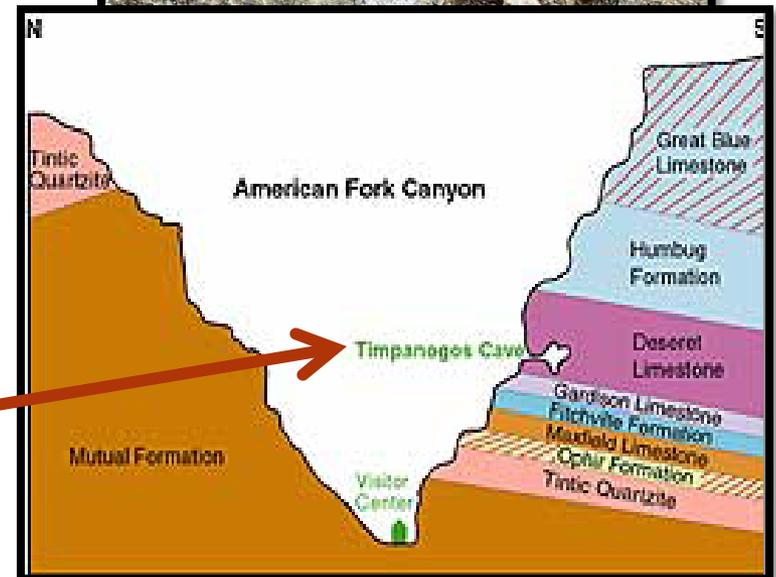




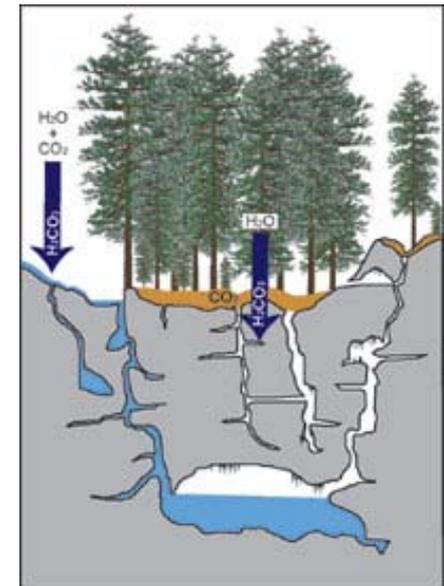
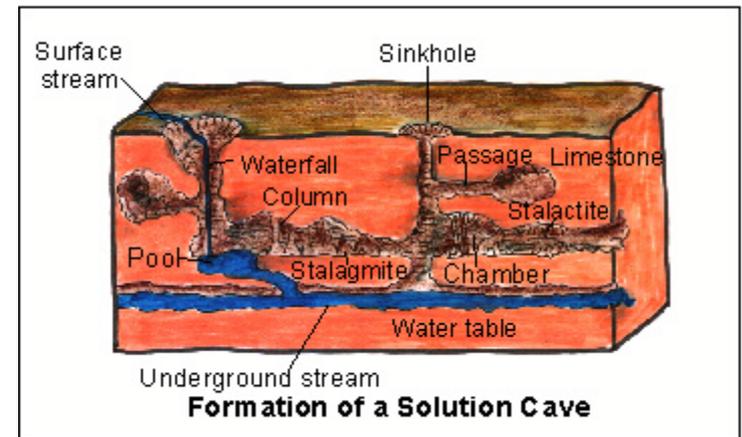
# How did fossils get in the caves?

- The fossils show us that Utah was once part of a shallow sea where fish and other sea creatures lived.
- When the creatures died their bodies floated to the bottom and after a long time huge layers of shells, plants and organisms built up.
- All those layers smashing on top of each other made the sedimentary rock limestone.
- Timpanogos Cave is in a layer of Deseret Limestone.



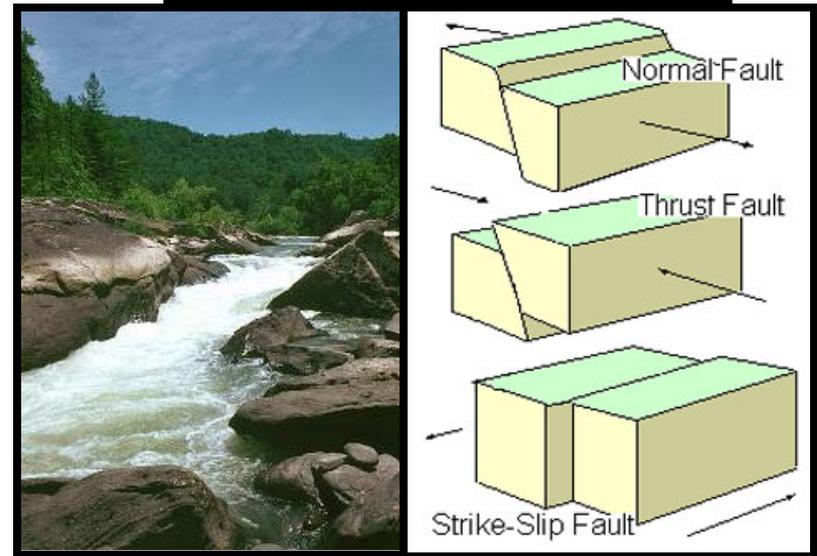
# What made the holes in the rock?

- As the continents shifted northward, huge plates of rock smashed together forming mountains and new fault lines.
- Water flowed into the faults from underground lakes and/or rivers.
- Water picked up carbon dioxide from the air or from plants in the ground and made a weak acid called carbonic acid.
- Carbonic acid ate away the rock until it created an opening to the outside air.



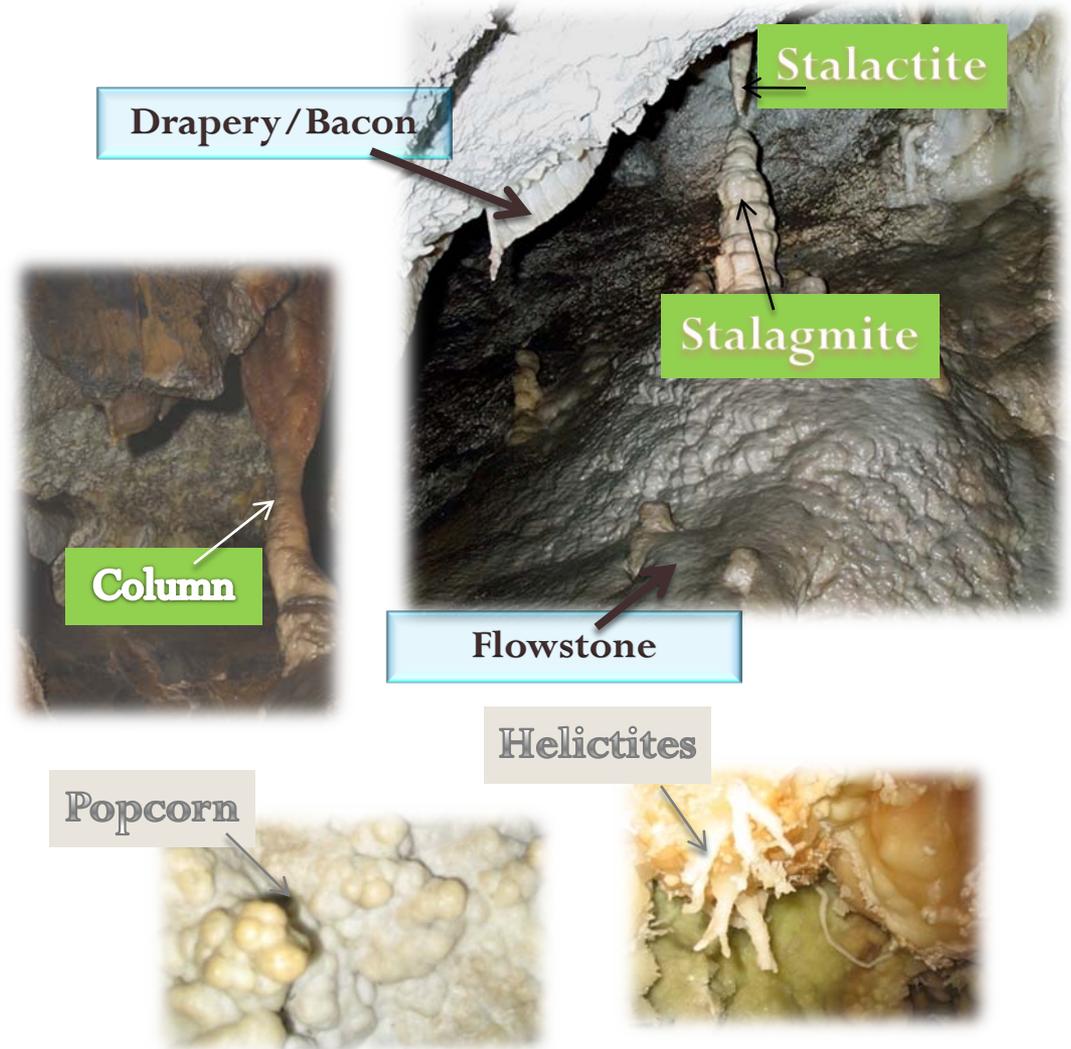
# How did the caves get so high?

- Pressure built up along the fault lines and the land began to uplift.
- The cave was pushed higher and higher in the mountains.
- At the same time, the river cut the canyon deeper and deeper.
- The mountains are continuing to grow higher, but erosion is breaking them down at the same time.



# How does water shape the rocks in the caves?

- Dripping Water**
  - Stalactite
  - Stalagmite
  - Column
- Flowing Water**
  - Drapery/Bacon
  - Flowstone
- Seeping or Evaporating Water**
  - Helictite
  - Popcorn



# What lives in caves? Not TICA specifically

## How Cave Biology Works

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### Cave Zones



#### Entrance Zone

Sunlight  
Variable  
Temperature  
Green vegetation



#### Twilight Zone

Less light  
Minor temperature  
changes  
Minimal plant life

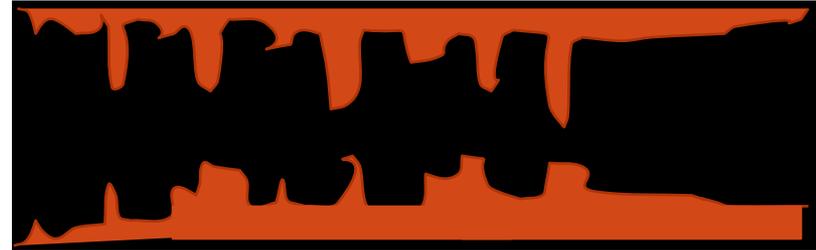


#### Dark Zone

No light  
Constant  
temperature

# What is the future of the caves?

- Formations grow slowly, but as long as water is moving through the cave they will get bigger and bigger.
- Stalactites and stalagmites grow together to make columns.
- Eventually the entire cave may fill up with calcite.
- Or the outside rock may erode away to expose the cave.



# THE END



- **Sources**
- <http://animals.howstuffworks.com/animal-facts/cave-biology2.htm>
- <http://www.enchantedlearning.com/geology/rocks/glossary/>
- <http://www.scienceviews.com/parks/timpgeologichistory.html>