THE STUDY OF BOTANY.

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We understand the aim of true education to be the cultivation and expansion of the powers which God has given us. To cultivate anything, be it a plant, an animal, a mind, is to make it grow. Growth depends not only upon the natural soil, but upon the kind of food and manner of feeding. It is the uim, therefore, of the true teacher to choose such subjects as are best calculated to strengthen the minds of the children with whom he is associated day by day, and present them in such a manner that all their montal powers being gradually unfolded they may go forth from the schoolroom not dwarfs, but with vigorous and well-formed intellects, so that they may be not only morally and physically but mentally better able to take the positions in life which they are destined to fill.

Since a large part, and perhaps the largest part of the knowledge of the child is derived from its power of observation, we find the perceptive faculties the earliest avenue open to the mind. The child is over on the alert with watchful eye, quick ear, ready hands, and willing fect. As some one has expressed it : "Finite yet infinito to apprehend.' Nothing too small, nothing too great to be accounted for." We ask, then, how can this part of the child's nature be better developed than by bringing it into contact with natural objects ; we cannot say after all bringing into contact, for this is already done, but by arousing his curiosity about the objects he sees around him. Every child is born with a certain amount of curiosity. So also a love for the beautiful is implanted in every human breast. This love may be developed and form one link between the visible and the invisible, between man and God, in whose image he was created. We know of no study which cultivates this love, or one which gives a wider range for the powers of observation, or which is more interesting to the child, than that of plants in their forms and habits. Where also can we find greater variety of color, or greater perfection of form than in the plant-world, even among the most common weeds? Hence the study of flowers has a tendency to awaken a conception of design, and through this an idea of the great Designer. For we naturally, upon looking at a wonderful piece of art, whether it be a picture, a statue, or whatever it may be, ask 'Who is the author ?' Who could study nature in her variety and unity and not be led to contemplate the great Author? We cannot but believe that any study which has a tendency to direct the mind to the Creator is both elevating and profitable, and must form the noblest growth in man's nature. Tennyson must have had some such idea of the study of flowers when he wrote:—

"Flower in the crannied wall, I pluck you out of the cranuics, Hold you here in my hand, Little flower, root and all, And if I could understand What you are, root and all, and all in all, I should know what God and man is."

The introduction of this or any such study relieves the monotony of ordinary school-work, and gives a new impulse to many a child who might otherwise have a distaste for the usual work of the schoolroom. It also gives greater power of expression by helping to trace resemblance and difference.

Some, however, may object to this kind of work being introduced into our common schools, particularly on the ground that it is not necessary for the fitting of children for the various trades and occu-

to become a farmer, a shoemaker or shipbuilder, but because he is to become a man. A trade is not the great end of his being, for his mind cannot be shut up in it, his force of thought cannot be exhausted on it. How often when the arm of the laborer is employed does his mind escape to the ends of the earth. No one can assert that a man will cultivate his farm, or perform any labor less successfully for having some knowledge of nature. Heaven's richest blessings are bestowed on all alike. The sun shines on the rich as well as on the poor; the air we breathe is for all. Nature's bo mties are all free, and with these gifts minds are given to all capable of enjoying them.

> "Defeat and scorn and shame Be his who strives to bind The restless, leaping waves of thought, The free-tide of the mind."

In the past some few have stood on the pedestals of rank, others on the pedestals of wealth, and have viewed with a self-satisfied air from their lofty eminence the toiling masses below. But all are gradually learning that it is neither rank nor wealth that raises a man above his fellows. It is not these outward things, for they all find one common level, but it is the character which gives the man his true position. Hence the great law of human equality is being recognized, and the day will come when a man will be valued not so much for his rank and wealth as for the quality of mind he possesses. For an illustration of the power of mind in the masses we have only to look at Russia, shaken to her very foundation. Despotism may attempt the destruction of that power, but the history of Europe in the past proves it unequal to the task. The only thing which can elevate and give it a right tone is a universal education, which will not unfit for labor, but which will fit men to labor more intelligently.

The study of plants may be commenced with children as soon as they enter school, for when a child is able to distinguish a from bin the alphabet, it is certainly able to distinguish the root from the stem and leaf of the plant. There is no need of giving scientific terms, on the contrary this would confuse the child, and render what would otherwise be a delight an irksome duty. Thus, to tell a child five years old that a bell-shaped flower is campanulate, or that a butterfly-shaped flower is papilionaceous, or to call a pod a legume would be simply absurd. Give everything the simplest name possible. The parts of the plant may be learned first by talking with the children about what they can see, in the same manner as one would talk about a picture. They may learn the uses of the root, how it holds the plant in the ground and gets food for it. How it gets its food may be illustrated by putting blotting-paper in ink. The children will at once tell you that it sucks up or absorbs the ink ; they may then be shown that in the same way the ends of the roots absorb the moisture from the ground. This moisture is carried by the stem to the leaves, where it is changed into sap, and it is this sap which makes the plant grow and form new leaves, flowers and fruit. From this they will be able to tell readily what part of the plant assists in its growth.

Before taking up the form of the leaf and flower, get the children to look into their homes and see where they will find these forms represented. They will have quite a list of articles on which they have seen flower forms, viz : carpets, wall-paper, curtains, dishes, otc. The parts of the leaf may then be learned, as the blade, the footstalk and pair of little blades at the base of the footstalk. Leaves which have all these parts may be compared with those which have no footstalk, being sessile or sitting. Show also how the leaf is held together by a framework. The veins in the framework of some leaves form a net, in others they run side by side, or are parallel. It would add much to the interest of the lesson if a leaf were pations. But the child is not to be educated simply because he is shown with the pulp removed, or if a piece of net were cut out the

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