Courtesy photos

A majestic oak tree.

Quincy

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seedlings.

Trees "plan" reproduction at least a year in advance – as a group. It's called "masting." "Whether "tree love" happens every spring depends on the species. Deciduous trees "decide" a different strategy every year, depending on the predator population. If the wild boar or deer are too prolific, the trees will not bloom every year, thus starving out the predators. When the beeches and oaks finally all bloom, a diminished population of predators cannot wipe out everything, leaving behind enough undiscovered seeds to sprout. This oddity explains why the Mountain Ash trees bordering the Mount Washington Auto Road last fall were absolutely scarlet with red berries – it was a reproduction year, which no doubt, improved the winter feast on the mountain.

There is "social security" among trees – an equalizing influence between strong and weak, caused by, as Wohlleben describes it, a "lively exchange going on in that whoever has an abundance of sugar hands some over; whoever is running short, gets help."

Diversity in a forest is its own protection – by preventing the dominance of one species, the forest is less vulnerable to elimination by one infestation.

Trees are simply not as simple as we thought.

For decades, scientists offered simplistic explanations about how a tree moves water – capillary action, transpiration and osmosis, all of which the latest research has called into question. When scientists listened more closely, they registered a soft murmur in the trees – at night, when most of the water is stored in the trunk and held almost completely immobile – so where were the noises coming from? Scientists surmise it is the sound of carbon dioxide bubbles in the tree's "pipes." Thus, with gas bubbles interrupting a continuous column of water thousands of times, transpiration and capillary action actually contribute very little to the transportation of water. The explanation of the tree's nocturnal "soft murmur" remains a mystery.

A California Redwood tree with a sensor attached.

Interconnectivity seems to be inherent in the forest and is of paramount importance.

Wohlleben advises us to observe and exemplify the stewardship of wolves in Yellowstone National Park. When the wolves died off in the 1920s, increasing herds of elk fed on aspens, willows and cottonwoods along the streams, diminishing the animal population. After 70 years, when wolves returned, they kept the elk on the move and the trees sprang back. Cottonwoods and willows stabilized the stream banks, slowing the flow of water, creating space for other animals to return – beavers could find materials for their lodges, and river wetlands and meadows reformed. Wohlleben: "The wolves turned out to be better stewards of the land than people, creating conditions that allowed the trees to grow and exert their influence on the landscape."

Last year, the HeartMath Institute located in California, unveiled its Interconnectivity Tree Research Project, a scientific exploration of the energetic relationships between humans and trees. As the HeartMath video states: "Over the last several years, research conducted around the world has uncovered that plants and trees are intelligent and aware, with more than fifteen different senses and sophisticated organizational, cooperative and communication capabilities."

Some questions being considered: Are trees affected by human emotion? Do trees respond to emotional outpourings from large numbers of people? Do the biofields of trees have an uplifting effect on people? Do trees communicate energetically with each other over great distances? Can trees predict an earthquake?

In the near future, HeartMath will launch a Citizen-Scientist-based Project in which anyone can participate. All this research takes funding. If you would like to help fund the Tree Research Project, please text HMI-TREE to 41444 or visit www.heartmath.org/trees.

The oldest tree in existence is a spruce in Dalarna province in Sweden, carbon dated at an absolutely unbelievable 9,550 years old! We are just scratching the surface of knowing how trees work and what they "know." Isaac Asimov observed, "The saddest aspect of life right now is that science gathers knowledge faster than society gathers wisdom."

I would not be surprised to discover one day that science will unveil the fact that we humans are among the least intelligent in the "classroom" of Nature. As science becomes increasingly intertwined with daily life, we all need to become scientifically literate. Let us each begin by respecting the vast intelligence of trees, counting the blessings of valuable lessons we can learn from a seedling.