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Tsuga canadensis 'Minuta'
Photo by Dennis Groh



Pinus mugo 'Mitsch Mini'
Photo by Dennis Groh

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Contents

- 6 Wellesley College Conifer Reference Garden**
by Mary Coyne
- 15 My Favorite Conifer: The Bristlecone Pine**
by David Rasch
- 18 Celebrating Conifers in the South**
by Rona Bathea
- 22 Designing with Conifers – Book Review**
by Jerry Belanger
- 26 Conifer Road Less Traveled – Part 2**
by Tom Cox
- 30 Wintering Potted Conifers in a Sunroom**
by Wynne Keller
- 38 Expedition into the Altai Mountains – Part 2**
by Jörg Kohout, translated by Ron Elardo

American Conifer Society Voices

- 2 President's Message
- 4 Editor's Memo
- 11 Northeast Region Report
- 34 Editor's Corner
- 45 Dr. Al Paulsen

The purposes of the American Conifer Society are the development, conservation, and propagation of conifers, with an emphasis on those that are dwarf or unusual, standardization of nomenclature, and education of the public.

My Favorite Conifer: The Bristlecone Pines

Text and Photos by David Rasch



My favorite conifer is a 5-needled white pine that has become well-known in horticulture and is superlative in nature.

It is the bristlecone pine, consisting of two geographically-separated species: *Pinus aristata*, the Rocky Mountain bristlecone pine (RMBP); and *Pinus longaeva*, the Great Basin bristlecone pine (GBBP). The two species can be distinguished readily by the presence (RMBP) or the absence (GBBP) of white crystalline exudates from a number of resin ducts on the needles.

Many of us know the Rocky Mountain bristlecone pine as an accent specimen in containers or in rock gardens. The pine's use in smaller scale situations is due to its rather slow growth. Several varieties in the market enhance this use with compact habits, probably originated from witch's brooms.

The other of the two species has drawn attention to this pine's longevity. The Great Basin bristlecone pine is

known to live longer than other trees with a maximum age up to 5,000 years as measured by Donald Currey in 1964 from a tree that lived in an eastern Nevada glacial cirque.

Today, the oldest living GBBP, "Methuselah", discovered in 1957 by Edmund Schulman, and the largest living GBBP, "The Patriarch", are located in eastern California high in the White Mountains. The Inyo National Forest maintains a good gravel road to timberline and above within the Ancient bristlecone pine Forest preserve.

We learned from dendrochronologist Dr. Schulman that longevity through adversity is the key to this pine's old age. Centuries of slow and steady growth in this dry and exposed high-elevation environment are achieved with reduced threats from competing species, fire, insects, or decay. Indeed, the long dead snags lying on the ground may have been alive thousands of years before the



ancient living trees began to grow nearby. Timberline at 11,500 feet above sea level in the White Mountains has advanced and receded over the millennia and these trees have recorded it.

A science of comparison between

many pencil-thin cores of wood taken from both living and dead trees, known as cross-dating, has allowed researchers to more fully understand the climatic fluctuations in western North America for the last nine thousand years. The ancient



GBBP reveals these changes in its climate-sensitive tree-rings that are established with each growth cycle. The natural range of GBBP extends from southern Utah to eastern California, so this author enjoys periodic visits to see these magnificent pines in their native habitats.

There are remarkable Rocky Mountain bristlecone pines within a shorter and easier commute from home. The natural range of the RMBP extends within the eastern mountains of central Colorado to northern New Mexico and near Flagstaff, AZ. The oldest RMBPs were found by Craig Brunstein in 1991 growing in an odd location on a low, isolated peak in Colorado's South Park, known as Black Mountain. There on a steep, southeast-facing scree slope live several stunted pines that are up to 2,500 years old.

Even closer to home in northern New

Mexico's Carson National Forest, Valle Vidal Unit, the largest RMBP lives within the recently established Upper Ponil Botanical Area. Here, a handful of larger trees betray their status with brightly colored reddish-orange bark on massive 3 to 4 foot wide trunks that set them apart from their smaller gray-barked brethren.

Each summer after the winter snows have melted away and dirt roads have become passable, the ability arrives for journeys into these special sites where bristlecone pines thrive. Only then can we appreciate how harsh living conditions are mastered by these trees and that the pretty little plants in our gardens have the same time-tested genetics that could allow them to survive like their ancient relatives throughout the mountains of the American West.

