Geological Significance of Rats Nest Cave under Grotto Mountain, Bow Valley Corridor, Alberta

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ABSTRACT

Rats Nest Cave is a 4-km long cave system under Grotto Mountain in the Bow Valley Corridor. The cave has formed in the Livingstone/Mount Head carbonate Formation of Mississippian age. The cave developed as groundwater moved along a thrust fault, which dates back to the Rocky Mountain orogeny. Principal enlargement of the cave has occurred mainly during the Quaternary glaciations when glacially elevated water tables and high basal glacial water flows were available. Glacial sediments were also introduced into the cave at this time. Interglacial periods were, and are, times of lowered water tables allowing datable secondary minerals, biological deposits and some human artifacts to accumulate. The geological significance and accessibility of the cave (designated as a Provincial Historic Resource) make the cave ideal for research and educational purposes (Interpretive guided tours are conducted at the site). As such it is one of the focuses of the Canmore Geoscience Centre Program.

1. Fault-controlled Passage Rats Nest Cave with Secondary Mineralization

2. Location of Cave Grotto Mountain

3. Interpretive Guided Tour

References

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