



## Book Review

**The American Chestnut: An Environmental History, D. E. Davis. The University of Georgia Press, Athens, GA (2021). (368 pp. ISBN 978-0-8203-6045-4**

Of interest to a broad audience that would consist of tree-enthusiasts, natural historians, ecologists and the public-at-large, *The American Chestnut: An Environmental History* is an intently-researched resource produced by author and research scholar (Harvard University's Harvard Forest, Petersham, MA) Donald Edward Davis. Comprised of 4 parts, 12 chapters and a conclusion, this 368-page hardcover book is revealing, illuminating, and perhaps most prevailing of all, filled with historical realities about the importance of various facets of the American chestnut (*Castanea dentata*) and its impacts to the environment and our society – both past and present. This work is composed in a manner that is enjoyable to all, and surely engaging to any tree enthusiast.

Prior even to the table of contents, this book conjures a deep sense of history, nostalgia, and utility associated with the American chestnut, as it includes an excerpt from *The Chestnut Rain* (1986) by William Heyen:

“Now we read of this, of the hundred-foot tree that once, in airy-white blossom or heavy with pods of food, distilled the American earth for us. At Mount Vernon, the Washingtons' roast wild turkey was sewn stuffed with chestnuts. Cattle and deer fattened or held to life on the winter meat of chestnuts.”

The book commences with a preface that pulls the reader into the contemporary discussion regarding the potential for host plant resistance of American chestnut to the chestnut blight disease (*Cryphonectria parasitica*), and it is here that Davis states the purpose of authoring this book:

“...in part to answer such queries [regarding resistance to chestnut blight] as well as to shape public policy regarding the future re-introduction of the tree.” p.xii

Before leading the reader into the Introduction, the Preface closes with the author endeavoring to properly contextualize the reality that humans lived among American chestnut for many millennia before it largely succumbed to widespread population collapse due to chestnut blight, and any notions about its current status or propositions about restoration should be viewed through a wholistic, long-term lens.

The Introduction brings the reader to a time when before the American chestnut was “functionally extinct” (p.1), impressing the impact of this plant on the many “thousands” (p.2) of places that bear its name today – from the rural to the urban landscape.

Following the Preface and Introduction, the ensuing 12 chapters that comprise the book are divided into 4 parts: Part I titled ‘Chestnuts on the Move’ consists of only a single chapter – *The Evolutionary History of the Species*. It commences by outlining the 90-million-year history of the family of trees (Fagaceae) that produced the American chestnut – one of 9 *Castanea* species known around the globe today.

Part II ‘Chestnut Encounters’ consists of chapters 2–7 that specify, among other details, the influence of the American chestnut on aboriginal/native people groups. Nutshells, fuelwood and other chestnut remains have been recovered in relative abundance from early aboriginal encampments and settlements in southern regions of the U.S., dating 11,000–12,000 years before the present. As time progressed, reliance on the American chestnut for sustenance appeared to grow among certain aboriginal populations and its prominence and influence among popular culture also continued to flourish.

“...the American chestnut was a primary source of sustenance and timber, but it was also the subject of story, song, and art.” (p.123)

Part III ‘Chestnut Decline’ consists of chapters 8–11 and commences by highlighting a pivotal year – 1896 – that saw the ensuing celebration of the virtues of non-native chestnuts in numerous horticultural publications, that originated from Asia and Europe. By the early 1900's it was not uncommon to hear about the cultivation of Japanese chestnuts (*Castanea crenata*) in orchards throughout regions of the U.S. Of course, it was in 1915 that Chestnut blight was confirmed to have been imported on Japanese chestnut trees by plantsman Frank Meyer and USDA Plant Pathologists Cornelius Shear and Neil Stevens. Many contemporary nurseries from Long Island and New Jersey were implicated in the spread of the chestnut blight pathogen including Monmouth Nursery, Pomona Nursery and Kissena Nursery. In support of USDA Chief Plant Pathologist Haven Metcalf's belief that the pathogen originated from Japan, it was concluded that the infected stock likely originated after 1896 on imports from prominent Japanese nurseries like the Yokohama Nursery, and/or the Tokyo Nursery Company.

Part IV ‘Chestnut Revival’ consists of the lone chapter 12 – *Genes for Blight Resistance*. The final chapter details restoration efforts to return American chestnut via several strategies including the development of progeny from Chinese/American parentage, the use of genetic engineering to foster blight resistance, and the trialing of seedlings derived from espoused putatively blight-resistant “pure” American chestnut trees. The establishment and work of several organizations, including the American Chestnut Foundation and the American Chestnut Co-operators' Foundation is also outlined. The talents and energy of several specialists, critical in the effort to restore American chestnut at major research institutions, including Gary Griffin (Virginia Tech), Charles R. Burnham (Cornell University) and Harold Pellett (University of Minnesota) are also highlighted.

The book closes with a rather robust ‘conclusion’ (p. 214–22) detailing known populations of American chestnut that continue to persist on a localized basis throughout disparate regions of the U.S. landscape. That these individual trees and groups of small numbers of trees presently exist fosters hope that though perhaps functionally extinct, the American chestnut can persist. Perhaps with sustained support from individuals dedicated to its continuation – from conscientious, skilled tree care profession to agency specialists and members of the research

community (i.e., academics) – the American chestnut will one day again flourish.

this submission.

**Declaration of Competing Interest**

Enclosed please find the manuscript of a formal Book Review. I would like to declare that there is no conflict of interest associated with

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