ing its kind. Reproduction of fungi is effected by spores which when ripe leave the parent plant in various ways and which are capable of growing independently into new plants. The sexual development of fungus spores, similarly to the seeds of higher plants is accurately known in a few instances. It is generally accepted that most fungus spores are produced asexually, that is without egg and sperm cells. The simplest form of spore production is that of the conidiospores. It takes place by the rising up from the mycelium of a number of erect hyphae, all of which produce at their tips a single or a series of spores. These spore-bearing branches are known as conidiophores. Frequently these conidiophores branch and each branch segments itself into successive spores. This is the case for instance in the fungus causing the common potato disease *Phytophthora infestans*. In other fungi the production of spores does not take place by this act of segmentation, but the contents of the hyphae itself generally form into spherical spores. In this way the smut spores of grain are produced.

A very common method of spore production is that in which the spores are produced in separate tubes, small sac-like organs, technically termed asci These are much broader than the hyphae and are generally club-shaped. Each ascus contains from two to eight spores often more, but always an even number. The spores produced in this manner are known as ascospores and the whole group endowed with this method of reproduction is known as ascomycetes. These forms of fungi are again subdivided according to the number of spores in each ascus and by the manner the asci are produced, which may be singly as in the Peach Leaf-curl fungus, or in flat or rounded discs as in peziza or in fruiting bodies similar to pycnidia , but here termed perithecia. These conditions of spore production may become still more complicated, as even one species may produce several kinds and crops of spores.

The spores of microscopic fungi differ greatly in size and form. Their colour is more generally hyaline or transparent, but they may also be brown, grey, pink, etc. Their form varies greatly: they may be oval, round, rod-shaped, or sickle-shaped, with pointed or rounded ends. They may be of single cells, or divided into two or many sections, smooth or pitted, with netlike markings or appendages. Thus they will be found to be very different objects, but their appearance is constant in each fungus. These characters, together with the manner in which they are produced are regarded as specific and generic distinctions and are largely used for the purpose of classification. When ripe the spores are shed in various ways, the conidiospores simply become detached and are carried by the air.