

Kennebunkport Participates in the Restoration of the Native American Chestnut

Kennebunkport's Shade Tree Committee has decided to participate in the restoration of Maine's native American chestnut tree. In the first half of the 20th century the American chestnut was devastated by the fungus *Chryphonectria parasitica*. An estimated 4 billion trees were killed by the fungus.

In January, Committee member Nina Pearlmutter and Tree Warden John Ripton discussed the American chestnut restoration project with Dr. Thomas Klak in his laboratory at University of New England. Dr. Klak explained that a blight-tolerant gene has been developed, a scientific achievement that makes possible the restoration of American chestnuts to Maine woods and towns.

Dr. Klak is propagating trees with the blight-tolerant gene in his UNE lab. Their pollen is gathered and manually "dusted" onto female wild chestnut trees planted in the field. Years of scientific field research has demonstrated that these transgenic trees fit into the ecology with no ill effects on animal, plant and insect life, the same as unmodified wild native American chestnuts.

"The chestnut blight has been called the greatest ecological disaster to strike the world's forests in all of history, " according to The American Chestnut Foundation. These hardy trees survived the challenges of the ecosystem for forty million years. Then a fungus literally brought them down in four decades. By the 1950s, so few American chestnuts were left in Maine that people began to forget them. Today the tree is considered "functionally extinct" because, while the roots survive and send up shoots, the resulting trees are "killed" back to the root by the fungus.

Historically the American chestnut is one of the most valuable American trees. Harvested since colonial times for its straight, rot-resistant wood, it has been argued that it is the most important tree in the nation's history. "Its bark was high in tannins and used for tanning leather for clothing, harnesses, hinges, rope and whips," according to researcher Doug Munroe (*The Trees of Ashe County, North Carolina*, 2017). American chestnut wood is a light-weight hardwood, easily split and durable, used in roofing, furniture making and

fences. Colonists fed their animals on the abundant chestnuts. The nuts were an important food source for the settlers themselves.

Kennebunkport's first step in restoring the native American chestnut to the Town and to Maine was taken in late June. Bruce King on Walkers Lane welcomed two saplings. Nina Pearlmutter took two more to be planted near her home off Locke Street. Bruce and Nina will care for these saplings, water them and protect them from deer. Next summer (2021) the transgenic pollen from the UNE lab will be introduced to the flowering female saplings Bruce and Nina planted. Half of the resulting chestnuts will carry the blight-resistant gene. These nuts will be planted and nurtured into seedlings in the lab. The blight-resistant seedlings will then be ready to plant in Kennebunkport and elsewhere throughout Maine.

Any Kennebunkport resident can become involved in this historic project to bring back the native American chestnut. **If you would be interested in planting a native American chestnut somewhere around your home, please contact Shade Tree Committee member Steve Powell at stevepowell728@gmail.com.**

John Ripton
Kennebunkport Tree Warden

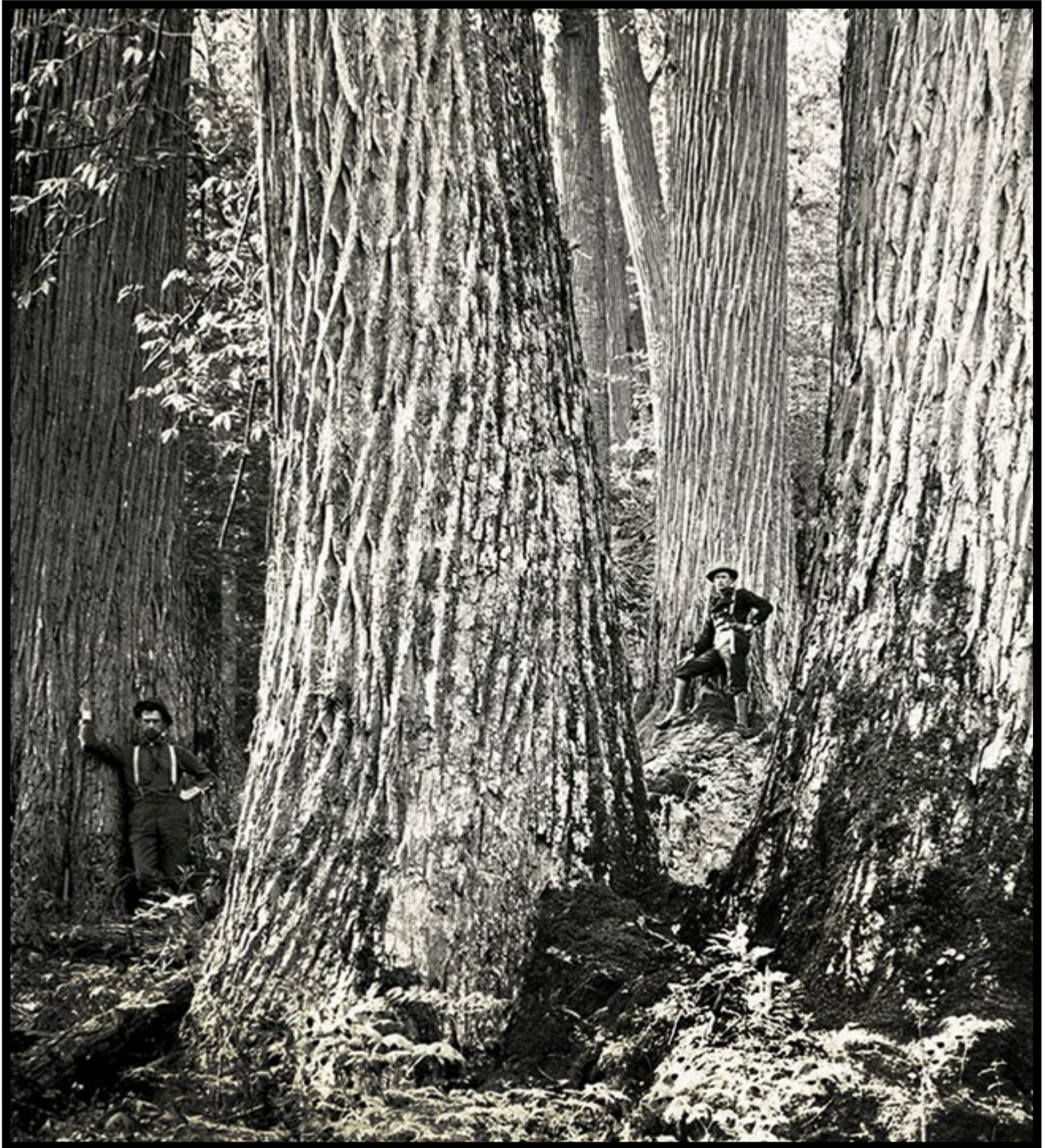


Nina Pearlmutter holds two American chestnuts she will plant.



UNE Professor Dr. Thomas Klak.

American Chestnut Images



Stand of American chestnuts more than a century ago. Source: Google images



Chestnut leaves, cask, and nuts.



Chestnut flowering.



Bruce King waters one of his two native American chestnut saplings.