

Chert

What a nasty little word for everybody's favorite rock. Tibor Zoltai, my mineralogy professor at the University of Minnesota, comes to the rescue, by saying that chert is a popular or discredited name for the mineraloid – chalcedony. We need another rescue here; chalcedony is pronounced kal sid' nee. Some other charming names for chalcedony are: jasper, opal, carnelian, sard, flint, agate, leopard skin, and bloodstone.

You can usually identify chert by the phrase "I found a neat rock." If it is pretty, it is chalcedony, a mineraloid, if not, it is chert, a rock. Chert is shiny and breaks like glass. The way to tell red chert from cinnabar is to scratch it with a nail or knife. Cinnabar will turn bright vermilion as it crushes; chert will scratch the metal. With a hand lens, you can see the line of metal on the stone.

Chert is not a real mineral, because its atoms -- Silicon and Oxygen, SiO_2 -- are not arranged in any orderly structure. Chert can be formed by geyser drippings, or by water and dissolved silicon moving through soil or rocks. Petrified wood is chert, oops, chalcedony.

Chert was used by native Californians to make arrowheads. It is harder to work than obsidian, because it doesn't chip as easily. The arrowheads found in the park are black obsidian which is not found in the park. We assume that obsidian was traded for cinnabar. In Quicksilver Park, most of the chert is dark red, but I have seen orange, white, black, and turquoise. On the road to Mt Umanum, there is a shaded cliff of wonderfully folded beds of red-brown chert.

The chert in New Almaden grew on volcanic ash or lava two hundred million years ago when New Almaden was under the ocean. I heard a lecture by a geochemist who "could prove" that chert could not grow on the ocean floor. He got very red waving his arms around, and his shirt-tail came out of his pants. Maybe he was right, but we see chert on top of pillow lavas and ash beds throughout the Franciscan.



By Robbi Lamons