

In some high-schools, ambitious courses in biology are undertaken, and pupils, who have not learned to use their eyes in the discovery of the hidden things of nature, have the technical difficulties of complicated instruments added to natural difficulties, which they too often fail to overcome. Under such circumstances, the tendency is to regard plants and animals as dead mechanisms, illustrating a certain number of dry facts. The lack of apparatus is, therefore, a safe-guard, necessitating work upon the living material and in the field. Thus, while the ability to observe, compare, classify and generalize will be developed, a greater breadth of vision, a natural interest in life itself, and a reverence for the divine, as seen in plants and lower animals, will be secured. But familiar generalities are not needful, and it will be better to consider without delay the work required for the A. A. certificate.

Though not an ideal text-book, Spotton's Botany is elementary and requires less than those used elsewhere. The difficulties with which teachers have met in using it are probably due to the short time devoted to the subject, and to a close adherence to the order in which it is presented by Spotton, an order neither the most natural nor the one best adapted to the school year. If the book were used for reference only, a pleasing variety could be given to the teaching, and results better from every point of view would be obtained. In an ideal school, nature-studies would be taught in every grade by means of object-lessons. The vital phases of plants having been first considered, a discussion of the parts, a comparison of forms, and an arrangement into groups according to likeness and difference would naturally follow. But, pre-supposing no such training, a profitable course extending over the final two years of a child's school-life may be obtained. A good introduction to the subject is the discussion of leaves. Their form, veining, arrangement, modifications, the autumnal change of colour and the fall of the leaf always prove most interesting topics. Buds, whose coatings are modified leaves, may be considered next. Types of branching, the modifications of branches, and macroscopic distinctions between exogenous and endogenous items may also be noticed. The remaining vegetative organ, the root, is a very good subject for winter lessons. Beans and corn, which are easily germinated, may be used to show the differences between primary and se-