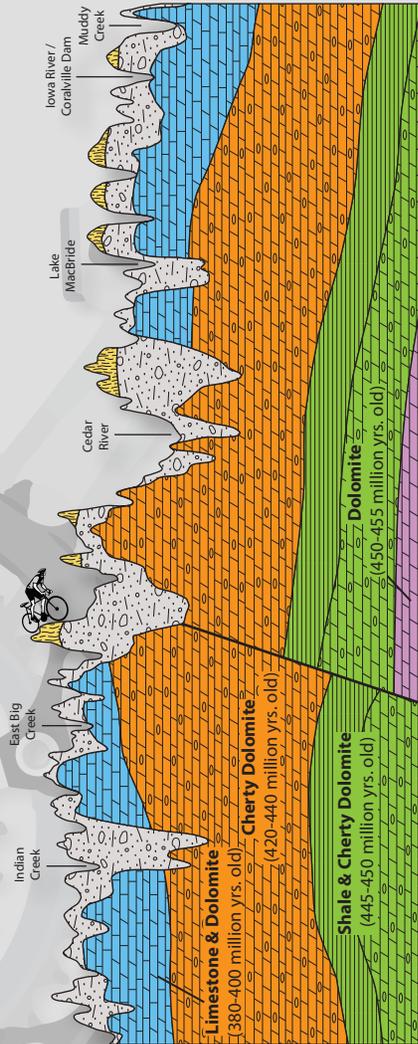


Paha

You will have the opportunity to see several excellent examples of paha on RAGBRAI today. Paha, a Dakota Sioux word meaning hill or ridge, are erosional remnants associated with the formation of the Iowan Surface. These elongated ridges are oriented northwest to southeast and are found throughout the Iowan Surface landform region. Stratigraphically, these ridges consist of a thick mantle of loess (wind-blown silt) over glacial till with an intervening paleosol. Today's route will cross several paha. Riders will cross one approximately two miles south of Springville and ride down the axis of another several miles later. Also, the town of Mt. Vernon sits on top of a paha, with Cornell College on the northwestern end. Riders will traverse its axis before heading south toward Coralville.

* Cover photo: Diorama of what the Devonian seas may have looked like. On display in the Iowa Hall portion of the UI Museum of Natural History.



Daily Geology:

The dark diagonal line in the cross-section is the Plum River Fault Zone (PREZ). Stretching over 110 miles from the Amana Colonies into northeastern Illinois, the PREZ is referred to as a fault zone because the bedrock didn't move along a single line, but rather multiple fault lines nested together; over half a mile wide in places. Displacement of 270' at the bedrock surface has been documented and over 1,000' of displacement in the Precambrian basement rocks have been estimated based on geophysics.

RAGBRAI

Day 6

2015

Friday, July 24

Learn About the Land



Devonian Fossil Gorge

Devonian Fossil Gorge is a 1/4 mile long exposure of fossiliferous limestone strata of Devonian age (~385 million years old) in the emergency spillway of the Coralville Dam. The gorge was created by the floods of 1993 and 2008, when the water level behind the dam rose above the crest of the spillway and poured over in a torrent, tearing away vegetation, pavement, topsoil, sediments, and exposing the solid limestone with a wide variety of fossils in incredible abundance. Interpretive exhibits line the entry plaza and open observation platform, and 20 "discovery points" are marked by numbered hexagonal metal plates: maps and explanatory brochures are provided. Operated by the Corps of Engineers, the history and science of the dam and gorge are featured in a visitors' center located on the east end of the dam.

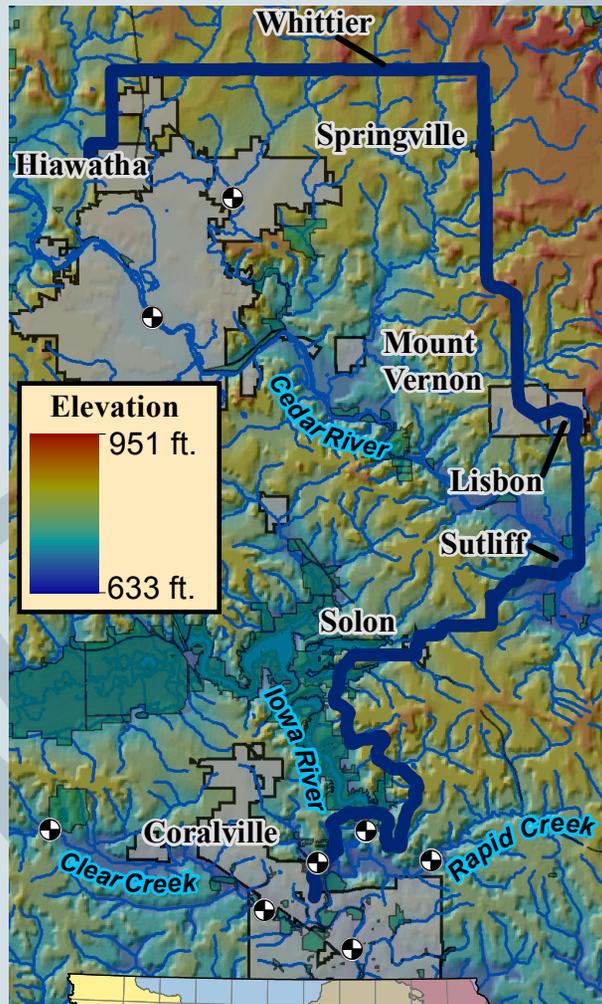


Iowa Rocks!!

If it can't be grown it has to be mined



*Everything we have
and everything we use
comes from our
natural resources*



-  USGS streamflow station
-  Parks and preserves
-  Cities and towns



History of Coralville Dam

The United States Army Corps of Engineers (USACOE) built the Coralville Dam on the Iowa River north of Iowa City primarily as a flood control project for tributaries of the Mississippi River. The dam is a 100-foot-high earthen structure, capped and faced with limestone rubble (quarried near the dam site). Construction was completed in 1958. The reservoir has a capacity of 461,200 acre•ft of water (=137.18 billion gallons) at its "100 year flood" level of 712 feet above mean sea level at the crest of the concrete emergency spillway. Maximum controlled outflow (discharge) from the dam is approximately 20,000 cubic feet/second (CFS).

The above photo is of the Coralville Dam at flood stage in June 2008. The emergency spillway of Coralville Dam is on the left of the main dam structure in this image and the dam control structure (discharge outfall) is on the right. Water overtopped the emergency spillway twice (floods of 1993 and 2008) eroding alluvial and glacial sediment downstream of the concrete apron of the spillway, exposing Devonian-age fossiliferous limestone bedrock (in the treed area). This area of exposed bedrock is known as the "Devonian Fossil Gorge." Inflow into the reservoir on June 13, 2008 from the Iowa River Watershed was estimated at 48,000 CFS (Riley Post, USACOE, personal communication).