The Coralville Dam's emergency spillway serves as a safety valve to release excess water and protect the dam if Coralville Lake levels rise too high. The spillway has served that function twice in its history, once in 1993 and again in 2008. During the 1993 event, the flood waters swept away a campground and picnic facilities and first exposed the rocks of the gorge. It was then given the name "Devonian Fossil Gorge." The flooding in 2008 widened the gorge and swept away loose rocks and vegetation to expose additional rocks and fossils.

The limestone rocks exposed at the Devonian Fossil Gorge are of middle Devonian age (about 375 million years old) and include the Rapid and Solon members of the Little Cedar Formation. During this time, Iowa and much of North America lay at tropical latitudes just south of the equator, and the Devonian sea covered most of what is now the United States.

Composed of the fossilized remains of shells, disintegrated algae (mud), and other parts of animals living in the shallow tropical seas that covered the region during the Devonian period, this limestone was deposited across most of Iowa. Since then, it has been eroded away from northeastern Iowa and buried by younger rocks in the west and southwest parts of the state. The rock exposures at Devonian Fossil Gorge are unique because they have bedding planes that show the sea floor in layers much as it was deposited. Most rock exposures in Iowa, road cuts for example, are vertical cuts through the original bedding planes.

Visit the Coralville Dam's Visitor Center, operated by the U.S. Army Corps of Engineers, for additional information, to view flood videos, and to see fossils and other displays.

www.mvr.usace.army.mil/coralville/default.htm
Phone: 319-338-3543 ext. 6300
Brachiopods are shelled animals that lived attached to the sea floor. Typical species include Spinatrypas (left), atrypids (upper right), and ortho spirifers (lower right).

Cephalopods (illustration below) were the shelled relatives of today’s squids and related animals. Their shells were segmented (chambered and cone-shaped (photo right) and usually only portions are preserved at the Gorge.

Crinoids are animals that lived attached to the sea floor by a long stalk made of small disk-shaped plates. A calyx (head) was attached to the top of the stalk and long feather-like arms attached to the head collected food. They usually fall to pieces after death (crinoid calyx and stem pieces, below), although complete animals have been found at the Devonian Fossil Gorge (photo right).

FOSSILS of many types of animals are found in the limestone rocks exposed at Devonian Fossil Gorge. The most common are described here.

Coralis found at the Gorge lived in a shallow, clear, warm tropical sea environment. The two principle types are colonial (that lived in connected colonies) and solitary (single animals).

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Bryozoans, like corals, live attached to the sea floor. They are colonies of hundreds of animals that have branching forms and can be identified by their tiny pores.

Cephalopods (illustration below) were the shelled relatives of today’s squids and related animals. Their shells were segmented (chambered) and cone-shaped (photo right) and usually only portions are preserved at the Gorge.

This view of Iowa Hall’s diorama shows a Dunkleosteus, a giant arthrodire fish that grew up to 30 feet in length and was the largest animal on earth 375 million years ago. A portion of the skull of one of these creatures was found in the Devonian Fossil Gorge and can be seen at the Coralville Dam’s Visitor Center.

FOSSILS of many types of animals are found in the limestone rocks exposed at Devonian Fossil Gorge. The most common are described here.

Corals found at the Gorge lived in a shallow, clear, warm tropical sea environment. The two principle types are colonial (that lived in connected colonies) and solitary (single animals).

Trilobites are arthropods that lived on the sea floor. They have three main body sections: head, thorax, and tail. The most common at the Gorge include Phacops (below left) and Greenops (below right). Sometimes only the tails are preserved.

Placoderms were primitive fish (below) partly covered by bony plates that gave them an armored appearance. This fossil jaw (above) belonged to a 2 to 3 ft-long placoderm.

Faults are fractures along which rocks have moved. There are many faults present at the Devonian Fossil Gorge (seen as linear fractures in the rock) including one that moved about 10 feet (above). Linear scratches (slickensides) indicate fault movement (right).

Worms left burrows in muddy sediments (below).

Brachiopods are shelled animals that lived attached to the sea floor. Typical species include Spinatrypas (left), atrypids (upper right), and ortho spirifers (lower right).

Calcisphere

These sponges had hard skeletons.