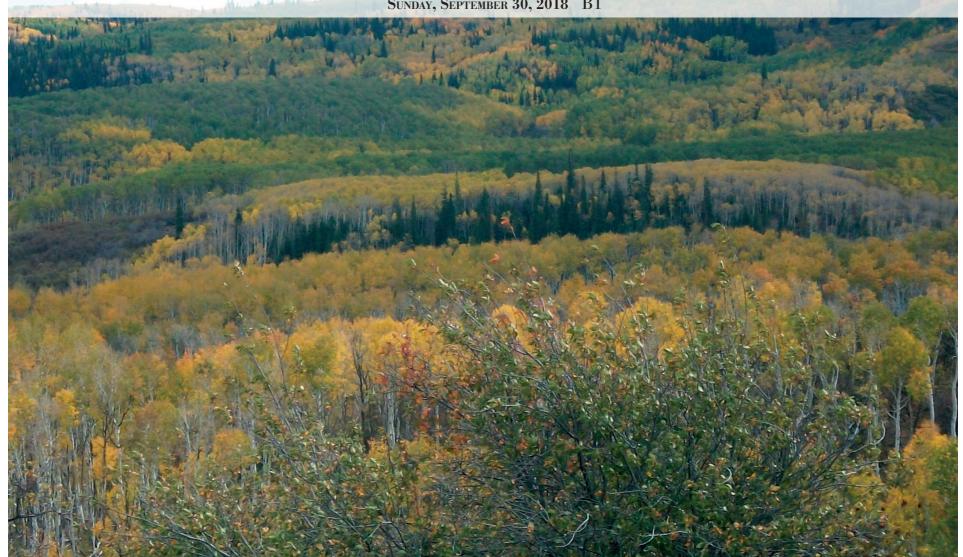
SUNDAY, SEPTEMBER 30, 2018 B1



## Gold in the hills, the aspen tree



**Tips** from the Posse

By Mark Rackay

I was very fortunate to spend many autumns of my youth in the north woods of Wisconsin and Canada. The explosion of colors signaled an end to the long summer days and a warning that winter was bearing down. To me, it signaled hunting season, but that's another story.

I always enjoyed walks in the trees during the fall. There is a special solitude, an air of loneliness that engulfs my soul when I am amongst them. Soon they will have their long winter's sleep.

A Rocky Mountain September is spectacular and very difficult to beat. In the high country, the air is silver and the leaves are gold, to borrow the words of C. W. McCall. I thought, with our gold explosion going on, we might explore the aspen trees of Colorado.

The aspen tree, also called the quaking aspen or quakies, have the official Latin name of Populus tremuloides. They are a member of the poplar family that includes willows and cottonwoods. Aspen are the most widely distributed tree species in North America and the dominant tree in what is known as the montaine lifezone. They are generally found at elevations from 7,000 to 12,000 feet.

The white bark carries out the photosynthesis for the tree. The leaves of other species of trees usually carry out photosynthesis. That means in winter, long after the leaves have dropped, the tree continues to produce sugar for energy. The deer and elk know this and will take a bite out of the aspens during the winter months. The scarred bark is evident just about everywhere there are trees.

Aspen trees are unique because of their ability to clone themselves. Cloning occurs when roots sprout new trees that share an identical genetic makeup. The



(Top) This is what fall is all about in Colorado: the gold explosion. (Above) A very healthy grove of aspen trees on the Uncompangre Plateau. (Special to the Montrose Daily Press/ Mark Rackay)

tree does produce seeds, but cloning does most of the reproduction. Usually, an aspen tree will not live past 100 years.

When you look at a stand of quakies, it may be one clone whose leaves all turn at the same time. There is a well-studied aspen clone in Utah that covers 106 acres. It has been estimated at 40 times the weight of a blue whale, making it the largest living thing on Earth. The age of this clone has been estimated at 80,000

Unfortunately, all is not well in the aspen world. For decades, forest managers have been calling attention to an aspen decline. It was thought to be a result of reduced fire frequency. Aspens recover very quickly from fires, faster than other species.

Recently, "sudden aspen decline" or SAD has been reported. As of 2007, widespread, severe, rapid dieback and mortality has affected about 15 percent of the aspens in Colorado.

Researchers now believe that the drought across much of the West in the early 2000s is the cause. This drought has killed off upwards of one-fifth of the trees in some areas. Add to that, exceptionally hot springs and summers, all proved too stressful for many aspen to survive.

A study by biologists at the University of Utah came up with two theories for the decline. One is that the trees starved by not being able to photosynthesize for long periods of time, or, quite simply died of thirst. The drought compromises their water systems that move water from the roots to the leaves.

The second theory presented by the researchers claims that the drought, in concurrence with high temperatures was really the culprit causing the die offs. As the globe warms, the West is predicted to get even drier. That will be a challenge for aspen trees, some of which are the Earth's oldest living things.

A healthy aspen grove will have sprouts, saplings and mature trees. Generally, you cannot see through a healthy grove of aspen trees.

If you can see through an aspen grove, check whether the grove is missing sprouts and saplings. If they are missing and there are mature trees, grass, shrubs or young conifers present, the grove may be unhealthy. New sprouts are the best indicator a grove is healthy.

When no sprouts or saplings are present and there are only a few mature trees, the grove is not healthy and no longer producing sprouts. It is just a matter of time before this grove dies off and disappears from the landscape.

If you decide to take a walk in a golden aspen grove this fall, tread lightly. Most groves are around 10,000 years old. Think about how many times, that particular grove has cycled through the cloning process, and how long it shall go on after we have left this earth. I hope it is a long time.

Mark Rackay is a columnist for the Montrose Daily Press and an avid hunter who travels across North and South America in search of adventure and serves as a Director and PIO for the Montrose County Sheriff's Posse. For information about the Posse call 970-252-4033 (leave a message) or email info@mcspi.org



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