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When a tree falls

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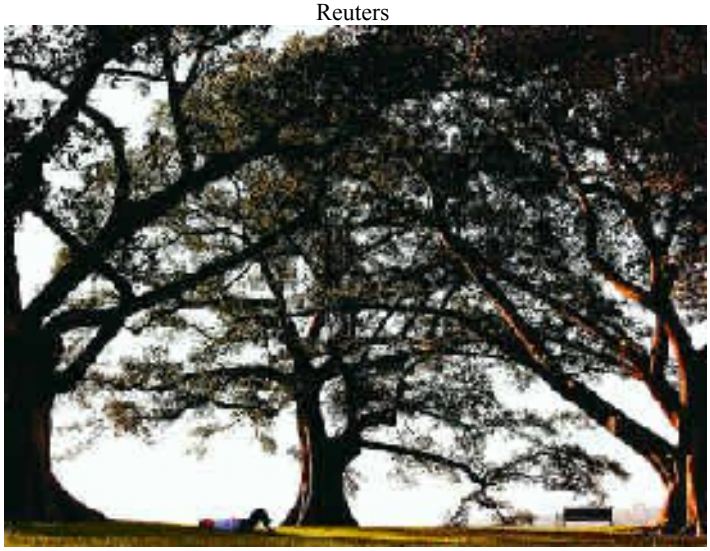
Have you ever explored the life within a "dead" log? You will be amazed at what you may find.

Reuters



Almost everyone interested in the outdoors loves trees. Trees have an element of beauty and grace that few other life forms can match. But when a tree falls, it is simply seen as a dead tree; not many people even spare it a second glance. Though you have probably never realised it, the dead tree that seems lifeless, serves as a shelter to a lot of life forms.

In the course of its life (and this varies greatly from tree to tree) a tree works as a collector, retainer and converter — all rolled into one. Water, solar energy and soil minerals are all tapped and retained by the tree and later converted into the matter that forms the leaves, the wood, the sap, the flowers and the fruit. Nutrients are thus blocked in a living tree and admirably protected by the tree's natural defences. The outer bark, for instance, prevents all kinds of invading organisms from attacking and destroying the inner wood tissues.

Once a tree dies, the dry, strong, hardy bark that used to function as a protective layer, begins to weaken. Several factors may be responsible for this. A fire, moisture, the action of wind, all contribute to the gradual weakening process, whereby the wood slowly begins to get softened. The inner tissues — the xylem and the phloem — begin to lose their firmness. And this is the time when life begins to make an appearance on the log.

Invasion begins

Though you could find a lot of fungi (particularly bracket fungus) on the stem of a tree even before it has fallen, it is only when the tree is dead that fungi and moss actually flourish. This

marks the beginning of the invasion. The organisms that come into a new habitat (in this case, the fallen log) are termed invaders. The ecological term for this sequence of colonisation is succession, because there is an invasion of organisms into a previously unoccupied niche or area.

Look carefully at a fallen tree. Besides the fungi and the moss, you will see engravings and narrow tunnels in places, more so where the bark has been stripped and is exposed. This is the work of engraver beetles, wood-boring beetles, termites and a few other insects. Check a fallen log and count all the different species of beetles and insects you can locate. At first glance, you'll most probably see nothing at all and feel extremely disappointed. But wait. Gently prod the rotting log or pull off a little strip of the loose bark and a lot of little crawly forms start scuttling about. This is the best way to discover insects and other small creatures that occupy the log. Besides beetles and termites, wood ants, field crickets, a few moths and perhaps a wasp's nest, you might find arthropods such as centipedes and scorpions; a frog or a toad may even hop away from near the log.

A lot of what you might see will depend upon the nature of the wood, and where it actually lies. There are chances of seeing more life forms in moist, decaying log, particularly wood-boring insects. Some of these, you will see, bore deep into the wood, others remain only in the outer tissues; some spend their entire lives in decaying wood, and create the most amazing patterns of tunnels and galleries in the wood. If you are a careful and regular observer, you could be witness to a small food chain that may have formed in, and in the immediate vicinity of, the log. The cavities and tunnels of beetles and termites soon become pathways or entry-points for other small organisms. These insects in turn attract other insectivorous creatures — birds like nuthatches, robins, possibly a woodpecker or a flycatcher, to name only a few. Ultimately, of course, the number and kind of birds will depend upon the habitat and the time of the year. You would do well to keep a list of all the birds you see on and around the log. There might even be a few lizards that have come to feed on the insects.

Life in the log-niche

As the log gets more and more soft, and the holes and crevices get larger, you might see a hole-nesting bird breeding in it — a robin or a nuthatch or a wood sparrow. There will almost always be snails around, and there are chances of encountering a small snake, resting in a crevice. If you have been keeping track of the log right from the time the tree died, you will notice that each new entry into the log-niche brings in its wake other creatures. It soon becomes a micro-habitat. Such rotting logs may often shelter a few saplings/seedlings. And as time passes, the log is eventually so weakened and decomposed that it will gently disintegrate, becoming part of the soil around — a bounty of humus that in turn will support and encourage the growth of other life. So, the next time you come across a fallen tree, don't just ignore it. Get down to work!

In collaboration with Kalpavriksh Environmental Action Group