

Plant Exploration in the Rockies®

Jerry Morris

845 Dudley Avenue, Lakewood, Colorado 80215 U.S.A.

Email: jerryandsaunny@aol.com

BRISTLECONE PINE

I think many of you went to Mt. Goliath on the tour and saw the bristlecone pine (*Pinus aristata*). They seem to be a hobby with me. I will show slides of this pine with emphasis on how they live and how they struggle. There is a little story about a bird that I need to tell. The Clark's nutcracker (*Nucifraga columbiana*) eats the seeds of most pines. This bird is active right now. They go out and collect the pine seeds and plant them in an open hillside in groups of 1 to 10 in the fall. The birds then come back and feed on the seeds later. It seems impossible to me that they can do that. However, there was a researcher who saw them planting these seeds, so he and a friend put numerous stumps in the area and left. Sure enough, the birds came back and landed on the stumps and eat the seeds. They then moved the stumps and the birds could not find the seeds. Moving the stumps back again revealed that the birds could find the seeds. That answers the question of why we find pines in clumps sometimes — they were seeds that all grew.



Figure 1. Bristlecone pine tree along road to Mt. Evans.



Figure 2. Bristlecone pine tree that has grown horizontally for almost 1,000 years.

The picture of the bristlecone pine in Figure 1 was taken in 1922 and is over 1000 years old. It has numerous dead and dying branches. This picture was taken at the time the road to Mt. Evans was completed; it is also the road you probably took on your way to Mt Goliath. That tree is declining because during construction of the road the water flow was changed, and the tree was in dire straits. Twenty-five years later it was still declining. I took another picture 25 years later, and the tree was still declining. Last year I took a picture, and it is finely starting to come back strong.

Looking at the bristlecone tree in Figure 2 you can see a little rock next to it, the Clark's nutcracker probably landed on that rock to tear apart a bristlecone cone to eat the seed. A seed escaped the bird and grew as high as the rock which protected it and then the wind caused it to grow horizontally. It has grown horizontally for close to 1000 years and will be alive 1000 years from now. So that tree is there because of the rock.

Fifteen years ago on Windy Ridge, Colorado, one of the best places to see bristle cone pine, one of my grandsons, Jeffery, and I were up there, and I told him about the rocks, and he put some additional rocks up there. Other people are now also piling up rocks in this area. Here is a 2000-year-old pine that has never been more than 20 ft long and 6 ft tall; it is also on Windy Ridge and one of the prettiest trees up there. So go and visit these bristlecone pines. They are 1 h away, and I might just visit you up there.

The Denver Botanic Garden has a good collection of dwarf conifers, maybe close to 200 of them. Dwarf conifers have always been a hobby with me. When I collect seed from these dwarf conifers and plant them I obtain very wide variation in growth habits. Some may grow only 1 inch per year while other may grow 6 inches per year. It is fun to grow them because in a few years you will have variations from little round, to flat, to pyramidal, or weeping forms. So that is what you can get from dwarf conifers.

OTHER PLANTS

For 30 years I have travel the Rocky Mountains and have collected over 30 such unusual plants. I usually only grown 1 or 2 of them and give them away and they are still there for the taking and there are lots of them in the Rocky Mountains. Next are some examples of interesting plants I have seen. I found a red-fruited elderberry with shredded leaves. You also find color variations in conifers. A blue-needled pine, *P. monophylla* 'Blue Jazz' with single needles is one that I introduced. I have seen a yellow spruce. In the west, you can find areas with weeping plants such as *Juniperus osteosperma*. When you graft them you obtain many unusual plant forms. We have an area southeast of Trinidad, Colorado, where a group of eight different oaks got together and hybridized. While most of the original species are gone, their genes are present in the many hybrid forms. When you walk in some areas, every plant is different and they are just waiting to be selected. I was hiking in the Tetons in Colorado and came upon some Colorado spruce. I looked around and I found 14 trees that were growing in a prostrate form on the ground. The best introduction of these is called *Picea pungens* 'Big Goose'. When I cored the larger plants some were at least 80 years old and that was 20 years ago. Next to the Colorado spruce was a group of Ponderosa pines (*P. ponderosa*), one of which was columnar with different needles. I am not sure what use it is, but it just indicates the variation available in the wild. Next I want to talk about a potential clone of a *Prunus* species that develops a red fall color; most of the species has a yellow fall color. We should have more plants with red color for the fall because most of our fall color is yellow. I have also found aspen selections (*Populus tremuloides*) that turn red in the fall. I don't know of anyone who is selling them specifically for their red fall color. Also there is variation in color of the bark with some having better white color.

In closing, I have tried to show you a range of different Rocky Mountain plants to provide you with a feel for the natural variation that exists in our native plants in Colorado.