

## Literary Notices.

### FUNGI: THEIR NATURE AND USES.

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This volume opens up a department of Natural History to the general reader which is one of singular interest and one of great importance. Assisted by many illustrations the author takes up the nature and structure of fungi, their classification, uses, habits, cultivation, distribution, and influences. The work is sufficiently technical to enable the student to identify the different species, while at the same time it contains much of interest for those who merely seek general information in its pages.

#### POISONOUS FUNGI.

In estimating the influence of fungi upon man, we naturally enough seek in the first instance to know what baneful effects they are capable of producing on food. Although in the case of "poisonous fungi," popularly understood, fungi may be the passive agents, yet they cannot be ignored in an enquiry of this nature. Writing of the Uses of Fungi, we have already shown that a large number are available for food, and some of these real delicacies; so, on the other hand, it becomes imperative, even with stronger emphasis, to declare that many are poisonous, and some of them virulently so. It is not sufficient to say that they are perfectly harmless until voluntarily introduced into the human system, whilst it is well known that accidents are always possible, and probably would be if every baneful fungus had the word POISON inscribed in capitals on its pileus.

The enquiry is constantly being made as to what plain rules can be given for distinguishing poisonous from edible fungi, and we can answer only that there are none other than those which apply to flowering plants. How can aconite, henbane, ananthe, stramonium, and such plants, be distinguished from parsley, sorrel, watercress, or spinach? Manifestly not by any general characters, but by specific differences. And so it is with the fungi. We must learn to dis-

criminate *Agaricus muscarius* from *Agaricus rubescens*, in the same manner as we would discriminate parsley from *Ethusa cynapium*. Indeed, fungi have an advantage in this respect since one or two general cautions can be given, when none such are applicable for higher plants. For instance, it may be said truly that all fungi that exhibit a rapid change to blue when bruised or broken should be avoided; that all *Agarics* are open to suspicion which possess an acrid taste; that fungi found growing on wood should not be eaten unless the species is well known; that no species of edible fungus has a strong unpleasant odor, and similar cautions, which, after all, are insufficient. The only safe guide lies in mastering, one by one, the specific distinctions, and increasing the number of one's own esculents gradually, by dint of knowledge and experience, even as a child learns to distinguish a filbert from an acorn, or with wider experience will thrust in his mouth a leaf of *Quercus* and reject that of the white clover.

One of the most deleterious of fungi that we possess is at the same time one of the most beautiful. This is the *Agaricus muscarius*, or Fly Agaric, which is sometimes used as a fly poison. It has a bright crimson pileus studded with pale whitish (sometimes yellowish) warts, and a stem and gills of ivory whiteness. Many instances have been recorded of poisoning by this fungus, and amongst them some British soldiers abroad, and yet it cannot be doubted that this fungus is eaten in Russia. Two instances have come under our notice of persons with some botanical knowledge, and one a gardener, who had resided in Russia and eaten of this fungus. In one case the Fly Agaric was collected and shown to us, and in the other the figure was indicated, so that we might be under no doubt as to the species. Only the hypothesis can be advanced in explanation. It is known that a large number of fungi are eaten in Russia, and that they enter much into the domestic cookery of the peasantry, but it is also known that they pay considerable attention to the mode of cooking, and add a large amount of salt and vinegar, both of which, with long boiling, must be powerful agents in counteracting the poison (probably somewhat volatile) of such fungi as the Fly Agaric. In this place we may give a recipe published by a French author of a process for rendering poisonous fungi edible. It must be taken on his authority, and not our own, as we have never made the experiment, notwithstanding it seems somewhat feasible:—For each pound of mushrooms, cut into moderately small pieces, take a quart of water acidula-