Iowa Department of Natural Resources maintains a game management area. Thousands of ducks (teal, bluebills and mallards) migrating to their summer breeding grounds take refuge at Rock Creek. White-tailed deer and other animals are also seen.

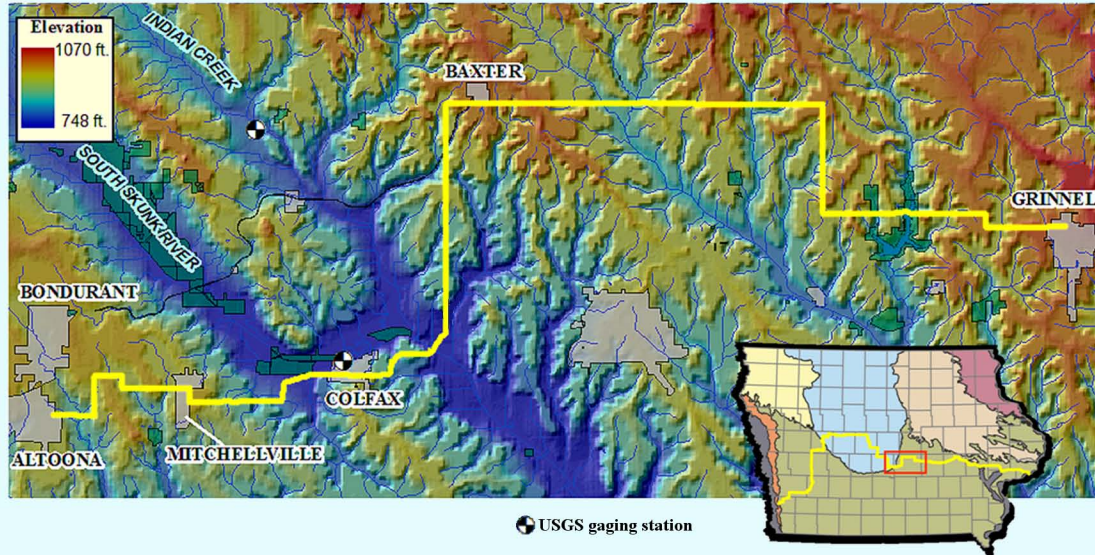


Grinnell College

Grinnell College is a private liberal arts college in Grinnell, known for its strong tradition of social activism and rigorous academic environment. Founded in 1846, it currently enrolls about 1,600 students and has been consistently ranked in the top 18 liberal arts colleges in the nation. Grinnell is the 49th wealthiest educational institution, of any size, in North America, with a larger endowment than many research universities such as Georgetown, Tufts, and UCLA. Its \$1.26 billion endowment, the fifth-largest among United States liberal arts colleges, is evident in the college's facilities, art collections, and generous financial aid programs. The Faulconer Gallery displays much of Grinnell College's art collection of approximately 5,000 original works. The Grinnell College Libraries have been recognized by the American Library Association with the Excellence in Academic Libraries Award for 2011. The award, presented by the Association of College and Research Libraries, acknowledged the "outstanding services, programs and leadership" provided to Grinnell College students, faculty, and community. Recent data place Grinnell at number eight among all U.S. undergraduate institutions in the proportion of graduates who go on to earn Ph.D. degrees and 15th for graduating female Ph.D. earners.

Southern Iowa Drift Plain

As you have surely noticed, the last 2 days of this year's RAGBRAI route is far less hilly than the first 2 days. Today and for the rest of the trip you will see a return to the hilly landscape. This is because most of this year's route is on the mature landscape of the Southern Iowa Drift Plain. The largest landform region in Iowa (see map on Day 1 brochure), the Southern Iowa Drift Plain comprises most of the southern half of the state. Iowa was glaciated numerous times from 2.2-0.5 million years ago. These glacial advances left behind a thick package of glacial till. Long periods of erosion and landscape development created the well-defined river valleys and topography that we see today. More recently, this area was mantled by several wind-blown loess deposits, accentuating the topography. The loess deposits are thickest near Missouri River and rivers that carried material from the Des Moines Lobe.



**"If It Can't Be Grown
It Has To Be Mined!"**



**Everything we have and everything we
use comes from our Natural Resources**

In the late 1800s and early 1900s coal mining was a major industry in Iowa, in large part to fuel the westward expansion of the railroads. By 1876 the North Western Railroad reached Council Bluffs, and Iowa was the leading coal producer west of the Mississippi and fifth in the U.S. Annual coal production in Iowa peaked at 9.3 million tons in 1918, when Iowa led the nation in coal production. Des Moines and Colfax saw extensive underground mining of the coal seams that occur in the Pennsylvanian-age bedrock directly below the glacial drift in this area. Mine depths ranged from a few tens of feet in the eastern part of Des Moines to 350 ft. west of the city. Polk and Jasper counties produced over 61 million tons of coal since mining began in 1840. No coal mining has occurred in Iowa since 1994 when the last mine, about seventy miles to the southeast, closed.

Coal has been mined in 31 of Iowa's 99 counties. About 400 million tons of coal was mined in the state, but it is estimated that more than 3.5 billion tons remains in the ground. In Polk and Jasper counties only about 8% of the original reserves of coal have been mined, with about 675 million tons remaining in the ground.

Underground Coal Mining in Iowa

About 6,000 coal mines underlie 80,000 acres of Iowa, 3,800 of which are in urban areas. Well documented cases of mine collapse in the Des Moines area resulted in damage to structures and utilities, and periodic problems are likely to continue.

