Decomposers: Nature's Recyclers

Mold and bacteria and higher level organisms like beetles, centipedes and, of course, earthworms are all busy recyclers. Locked in the tissues of every plant and animal is a wealth of nutrients, including carbon, nitrogen, and phosphorous. Living organisms require huge amounts of these and other elements in order to grow and survive. Without the help of worms and other decomposers, every plant and animal that died would stay right where it fell. Trees, leaves, fruit, nuts, dead animals and food would just keep piling up on the ground. Not only would this create an unpleasant environment to live in, but the ecosystem would run out of the nutrients needed to keep the living organisms alive.

Decomposers, including fungi, bacteria, and invertebrates like earthworms, work to take apart the cells and structures that made up the dead organism. In the process of breaking down dead plant and animal tissue, decomposers not only gain energy to fuel their own life processes, but release nutrients back to the environment, where they can be used again by other organisms. All of that dead material becomes rich soil for new seedlings to grow. And the cycle starts all over again!

Worms are decomposers that are also underground farmers who turn the soil over like a plough. In just one acre there can be a million or more worms, eating 10 tons of leaves, stems, and dead roots a year and turning over 40 tons of soil. Imagine them all over the world -- billions and billions of earthworms, tunneling through soil, chewing up fallen leaves and animal remains, pushing heavy stones. And don't forget pooping! Worm poop, called castings, contains the recycled nutrients from the debris we ate. Worms really do change the dirt under our feet!