It is in the animal kingdom only that we meet with instances of this spontaneous division of an organic being into parts; where each reproduces an individual of the same species. All plants, however, are capable of being multiplied by artificial divisions of this kind; thus, a tree may be divided longitudinally into a great number of portions, or *slips*, as they are called; any one of which, if planted separately and supplied with nourishment, may continue to grow, and may, in time, reproduce a tree similar in all respects to the one from which it originated. This inherent power of reproduction exists even in smaller fragments of a plant; for, when all circumstances are favourable, a stem will shoot from the upper end of the fragment, and roots will be sent forth from its lower end; and, ultimately, a complete plant will be formed.* These facts, which are well known to horticulturists, exhibit only the capabilities of vegetative power under circumstances which do not occur in the natural course of things, but have been the effect of human interference.

Reproductive powers of a similar kind are exhibited very extensively in the lower departments of the animal kingdom. The *Hydra*, or fresh water polype, is capable of indefinite multiplication by simple division: thus, if it be cut asunder transversely, the part containing the head soon supplies itself with a tail; and the detached tail soon shoots forth a new head, with a new set of tentacula. If any of the tentacula, or any portion of one of them, be cut off, the mutila-

* Among the conditions necessary for these evolutions of organs are, first, the previous accumulation of a store of nourishment in the detached fragment adequate to supply the growth of the new parts; and, secondly, the presence of a sufficient quantity of circulating sap, as a vehicle for the transmission of that nourishment. It has been found that when these conditions are present, even the leaf of an orange tree, when planted in a favourable soil, sends down roots, and is capable of giving origin to an entire tree. According to the observations of Mirandola, the leaf of the *Bryophyllum*, when simply laid on moist ground, strikes out roots, which quickly penetrate into the soil. (De Candolle, Physiologie Végétale, ii. 677.) The leaves of the monocotyledonous plants often present the same phenomenon.