

## TREE OF THE MONTH – MARCH

### **Bristlecone Pine**

Ancient Pine or Great Basin Bristlecone Pine – *Pinus longaeva*

“This tree is ever found to be irrepressibly and extravagantly picturesque.” - John Muir, co-founder of the Sierra Club.

In 1958, Edmund Schulman wrote an article in National Geographic announcing his discovery of the oldest known living non-clonal organism. It was a tree – *Pinus longaeva* (or *Pinus aristata* var. *longaeva*, as it was known then), and it had 4,789 rings, as determined by a core sample. It was ancient, stunted and twisted, with most of the bark dead except for a few narrow living strips that connected living roots to branches with green needles. It was growing on a rocky slope high up in the White Mountains in California, an area with cold temperatures, intense sunlight, and little water. The tree is still alive today, and is called the ‘Methuseleh’ tree, after the über-geriatric biblical figure.

*Pinus longaeva* is native to the United States in Utah, Nevada and Western California. The oldest specimens are always found in dry conditions where they grow very slowly and have short, thick, twisted trunks. After the trees have lived for a long, long time, they gradually begin to lose sections of roots, bark, and branches, until eventually they become stunted old trees with sections of living tissue and sections of dead, exposed wood. This prolonged stage of slow death may help explain their longevity.

Because of dry conditions and natural preservative resins in the wood, the trunks of these trees can remain standing long after they die. The growth rings of these ancient snags can be used to glean clues about climate going back many thousands of years.

The needles of *Pinus longaeva* come in bundles of 5, with 2 resin ducts on each needle, and unlike most pines, they can keep their individual needles for up to 40 years.

The common name “bristlecone pine” is attached to three closely related species of *Pinus* – *P. longaeva*, *P. aristata*, and *P. balfouriana*. The first two were once considered the same species, with *P. longaeva* being a variety of *P. aristata*. They were separated in 1970 due to differences in needle anatomy and lifespan (*P. aristata* only live to around 2,000 years). *Pinus longaeva* is found in isolated sections of the Great Basin, and is considered ‘vulnerable’ by IUCN red list.

At VanDusen, we have a cultivar of *Pinus longaeva* called ‘Sherwood Compact’, a dwarf version of the species. It can be found in the southern part of the Stanley Smith Garden.