When asked to do another article for the Shasta Chapter of the California Native Plant Society, I chose a tree that I have always been fond of and thought I knew well: the McNab cypress (*Hesperocyparis macnabiana*). Thinking that this would be “easy breezy,” I soon learned otherwise.

I have always been told that the first McNab cypress specimen ever collected and described (commonly referred to as the “type specimen” by botanists and taxonomists) came from a grove that grew next to the original town of Whiskeytown. I also assumed that such a low-elevation shrubby tree that grows intermixed with chaparral species would burn like the sun. Apparently, these assumptions are not as easy to confirm as you would think.

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Sometimes called “Shasta cypress” or even “fragrant cypress,” the McNab is an evergreen tree with a shaggy appearance and a fresh piney smell, which has been described as spicy by some. It can grow up to 40 feet, has furrowed bark, and branches that extend all the way down to the ground. The leaves have conspicuous glands that produce drops of resin, and the cones are brown to gray in color, knobby, and closed. The botanical description that “the branchlets all lie in one plane forming a spray” has never helped me to identify it, but apparently this characteristic makes it unique to other cypress in California.

The McNab cypress is found in about 30 sites across 12 counties in California, usually in hot and dry low elevation sites, on poor soils, and is often associated with knobcone pine and chaparral species. It is considered a California endemic (even though there are some in southern Oregon) and it has been hypothesized that these isolated populations are what is left of a once vastly different climate in which cypresses were more widely distributed across the landscape.
One of the largest populations was located where the type specimen is said to be collected, near the old town of Whiskeytown, and was destroyed by the creation of Whiskeytown Lake in the 1960s. A quick search of the National Park Service’s records revealed that local Native Americans referred to a “juniper tree” in that approximate location, which may mean that the tree was unusual enough for them to distinguish it on a map. Before the lake was formed, someone recognized the importance and uniqueness of this McNab cypress population, for whatever reason, and transplanted individuals to old homesteads around the lake, in French Gulch, and in Shasta. These are the remnants of the largest grove described in California.

The McNab cypress was first officially described by a Scotsman named Andrew Murray (1812 to 1878), a politician who studied insects and conifers as a hobby. I got derailed on my search here for a bit because there are some references that state that it was Andrew’s brother, William, that actually first described the McNab on a trip to California, and other records say that John Jeffrey was the discoverer. But perhaps the most concrete evidence of its discovery that I found is that it was actually physically collected by A.F. Beardsley. Beardsley was a professional seed collector working for Andrew and was an old buddy of Andrew’s brother William, and it was William who named the tree after James McNab (1810 to 1878), curator of the Edinburgh Botanic Garden at the time. Got it?

I have to admit, it was easy to get distracted by the connections between these Scots and their experiences. For example, James McNab was apparently most famous for his 1834 collecting trip to Mexico where he successfully introduced the poinsettia. John Jeffrey was another Scottish-born famous plant hunter that the Jeffrey pine was named after. He apparently set out from San Diego to cross the Colorado Desert in 1854 and was never seen again. And for a good read, A.F. Beardsley has a harrowing description of a conifer collecting trip to the Santa Lucia mountains in the Ventana Wilderness. These guys had to be brave to wander around in the woods so far from their home in that day and age.

As for the ecology of the McNab cypress, it is also not straightforward. I assumed that since this species grows intermixed with chaparral, on dry sites, and in hot climates, it would be adapted to high intensity wildfires. It also has some life history traits to support this: not only do its branches descend all the way to the ground so that a surface fire can quickly carry into the canopy, it also has closed cones, often referred to as “serotinous.” These closed cones often retain seeds until being opened by a trigger—like drying, high heat, or fire. They are dependent on this trigger event to release the seeds. Plus, McNab cypresses are resinous—they are sticky! That alone makes it seem like it would be highly flammable!

However, there are some recent case examples in which cypress species are somewhat fire resistant, which, to put it simply, means they didn’t burn when they should have. For example, the Rocky and Jerusalem fires burned within the University of California McLaughlin Natural Reserve and patches of McNab cypress survived within the burned area. Researchers in Italy and Spain—in a climate and fire regime similar to California—revealed that cypress trees ignite seven times slower than other native species. This may be due to the fact that cypresses do not have needles, but scales, and when the scales fall to the ground, they compact closely together and do not provide enough surface area for oxygen to support fire. These results have led some to advocate that cypress species may serve as a potential barrier to reduce fire risk and to slow fires. I spoke with other local ecologists and this had us all scratching our
McNab cypresses with closed cones at the UC McLaughlin Natural Reserve in Napa County. Photo by Chris Mallek.

Left: Close-up of a closed cone on a McNab cypress. Photo by Jeff Kane. Right: Opening cones of a McNab cypress two days after fire. Photo by Chris Mallek.

the trees ignited or how hot they burned, I don’t know—I wasn’t there and am trying to find someone who was. But the trick with this species is not too frequent of fire because you can deplete the seedbank before the adults produce cones for the next crop. And some say the overall lack of fire may pose the greatest risk to them because the adults will senesce and die before ever getting a chance to open their cones and release the next generation of happy seedlings.

I am probably not going to plant a grove of cypress next to my house until I know more—a lot more. Until then, it amazes me that there are still so many things we don’t understand about this species right here in our backyard.

Happy McNab cypress seedlings that germinated after the 2008 Motion Fire in Whiskeytown National Recreation Area. Photo by Jeff Kane.