

## *City Under Siege: How Caves and Karst Might Just Save the City of Glenwood Springs, Colorado*

### **ABSTRACT:**

A proposal to quarry the Mississippian-Age Leadville Limestone strata north of the resort community of Glenwood Springs, Colorado to provide aggregate rock for the quickly-growing eastern cities of Denver, Colorado Springs, and Fort Collins has been met with exceptional local and regional opposition. Glenwood and Garfield County residents, businesses, and organizations have joined together to oppose the expansion of the Mid-Continent Quarry from its current 16 acres to more than 300 acres. Cavers with the Colorado Cave Survey of the National Speleological Society are among those who have provided assistance in this ongoing opposition, working closely with the popular Glenwood Caverns commercial attraction in studying the area's geology, documenting known caves, and seeking previously-undiscovered caverns.

The October, 2019 discovery of Witches' Pantry Cave within the footprint of the proposed expansion greatly surprised local officials and the community, along with federal agencies, and the Denver-based mineral development company. Through studying scientific reports created in support of the expansion project, cavers were encouraged to carefully walk sections of the mountain in search of unknown cave and karst features. This significant new cave has exceptional promise for additional passageways and chambers, and appears to contain an extensive collection of bones of animals who stumbled to their deaths into the cave's pit entrance over potentially a millennium or more.

Geological studies suggest the mountain has extensive caves, developed by rising hot mineral water over millions of years. These hypogenic, mixing-zone caves can be lengthy – nearby Glenwood Caverns has more than three and one-half miles of surveyed passage, while the more distant Groaning Cave is Colorado's longest, with more than 15 miles of passage.

Future studies and exploration in 2020 will determine whether Witches' Pantry Cave will be destroyed through commercial quarrying in the near future, or preserved and protected by federal agencies for the advancement of scientific knowledge.