

how it is done, we shall find out later on. In the meantime we shall just mention that every part which performs a special duty is called an *organ*, and from this out we shall often use this word in this sense.

Now look at the stem of the Buttercup. Squeeze it between your finger and thumb, and observe how readily it yields to the pressure. Try the Wallflower and Geranium stems in the same way. They are harder, especially the lower part of each. The soft stem is *herbaceous*, the hard ones *woody*. In these three plants the chief use of the stem seems to be to produce and carry the leaves and flowers. It has other uses, to be described hereafter, but for the present you must know that *leaves are produced on stems and branches*. Now look at the Dandelion. Find the stem. You will probably say it has none. But it has leaves, and these must grow on a stem. The leaves of Dandelion are all crowded together, forming a mat or rosette at the surface of the ground, and the stem must therefore be very short indeed. Such plants as this are, in fact, often called *stemless*. Now compare the Dandelion with the Hepatica. The knowledge you have gained from the Dandelion is of great use to you here. You at once pronounce the Hepatica to be *stemless* also, the spaces of the stem between the leaves being reduced almost to nothing.

The leaves themselves next call for examination. Beginning with the Buttercup, we see that the lower leaves are somewhat different from the upper ones. Each of them has a stalk and a spreading flat part, the latter more or less cut up into sections. The upper leaves of all have no stalk. We shall call the stalk of a leaf its *petiole*, and the flat part its *blade*. All the leaves of the Hepatica have blades and petioles. Those of Dandelion and Wallflower

simply have their blades narrowed considerably as they approach their insertion on the stem, but can hardly be said to have true petioles. All the Geranium leaves have blades and petioles. Do you see anything else about the Geranium leaves? Of course you notice the two little leaf-like things at the lower end of the petiole, one on each side. These belong to the leaves, and are called *stipules*. Do you find anything like them on the other plants? Always keep a look-out for stipules when inspecting leaves.

Just one other matter and we shall pass on to the flowers. Hold up a leaf of each plant between you and the light, and notice the network of veins running in all directions through the blade. Of course the leaves are very different in shape, those of Hepatica and Geranium being a little alike, and also those of Wallflower and Dandelion, but in the network of veins they show a similar plan. Now all leaves of this sort are said to be *net-veined*, in contrast, for instance, to a leaf of Indian Corn, which is *straight-veined*.

FRUITS IN NEBRASKA.

The Nebraska State Horticultural Society recommends for general cultivation in that State many of our popular varieties, such as Astrachan, Duchess, Snow, Wealthy, Pewaukee, Grimes Golden, Ben Davis, Northern Spy, Walbridge, Mann and Whitney, among apples; Alexander, Amsden, Crawford's Early, Crawford's Late, Smock, and Old Mixon, among Peaches; and of grapes the Concord, Delaware, Moore's Early, Worden, Salem, Pocklington and Eumelan. Planting of pears for profit is not recommended, as the trees have almost universally blighted. The safest are thought to be Flemish Beauty, Louise Bonne, Vicar, Lawrence, Clapp's Favorite, Bartlett