

Book Review: *American Chestnut: The Life, Death, and Rebirth of a Perfect Tree*

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American Chestnut: The Life, Death, and Rebirth of a Perfect Tree
Susan Freinkel. University of California Press, 2007. 284 pages.
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American Chestnut: *The Life, Death, and Rebirth of a Perfect Tree* chronicles the history of chestnut blight, a devastating fungal disease first identified in 1904 by Hermann Merkel, Chief Forester of the New York Zoological Park, and studied by William Merrill, a mycologist at The New York Botanical Garden. The fungus—reclassified in 1978 as *Cryphonectria parasitica*—swept rapidly through American chestnut’s native range, nearly annihilating this once-dominant tree species. By mid-century the blight had reached the southernmost part of the range—Alabama, Mississippi, and northern Georgia. Freinkel notes, “A map produced by Gravatt in 1943 showed the scope of the pandemic as a long ellipse stretching nearly the full length of the Atlantic seaboard. Within that ellipse, 50 to 99 percent of the chestnuts were dead... All told, it is estimated the blight killed between three and four billion trees, enough to fill nine million acres. That is enough trees to cover Yellowstone National Park eighteen hundred times over.”

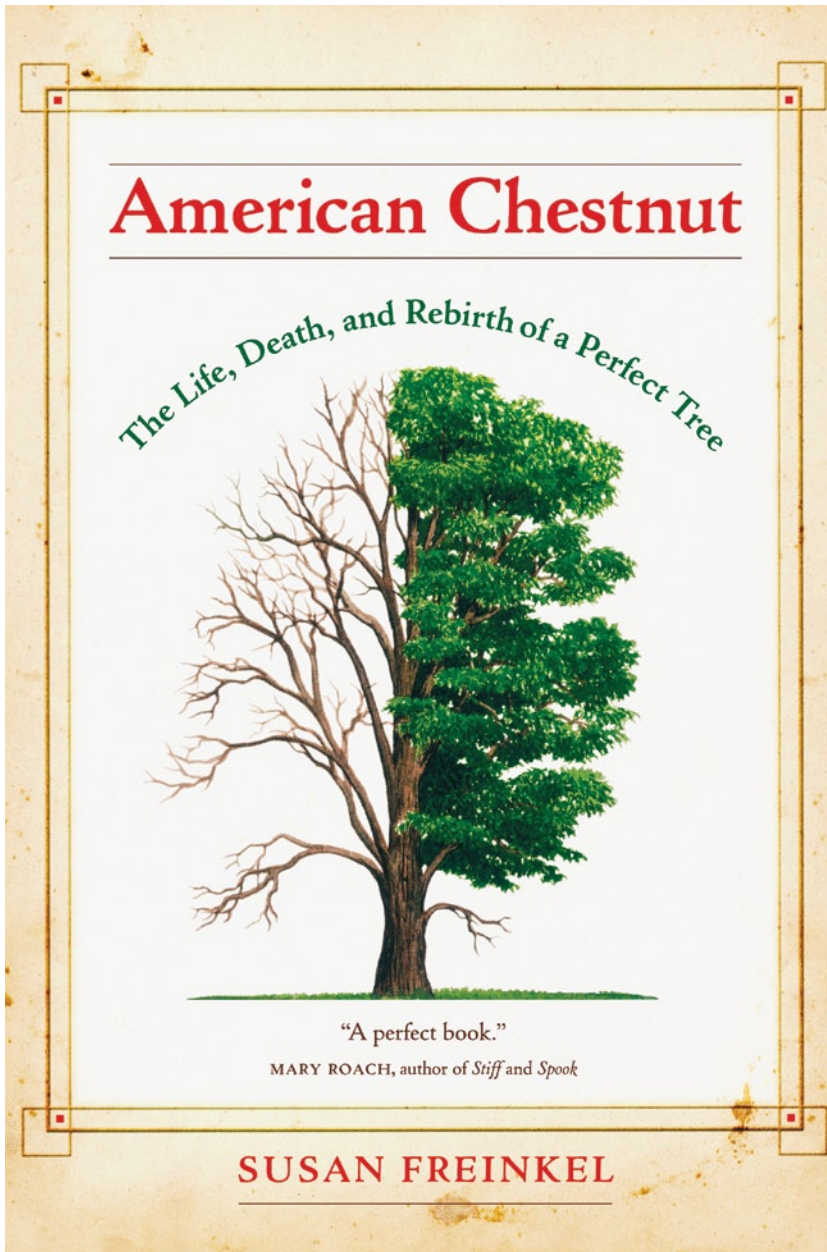
Susan Freinkel presents ethnobotanical information on the cultivation of the American forests, first by Native Americans and later by rural inhabitants. She describes an Appalachian culture benefiting from an economy based on collecting chestnuts from family “orchards”—actually chestnut stands in the wild that loosely belonged to different families by tradition or proximity. With little else to use as barter, Appalachian families used chestnuts in trade for store goods at mountain exchange posts.

The tree’s carrotty flavored nut was considered superior to other endemic nut species, and its lumber was straight, strong, and rot resistant. The Appalachian voices in this book provide a soliloquy to the species, which was once so abundant that a squirrel could supposedly pass from “Maine to Georgia” in its branches.

The American chestnut—in diminished form—still lives on more than one hundred years after the blight was first diagnosed. But the species is on a life line, as the author details, waiting for a positive outcome from the experimental strategies of back breeding and guided natural selection. Freinkel conveys the tale of American chestnut through the facets of rural and suburban culture, focusing primarily on Appalachia, New York City, and Pennsylvania. She details the endeavors of the nascent forestry and agricultural departments, observant naturalists and scientists, and well-intentioned legislators. The book portrays key agents and events in the American chestnut’s struggle to survive.

Many of the chapters are defined by singular people with some intuitive knowledge and skill who bucked common opinion in their methods. They were agents in early control measures like fungal identification, eventual experiments to fight fungus with fungus, and later breeding and scientific efforts to improve the chestnut gene pool. This legacy is mostly borne by a few tenacious individuals, many of whom receive well-deserved public recognition in this book. They were the architects of experimental nurseries and laboratories working on breeding projects or fungal experiments whose results are clocked in a life cycle longer than that of human generations. These efforts, not yet abandoned, may still succeed.

This wonderful book is paced like a mystery novel, complete with fascinating characters. The plot line of chestnut’s survival includes



serendipitous interventions such as that of a cross-country skier turned horticulturist who recognized a surviving stand of chestnut trees in Michigan, or the observant tourist who did helpful comparative research on the European chestnut blight. The history also includes unfortunate, foolhardy visions borne of the spirit of the times such as seed irradiation or

the advice given to the struggling public to cut down every tree while the lumber value still yielded a profit. The effects of such commerce consequently spread the blight and reduced the gene pool. The story of the American chestnut showcases a chapter of scientific history, human history, and a change in environmental consciousness.

Susan Freinkel combines an easy narrative style with a factual yet poetic voice that elevates this material beyond dry science to make it a compelling, addictive read. As the author points out, in a world where a species is lost every minute, the survival and potential comeback of the American chestnut is a victory song for the unsung soldier. The beauty of this book is that at its heart it is a tale of the heroic spirit of individuals who have dedicated careers to work on a solution against great odds. Her observations focus the dialogue on the evolution of a consciousness about an enemy that had not been understood or apprehended. It became an enemy that schooled young foresters, botanists, ecologists, enthusiasts, and scientists on how to work on a problem of vast scope. To the author's credit, she refrains from moralizing or

predicting the future. She turns the problem around for proper examination from all sides. An old riddle is answered—yes, if a tree falls in the forest and there is no one there to hear it, it does make a sound.

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