

A NEW LABORATORY GUIDE FOR HIGH SCHOOL BOTANY.

Under the title, "Laboratory Botany for the High School," Prof. Willard N. Clute has published, through Ginn & Company, a little volume that will be an important addition to the text-books intended for secondary schools. The author is a high school teacher as well as a practical botanist and the book before us shows that it is the outcome of a course adapted to the age and capacity of the students for which it is intended.

The one essential to a good high school course is that it should not ape the general course given to more mature students in the college. The high school has a field of its own.

"Laboratory Botany" can be used for a half year or a year course. The work is so arranged that a greater or less amount of an exercise can be taken without difficulty. The language is simple, which makes it easy for the student to concentrate attention on the necessary scientific terms. There are review questions and suggestions to the teacher that are very opportune. The definitions at the end of each chapter are perhaps one of the best features of the book. It is just such convenient lists that the beginner needs to consult.

The work begins with simple exercises on the living cell and is followed in order by chapters on seeds, roots, buds, stems, leaves, flowers, and fruits and seeds. The first part ends with a study of trees and the ecology of the flower. The first part will make a good half year course for the spring semester, although the author shows that it can easily be given in the fall if one has access to a greenhouse.

The second part deals with the spore plants, beginning with the blue-green algae and ending with the angiosperms. The more important structures are considered and emphasis is laid on the relationship and classification of the various groups. This work can be given either in the fall or spring but to the mind of the reviewer it would appropriately follow work in the spring.

Finally the book closes with thirty-six experiments in physiology. These can be scattered through the general work, given successively or used for general demonstrations as the teacher may desire.

The course thus outlined is practicable and workable and fitted to the mental capacity of the average high school student and will give a substantial botanical training both for practical life and as a stepping stone to further botanical studies.

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