

This work reveals new and countless interesting facts which Nature has to teach. "Devotion," says one writer, "is the keystone of character; a child who has given care, protection and love to the puniest plant is thereby a better soul."

Germination should next be followed by the *after growth of the plant*—the stem and the root. (Drawings in connection with root and stem). By this time, having watched a seed, under the protection of heat and the moisture of the earth come into life, rise above the ground into a plantlet with organs the same as a large tree, and having seen the plant silently and slowly expanding, adding new leaves and stem, and then accomplish its object in life, to re-produce flowers and seed of its own kind, having seen all this, the pupils have had their interest stimulated to study the flowers in order to understand where the seeds come from. In this way the life history of a plant, from seed to seed, is studied.

The time for the study of the ever-fascinating flowers will probably now come when Nature withholds her outdoor treasures from us. The chapters in the book, however, can be studied with profit, and then when spring comes with its wealth of flowers no time will be lost in studying from the book the somewhat dry details, but we can say to our pupils, as Wordsworth has said to us,

"Come forth into the light of lights,
Let Nature be your teacher."

One of the most beautiful things in flower study in the spring is to watch "the procession of the flowers," and in no better way can we teach our classes. "From the time when October has effloresced into witch hazel there is an absolute reserve of blossom until the alders wave again." These "drooping tresses" of alders which have waited so patiently are the first from their thousand boughs to wave defiance to the winter. Here, as in the case of insects, can be taught from the gracefully formed catkins the agency of the wind in carrying pollen and thus aiding cross fertilization. Remembering their study in the early grades, the pupils will know what flowers to look for first and what will follow. The first wild flower—our own Mayflower—is the one for which country children have an almost hearty passion. From the beginning of the flowers in April there is no break, and thus they afford constant study. All the parts, forms, kinds of flower clusters, etc., described in the text-book can be found in the flowers as they come. These will afford ample opportunity for *sketching*, and here some of the most delicate spring flowers make beautiful drawings. The common dandelion, from its color and its structure, gives an interesting example for study. Its structure accounts,

in a great measure, for the brilliancy of its color. This brightness is in the middle of the flower, centered there by the strap-shaped corollas reflecting back and forth the rays of sunlight until they are intensified seven-fold. This is what attracts the bee to the exact spot where the golden pollen hides, ready to powder his back.

Help our school children thus to understand some of the mysteries of plant life—in germination, in growth, in cross fertilization, in significance of color and form in flowers—and we will help them to appreciate the chapter, "Why plants grow and what they do." The part which plant life plays in our life, in purifying the air, in furnishing food, clothing, fuel, etc., will help them also to realize our Heavenly Father's care over His children.

It is with pleasure we notice that the study of cryptogamic botany is being slowly introduced into the school. But there is not enough of it. The mosses, toadstools, lichens, are plants as well as butter-cups and daisies. From lower to higher in the order of study gives the best idea of the evolution of the plant kingdom. One writer strongly states that there is "no proper notion of higher plants without previous study of lower ones." The study can be made very simple. The steady rising in the scale of plants may be studied:

1. Simplest forms, or slimes.
2. Green, brown and red algae, or sea weeds.
3. Fungi or mildews, lichens, rust.
4. Chara or Nitella (little water plant).
5. Mosses.
6. Ferns.
7. Pines (connecting link between the Cryptogams and Phenogams).
8. Phenogams or flowering plants.

In conclusion let me briefly summarize. In the grades from I to VII only the simplest forms of botany should be taught—growth, habits and habits of flowers; grades VII and VIII should have more advanced work in growth, parts of flowers, relation of insects to flowers in cross fertilization, and with the sketching of flowers studied and the expression of their knowledge in writing. The ninth grade takes up the text-book.

With this work surely the results must be those which were aimed for in the beginning of study, i. e., greater observing powers, greater curiosity and interest, greater love for nature and nature's children—the plants and flowers—and greater desire to peer into and understand the wonders and mysteries which are everywhere around us. It is surprising how little country children know of the common things about them. "It is no wonder," says one writer, "that there is so little substantial enjoyment of nature in the community when we feed children on grammars and dictionaries only and take no pains to train them to see that which is before their eyes." The latter part is not now literally true. But are we doing our best to train the school children in the valuable habit of observation, which will mean everything to them in their later life? We who are teachers must also be students—students of nature in the deepest and truest sense of the word—and then shall we be able to teach the children greater knowledge than they can ever learn from books.