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**Book Review - Suzanne Simard, Finding the Mother Tree:
Discovering the Wisdom of the Forest (New York: Alfred A. Knopf,
2021)**

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BOOK REVIEWS

Suzanne Simard, *Finding the Mother Tree: Discovering the Wisdom of the Forest* (New York: Alfred A. Knopf, 2021).

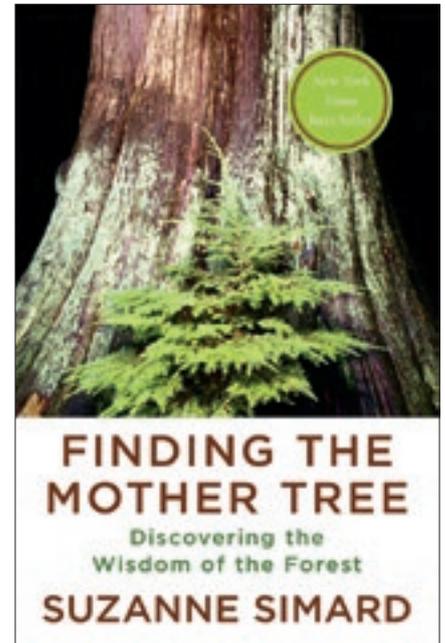
Heather Marella

“I can’t tell if my blood is in the trees or if the trees are in my blood” (25). That is how Dr. Suzanne Simard closes out the first chapter of her memoir, a personal and scientific journey from a child of the wilds of British Columbia to a respected forest ecologist. The book begins with Suzanne, a college student working as a summer intern for a logging company, getting stuck deep in the woods overnight, alone with her thoughts and a grizzly bear. She’s been sent out to check on the health of spruce seedlings planted in tidy rows to meet government regulations after the logging company clear cut hectares of forest. Along her hike out to the clear cut, she collects interesting fungi and weaves in a bit of her family’s history as small-time hand loggers living in rural British Columbia. This is dangerous work, she is the first woman to work for the logging company, and they have sent her into the forest alone. But we see her scientific mind at work as she collects and observes the fungi in the dense forest, and her horror at the sickly, yellowed spruce seedlings she encounters in the clear cut. The roots of the spruce seedlings are bare and unlike those of the healthy trees in the forest whose roots are coated in colorful fungi. Her gut tells her that the fungi play a role in the health of the forest, providing the impetus for her scientific journey.

The forest is like an iceberg, the bulk of the action occurring below the surface. Simard has collected mycorrhizal fungi, not the decomposing type of fungi most are familiar with, but rather

symbiotic fungi that associate with plants. In this relationship, the fungi encase the roots of the plant, providing the plant with soil minerals and water, while the plant gives the fungi

photosynthate. But what is amazing is that a single fungus can associate with more than one plant, in fact, it can associate with plants of different species creating a vast underground web that connects the trees of the forest. A tree isolated from the mycorrhizal network will struggle to survive.



Her work at the logging company ends; it has given her an inside look at a dark and destructive industry. Simard graduates from college with her forestry degree, lands a job in the Forest Service, then heads off to grad school before coming back to the Forest Service. All the while she’s pushing boundaries with her ideas of forest health and responsible logging and butting heads with the boys’ club of foresters. She intertwines her life journey with science, and we see her relationships with others develop, as tangled and messy as the web of mycorrhizal fungi in the forest floor.

The opportunity to leave the stifling constraints of the Forest Service for academia allows Simard to earnestly chase after her scientific passion and develop

her voice as an advocate for forest preservation. The Mother Tree concept doesn't arise in the book until Chapter 12 which might seem odd considering it is the title. But Simard methodically walks the reader through her science on the fungi and trees, step by step, showing how each experiment revealed an answer but also more questions, leading readers through her scientific thought process. "Finding" the Mother Tree requires finding out how the mycorrhizal fungi network operates, which she connects to her own experience as a mother to two daughters.

A Mother Tree is a hub in the mycorrhizal fungi network, a mature tree that is connected to many other trees of varying ages and species, including its own offspring. It supports the growth of its offspring by sending them photosynthates, through the fungal connections, since they live in the shaded understory of the forest. Keeping one's offspring alive is central to motherhood and evolution. But the fungal network can do much more than deliver food and water; it also acts as a signaling network, allowing trees to communicate warnings about damaging insects and environmental stressors. In essence, mother trees prepare the next generation for trials they might face, the biggest being climate change. Simard closes the book by inviting us all to participate in what might be her final act as a scientist, The Mother Tree Project. This large-scale project, which employs both scientists and citizen scientists, aims to investigate the role of retaining Mother Trees in protecting the forest against climate change (<https://mothertreeproject.org/>). As such, she is acting much like a Mother Tree to younger scientists around her.

Simard has become a towering figure in the field of forest ecology, much like the trees she studies. She's candid about her struggle to learn how best to relay her message, but persevered and is now TED-famous, the inspiration for a character in Richard Powers's *The Overstory*, central to *The Hidden Life of Trees* by Peter Wohlleben, and even mentioned on an episode of *Ted Lasso*. While writing a memoir is not something most scientists aspire to or train for, Simard undertakes the task to deliver what she believes is her most important message and legacy and to make it accessible to a wide audience. The blend of science and personal sto-

system of roots and fungi that keep the forest strong" (283). Her recognition that both traditional knowledge and Western science can lead to the same conclusions, through different processes, helps to emphasize the central importance of symbiosis between fungi and trees and all creatures in the forest.

At its heart, the book is about connections and community. After living in the midst of a pandemic for the past few years, we've realized that physical isolation is detrimental to well-being. Hugs and handshakes can't be replaced with Zoom and emojis. Being physically together matters. If it is true for humans, why not the trees?

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ries is more successful in certain chapters than others. Non-scientists might struggle with technical aspects while scientists might cringe at the anthropomorphism she utilizes. As a fellow plant biologist, I understand the challenge of making plants relatable to people and can forgive the anthropomorphic descriptions for the sake of the argument. Simard also infuses the memoir with knowledge of the forest from First Nations and Indigenous people groups and credits them with first understanding the wisdom of the forest for "there is an intricate and vast



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