

Forestry 101

Basic Forestry for Woodland Owners

The Stories That Trees Tell

Tree rings provide an important history of a tree and the environment in which it is growing. Children commonly look at tree cross sections or “tree cookies” in school and know the routine when they are presented a cross section of a tree. They quickly tell you that the age of a tree can be determined by counting the cross-sectional rings, or annual rings, of the tree because each annual ring represents one year of growth. Foresters daily use the information that tree rings provide. Foresters look at these rings and determine not only the age of a tree but also the “pulse” of the tree’s health.

A wide annual ring means that the tree grew significantly in diameter that year and usually indicates a favorable growing environment for the tree. Wide tree rings are the result of ample growing space for a tree in the forest, providing the tree with ample sunlight, moisture, and nutrients to maintain rapid growth.

You might question how a forester determines this cross-sectional view of the tree without the tree being cut down. Foresters carry with them a tool called an increment borer that is used to measure the growth pattern in a living tree. The hollow tube of the increment borer is hand turned into the tree and produces an increment core that clearly reveals the annual rings. The term increment core is used because foresters can determine how long it has taken the tree to grow a certain amount in diameter, or in other words, to attain a certain increment of growth. For example, by measuring the distance between the end of the core that came from the outer edge of the tree next to the bark back 10 annual rings, the forester can determine that the tree is growing so many inches in diameter every 10 years. This is the growth increment of the tree.

From the observation of this small boring of wood, the forester can quickly evaluate the growth rate and health of a tree. If the bands gradually become closer



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together as the tree grows older, the indication would be that the tree’s crown is small and producing little food for diameter growth. In most of these situations, if the objective is to maintain good growth, a thinning would be prescribed to remove competing trees from around the crown of the tree in question. This gives the tree more room to grow. A forester will always observe to see if this reduction in tree diameter growth could

have been caused by insects feeding on the foliage, recent droughts, or even a recent fire that has damaged the bole of the tree.

If foresters observe any abrupt change in width of the annual rings, they need to re-evaluate the existing forest management plan with the input of the forest landowner and possibly adjust the plan to maintain the best potential growth for the stand. If a timber stand is being grown for future timber harvests, increasing a tree’s diameter growth is important.

It is important for you, the ultimate manager of your forest, to stop and determine the story that your trees are attempting to tell you about their health and growth patterns. Your forests, just like you, should have routine health checkups. This routine forest “checkup” will help in maintaining a healthy, vigorous, and economically sound future.

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