NATURALLY: Sugar maple trees are a regional treasure

- By DANA LYNN DRISCOLL Special to the Gazette
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Boiling sap to make maple syrup can take several hours.

Looking at White's Woods from a distance during the autumn months, you are sure to see the sugar maples displaying brilliant colors of yellow, red and orange.

In fact, these maples are known throughout the Appalachian Mountains as "fire maples" because they unveil this brilliant fall splendor. They are so bright they make the entire mountain range look like it is on fire.

In addition to their lovely fall foliage, sugar maple (acer saccharum) is a critically important tree to the ecology of our forests, as well as to our regional Northern Appalachian heritage.

Sugar maples are abundant in White's Woods and in many of our parks, and form a climax community with beech, oak, birch, hickory and tulip poplar. The term "climax community" refers to the final stage of ecological succession in a forest, which creates an abundant, rich ecosystem. This climax forest is the richest in biodiversity, offering refuge for life, and beauty to humans who visit.

Most importantly, this mature forest sinks tons of carbon each year. You can see some of the largest and most beautiful sugar maple trees in White's Woods.

The sugar maple grows through much of the Midwest and mortheastern parts of North America, and as climate change continues to push warmer temperatures northward, the range of sugar maple is moving north. A typical sugar maple can grow up to 115 feet tall and be part

of the forest canopy. However, because it is quite shade tolerant, it can also function as part of the understory. Sugar maples can live for 300 to 400 years.

After her fall fire splendor, the magic of the sugar maple carries on to late winter and early spring, when the maple sap begins to flow. In our region, sugar maple sap typically begins to run in early to mid-February. Prime maple sugaring weather begins when the temperatures are above freezing during the day and drop below freezing at night.

The nutrient-rich sap rises from the maple's roots, up the trunk and into the branches to nourish the tree. The maples continue to flow until they bud out, sometime in late March or early April, depending on the weather. Sometimes the flow lasts as little as two weeks, while other times the flow can last up to two months; it all depends on how much of the perfect sugaring weather we get.

Unfortunately, with less stable weather patterns these days, the timing can be hard to predict.

Many locals along the Appalachian Mountains, including this author, relish the time of maple sugaring, and tap trees to gain the ambrosia contained within. If you are planning on tapping trees, it might be helpful to learn how to identify maple the year before, from the bark or when it is in leaf.

A good identification tool in winter is to look at the buds that are alternatively branched and paired. Younger trees have gray and very smooth bark, while older trees have more varied bark. Of course, in the summer months, the leaves are easy to identify, as they are most similar to the maple leaf on the Canadian flag.

Tapping trees, harvesting sap and boiling it into maple syrup is quite an endeavor. It takes many trees to produce 40 gallons of sap, and from that, after many hours of boiling, you get one gallon of syrup. Thus, one of the lessons this maple teaches us is that hard work over time allows us to reap the sweetest rewards.

Because producing maple sap is so labor intensive, it is both expensive and treasured. Humans aren't the only ones after the maple sap — if you see V-shaped marks on the bark, this may be a sign that a red squirrel has tapped the tree for sap. The sap evaporates on the trunk and the squirrel licks up the sweetness.

Unfortunately, sugar maples in our region have been in decline for a number of reasons. Not only are warming temperatures pushing the trees further and further north, logging activity in the region is very damaging to them. Maples are slow-growing, and after logging, faster-growing trees like birch may out-compete the sugar maple.

Selective logging, like that done in many parts of our region, also contributes to secondary tree loss, where sugar maples left standing may either crack at the top or be uprooted during

storms. Thus, even if they remain after logging, they are often lost within two to 10 years. Finally, sugar maples are not very tolerant of common pollution issues in our region.

Given the importance of sugar maples, both to the beauty of our region and as an incredibly important cultural food, I think it is wise for all of us to learn to identify, protect and enjoy these incredible trees!

Dr. Dana Driscoll, a professor of English at IUP, has been teaching wild food foraging, herbalism and sustainable living for more than 10 years. The Naturally columns are brought to you each month by the Indiana Gazette and Friends of White's Woods to showcase the wonders of nature in our area.