

**BOTANY,
DEVELOPMENTAL
AND DESCRIPTIVE**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649085507

Botany, Developmental and Descriptive by William Mansfield

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WILLIAM MANSFIELD

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BY

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Illustrated with 135 Engravings



LEA & FEBIGER
PHILADELPHIA AND NEW YORK
1922

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Mrs. H. R. Wagener
4-21-26

PREFACE.

THE study of botany has a distinct cultural as well as a scientific and practical value, and therefore, the author of a text-book of botany should aim to interest students in plants. Without such interest a large part of the time spent in the study of botany is wasted.

The two phases of botany which will interest the average student are developmental and descriptive botany. The developmental part can be fully illustrated in the laboratory and the descriptive part in both field and laboratory.

Students who show a special inclination for studying any given group should have their interest stimulated further by the study of additional forms.

In Part I special attention is given to the development and relationship of plants, to the modifications of the reproductive process and organs, and to the development of new tissue or special modifications of old tissue in each succeeding higher group. The summary is a brief discussion of the variation of the plants within a group and is helpful when comparing different plants.

Teachers can readily extend Part I to cover a term by giving the student additional forms for study and comparison with the plants illustrated in the text.

In Part II, attention is given to descriptive botany. This part contains all the facts necessary for a complete understanding of the study of roots, stems, buds, leaves, flowers, fruits and seeds.

The figures are all photographs from Nature, and have, therefore, a greater value than line drawings. Such illustrations serve also to stimulate students to make collections of similar forms from other plants.

A knowledge of descriptive botany enables one to identify the plants in any locality by means of the key to the flora of that region. It is a regrettable fact that few students have any knowledge of descriptive botany; therefore, they remain ignorant of our flora and lack an interest in our common plants.

Great care was exercised in the selection of the plants for making sections, in the preparation of drawings and in the arrangement of the material of the figures.

Teachers and students should have little difficulty in collecting similar material for laboratory and home study because the plants used in the figures may be readily identified.

The author wishes to express his appreciation to Mr. Ralph Young for the greater part of the photographic work and for much other valuable assistance. He is also indebted to Dr. N. L. Britton, Dr. J. H. Barnhart, Dr. M. A. Howe and Mr. Percy Wilson for assistance in various ways, and to Dr. E. H. House for photographs used in Figures 109, 110, 111, 112, 113 and 114.

W. M.

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