

parts of different plants, observing any differences of plan that may strike us, and giving, for convenience in speaking about them, special names to special forms. Then, as our observations go on, you will easily discover for yourself that while plants vary so much in one way or another that hardly any two are just alike, still there are a good many points in which even the most unlike plants resemble each other, and that by noticing these points of resemblance we can readily parcel out the plants that grow all about us into groups, and these again into smaller groups, giving them all appropriate names, and, in short, making for ourselves a classification or orderly arrangement of them. If you have commenced the study of English grammar you know that one of the first things you have to do is to observe the peculiar uses of the different kinds of words, and having learned the uses of them to give them special names, so that you discover in time that every word in the language must be classified under some one of the eight parts of speech. Then you find that while all the words in a certain group are equally entitled to be called *nouns*, we will say, yet the large group of nouns may be broken up into smaller groups which we call *common nouns*, *proper nouns*, &c. In short you learn to make a classification of words, and you do not require to be told what an advantage it is to have a clear understanding of this classification. Just so in the study we are now beginning. You will learn how to classify plants, and this we hope you will do by so using your own eyes as to read in the plants themselves the reasons for their position in the system.

For our first examination it makes but little difference what plants we take, but let us choose two or three which will be within everybody's reach, particularly at the commencement of

our Canadian summer. Obtain, then, a specimen of each of the following, *in flower*:—Hepatica, Dandelion, Geranium, Wallflower, Buttercup. The last-named is the best one to begin with, for a reason which will appear presently. In Canada there are a good many kinds of Buttercups, but any one of them will do just now. You will be pretty sure to find one of some sort in the first wet ditch or meadow that you visit. The Hepatica will be in bloom in April and May in every piece of dry woods. You will observe that the flowers appear before the leaves of the season, so that you must gather a few of the old leaves when taking up the plant. The Dandelion is only too common, and the Geranium and Wallflower are to be found in every collection of house-plants. You should be careful, when gathering the out-door specimens, to take up the root as completely as possible. Having shaken off the adhering earth, or, better still, having gently washed it away by dipping the roots in water, we are ready to begin. Look first at the root of the Buttercup. Observe its thread-like or *fibrous* form, and contrast it with the single stout *tap-root* of the Dandelion. (How does it compare with the Hepatica?) Observe the much finer threads that strike out from the surface of all the roots; we shall call these *rootlets*. You see that the color of the roots is not green like the upper part of the plant, but generally pale or brownish; and above all satisfy yourself that there are no *buds* or leaves, or anything like them, on the roots. If you ever find an underground part which seems to have leaves or buds, you may be perfectly sure it is not a root. The Canada Thistle, the Couch-Grass or Quick-Grass, and the Potato all have such underground parts. The root of our plant has a special duty of its own to perform; what that is, and