

The Forest Cycle

The mature mountain beech forest is not the end of a process. Within the forest, species regenerate, and when an old plant dies, new plants grow to fill its place. The death of one plant helps other plants to grow and flourish.

As you walk through the forest it feels like you are walking on a carpet of leaves, twigs, and soil. Kick some of this carpet up. Can you smell the rich **mustiness** of this layer **of leaf litter**? Life in the forest begins and ends in the soil and within the litter of the forest floor. Here is a whole new world we know little about. Dead trees fall and rot on the forest floor. Branches, twigs and leaves pile up on the ground. Droppings of birds and animals all end up eventually on the forest floor. Slowly over months and years this matter is riddled with worms and grubs, decays, and is broken down to eventually become **compost**. This enriches the soil with **minerals** and provides **nutrients** and **humus** for seedlings and young plants to grow.

The rotting material is broken down with the help **of bacteria** and **fungi**. You can often see the fruiting bodies of the fungi as brightly coloured mushrooms and toadstools. The bacteria and fungi are assisted in this process of **decomposition** by a large number of small creatures, including tiny mites and worms, which feed on dead animals and decaying matter. After these animals have digested their food their own wastes are further decomposed by bacteria and fungi in the soil. The nutrients finally produced by this process are mixed with rain water and taken up by the plant roots as food for their growth. Most trees in the beech forest have shallow roots, because all the nutrients are in this surface layer of the forest floor. The nutrients provide food for the tree to grow new leaves which eventually drop to the ground to become leaf litter, and decay with the help of bacteria, fungi and worms.

Thus the **cycle of the forest** is a continuous process of growth, death, and decay to provide new life. Old trees die, decay, and become soil for new plants. What happens when a tin can dies? Thus the forest has its own population control and does not become overcrowded.