Petrified Wood: A Rock with Tree Rings

By Patti Albrecht, Owner of Earth's Treasures

Montana is known for many things and our forests are at the top of the list. They support our economy, recreational pursuits, ecosystem and tourism. Our ancient forests have also given us petrified wood, literally, "wood turned into stone." While a majority of fossils are impressions of ancient life left in rock, petrified wood is a 3-D replica of a tree from long ago.

In the early forests, when a tree died one of three things happened: most commonly, the tree decayed and returned to the soil; occasionally, the tree was compressed and turned into coal; rarely, the wood was fossilized and turned into stone, creating petrified wood. Petrified wood has been found on every continent except Antarctica.

For the wood to be petrified several things had to take place. It is generally accepted that most petrified wood fell and was washed away in a river, deluge or lava flow. The wood was buried under layers of sand, mud, sediment or ash, creating a lack of oxygen, which slowed down the rotting process. As microorganisms broke down the tree's tissue, mineral laden water flowed through the increasingly larger spaces. The minerals in the water replaced the organic matter. The slower the decaying process, the finer the details that remained during fossilization, sometimes remarkably retaining the tree's original shape, grain, rings and bark. In other instances, a detailed mold was preserved and then a unique solution of other minerals flowed through, producing one of the rarest and most beautiful petrified wood formations. In such a case, Australian precious opal replaced the original stem tissue of a limb, creating petrified wood of such beauty and quality, with such an amazing play of colors, that it can be cabbed and turned into jewelry. However, to the collector, the piece is most valuable in the original shape of a limb, with the end polished to show the intense blue/green/red flashes.

The most common replacement mineral in petrified wood is quartz. Some people think that the varying colors in petrified wood are determined by the species of tree. This is not the case, however. Trace minerals in the water solution provide the breathtaking range of colors: iron oxides create browns, reds and yellows; copper and chromium create greens and blues; and manganese creates a range of pinks.

The rarest form of Montana petrified wood is called Channel Wood. This type of wood is black and white. What it lacks in bright colors, it makes up for in detail. The black reveals the unique wood grain while the contrasting white quartz appears to drip through some of the ring growths. Visually, it looks much like contrasting geometric shapes. The Smithsonian Institute has verified pieces of Montana Channel Wood as ancient Sequoia trees, which were charred in a fire and then fossilized. It is the carbon from the fire that produces the black color.

Rocks and minerals come in a dizzying array of colors and formations. Petrified wood, however, is both rock and fossil in a gorgeously wrapped package that looks like wood. Come in to Earth's Treasures and see for yourself some of the unique and remarkable aforementioned formations, including the rare Australian Opal Wood and Montana Channel Wood. Earth's Treasures is located at 25 N. Willson. For more information, contact the store at 586-3451 or visit www.EarthsTreasuresMT.com