



American PAST

By Sarah Farmer

USDA Forest Service Southern Research Station (SRS)

Until the early 20th century, American chestnut (*Castanea dentata*) was one of the most ecologically, culturally, and economically significant trees of the eastern United States. The accidental introduction of an exotic pathogen, chestnut blight (*Cryphonectria parasitica*), devastated the chestnut population, causing the species to become functionally extinct.

However, American chestnut may be poised for a return to the woods. After decades of trying to develop blight-resistant trees, scientists have made great progress, and American chestnut trees that are presumably blight-resistant have been bred and planted in test plots. If these trees prove resistant, restoration will shift

from the quest for blight-resistance to regeneration.

Because of American chestnut's long absence from the landscape, standard silvicultural handbooks such as the USDA Woody Plant Seed Manual have not included complete information about the species' life history and growth habits. A new publication, *The Silvics of American Chestnut*, supplements silvicultural hand-

books by summarizing information about American chestnut that will be important to future restoration efforts. This new general technical report, published by the U.S. Forest Service Southern Research Station (SRS), describes the habitat, life history, special uses, genetics, and restoration of the American chestnut. The publication is the result of collaboration between G. Geoff Wang, the lead author, his colleagues at Clemson University, and Stacy Clark, a research forester with the SRS Upland Hardwood Ecology and Management unit.



Paul Wray, Iowa State University, Bugwood.org

USDA Forest Service Southern Research Station Archive, Bugwood.org

can Chestnut AND FUTURE

The authors point out that restoring chestnut on most sites will require artificial regeneration — growing the blight-resistant trees in a greenhouse or nursery and planting them as seedlings rather than starting from seed. They also caution that even if the chestnut trees prove to be blight-resistant, the effects of damaging agents other than blight, including root rot disease and insects that defoliate leaves or damage roots, may represent real barriers to restoration.

American chestnut was once a dominant and widespread canopy tree through many parts of the country, its range stretching from Mississippi to Maine. Its nuts were consumed by animals and people alike, and it was widely used as timber. “Chestnut’s demise is regarded as the most tragic ecological event in the post-glacial history of eastern North American forests,” says Clark. “Its return from the brink of extinction would be one of the greatest success stories in the history of forest management.”

Reprinted with permission from CompassLive, the online science magazine of the USDA Forest Service SRS. For more about forest science in the South, sign up for weekly updates from CompassLive at www.srs.fs.usda.gov/compass/.



Keith Kanoff, Maine Forest Service, Bugwood.org

American chestnut catkins starting to bloom.

Headquartered in Asheville, NC, the Southern Research Station is comprised of more than 120 scientists and several hundred support staff who conduct natural resource research in 20 locations across 13 southern states (Virginia to Texas). The Station’s mission is “... to create the science and technology needed to sustain and enhance southern forest ecosystems and the benefits they provide.” Learn more about the Southern Research Station at: www.srs.fs.usda.gov.

