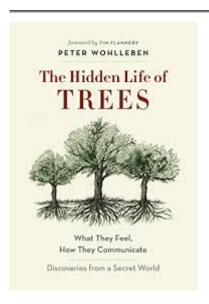
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## The Hidden Life of Trees – Evergreen Audubon

4-5 minutes



Peter Wohlleben spent over 20 years as a forest ranger in Germany before he left to found an environmentally friendly woodland. His premier work, *The Hidden Life of Trees: What they feel, How they communicate—Discoveries from a Secret World*, became a surprise hit in 2015 and is translated into 19 languages.

Wohlleben startles the average reader by demonstrating that trees have a complex social life. Rather than using scientific language, he speaks of trees as sentient creatures that communicate, care for their young, look after the old, count, learn, and remember.

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Wohlleben explains that trees are not individuals. They live most successfully in a forest. The beech trees that dominate the forests in Germany exist are an interconnected community.

Trees do not choose to live individually. In a beech forest, the roots of the trees interconnect, in a symbiotic relationship with a fungus that enables trees to share nutrients and communicate. When one tree is cut down, it can grow up again from the roots because the roots are provided with nutrients from neighbors.

The trees in the forest also interact with birds, mammals, insects, and other plants, all working together. As Wohlleben explains: "It's a bit like the way social security systems operate to ensure individual members of society don't fall too far behind."

Trees develop fruit and seeds to foster their species. Mother trees help to suckle baby trees through the root system, helping the baby trees to survive and grow. Related trees communicate problems like insect infestations, through chemicals in their leaves, warning neighboring trees of a coming threat. In fact, Wohlleben's entire focus is on the importance of an intact forest community that helps trees reproduce and thrive.

For example, he discusses American redwood trees, a popular planting in Europe. Because they are removed from their native

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communities, they fail to thrive and do not grow as tall as they do in the Pacific Northwest.

Wohlleben explains how trees hibernate, dampening their growth when the weather turns cold. They depend on the length of the day to know when to move in and out of hibernation. The trees in some way know about the length of day, an amazing relationship with the world around them. In some mysterious way, Wohlleben explains, a tree can "see" the changes in light level.

The forests in Europe have returned after the ice age, when Europe was largely covered by ice. The trees migrated north as the ice withdrew. Now with climate change, they are continuing their northward movement. Seeds that are dispersed north of the mother tree, by birds or mammals or weather, are more likely to survive than seeds that happen to land to the south.

Although trees can migrate, just like animals do, trees are slow to change. Their life expectancies are in the hundreds of years, so they are in no hurry. Without disease or injury, a beech or oak tree might live for 500 years. In fact, trees put out defenses that protect them from infections.

How is it that trees can count? Trees leaf out at different times of the year, depending on the local temperatures and the light levels. Studies show that trees might leaf out a set number of days after the first warm day. The leafing out is related to temperature but as a protection against leafing out too soon, trees count the number of warm days to be certain it doesn't turn cold again.

Although Wohlleben's favorite tree is the circumpolar Beech, he

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discusses alien trees that have been transplanted from elsewhere in the world. Unfortunately, the transplants don't grow as well as they do in their native areas. The transplants have no community to support them.

The unifying idea of *The Hidden Life of Trees* is the forest. Individual trees are best understood as part of a forest. Trees do not, Wohlleben contends, live successfully outside of a forest. He says that "... we shouldn't be concerned about trees purely for material reasons. We should also care about them because of the little puzzles and wonders they present us with. Under the canopy of the trees, daily dramas and moving love stories are played out."

Published by Greystone Books, 2016. This review was coauthored by Bill Hackos, who read the book.

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