

leaf. Several varieties of this kind of leaves have been formed upon the number, direction and other peculiarities of the nerves; but this degree of minuteness is unnecessary here. 6th. When instead of veins or nerves there are small dots or points upon the surface of a leaf, it is said to be *dotted*. 7th. The last distinction of leaves is founded upon the peculiarity in the shape of them; as when the edges of the leaf curl in and leave the middle rib in the form of a keel of a boat—in which case they are called *keel shaped* leaves. This is chiefly met with in the linear or oblong leaves.

*Compound leaves*, are those in which we find more than one supported on the same foot-stalk; (as Withering terms it,) when we find one leaf inserted into another; as in the Wood-horse tail. Authors on this subject have enumerated a great number of different kinds of leaves of this class; but there are few of them possess sufficient marks of discrimination to entitle them to a separate description. The whole of the compound leaves, as far as is necessary for the young botanist may be classed under four kinds; the rest being only varieties of one or other of these.

1st. When the bases of several leaves rest upon the top of one foot-stalk as in the Horse chesnut; they are termed *fingere*d leaves.—2d. When the top of the foot-stalk is cloven and one more leaves issue from each point of it in these cases they are considered as compound leaves, and named according to their number. 3d. There is another division of these called *Pedate* leaves, as when the foot stalk is cloven and their issues from the point of separation a leaf of a smaller size than the rest termed a leaflet, an example of which is seen in the Hellebore. 4th. The *winged* leaves, which are seen when a number of small leaves spring from opposite sides of the same leaf-stalk—Many varieties of these have been formed, from the position of the leaves on the foot of the stalk, their number and other circumstances, but these are unnecessary in this place. In the common Roan we have an example of this kind of leaf.

Having thus noticed the principal marks of distinction among leaves, arising from the figure; it now remains to consider the differences in leaves which are found and characterised by their position and substance.

With regard to the first of these characteristics, (namely, the position in which leaves grow with respect to their stems,) Botanists seem to entertain a wide difference of opinion. While some have held the position of a leaf as the first mark of distinction to be noted in it; others have contended that the position being liable to be varied by an endless diversity of circumstances, is deserving of no attention as a discriminating mark. Perhaps a middle course between these dissenting opinions would be the best; and while trivial differences in the positions of leaves are not worth consideration; there are other differences which result from the parts of the plant on which they grow so permanent and well defined that they must not be overlooked in a system of Botany.

The first of these to be noticed are termed *radical leaves* as when they spring directly from the root without being supported on stems or branches. This is the case with the Violet. The second descrip-