

## **Declining Habitats – American Chestnut**

Suitable area for future re-establishment – Piedmont and mountainous areas of the state

The American Chestnut (AC) (*Castanea dentata*) was once a major, or keystone component of the eastern hardwood forest. Its range formerly extended from Southern Maine to Florida, and from the Piedmont west to the Ohio Valley, until succumbing to a lethal alien fungus infection, during the first half of the 20<sup>th</sup> century. In Virginia, a century ago, the AC covered an estimated one quarter of the hardwood forest in the state – primarily in the mountainous and Piedmont areas of the state. However, it was nearly extinct as a mature tree by 1950. Now, although still present as a sapling, it dies back long before reaching maturity.

It is hard to quantify the loss of the chestnut to the deciduous forest ecosystem. The Chestnut was the primary nut producer, dwarfing the total production of oaks, beech, and hickories, and served as a major source of wildlife food. This was due to AC's habit of flowering in June, so that late frosts did not reduce its reliable and abundant harvest of carbohydrate rich nuts. Oaks and other nut producers that survive today, often suffer winter spoilage and irregular acorn production, which results in higher wildlife winter loss compared to AC.

The wood of AC was straight grained, and easy to saw and split. It was of very high value commercially since it grew faster than oaks. Being rich in tannins, its wood was highly resistant to decay and therefore used for a variety of purposes, including furniture, shingles, home construction, flooring, piers, plywood, paper pulp and telephone poles.

The present re-establishment status of AC is a work in progress. A great deal of research and development has occurred, much of it in Virginia, where the American Chestnut Foundation is located.

While hopeful of long term development of natural resistance to alien fungus, researchers have also made several backcrosses with the blight

resistant Chinese chestnut. The procedure was done repeatedly to produce a chestnut tree that retains no Chinese characteristics other than blight resistance. Today, over 30,000 trees, at various stages of breeding, are growing in Virginia nurseries. Although it will take more time to perfect a suitable replacement seedling, on a large enough scale, it should be available in the next few years.