



## An American Tour: 36



### Plymouth's Polar Caves

Looking for a destination that the whole family will enjoy? Kids won't even know they are learning about geology as they crawl through these dimly lit caves created by the glaciers in central New Hampshire, in the heart of New England and close to upstate New York. Located in the Beautiful Baker River Valley on the Tenney Mountain Highway, Plymouth, New Hampshire, they're perhaps America's most sensational glacial caves, and they're located in the most beautiful of woodland settings.

Polar Caves were named because of the way they were formed. They are the result of the third continental glacier during the Ice Ages. During the Ice Ages the temperatures became lower and, probably more important, the amount of rain in the north increased. So there was a lot of snow, which did not melt during summer and formed increasing shields of ice, the glaciers. As ice is not hard as rock, it starts moving under pressure, and with several hundred or even thousand meters high shields of ice, the pressure of their own weight is enough. So the ice of the northern glaciers was kind of *flowing* south, always melting at the tip.

As long as the amount of new ice was bigger than the amount which melted at the head, the glacier increased, moving south, covering valleys and hills. The moving glacier pushed the debris like a snow plough. The climate changed several times during the Ice Ages and warmer periods with less rain and colder periods with more rain succeeded. During a so called warm period, the glacier became shorter and left the moraine at the position of his longest extend. While it became shorter, it still moved south, but the melting rate was higher than the movement. And still debris was accumulated at the rim.

Polar Cave is a talus cave, which means huge boulders of rock lying on a heap do not really fit, and so there are crevices and cracks between them. They were formed by a shrinking glacier, leaving huge boulders, which came from the north. Talus caves are rather rare, especially the big ones. At Polar Caves there are three caves big enough to walk through. Their size differs much, narrow passages and bigger rooms are a result of fortuity.

[<http://www.showcaves.com/english/usa/showcaves/Polar.html>]

