

CORNELL UNIVERSITY.

---

Faculty of Arts and Sciences.

---

DEPARTMENT OF BOTANY.

---

Courses of Instruction for graduate and undergrad-  
uate students for the academic year

1896-97.

---

ITHACA, N. Y.

## STAFF.

---

GEORGE FRANCIS ATKINSON, Ph.B., Professor of Botany, with special reference to comparative morphology and mycology.

WILLARD WINFIELD ROWLEE, B.L., D.Sc, Assistant Professor of Botany, with special reference to histology and systematic botany.

ELIAS JUDAH DURAND, A.B., D.Sc., Instructor in Botany.

KARL MCKAY WIEGAND, B.S., Assistant in Botany.

BENJAMIN MINGE DUGGAR, A.B., A.M., Assistant on Experiment Station

ROBERT SHORE, Head Gardener.

---

### I. GENERAL COURSES.

1. General comparative morphology and physiology of plants. Three hours. Fall and Winter. Lectures. Laboratory practice and demonstrations. Professor ATKINSON and Instructor DURAND.

2. Special Morphology of Higher Plants. Spring term. Three hours. Lectures. Laboratory work. Assistant Professor ROWLEE and Assistant WIEGAND.

3. Dendrology. Fall term. Lectures. Assistant Professor ROWLEE and Professor ATKINSON. (Required of Civil Engineers.)

[4. Forestry. Two hours. Assistant Professor ROWLEE and Professor ATKINSON.] (This course is offered for 1897-98.)

5. Geographical Botany. Spring term. Lectures. Practical field studies. Assistant Professor ROWLEE.

6. Exotics. One or two hours. Practical methods in the propagation and cultivation of conservatory plants. Mr. SHORE and Professor ATKINSON.

### II. ADVANCED AND GRADUATE COURSES.

(Courses 7-11 may be elected in any order which the student chooses, the only pre-requisite being courses 1 and 2.)

#### *Comparative Histology, and Phanerogamic Botany.*

7. Systematic Botany. Three hours through the year. Lectures. Laboratory work. Assistant Professor ROWLEE.

8. Comparative Histology of Plants. Three hours through the year. Lectures. Laboratory work. Assistant Professor ROWLEE and Assistant WIEGAND.

#### *Comparative Embryology, Mycology and Kindred Subjects.*

9. Comparative morphology and embryology. Three hours through the year. Lectures. Laboratory work. Professor ATKINSON and Instructor DURAND. Pre-requisite, courses 1 and 2.

10. Mycology. Three hours through the year. Lectures. Laboratory work. Professor ATKINSON and Instructor DURAND. Pre-requisite, courses 1 and 2.

11. Algology. Two hours through the year. A study of fresh water and marine forms of algae. Lectures and laboratory work. Professor ATKINSON and Instructor DURAND. Pre-requisite, courses 1 and 2.

### III. RESEARCH, THESES AND SEMINARY.

12. Research work in comparative histology of plants and in systematic botany. Assistant Professor ROWLEE.

13. Research work in comparative embryology, mycology, algology, experimental morphology, etc. Professor ATKINSON.

14. Seminary. Professor ATKINSON and Assistant Professor ROWLEE.



The advanced courses in comparative morphology and embryology, comparative histology, and mycology, are intended to lay the foundation for independent investigation in these subjects, as well as to present in a logical way the fundamental principles of development, relationship, and phylogeny, as applied in these topics. Aside from courses 1 and 2 these subjects are especially recommended to students who are fitting themselves for teachers, since a grasp of the principles underlying them is needed for the proper and thorough presentation of the elementary principles of botany.

The flora of the region of Ithaca is very rich in species, and offers excellent opportunities for the student of systematic botany, and some facilities in the study of geographic botany. Excellent facilities are offered to the students who are fitting themselves for [experiment] economic work in the courses in plant histology and in the study of the fungi. While the laboratory is distant from the seashore it is well supplied with material of the marine algae for morphological and developmental study of typical forms, and material preserved especially for the purpose is also supplied for investigations in development.

The laboratory is well equipped with microscopes, microtomes, photographic apparatus, thermostats, sterilizers, culture rooms, an electric lantern and a large number of views for illustrating portions of the lectures, the Auzoux and Brendel models representing the different groups of plants and other illustrative material. The large green houses in connection with Sage College adjoin the rooms of the department, and are filled with many exotics representing the Pteridophytes, Gymnosperms, Angiosperms, and offer available material at all seasons for studies. Space is devoted to the study of plant growth, physiological experiments, and for the handling and treatment of green house plants. The department also contains a large and growing herbarium.

---

## Cornell University Agricultural Experiment Station

### DEPARTMENT OF BOTANY.

---

PROFESSOR GEO. F. ATKINSON,  
PROFESSOR W. W. ROWLEE,  
B. M. DUGGAR, A.B., A.M.,

*Botanist*  
*Plant Histologist*  
*Cryptogamic Botanist*