

The Majesty of Trees

A review of a trio of books by Tim Beatley

At a time when much of the world's forests are under direct attack -- we see Sequoia's burning in California, record high rates of deforestation in Amazonia, and trees sacrificed to build or expand roads in Indian cities -- a suite of books that celebrate the wonder and majesty of trees is welcome indeed. While not explicitly aimed at urban trees, there are abundant lessons and remarkably fresh eyes through which to see and understand our forest brothers and sisters.

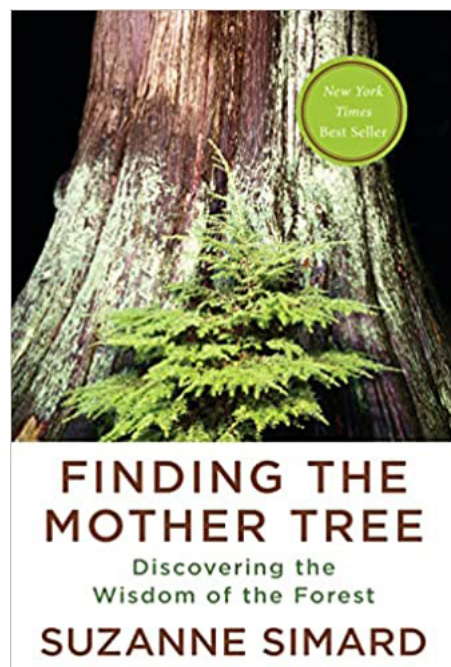
Finding the Mother Tree: Discovering the Wisdom of the Forest, By Suzanne Simard (Knopf, 2021)

Few forest ecologists have made greater contributions to our understanding of trees than the work of University of British Columbia professor Suzanne Simard. She is renowned for discovering and rigorously demonstrating through her research and field work that trees are not solitary or singular organisms but members of complex communities of life. They are connected together by a dense network of mycorrhizal fungi, a "wood-wide web" she calls it. Trees share resources, communicate with each other, help their offspring and other trees to survive, even signaling to other trees when there are threats. At the heart of this network, which she likens to the neural network of the human brain, are the larger older trees, the mother trees.

This new way of thinking about trees is nothing short of revolutionary and will forever change the understanding of forests and hopefully how we protect and manage them in the future. To some readers,

there will be too much anthropomorphizing: attributing intelligence, agency, and sentience to trees will be a step too far. But the case she makes is a strong one; noting at one point how trees meet the Latin definition of intelligence ("to comprehend or perceive"). I love the logical admonition at the end of the book that we begin to see trees as people. This is certainly how I have felt about particular trees in my own life!

The book is also a memoir and life story. She begins with the story of growing up in the northwest of Canada in a family with a long heritage of timber harvesting. She takes us through her early days navigating the (still) conservative culture of timber and wood products industry, and their palpable resistance and skepticism about her ideas. Even the scientific community clings to orthodoxy, believing strongly in an overly narrow view of plant and forest ecology as a world of competition rather than, as she finds, one cooperation and



mutualism. There are difficult personal challenges along the way as well: she loses a brother to a bizarre accident; she raises children and struggles in a marriage that ends in divorce; and she grapples with cancer, all while moving her pioneering ideas and research forward. In many ways, the personal stories seem to closely parallel the science, as her own network of friends and family sustain her in difficult times. "We were there for one another when it counted,"

she reflects about her family (p.296), and there is little doubt about her own importance as a mother and cornerstone in her family.

It is a compelling and interesting personal story of growth, discovery and perseverance, and it is an immensely engaging read. There are few references to the implications of her work and ideas for cities and urban forests, something a green urbanist can't help but keep top of mind while reading this book.

The Nature of Oaks: The Rich Ecology of Our Most Essential Native Trees By Douglas Tallamy (Timber Press, 2021)

Some of these new ecological understandings of trees and approaches to tree-planting, which are contained in Simard's book, are also clearly evident in Douglas Tallamy's new book. As a lifelong lover of oaks, Tallamy's *The Nature of Oaks* was a delight to read. I learned many things I did not know about oaks and especially the sense of an oak tree as an immense ecosystem supporting and interacting with a complex biodiversity changing over the course of a year. Indeed, the book's narrative follows oaks through a year's cycle, beginning with October and ending in September; each chapter a single month's focus on the biological goings-on of oak trees.

A deeper dive into the complex mutualism and ecological

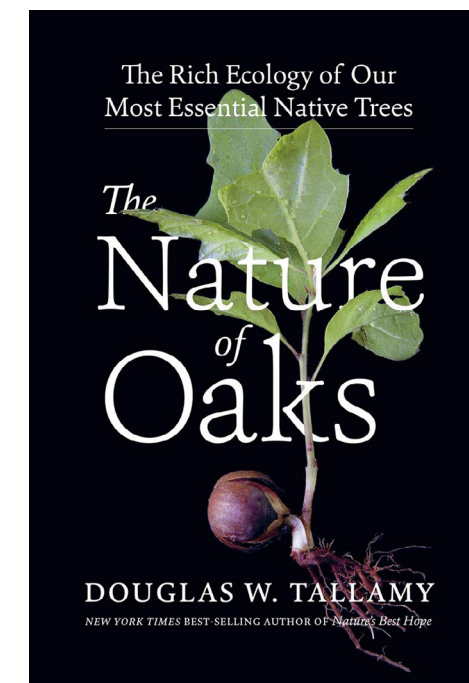
Recently, on the other side of Canada, the City of Toronto has chosen to preserve a 250-year old northern red oak, located on a suburban house lot. It is thought to be the oldest tree in the city, an urban mother tree certainly, but with less ability to provide the nurturing and community-strengthening functions that might be possible in less-urban, less-fragmented landscapes. But might these revelations lead to new opportunities to envision cities and suburbs where older mother trees are left in place,

synergies with many other lifeforms makes their importance that much clearer. As a lover of birds, oaks play a special role that in some ways I did not understand before. Tallamy makes a strong case in earlier work (especially in his 2020 book *Nature's Best Hope*) of the outsized ecological role oaks play, specially white oaks, in providing for insects and caterpillars; the essential food sources needed to raise young birds. Oaks are in a league of their own; what Tallamy calls "keystone species".

Tallamy tells a story, that I have never heard, about the special connection between Blue Jays and oak trees. I grew up loving Blue Jays, brash and loud and colorful. They fill

where corridors and ecological connections of various kinds and sizes are secured and set aside and where the mycorrhizal fungal grid could be allowed to work its magic? Simard's critique of planting trees in straight rows could apply as well to cities, challenging us to find creative ways to plant groupings of trees, even when they extend beyond the neat confines of linear streets and sidewalks.

much of my outdoor childhood memories. Little did I know how important oaks are to the survival of these birds, and vice versa how essential Blue Jays are to the dispersal of acorns and



the propagation of oaks. Tallamy pulls together some remarkable stats: Each Blue Jay collects and buries some 4,500 acorns every season. The majority of these are never retrieved and eaten and so become planted seeds. Blue Jays, Tallamy says, are the “ultimate dispersers,” something he discovered himself as he tried to figure out how new oak seedlings had emerged on his own newly-acquired land when the nearest oak tree was more than a mile away. Even the physiology of Blue Jays has evolved in response to their dependence on acorns: a small curve in their beak for puncturing an acorn’s outer layer and an enlarged esophagus permitting the birds to carry as many as five acorns at once during flight.

There are many other aspects and examples of ecological interdependence, and the book describes them all with enjoyment and wonder. We learn about: acorn masting (when oaks produce an unusually large crop of acorns) and the benefits it might confer; leaf marcescence (why oaks hold onto their dead leaves longer than other trees); how oaks provide food for songbirds even in the dead of winter; how oak leaf litter may help control invasive plants; and why leaves at the bottom of an oak tree are larger than those of the top. These are just a few of my favorite insights gleaned from this book!

There is also considerable practical advice for readers.

The need to plant oaks is a key message, but Tallamy cautions against planting anything other than acorns (seedlings and young oak grown in pots will develop tangled and limited root systems that will impede healthy growth). And, again reflecting the new reality of tree biology gleaned from Suzanne Simard’s research, suggests planting oaks in groups, eschewing the idea of a singular specimen tree in one’s yard. I have already taken Tallamy’s advice about the acorns, collecting several in hopes of helping to disperse (in loving collaboration with my friends the Blue Jays) these wonderful trees.

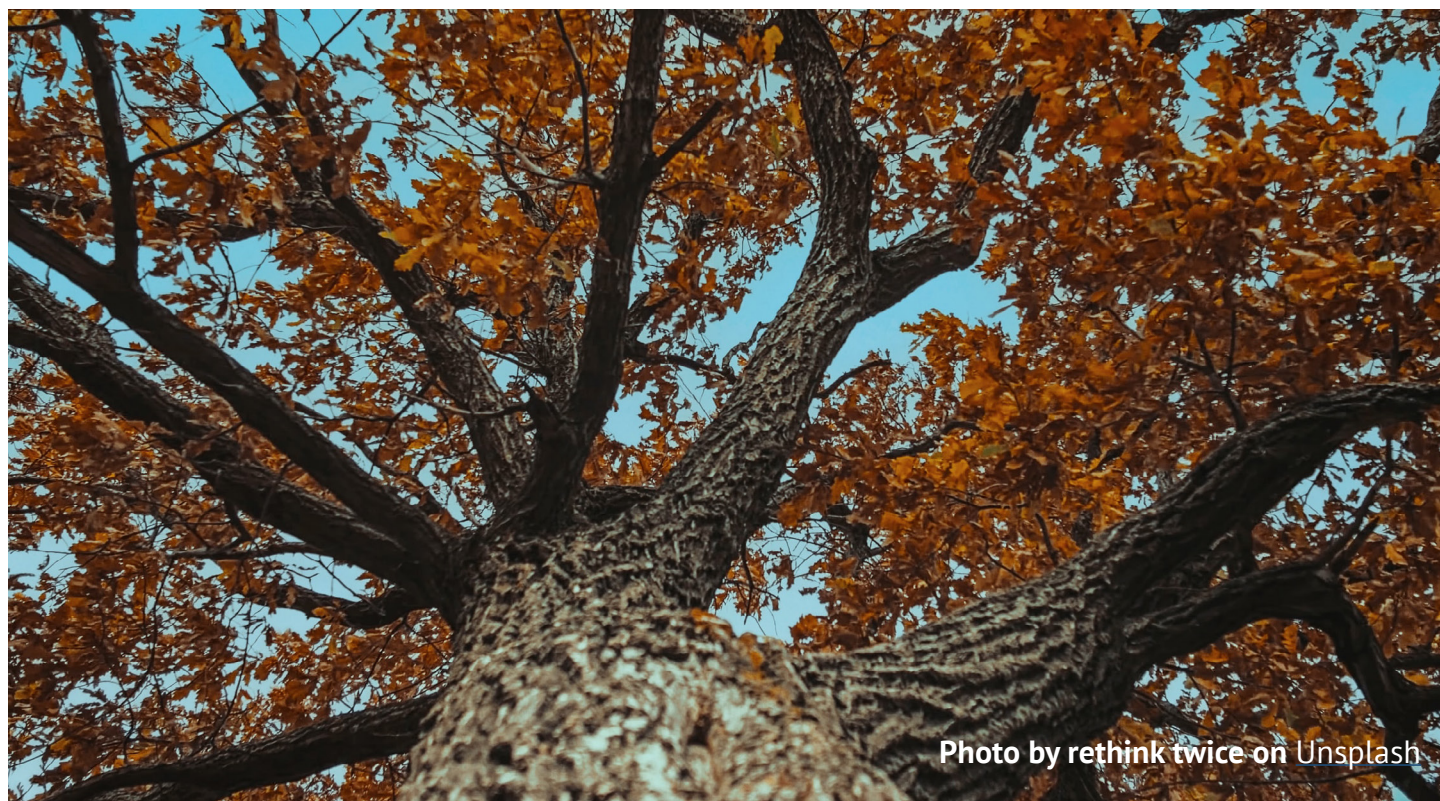
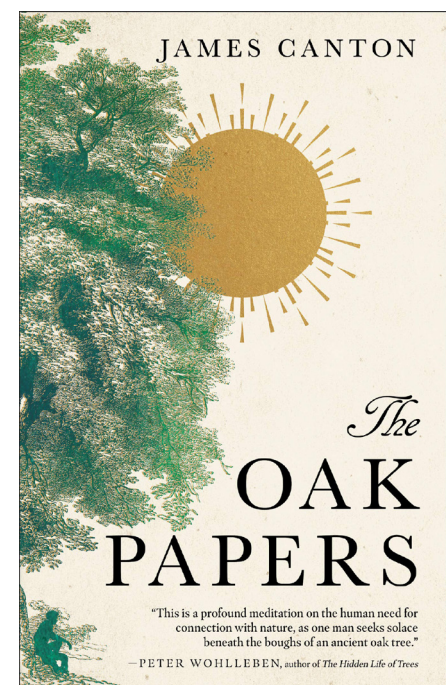


Photo by rethink twice on Unsplash

The Oak Papers, by James Canton (Black Inc, 2020)



Finally, James Canton’s book *The Oak Papers* is an equally pleasurable read and perhaps the most wide-ranging in terms of coverage. Canton explores the many different dimensions and connections we have to ancient oaks -- historical, cultural, and literary, among others.

The approach may also be the most personal in the way Canton connects with one specific tree -- the ancient Honeywood Oak, on the Marks Hall Estate in the UK. He decides to visit this tree daily and does so for some two years. His visits are up close and personal, and lead to some personal revelations. He records his experiences and observations diary-style (which essentially is the format of the book), and the many entries are informative and eloquent, ranging from

explorations of Buddhist thought and British naval history to the poetry of Keats. He also records in his entries the remarkable degree of biological bounty both visiting and living on or within the tree; from midges and bees, to squirrels, kestrels and many other species of birds.

One aspect of the power of an ancient oak being is to induce a feeling of humility. “We are as bees or birds, that come and go across the years and pause a second here beside the boughs before we wander on. This great oak has existed across the time that some thirty generations of human beings like me have been born and lived their lives and died back into the soil. And still the oak lives on.” (p.106). It is reassuring that there are ancient life forms that will be here when we arrive and will continue beyond our lives.

“You can stand beneath a grand oak and know that your more distant ancestors did so too. Oaks hold onto the memories of earlier generations. By touching the skin of the oak it is possible to feel some tentative trace of those that have gone before” (p.5). Canton finds himself at several points vividly remembering his father. Oaks in their role of timekeepers seem to encourage thinking about the past and are helpful in facilitating a sense of deeper

time. After all, Canton reminds us at one point, the Honeywood Oak was “a mere sapling when the Magna Carta was signed” (p.9).

Canton’s book is a convincing first-person account of the power of simply hanging out in the presence of such antiquity, majesty and beauty. Just being around such trees, inhaling their smells, watching the many other lives that flutter and inhabit these spaces, and touching the bark, all contribute to a sense of solace and calmness. “Something happens,” Canton writes, “My heart slows A calm creeps over me as though a blanket has been wrapped around my shoulders” (pp.16-17).

Together, these books are a compelling trifecta for trees: two from the sciences and one from the perspective of the humanities. All three authors are in agreement about their deep love of trees.