

ever is not invariably the case even in their natural state; and it is liable to be changed by various accidents as will be more fully noticed when we come to treat of the Physiology of plants, in another place.

In some cases leaves are met with, which completely answer some of the foregoing descriptions, but growing in an inverted state; i. e. with their base where the point ought to be. This kind of leaves, in scientific language are usually described by the term which denotes their class with the word *ob* prefixed to them as *ob heart-shaped*, *ob kidney shaped*: but to beginners it is preferable to join the term inverted to them. The term *leaflets* is often applied to a lobed leaf in which case it signifies one of the lobes; and when used in speaking of a winged leaf it denotes one of the smaller leaves which compose it. Some leaves appear to be covered with a fine dust or powder when they are called *powdery leaves*, and in like manner when their surface seems covered with a crust, they are called *crustaceous leaves*.

As in many plants, particularly those of the Fern tribe there are properly speaking no stems; but the leaves rising directly from the root bear the seeds; some Botanists have considered all plants in which the stems are marked with a groove on the one side and rounded on the other as belonging to this class; and have ranked all stems which presented this appearance among the leaves. How far this is correct need not be determined here; it is certain that this method of classification has been the cause of many mistakes to beginners who have paid too implicit attention to it, and this fact alone is sufficient to exclude it from a particular notice in any elementary work. Such minute characteristics may be attended to in particular descriptions of plants, and ought to be noticed when they occur as a circumstance peculiar to some plants, but ought never to be looked upon as discriminating marks of importance by which they are to be referred to any particular order or class. The same remark is applicable to all the distinctions founded on particularities in the stems or leaves which have been here noticed. None of these are in the present advanced state of the science considered as any more than making varieties of any one order or species; which is all the extent to which they can be employed for the purposes of classification.—Some Botanical writers in their rage for describing the minutiae, in plants have bestowed a great deal of attention on the leaf stalks. These like many other parts, although not to be entirely overlooked, are not inheriting much attention. Leaf stalks are nothing more than a part of the stem or branches, and almost in every case bear a striking resemblance to them in both shape and surface. In the language of Botanists, these have been described under the term *Petiolus*.