

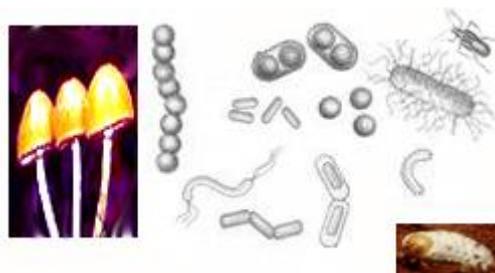
DECOMPOSER HABITAT

On the sites we manage, there are often decomposer areas where we let organic waste, such as grass mowings, hay, brash and larger wood thinnings, decay. We try to have these in out-of-the way corners but please don't complain about them – decomposer food webs and the communities of organisms that carry out or depend on the catabolic (break-down) processes of decay are vital to healthy ecosystems, as well as being biologically rich and fascinating. Indeed, we could not live without them.

PLEASE NOTE THAT OUR DECOMPOSER HABITAT AREAS ARE **ONLY FOR USE BY BETTS STAFF**. PLEASE DO NOT PUT YOUR WASTE ON THEM IF YOU WANT TO COMPOST, THERE ARE MANY INEXPENSIVE COMPOSTERS AVAILABLE FOR USE IN YOUR GARDEN.

On poor soils we are able to mulch-mow, but on many grasslands the nutrient status of the soil left after development is much too high: it encourages bulky, fast-growing grasses and large weeds in a species-poor vegetation cover that out-competes the finer grasses and forbs (non-grass wild flowers) that we want to encourage, and the small mammals, birds, bees, butterflies and other invertebrates we want to foster. Similarly, in areas of meadow that we cut late in the summer or in autumn when the seeds have fallen, though we will sometimes leave patches to develop into tussocky grassland, mostly we will take the hay off to decompose elsewhere on site, if it is not wanted by local stock owners. So too, though the first rule is to leave dead wood on the trees for *in situ* saproxylophiles (organisms that like dead wood), there are thinnings and prunings that we have to remove from time to time, again for decomposition elsewhere on site.

So what happens biologically and ecologically in these piles of organic cuttings and prunings? The organisms that consume and break down organic matter into simpler molecules are known as detritivores and saprobes (small invertebrate animals, fungi, bacteria) and they play an essential role in keeping the energy flowing and the nutrients cycling, processes without which an ecosystem is not functional.



Grass cuttings tend to decompose quickly (they are 80% water) but then use up all the oxygen and stick together, preventing air from circulating so that the decomposition becomes anaerobic. That isn't necessarily a problem because there are still many microbes that will continue to live, in some cases can only live, in oxygen-deprived environments, and they will still carry out their important decomposing work. They may produce gases that are a bit whiffy, though, so we will often mix grass cuttings with coarser wastes or turn them over to let air in now and again.

Fallen leaves also accumulate, especially in the autumn, and these form an important part of the decomposer element of the ecosystem and contribute to biodiversity as they decay. They are also food for earthworms that harvest them, so we don't sweep them up unless there are very large accumulations we want to compost – and earthworms are of great importance for soil health (nutrients and structure) and a significant food source for birds and other animals such as shrews and badgers.

Decomposer habitats are good places to see birds hunting for insects and worms, and if you are really lucky, you may find baby grass snakes that have hatched from a pile of grass cuttings where they were laid to incubate in the warmth. Please do not disturb these beautiful and useful reptiles!

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