Do trees 'talk' to each other through their roots? It's become a highly-contested belief

Few recent scientific discoveries have captured the public's imagination quite like the wood-wide web — a wispy network of fungal filaments hypothesized to shuttle nutrients and information through the soil and to help forests thrive. The idea sprouted in the late 1990s from studies showing that sugars and nutrients can flow underground between trees. In a few forests, researchers have traced fungi from the roots of one tree to those of others, suggesting that mycelial threads could be providing conduits between trees.

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But as the wood-wide web has gained fame, it has also inspired a backlash among scientists. In a recent review of published research, Dr. [Justine] Karst, Dr. [Jason] Hoeksema and Melanie Jones, a biologist at the University of British Columbia, Okanagan, found little evidence that shared fungal networks help trees to communicate, swap resources or thrive. Indeed, the trio said, scientists have yet to show that these webs are widespread or ecologically significant in forests.

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The researchers also found a growing number of unsupported statements in the scientific literature about fungal networks connecting and helping trees. Frequently, papers such as Dr. Klein's are cited by others as providing proof of networks in forests, Dr. Karst and colleagues found, with caveats that appeared in the original work left out of the newer studies.

"Scientists," Dr. Karst concluded in her presentation, "have become vectors for unsubstantiated claims." Several recent papers, she notes, have called for changes in how forests are managed, based on the wood-wide web concept.

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