

The Bristlecone Book

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Book Review

THE BRISTLECONE BOOK. By Ronald M Lanner. Missoula, Montana: Mountain Press Publishing Company, 2007. x + 117 pp. \$12.00 (paperback). ISBN 978-0-87842-538-9.

Since their “discovery” in the 1950s as the longest-lived tree species, bristlecone pines have captured both the public imagination and the sustained attention of geoscientists, particularly those in paleoclimatology and geomorphology. Ronald Lanner has carved out a niche over the past two decades as an expert guide to trees of the western United States, authoring well-regarded books on pinyon pine, the symbiosis between pines and birds, and the conifers of California and the Great Basin. His latest effort, however, may disappoint readers of his previous books, and admirers of bristlecones. THE BRISTLECONE BOOK is an idiosyncratic work, narrowly focused on Lanner’s own research interests (anatomy, physiology, and genetics), and fairly technical for a slender book marketed to a general readership. It falls short of the promise of its expansive title and subtitle, “A Natural History of the World’s Oldest Trees.”

THE BRISTLECONE BOOK begins with a brief description of the three pine “cousins” in subsection Balfourianae that are the subjects of the book: Great Basin bristlecone pine (*Pinus longaeva*), Rocky Mountain bristlecone pine (*P. aristata*), and foxtail pine (*P. balfouriana*). The next chapter details the anatomical and physiological characteristics of bristlecones—though nearly all of these features, as Lanner acknowledges, apply generally to *Pinus*. The third chapter describes the life stages of bristlecones, concluding with recent research by Lanner and others on their apparent non-senescence. The next chapter discusses some of the more interesting, if not unique, aspects of bristlecone morphology, including sectored architecture, bark strips, and multiple stems. Chapter 5 is a brief treatment of several interacting and increasing threats to the bristlecones: global warming, greater fire severity, pine bark beetles, and white pine blister rust. The final chapter explores at greater length Lanner’s past research and current speculation on the causes of the bristlecone’s superannuated lifespan.

For the most part, the text is well-written and appealing, though Lanner occasionally lapses into jargon not covered in the book’s glossary. The presentation of material on bristlecone anatomy and morphology—constituting much of the book—would have been greatly enhanced by line drawings (there are none) to illustrate complex structures. As I read the book, too often I found myself visualizing appropriate figures seen in other sources. And several of the color photos could have used annotation to clearly identify features mentioned in the captions.

While the book’s bibliography is reasonably extensive and diverse, in places Lanner overemphasizes his own research. For example, based on work with Kristina Conner on anatomical and genetic characteristics, he concludes that old bristlecones show “negligible senescence.” That conclusion sidesteps a growing number of studies showing significant decreases with age in photosynthesis and other functional parameters in other *Pinus* species. The side benefits, though, of this focus on his own work are Lanner’s engaging personal perspectives on the research process.

The chief weakness of THE BRISTLECONE BOOK, however, is what’s not in it. Lanner fixates on the tree as individual organism, largely ignoring other aspects of bristlecones that one would expect covered under the rubric of “natural history.” Particularly lacking are sustained treatments of the compelling physical environment of the bristlecones (substrate, topography, and climate), the trees’ ecological relationships with other plant and animal species, and the characteristics of bristlecone stands and forests.

Once one accepts the limitations of the author’s scope, The Bristlecone Book does reward the reader. And the price will make it easier for a “pinophile” to justify adding it to the bookshelf. But a complete natural history of bristlecone pines still awaits those interested in these iconic species.

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