

in a great measure shows its extensive applicability: where it includes a knowledge of the properties of plants; and presents a complete description of the science in its most improved state. There have been Botanists who have rested satisfied, with a brief enumeration of such outward points of difference as enabled them to distinguish one plant from another, and even this extent of acquaintance with the science, is both amusing and interesting. It is moreover the first part of the study proper to be learned; but is not sufficient to constitute a Botanist, for with only a knowledge of this part of it curiosity may be gratified; but the use and application of the science, the most valuable parts of it are overlooked.

To be able to investigate the chemical properties of any plant, so as to learn its effects upon the animal system, intrudes upon the duties more properly belonging to the Physician; but although it is not absolutely necessary for the Botanist to dip deep in this part of the study, a slight acquaintance with it will be of service and may contribute to his safety. He ought at all events to be able to distinguish what plants are poisonous from such as are harmless!

The amateur in this science will frequently be desirous of observing the growth and development of the different parts of plants, and for this purpose must have them under his eye. In this part of his study he will have to encroach on the business of the gardner and florist: an amusement, sufficiently attractive to require few arguments to recommend it. To an acquaintance with the appearance of every part of a plant at every period of its growth, the true Botanist ought to add, a knowledge of the soil and situation in which different plants will thrive best and also of what countries they are natives. Hence he must borrow from the professions of the seeds-man and also as a preparatory step to the study, have some knowledge of Geography.

A fashionable, and indeed a necessary plan for the study of any science, is to divide it into different branches, so arranged that a knowledge of the one will prepare the student for entering upon the succeeding branch—and enable him to understand it completely.—Pursuing this method with the science of Botany, the first part to be attended to is *the structure of plants*. This is the foundation of all Botanical knowledge, and upon the extent of the student's acquirements in this will depend his success in learning all the rest.

The second object for the Botanist's consideration is *the nourishment of plants*. In examining their structure he will see that all plants belong to what are termed organized bodies; they all possess a species of life—for they have their growth and decay, are liable to disease, and possess many other properties in common with living substances. As possessing these qualities they must have nourishment, and in the more extended state of the science it will become the duty of the Botanist to be acquainted with the sources from whence that nourishment is drawn, as perhaps on it may depend their chemical properties.

From an examination of their structure, the Botanist will find plants are composed of tubes and vessels; and he will from this fact and a knowledge of their nourishment discover that the food is supplied to