

BOTANY AND ZOOLOGY;  
BY  
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**BOTANY.**

Part I.—STRUCTURAL BOTANY.

Anatomy:—Cells, Vessels, Ducts, Cysts, Glands, Intercellular Spaces, &c.

Anatomy of Roots, Stems, Leaves, Flowers, and Fruits.

Morphology:—Plant: Axis of Vegetation and Appendages.—Organs.

I. *Organs of Vegetation:*

- a. Root (character, position, form, &c.)
- b. Stem (character, position, form, &c.)
- c. Leaves (simple and compound, venation, modifications of venation, phyllotaxis, &c.)

II. *Organs of Reproduction:*

- a. Flower (regularity and symmetry of the floral organs. The various modifications of the flower.)
- b. Inflorescence (indefinite, definite, and their varieties.)
- c. Fruits (simple, aggregate, accessory or anthocarpous, and multiple.)

Part II.—PHYSIOLOGICAL BOTANY.

1. *Cell Formation and Development of Tissues.*
2. *Functions of the Organs of Vegetation.*—Absorption, Transpiration, Respiration, Assimilation, and Secretion.
3. *Functions of the Organs of Reproduction.*—Formation of Pollen; Fertilization and Growth of Ovules; Maturation and Germination of the Seed; Development of Spores, &c.

Part III.—SYSTEMATIC AND DESCRIPTIVE BOTANY.

Under this division of the subject, the principles of classification will be discussed. Special notice will be taken of those orders containing medicinal plants indigenous to Canada and the United States, and, towards the end of the course, a few lectures will be devoted to the mode of preserving and determining plants.

**ZOOLOGY AND COMPARATIVE PHYSIOLOGY.**

- 1.—*General Zoology.*—Under this heading will be considered the Histology, Comparative Anatomy, and Physiology of Animals.
2. *Descriptive Zoology.*—Including the principles of classification and the grounds on which the divisions of the Animal Kingdom are made.

Every Monday, Wednesday, and Friday, at 3 P.M.

*Text Books.*—Dr. Gray's Structural and Systematic Botany, and Dr Silver's work on Botany. Dawson's Manual of Zoology.