

Hadley Rampton

For the past 24 years I have ventured from the Salt Lake Valley up Emigration Canyon to an aspen grove along a small mountain tributary called Freeze Creek. During that time, it has become my place of refuge and inspiration. Whenever my mind finds itself overwhelmed, either by the world or my own microcosmic stresses, painting among the Freeze Creek Aspen Grove always brings me peace. Sadly, this lovely little aspen grove looks to be in trouble. In recent years I have noticed a decrease in leaf density and an increase in tree deaths. What is causing this?

As we know, our climate is changing and, despite two water years that were more plentiful, Utah and the Mountain West are struggling with years of drought. Scientists are concluding that this may be the greatest contributor to widespread aspen forest die off in the Western United States, especially at elevations lower than 9,000 feet in elevation. According to BYU biology professor Sam St. Clair, the high temperatures and drought are causing tree “heart attacks”. “As you get hot dry conditions, taller aspen trees have to pull water up from the soil more strongly and it creates bubbles in the water and blocks the transport of water and nutrients up the tree” says St. Clair. “The tree will die from the top down.”

Because aspen in a grove are actually one organism made up of clones and connected by a mother root system, when one clone dies, others are weakened. This in addition to drought and high temperatures make the whole organism more susceptible to a host of insects and pathogens which disrupt important tree physiological processes, eventually resulting in tree death. This is how entire aspen forests can be lost.

And it isn't just the trees that are affected. Aspen is a keystone species, meaning their health positively or negatively affects entire forest ecosystems, which in turn has an impact on the whole planet. When the gentle shade and dappled light of an aspen canopy disappears, the temperature of the forest floor rises, and the understory microclimate becomes inhospitable for the existing plant and animal species.

I painted this piece in late June and early July. We have been fortunate these past couple of years to have had generous snow winters and wet springs in the mountains, which has helped to restore the Freeze Creek Aspen Grove. Several young, healthy aspen shoots have now reached a height that make them less susceptible to hungry deer. Unfortunately, due to a fairly dry spring and now very arid summer, Northern Utah has once again found itself in drought territory. Can this small aspen grove not only survive but continue to regenerate? Can others? Time will tell and, in the meantime, what might we humans do to help our aspen forests not only survive but thrive? I believe we must draw upon our innovative capabilities, and our creativity.

