

species, it does not therefore follow that they are incapable of supplying salutary nourishment to other kinds of plants: thus, it has been observed that the *Salicaria* flourishes particularly in the vicinity of the willow; and the *Orobanche*, or broom-rape, in that of hemp. This fact has also been established experimentally by M. Macaire, who found that the water in which certain plants had been kept was noxious to other specimens of the same species, while on the other hand, it produced a more luxuriant vegetation in plants of a different kind.

This fact is of great importance in the theory of agriculture, since it perfectly explains the advantage derived from a continued rotation of different crops in the same field, in increasing the productiveness of the soil. It also gives a satisfactory explanation of the curious phenomenon of *fairy rings*, as they are called; that is, of circles of dark green grass, occurring in old pastures: these Dr. Wollaston has traced to the growth of successive generations of certain *fungi*, or mushrooms spreading from a central point.* The soil, which has once contributed to the support of these fungi, becomes exhausted or deteriorated with respect to the future crops of the same species, and the plants, therefore, cease to be produced on those spots; the second year's crop consequently appears in the space of a small ring, surrounding the original centre of vegetation; and in every succeeding year, the deficiency of nutriment on one side necessarily causes the new roots to extend themselves solely in the opposite direction, and occasions the circle of fungi continually to proceed by annual enlargement from the centre outwards. An appearance of luxuriance of the grass follows as a natural consequence; for the soil of an interior circle will always be enriched and fertilized with respect to the culture of grass by the decayed roots of fungi of the preceding years' growth. It often happens, indeed, during the growth of these fungi, that they so completely absorb all nutriment from the soil beneath, that the herbage is for a time totally destroyed.

* Phil. Trans. for 1807, p. 133.