

These are NOT toadstools!

Most of the wild mushrooms that you see are either benign soil organisms that have decided to disperse their spores, or useful mycorrhizal associates of the trees and shrubs they fruit under. The brackets and punks (yes, those fat fungal saddles poking out of stumps are the original punks...no spiked hair, bad eye shadow and nose rings) that flourish on dead wood are part of the nutrient cycle.

Beneath our feet the soil is teeming with microbial life. There are bacteria and cyanobacteria devouring the leftovers of all the soil insects and worm meals, taking nitrogen out of the air or out of dung, and trapping the sulphur and phosphorus released by mineral decay or bodily functions. Along side the bacteria are fantastic, intricate networks of fungal threads. Turn over a pile of decaying leaves and see all the cobwebs of fungal and slime mould threads! Just at the surface are the soil crust gang — cyanobacteria, lichens, liverworts, mosses and miniature succulents like *Crassula sieberi* and sunrays, *Triptilodiscus pygmeus*.

The fungal fruiting body you see is the end product of the work done by those intricate cobwebs of fungal threads. In the case of mycorrhizal fungi, like the *Boletus* in the pictures, the threads attach to the newly germinated plant and grow with and through the root system. The fungus uses its elaborate set of breakdown enzymes to release nutrients into the soil around the roots of the plant. The roots move moisture and excess sugars into that same soil for the fungi to use. In many cases the association is even more elaborate and the fungal threads tap into the roots that in turn deliberately follow the fungal threads. Both organisms need the other to thrive!

So don't use these fungal fruiting bodies as footballs! They have an important job to do in the ongoing life of the riparian zone!

