

tion of this is the fact that of all the edible, fleshy fungi known and desired by man, we have learned the conditions of growth of only one, the common Meadow Mushroom, and in spite of many long continued efforts at cultivation by botanists and epicures, not another kind has as yet been tamed.

The fungi "seek darkness rather than light" and usually the only parts which come into the light are those reproductive structures which quickly break down into minute fragments to be scattered by the wind and water. These colorless plants are able to live only by absorbing other protoplasmic substances, either dead or alive. They are therefore not honest in getting their livelihood, but take it from others, although it is true that in some instances they give valuable service in exchange.

Note that in the forms of life thus far mentioned there is no such phenomenon as sex. But when we turn to those which have learned to tolerate light and protect themselves from its harmful power, we at once come into contact with another method of reproduction, and this method has proved so advantageous that all but the lowliest forms of life have adopted it. Sexual reproduction differs from that described as belonging to most fungi, in that each offspring has two parents instead of one. In place of fragments—(spores) falling from one individual, and each spore growing into an individual like the parent—two fragments are necessary, usually one from each of two different individuals, these spores fuse together into one, and this resulting egg has the power of growing into an individual like the parents.

Such an arrangement is evidently much less simple than the other, the sexual way, but, as said before, it has become the method among all higher organisms. There must be very important advantages connected with it. We are not able to give clear and complete reasons for the general adoption of the sexual method, but one advantage has been indicated by contrast. In sexual reproduction—say in *Spirogyra*, one of these simple plants—fragments of two individuals take part in the formation of each new *Spirogyra* individual. The parent filaments of *Spirogyra* being free floating plants, did not grow under exactly similar conditions and are not likely to be offspring of the same two parents. Hence they will have qualities which are somewhat unlike. This variety of qualities will be inherited by their offspring, and the offspring will thereby have more power of adapting itself than though derived from a single parent having but one set of qualities. As the young *Spirogyras* float about they will certainly have a better power of adapting themselves to the variety of conditions they will meet, than has the young fungus, which has no varied assortment of qualities, derived from a varied assortment of ancestors. It is certain this is an