

They are the smallest of the family, having some of the speed and dash of a fly-catcher. This little fellow proves himself to be a very useful member of a useful family. They inhabit moist situations, where young white birches abound. They build a very neat little nest on the ground, very cleverly concealed. Four or five pinkish-white eggs are laid, spotted with reddish-brown. The colors of this warbler are clear olive-yellow, the crown glossy-black.

### Botany for August.

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At this season many plants have fruited. Teachers who were interested in flowers before vacation should try to recognize the same plants now by their fruits.

For example, the Meadow Rue, so common along streams and at the moist bases of wooded banks, is a good plant to observe. Notice the crowded clusters of hooked fruits, so much like the fruits of a buttercup. Do you think the Meadow Rue might be a close relative of the buttercup?

Practically every Buttercup bears a cluster of fruits—or "seeds" some prefer to call them. Many of the Meadow Rue plants, however, have no seeds; even though we are certain we saw the same plants in flower a month ago. How do we account for this? Did you notice, when they were in flower, that many of the flowers were *staminate*? Buttercups bear perfect flowers, but Meadow Rue is usually imperfect. Hence the absence of fruit in some plants.

If we had not seen the fruit, it might not have occurred to us that Meadow Rue was a *Ranunculus*. As a fact, however, it is. It has no petals, but like its brother, the Gold Thread, it has showy sepals. The detailed structure of its flower is much like that of a buttercup—though, superficially, they look very different. The garden Columbine and Larkspur also belong to this family. The Meadow Rue leaves are so much like those of Columbine that I have heard it locally called Wild Columbine. Do not let this name mislead you, however, for the Garden Columbine has "gone wild."

Bedstraw is also in good condition now. It grows in beds or tangled masses in the same localities as Meadow Rue. It sticks to one's clothing by the spines on its four-sided stem. The stem is too weak to hold itself erect. Therefore, it clings to alder bushes or tall herbs among which it grows. Our

common species have leaves in whorls of four or six. These plants are worth studying.

Associated with the foregoing are Jewel-weed, Enchanter's Nightshade, Water Horehound, various Mints, Skull-cap, Sedges, Rushes, Horse-tails, Sensitive Ferns, Tear-thumb, and many others. All these growing together, constitute one plant society. How many species can you find in this Water-loving Society? What families are represented? What are their distinguishing characteristics?

The Meadow Rue and Creeping Buttercup, which often grow together, are said to belong to the Crowfoot family. In the pond or slow brook nearby, possibly we can find the Water Crowfoot. The name Crowfoot has probably been given on account of the divided leaves of many species. *Ranunculus* is from the Latin name for the frog; because many species grow near frog ponds.

Botanists, as you know, give these families Latin names; but common people like common names. It is the custom, therefore, to use the common name of a typical representative of a family as its common family name.

The Water Horehound, Skull-cap and the Mints all have the same general flower structures. And since Mint is well known, all plants with its flower-structure belong to the Mint family. Notice the square stem. See also the four "seeds" in the bottom of the calyx cup, after the corolla has fallen. These peculiarities, together with the two-lipped corolla, make the family identification easy. The two-lipped corolla alone, however, is not enough, for the Butter-and-Eggs family has that. But it has not four "seeds" to the single flower.

Too many students draw inferences from one peculiarity in flower structure, without noting other details. For example, I have had students tell one Bedstraw belonged to the Mint family because it had a square stem. Others have told me it belonged to the Cress family because it had four petals. However, it belongs to neither. Compare the flowers of the three plants, to get three or four differences that would put them in different families.

In classifying plants, it is important to note not only the numbers of parts in the flower, but also the position of the calyx relative to the ovary, and the way different parts are joined or attached. Any botanical key is easily used if one has patience at first to learn its use. Try it.

Dozens of topics are suggested by the plants we found growing in this one wet place. Did you