



Mother Trees In A Wood Wide Web, by Suzanne Simard

Elders fill a special role in any community, having earned the respect of the tribe for their life-long wisdom, knowledge, and teaching. They help link individuals to the broader community as a whole, and connect the past with the future. Not all old individuals are elders, nor are all elders old. In my family, grandmothers and grandfathers usually filled the role of elders, although certain individuals, like my daughters, were born with wisdom beyond their years, connecting the family through the ages. This wisdom emerges from lives lived before them over many generations.Â

In my lifeâ€™s work in the forest, I have learned that elders of many species, including humans, also connect the forest, providing an adaptive genetic scaffolding for change and resilience among the whole community. In the forest, the foundational species are the trees, and the elders of this foundation are the biggest and oldest trees. Elder trees provide an anchor for the diverse structure of the many-sized trees in their neighborhoods. These elders are important not just as habitat for the many plant, animal, fungal, and microbial creatures that live in the forest, but also the people who depend on the woods for their cultures and livelihoods.

A single elder Douglas fir tree, for example, can be connected to hundreds of other trees, either of the same or different species, by the sheer magnitude of its massive root system and diverse fungal community. These subterranean connections form a mycorrhizal network, now known colloquially as the â€œWood Wide Web,â€• with a topology similar to that of neural networks, stream networks in watersheds, and the internet. In the Wood Wide Web, trees can be thought to serve as the nodes of the network, while fungi act as the vertices.

The Wood Wide Web is a busy network, where [...] elder trees are able to recognize neighbors that are genetically related, or that are kin, and they can send more or less resources to other trees to either favor or disfavor them, depending on the safety of the environment. I have taken to calling these elders â€œMother Treesâ€• because they appear to be nurturing their young. Mother Trees thus connect the forest through space and time, just like elders connect human families across generations.