

ted with two or three spoonfuls of vinegar, or two spoonfuls of bay salt. Leave the mushrooms to macerate in the liquid for two hours, then wash them with plenty of water; this done, put them in cold water and make them boil. After a quarter or half hour's boiling take them off and wash them, then drain, and prepare them either as a special dish, or use them for seasoning in the same manner as other species.

This method is said to have been tried successfully with some of the most dangerous kinds. Of these may be mentioned the emetic mushroom, *Russula emetica*, with a bright red pileus and white gills, which has a clear, waxy, tempting appearance, but which is so virulent that a small portion is sufficient to produce disagreeable consequences. It would be safer to eschew all fungi with a red or crimson pileus than to run the risk of indulging in this.

Not only are species which are known to be poisonous to be avoided, but discretion should be used in eating recognized good species. Fungi undergo chemical changes so rapidly that even the cultivated mushroom may cause inconvenience if kept so long after being gathered as to undergo chemical change. It is not enough that they should be of a good kind, but also fresh. The employment of plenty of salt in their preparation is calculated very much to neutralize any deleterious property. Salt, pepper, and vinegar, are much more freely employed abroad in preparing fungi than with us, and with manifest advantage.

#### INFLUENCE OF FUNGI ON PLANTS.

Wherever we encounter decaying vegetable matter we meet with fungi, living upon and at the expense of decay, appropriating the changed elements of previous vegetable life to the support of a new generation, and hastening disintegration and assimilation with the soil. No one can have observed the mycelium of fungi at work on old stumps, twigs, and decayed wood, without being struck with the rapidity and certainty with which disintegration is being carried on. The gardener casts on one side, in a pile as rubbish, twigs and cuttings from his trees, which are useless to him, but which have all derived much from the soil on which they flourished. Shortly fungi make their appearance in species almost innumerable, sending their subtle threads of mycelium deep into the tissues of the woody substance, and the whole mass teams with new life. In this metamorphosis as the fungi flourish so the twigs decay, for the new life is supported at the expense of the old, and together the destroyers and their victims return as useful constituents to the soil from whence they were derived, and form fresh pabulum for a succeeding season of green leaves and sweet flowers. In woods and forests we can even more readily appreciate the good offices of fungi in accelerating the decay of fallen leaves and twigs which surround the base of the parent trees. In such places Nature is left absolutely to her own resources, and what man would

accomplish in his carefully attended gardens and shrubberies must here be done without his aid. What we call decay is merely change: change of form, change of relationship, change of composition; and all these changes are effected by various combined agencies—water, air, light, heat, these furnishing new and suitable conditions for the development of a new race of vegetables. These, by their vigorous growth, continue what water and oxygen, stimulated by light and heat, had begun, and as they flourish for a brief season on the fallen glories of the past summer, make preparation for the coming spring.

Unfortunately this destructive power of fungi over vegetable tissues is too often exemplified in a manner which man does not approve. The dry rot is a name which has been given to the ravages of more than one species of fungus which flourishes at the expense of the timber it destroys. One of these forms of dry rot fungus is *Merulius lacrymans*, which is sometimes spoken of as if it were the only one, though perhaps the most destructive in houses. Another is *Polyporus hybridus*, which attacks oak-built vessels; and these are not the only ones which are capable of mischief. It appears that the dry rot fungus acts indirectly on the wood, whose cells are saturated with its juice, and in consequence lose their lignine and cellulose, though their walls suffer no corrosion. The different forms of decay in wood are accompanied by fungi, which either completely destroy the tissue, or alter its nature so much by the abstraction of the cellulose and lignine, that it becomes loose and friable. Thus fungi induce the rapid destruction of decaying wood. These are the conclusions determined by Schacht, in his memoir on the subject.\*

#### CULTIVATION OF MUSHROOMS.

The cultivation of fungi in this country (England) for esculent purposes is confined to a single species, and yet there is no reason why, by a series of well-conducted experiments, means should not be devised for the cultivation of others, for instance, *Marasmius orades* and the morel. Efforts have been made on the Continent for the cultivation of truffles, but the success has hitherto been somewhat doubtful. For the growth of the common mushroom, very little trouble and care is required, and moderate success is certain. A friend of ours some years since was fortunate enough to have one or two specimens of the large puff-ball, *Lycoperdon giganteum*, growing in his garden. Knowing its value, and being particularly fond of it when fried for breakfast, he was anxious to secure its permanence. The spot on which the specimens appeared was marked off and guarded, so that it was never desecrated by the spade, and the soil remained consequently undisturbed. Year after year, so long as he resided on the premises, he counted upon and gathered several specimens of the puff-ball, the mycelium continuing to produce them year after year. All parings, frag-

\* Schacht, "Fungous Threads in the Cells of Plants," in Pringsheim's "Jahrbuch," Berlin, 1863.