

WHITEFACED ROCK

43.5108 N, 72.1330 W

New Hampshire was not originally part of North America. About 420 million years ago, New Hampshire, then part of a huge volcanic island or micro-tectonic plate known as Avalonia, collided with the larger tectonic plate that constitutes the rest of North America. The boundary of the two ancient plates lies roughly along the Connecticut River, and as a result the soils and rocks of New Hampshire and Vermont differ markedly. The up-tilted layers of rock along I-89 give you some idea of the force of the collision.

Whitefaced Rock is largely composed of granite but contains a large mass of white quartz, most easily seen from Skinner Brook. The boulder was once part of a much larger mass of granite that split either due to movement of the Earth's tectonic plates or just because the rock cooled and contracted deep in the earth. Over time, quartz was dissolved in superheated water from deep within the earth and injected into the crack. As the water disappeared, the quartz was left behind.

Geologists call veins in a bedrock, like this vein of quartz in granite, a dike or sill. Another large vein of quartz in the bedrock can be seen along the trail leading from the parking lot to the bridge, look for it on the side toward the road.