



CAVE DETECTIVES: Unraveling the Mystery of an Ice Age Cave

(2007) by David L. Harrison.

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Review by The National Speleological Society

Reviewed by Danny A. Brass.

On September 11, 2001, a previously unknown cave near Springfield, MO was accidentally uncovered by a construction crew while dynamiting rock formations in preparation for extension of a road. The fact that the blast rubble had largely disappeared from sight instead of being thrown high into the air as expected alerted the crew to the presence of something out of the ordinary: an opening into a cave. A cursory exploration revealed that the Riverbluff Cave, as it was subsequently named, was far more than just another of Missouri's multitude of caverns. In fact, it was eventually found to contain a wealth of ancient fossils, the oldest of which are now known to be more than 900,000 years old. Riverbluff is one of only two caves in North America known to contain such ancient fossil deposits, making it an invaluable storehouse of information about regional life in the distant past (the other site is Porcupine Cave in Colorado¹).

In *Cave Detectives*, David Harrison brings the story of Riverbluff Cave to life. In this well-written narrative, primarily aimed at children 7 - 9 years of age, Harrison spins a tale of long extinct animal life in North America, skillfully weaving the story of ancient prehistoric beasts into the fabric of modern-day scientific exploration. Tracing the course of scientific studies in Riverbluff Cave, he highlights both the methodical and serendipitous nature of cave research—drawing attention to the close relationship between carefully planned studies and accidental discovery in the realm of cave science.

Harrison also explains how explorers and cave scientists work side by side as cave detectives, bringing both field research and laboratory studies to bear on their investigation of this unique underground paleontology study site. The author punctuates his story of Riverbluff Cave with a number of relevant sidebars, providing basic information on a variety of related topics: features of the Ice Age, genesis of caves and speleothems, aspects of cave conservation, and the formation of fossils.

A collection of full-color photographs and a series of nicely drawn illustrations depict the cave's discovery, exploration, and various fossil treasures. A short glossary complements the text. A regional timeline, stretching from 90,000 years ago until the present time, will help readers appreciate the evolutionary chronology of life at the Riverbluff site. In showing how researchers gradually unraveled many of the cave's long-held secrets, Harrison conveys a sense of the excitement and adventure inherent in the discovery process. As such, this book offers children and parents many opportunities for thoughtful discussion, especially among caving families.

In breathing life into the science of speleology, this Book Reviews volume may also stimulate an interest in cave-related sciences as well as help to motivate young readers towards a more critical observation of the world around them. Readers interested in additional details of the discovery and investigation of Riverbluff Cave can view an online video lecture by Mr. Harrison. This lengthy, but very informative presentation, which can be found at www.thelibrary.springfield.missouri.org/programs/other/riverbluff.cfm, also includes live, in-cave conferencing with the first scientists/explorers to actually investigate the cave: paleontologist Matt Forir, the lead scientist in the Riverbluff Cave project, and exploration team member Lisa McCann.