

into a right relationship with the big Nature world about us.—  
Study our home surroundings.

Down in a low corner of the grounds the soil is covered with much decaying vegetable matter. Ferns and mosses grow there and the leaf-screen of the trees allows but little sunlight to reach the damp soil. Year after year the organic matter accumulates in this corner, for pieces of limbs and bark are added to the leaf-mould, and year after year the decay continues. It is worth our while sometimes to observe the disintegrating agents at work. The leaves and twigs are often eaten by borers, sow-bugs, and centipedes, and the fungi continue the work on the stems which they have made to fall. Rupturing the bark of the dead limbs black pustules of many kinds of "sac-fungi" may be seen. The fine threads of these fungi have already penetrated the wood of the limb in all directions, and have come to the surface to produce their spores. On many limbs are slimy masses of the "slime-fungi," which also sends fine threads through the wood in search of food.

We may observe, moreover, that the bark breaks down less rapidly than the wood, for bark, we know, is largely composed of corky matter, which absorbs water but slowly; and as the destructive agents require moisture, its break-down is quite slow. The lichens, mosses and algæ that live on the bark, no doubt, hasten the operation, but the main agents are certain larger fungi and the bark-beetles. Moulds and bacteria follow and break down the tissues much farther. Soon this vegetable matter becomes mixed with the soil, forming a new soil from which mushrooms and other similar forms get their food-material. The decay continues through the activity of other delicate underground fungi attached to the rootlets of trees, whose threads explore the ground in every direction. In a few years the vegetable tissue, therefore, is completely broken down and incorporated with the mineral matter to form humus soil.