



Excerpts from *The Hidden Life of Trees*

From “Friendships” by Peter Wohlleben

A tree is not a forest. On its own, a tree cannot establish a consistent local climate. It is at the mercy of wind and weather. But together, many trees create an ecosystem that moderates extremes of heat and cold, stores a great deal of water, and generates a great deal of humidity. And in this protected environment, trees can live to be very old. To get to this point, the community must remain intact no matter what. If every tree were looking out only for itself, then quite a few of them would never reach old age. Regular fatalities would result in many large gaps in the tree canopy, which would make it easier for storms to get inside the forest and uproot more trees. The heat of summer would reach the forest floor and dry it out. Every tree would suffer.

Every tree, therefore, is valuable to the community and worth keeping around for as long as possible. And that is why even sick individuals are supported and nourished until they recover. Next time, perhaps it will be the other way round, and the supporting tree might be the one in need of assistance. When thick silver-gray beeches behave like this, they remind me of a herd of elephants. Like the herd, they, too, look after their own, and they help their sick and weak back up onto their feet. They are even reluctant to abandon their dead.

[...]

You can check this out for yourself simply by looking up into the forest canopy. The average tree grows its branches out until it encounters the branch tips of a neighboring tree of the same height. It doesn't grow any wider because the air and better light in this space are already taken. However, it heavily reinforces the branches it has extended, so you get the impression that there's quite a shoving match going on up there. But a pair of true friends is careful right from the outset not to grow overly thick branches in each other's direction. The trees don't want to take anything away from each other, and so they develop sturdy branches only at the outer edges of their crowns, that is to say, only in the direction of “non-friends.” Such partners are often so tightly connected at the roots that sometimes they even die together.



Master of I-nen Seal; *Trees*; mid-17th century; six-panel folding screen; ink, color, and gold on paper; 60 5/8 × 140 7/8 in (154 × 357.8 cm). National Museum of Asian Art, Freer Gallery of Art Collection, Purchase—Charles Lang Freer Endowment (F1962.30).

From the Forward by Tim Flannery

One reason that many of us fail to understand trees is that they live on a different time scale than us. One of the oldest trees on Earth, a spruce in Sweden, is more than 9,500 years old. That's 115 times longer than the average human lifetime. Creatures with such a luxury of time on their hands can afford to take things at a leisurely pace. The electrical impulses that pass through the roots of trees, for example, move at the slow rate of one third of an inch per second. But why, you might ask, do trees pass electrical impulses through their tissues at all?



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The answer is that trees need to communicate, and electrical impulses are just one of their many means of communication. Trees also use the senses of smell and taste for communication. If a giraffe starts eating an African acacia, the tree releases a chemical into the air that signals that a threat is at hand. As the chemical drifts through the air and reaches other trees, they “smell” it and are warned of the danger. Even before the giraffe reaches them, they begin producing toxic chemicals. Insect pests are dealt with slightly differently. The saliva of leaf-eating insects can be “tasted” by the leaf being eaten. In response, the tree sends out a chemical signal that attracts predators that feed on that particular leaf-eating insect. Life in the slow lane is clearly not always dull.

But the most astonishing thing about trees is how social they are. The trees in a forest care for each other, sometimes even going so far as to nourish the stump of a felled tree for centuries after it was cut down by feeding it sugars and other nutrients, and so keeping it alive. Only some stumps are thus nourished. Perhaps they are the parents of the trees that make up the forest of today. A tree’s most important means of staying connected to other trees is a “wood wide web” of soil fungi that connects vegetation in an intimate network that allows the sharing of an enormous amount of information and goods. Scientific research aimed at understanding the astonishing abilities of this partnership between fungi and plant has only just begun.

The reason that trees share food and communicate is that they need each other. It takes a forest to create a microclimate suitable for tree growth and sustenance.

Wohlleben, Peter. Excerpt from “1: Friendships.” In *The Hidden Life of Trees: What They Feel, How They Communicate*, 1-5. Translated by Jane Billingham. Vancouver, BC: Greystone Books, 2016.

Flannery, Tim. Excerpt from “Foreword.” In *The Hidden Life of Trees: What They Feel, How They Communicate*, vi-viii. Translated by Jane Billingham. Vancouver, BC: Greystone Books, 2016.