Miller, J. 2023. Hypogene speleogenesis of Ozark caves [abstract]. In J.H. Whitmore (editor), *Proceedings of the Ninth International Conference on Creationism*, p. 647. Cedarville, Ohio: Cedarville University International Conference on Creationism.

HYPOGENE SPELEOGENESIS OF OZARK CAVES

Jeff Miller, Apologetics Press, 230 Landmark Dr., Montgomery, AL 36117 jeff@apologeticspress.org

ABSTRACT

This abstract is an update on my continuing study of the origin of north American caves. Since it is difficult to fit carbonic acid dissolution speleogenesis into the timescale of the Creation model, and the Flood model can generate the acidic waters needed for hypogene speleogenesis (HGS), I suggest HGS is the primary mechanism of cave formation. To test this hypothesis, I have been visiting commercial caves to determine what percentage of them show HGS features and are thus likely to have been formed by HGS. This paper offers continuing preliminary results of that test, focusing on the caves of the Ozark Mountains region.

The features which characterize an HGS cave include (1) feeders (openings at the base of cave passages where the water entered the cave passage from below), (2) wall channels (where water rose along cave walls), (3) river-like ceiling channels (where water flowed along cave ceilings), (4) cupolas (dome structures on cave ceilings where pooled water lost dissolution potential), (5) superimposed cave passages, and (6) maze passages (where water flowed upward along orthogonal joints).

All 20 show caves visited in the Ozark region (Arkansas and Missouri) contain multiple HGS features. Nineteen of the 20 caves had clear feeders, with four of the feeders being "mega"-feeders. In spite of extensive fall-in and speleothem obstruction in many of the caves, all 20 caves were also found to have wall and/or ceiling channels. In 18 of the 20 caves, clear cupolas were present, with 11 of the caves containing mega-cupolas (similar to the "Big Room" at Carlsbad Caverns). In many, if not all, cases, the tour pathways may be the original channels that connected the mega-cupolas to their feeders.

While multi-level cave status is indeterminable in most cases, it is notable that in nine cases, the Ozark caves were known by cave staff to be multi-level systems, and in at least six other cases, evidence suggests those caves may be multi-level systems as well. Based on these results and similar ones in caves east of the Mississippi, HGS is likely responsible for the formation of all eastern U.S. carbonate caves.

KEYWORDS

Caves, hypogene, speleogenesis, carbonic, acid, sulfuric, karst, Ozark

THE AUTHOR

Dr. Miller holds a Ph.D. in Bio-Mechanical Engineering (Auburn University), a B.S. in Physical Science (Freed-Hardeman University), and B.S. and M.S. degrees in Mechanical Engineering (University of Texas at Arlington). While at Auburn University, he also instructed courses in Thermodynamics, Fluid Mechanics, and Heat Transfer, as well as Statics and Dynamics. He has been studying speleogenesis in North American caves since 2017. Dr. Miller currently serves as the full-time science writer for Apologetics Press and the associate editor of the monthly Christian evidences journal, *Reason & Revelation*. He is the author of several books, including *Science vs. Evolution* and *Flooded*.