How big are the trees?

Sierra redwood trees are the largest trees in the world. Many sierra redwoods are between 250 and 300 feet tall, the tallest being about 325 feet high. While their height is impressive, the real wonder of a sierra redwood lies in its bulk. Many of these giants have diameters in excess of 30 feet near the ground, with a corresponding circumference of over 94 feet!

The largest redwood in Calaveras Big Trees State Park is the Louis Agassiz tree. It is located in the South Grove. This tree is "only" 250 feet tall, but it is over 25 feet in diameter six feet above the ground! The largest tree in the North Grove is probably the Empire State Tree, which is 18 feet in diameter six feet above the ground.

Most trees have their diameter measured at breast height, which is considered to be four and a half feet above the ground on the uphill side of the tree. Sierra redwoods however, are measured at six feet above the ground. This is because of the major increase in circumference at the lower end of the tree. This "butt swell" helps the redwood in a couple ways. It adds stability to the tree, just as a wide stance adds stability to a football player. Also, it helps deflect falling vegetation away from the base of the tree. This decreases the chances of the redwood being injured by fire when that debris eventually burns.

It is difficult to imagine the size of a sierra redwood. You often read or hear stories like the fact that a sierra redwood may contain enough wood to build 40 five-room homes; a tree may weigh 4,000 tons; they are as tall as the Statue of Liberty. However, these stories do little to convey the actual size of these trees. Many people have tried to show others how large redwoods are. Some folks have had their picture taken while riding a horse and buggy on a downed tree. Others have taken photos of the Cavalry on a big tree. A favorite method for rangers to show children how large these trees are uses string. We cut a piece of string 95 feet long and then tie the ends together. The children then spread the string out into a circle. The resulting circle is about the same size around as a redwood with a 30 feet diameter. Several classes can fit inside the circle.