Leaf Litter Is an Environmental Windfall
By Vera Strader

Leaf litter is truly an environmental windfall. Fallen leaves act as a wildlife boon enriching soil, providing a down-like comforter for small critters and, according to one estimate, benefiting at least 122 bird species nationwide.

Mother Nature does not remove fallen leaves—and for good reason. Leaf litter provides food and shelter for earthworms, pill bugs, millipedes and a multitude of smaller life such as eggs and larvae of insects and spiders of many kinds. These creatures are all essential components of the food web providing sustenance to toads, frogs, lizards, and countless other animals.

Nearly all backyard birds require protein from insects to feed their young. A yard without thrushes and towhees mining for morsels in the litter and bluebirds and flycatchers snagging bugs from ground and air is a yard devoid of life.

But, the story of leaves goes even deeper into the web of life in the soil itself. Leaf litter fosters living soils with vast numbers of beneficial soil bacteria, fungi, and nematodes working in concert to build healthy loam and to nourish plants.

Writing in "Teaming with Microbes," Jeff Lowenfels and Wayne Lewis tell us that a healthy soil web breaks leaf litter into a rich, organic layer that supports life both above and below the soil's surface. Treating soil, instead, with concentrated fertilizers drives away earthworms and kills nurturing bacteria and fungi. Without the buffering action of bacteria and fungi, the soil's pH (acid/base balance) is thrown out of whack, say Lowenfels and Lewis. The soil then slowly loses the ability to hold air and water and to fight off disease.

In a study of the effect of blue oak litterfall (leaves, twigs, and acorns) on rangeland soil, researchers found that the improved environment for soil organisms under blue oaks leads to enhanced soil quality and fertility. Earthworms and ants attracted to this environment further benefit soil by mixing and aerating, fostering water penetration. Soil quality quickly declines upon the removal of the oaks.

In addition to leaf litter's benefits to soils and wildlife, fallen leaves suppress weeds, mitigate erosion, and reduce the need for irrigation, pesticides, and fertilizers. As leaf litter breaks down, it "time-releases" nutrients to the soil and plants, diminishing the need for fertilizers that create toxic runoff into waterways.

But our yards are different from forests and rangeland. Sometimes fallen leaves are just too much, threatening to smother lawns and perennials. Rather than waste this leafy resource, blow or rake excess leaves to an unused area of the yard or compost them to create a free, nutritious, and water conserving amendment for your garden next year. To speed decomposition, try grinding or chopping leaves with a chipper or weed eater. On the lawn, use a mulching or rotary lawnmower to shred the leaves; leave in place to nourish the grass and reduce water needs. If you truly cannot use all your leaves, perhaps a neighbor would welcome your contribution.

Be sure to keep litter and mulch away from plant stems and trunks to prevent crown rot. And, some plants that naturally grow in rocky, dry terrain should not be mulched with additional organic material.

Leaf litter that collects below diseased plants is best disposed of entirely. Examples are roses, peonies, iris, and hollyhocks that are frequently plagued with fungal diseases. Fruit tree leaf fall is also best removed to prevent possible reinfestation with certain diseases and insects.

Avoid sending plant materials to a landfill whenever possible. Transporting debris creates pollution and, once in the landfill, yard waste consumes huge amounts of space and generates methane, a powerful greenhouse gas.

Leave the leaves to save time and money, enrich soil, help sustain wildlife, and benefit water and air quality. Mother Nature will thank you.

Vera Strader is a University of California Cooperative Extension Master Gardener of Tuolumne County who mulches the leaves in her Sonora garden. UCCE Master Gardeners of Tuolumne County will answer gardening questions through their hotline at (209) 533-5912. For more information about our public education classes and activities, go to our UCCE Master Gardeners of Tuolumne county website at http://ucanr.edu/sites/Tuolumne_County_Master_Gardeners/. They can also be found on Facebook at Master Gardeners-Tuolumne County.