

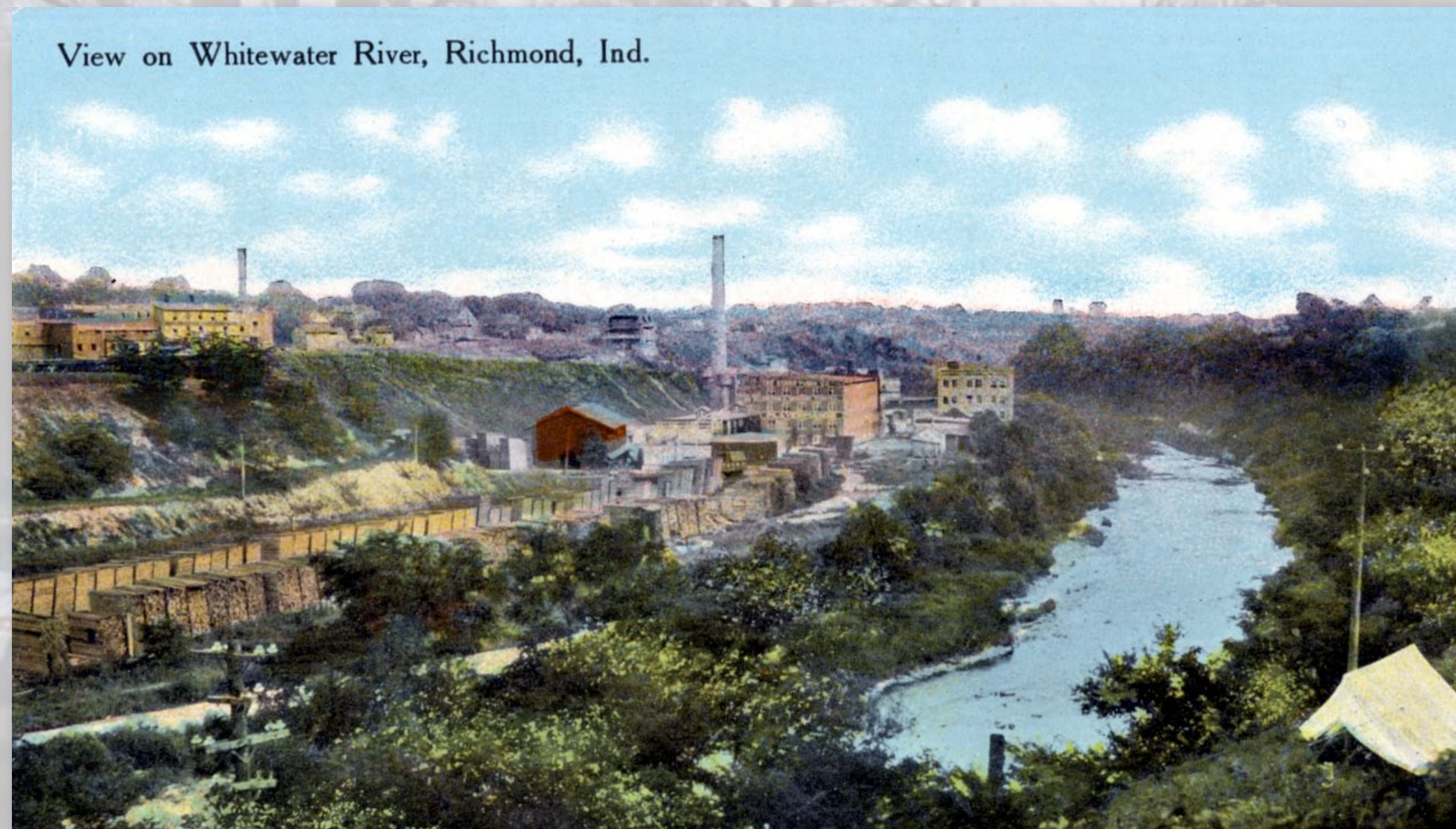
Whitewater River Gorge...A GEOLOGICALLY SIGNIFICANT NATURAL FEATURE

Did You Know?

The Whitewater River Gorge located here in Richmond is a geologically significant feature created by glacial activity.

Glaciers were formed by large amounts of snow that accumulated over years and turned to ice as it is compacted. With the weight of the massive glaciers and the force of gravity, the glaciers flowed downwards, almost like a huge frozen river. The southern movement of glaciers created a deep formation in the shale, clay and limestone layers.

The Whitewater Formation is home to the oldest fossils on earth found at ground level.

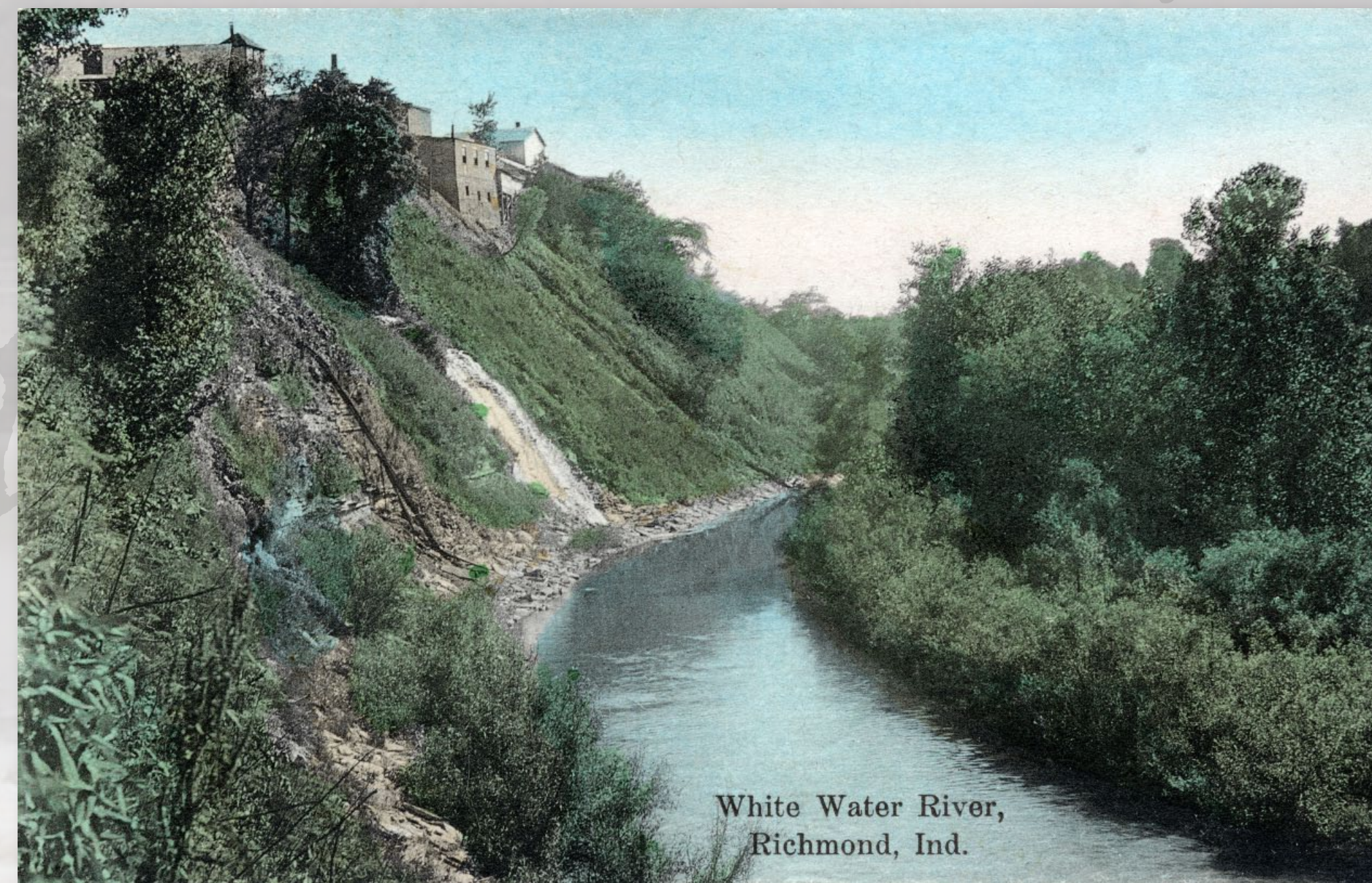


View of the Whitewater River with city
Photo courtesy of Morrison-Reeves Library

The Glacier Recedes...

In the last Ice Age (18,000 to 20,000 years ago) the glaciers started to recede and one large chunk of ice remained in the valley of the East Fork of the Whitewater River. This piece of ice was significantly large & geologists reported that the size actually caused a flood as it melted away. The flood was so strong that it cut narrow channel scores, several feet deep, into the ancient bedrock. Today this is known as the Whitewater River Gorge. See image below to view how deep the glaciers carved the formations along the river.

As the glacier began to recede it started to expose the Ordovician Period (part of the Paleozoic Era) fossils and, of special interest, the extinct trilobites (see information to the right). The Ordovician Period had a large variety of marine life and the extinction of this period was said to be the second most devastating extinction to the marine community in the history of the earth. One-third of two major families, plus several groups and a lot of the reef-building fauna were completely destroyed. More than one hundred families of marine invertebrates (animals without backbones) died in this extinction.



Glacier Formed Whitewater River
Photo courtesy of Morrison-Reeves Library



One of many different kinds of Trilobites
Photo courtesy of #####

Trilobites...

Trilobite means "three part body" in Latin, therefore the bodies can be divided into three lobes. These are hard-shelled, segmented creatures (which allowed them to roll into balls for protection) that were in existence over 300 million years ago in the Earth's ancient seas. These creatures were extinct before dinosaurs were around and were one of the most important creatures of the Paleozoic Era, the first era to show creation of complex life-forms. These fossils can be found in rocks all over the world and are among the favorite fossils, alongside with dinosaurs, to the paleontologists.

"...one hundred families of marine invertebrates died in this extinction."