

241572

THE
AMERICAN SCHOOL
AND UNIVERSITY

A YEARBOOK DEVOTED TO THE DESIGN, CONSTRUCTION,
EQUIPMENT, UTILIZATION, AND MAINTENANCE OF
EDUCATIONAL BUILDINGS AND GROUNDS

1931-1932

FOURTH ANNUAL EDITION

PUBLISHED BY THE
AMERICAN SCHOOL PUBLISHING CORPORATION
470 FOURTH AVENUE, NEW YORK

CON-
STRUCTION
ECONOMY

Section X

LABORATORY

The Biology Wing of the Biology-Geology Building, University of Rochester

BY WILLIAM DAYTON MERRELL

DEPARTMENT OF BIOLOGY, COLLEGE OF ARTS AND SCIENCE, UNIVERSITY OF ROCHESTER,
ROCHESTER, N. Y.

THE Biology and Geology Departments of the College of Arts and Science at the University of Rochester occupy separate wings in a new building. The building faces a little east of north. Geology preferred the more shady east wing and Biology the sunny exposure of the west, so both departments are satisfied. The two wings are connected with a Museum, in which exhibits will be arranged to show the actual continuity of life in the past and the present.

The entrance to the building from the main quadrangle of the campus leads directly to the main floor, marked on the plans as the "first floor." This is really the second floor, for the ground slopes away so that the entire south and west exposures of the lower floor are above ground, doing away with any appearance of a "basement." Each department, including the museum and the greenhouse, has a convenient rear entrance from the parking area. This article is concerned only with the Biology wing.

The Ground Floor

On the ground floor of the Biology wing, under the two general laboratories on the first floor,

is the lecture room, which seats about 140. Opening off the lecture room is a preparation room for charts, slides, etc. A corridor leads back to the Genetics laboratory, which is behind the lecture room, and then on to the one-story Vivarium, which is thus connected with the main building. Across the corridor from the lecture room, a special Cooking Room, with a ventilating hood and fan to outdoors, serves both Genetics and Botany courses. There are also three offices in the wing on this floor.

The museum space on the ground floor is used for general museum storage. An area about 25 feet wide, along the west side of this large room, is destined ultimately for advanced work in Botany, particularly in plant physiology.

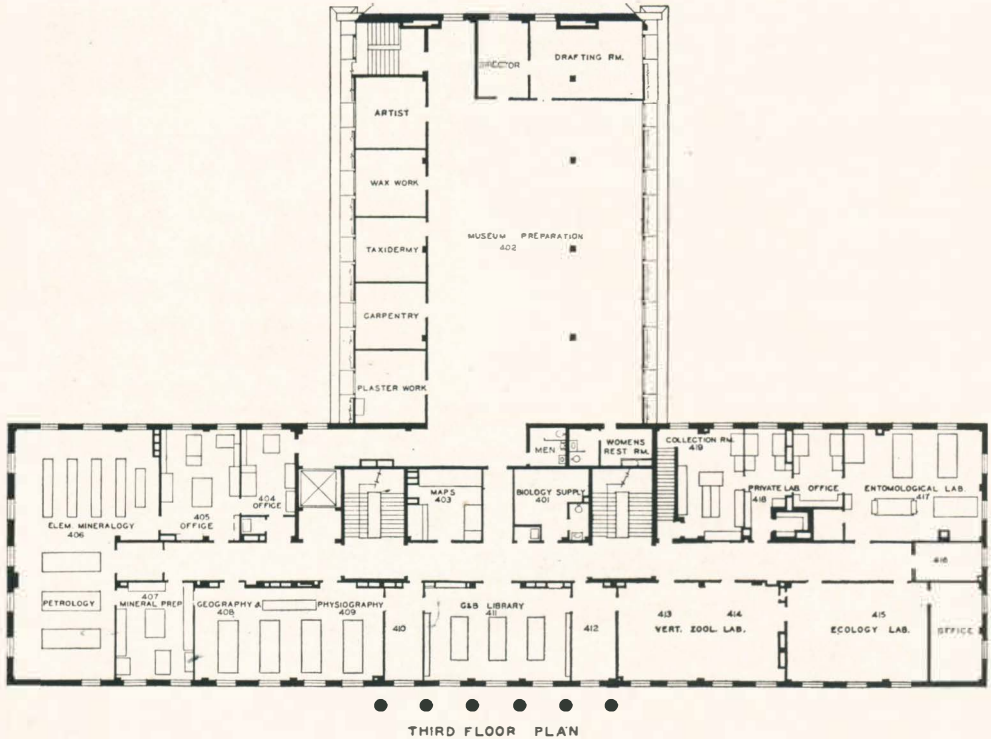
The Greenhouse and Vivarium

The corridor leading from the main building to the Vivarium is fully enclosed and warmed. The rooms in the headhouse (outlined in black in the floor plan of the Greenhouse and Vivarium) will serve as special laboratories for instructors and advanced students investigating living ma-

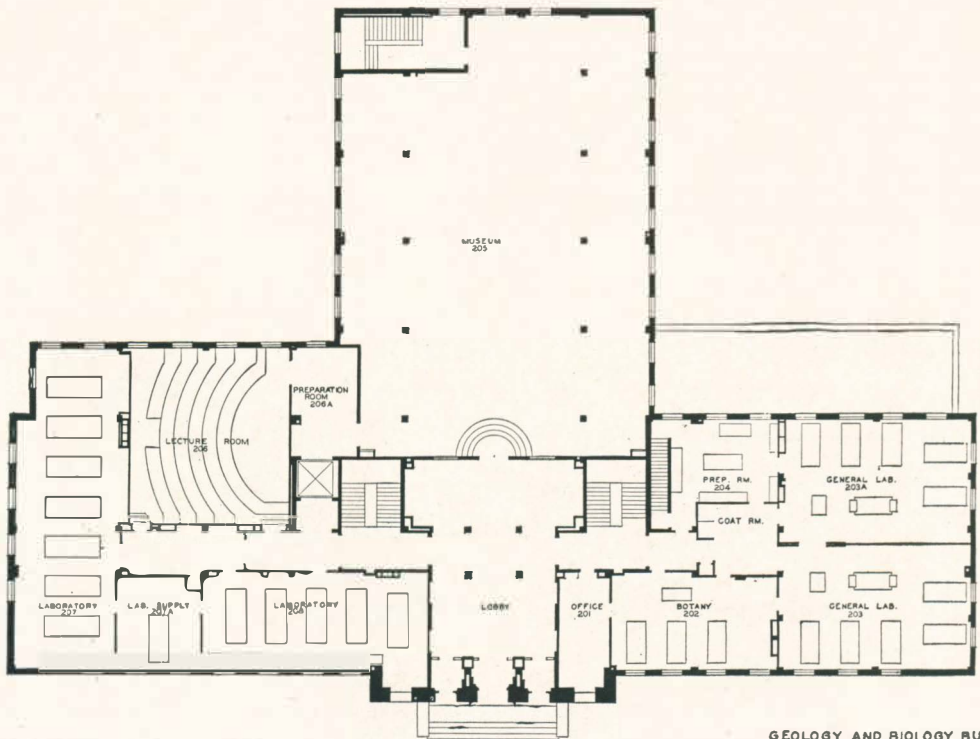


THE MAIN PLAZA OF THE NEW CAMPUS OF THE UNIVERSITY OF ROCHESTER, LOOKING EASTWARD
Reading left to right, the five buildings shown are the Chemistry, Arts, Library, Physics, and Biology-Geology Buildings

LABORATORY
COLLEGE PRESIDENT
SUPERINTENDENT
STATE DEPTS
ARCHITECT
SCAPL ARCH
DEALERS
INDEX



THIRD FLOOR PLAN

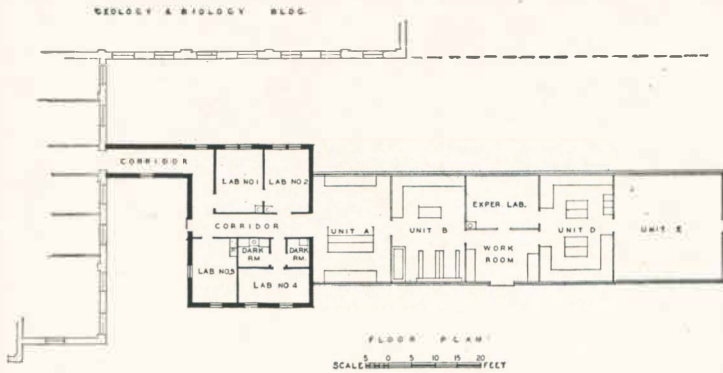


FIRST FLOOR PLAN

GORDON & KAEHLER ARCHITECTS
ROCHESTER NY



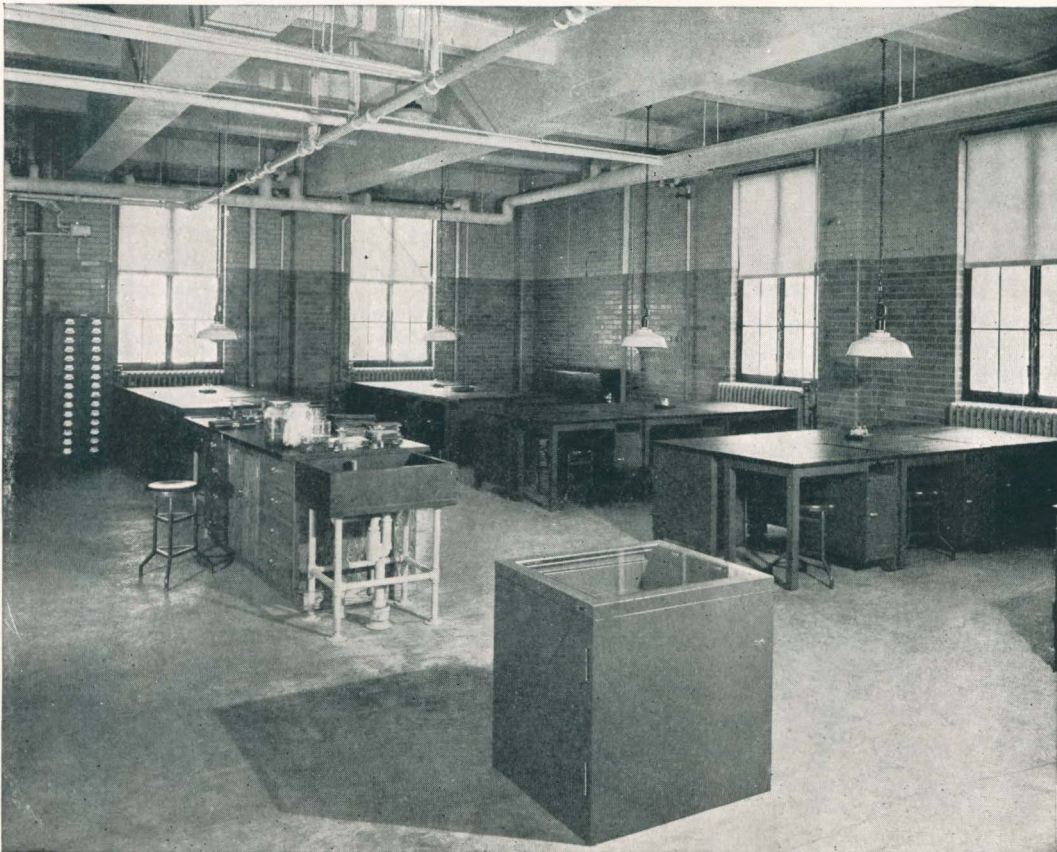
GEOLOGY AND BIOLOGY BUILDING
THE UNIVERSITY OF ROCHESTER
ROCHESTER NY



FLOOR PLAN OF THE GREENHOUSE AND VIVARIUM ADJOINING THE BIOLOGY WING

material from the units of the glass houses. Everything beyond the headhouse is of standard greenhouse construction. Unit A is roofed with mottled glass, the other units with plain glass. Units A and B are equipped with a variety of tanks and pools with running water, for living animals. Unit C contains a room for rough work, and an experimental laboratory for

room. Student tables are grouped by sixes opposite the large windows. The lumière over each window group is a special assemblage of standard units, giving ample light of daylight quality on dark days and at night. For students who are doing work with immersion lenses, individual lamps can be plugged in above the large reflector.



ONE OF THE GENERAL BIOLOGY LABORATORIES

plant physiology. Unit D has regular greenhouse benches, but unit E has a dirt floor for raising plants in quantity.

The General Biology Laboratories

The main floor contains two large laboratories for General Biology, each with a capacity of 30 students. At present only one of these has been equipped. The accompanying photograph shows part of the layout as seen on entering this

COLLEGE
PRESIDENT

SUPER
INTENDENT

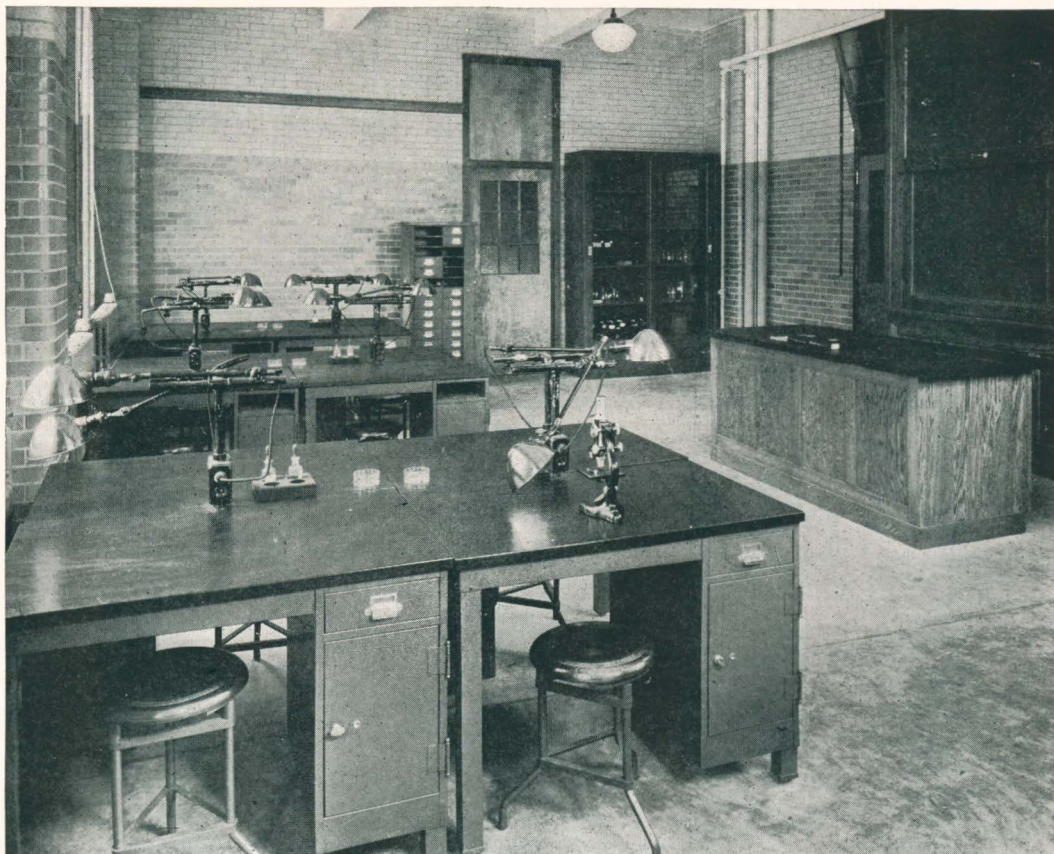
STATS
DEPTS

ARCHITECT

SCAPE
ARCH

DEALERS

IFIED
INDEX



THE GENERAL BOTANY LABORATORY

Other Equipment Illustrated in the General Biology Laboratory Photograph

In the foreground of this photograph is a steel exhibit case, with a series of drawers containing specimens belonging to the groups being studied. These drawers can be shifted up under the plate-glass top as different groups are studied.

At the extreme left of the photograph is one of the four steel locker-cabinets in this laboratory. Each cabinet contains 30 lockers or drawers, enough for one section. A student on entering takes his drawer to his table, slips it into the blank space there, and thus has his locker at his elbow while at work. At present four men use the same table on successive days. Each of the student tables has a microscope, which is kept in the table cupboard, and is safer for not being carried about the room. Expansion for another section involves merely an additional locker-cabinet.

The General Botany Laboratory

The photograph above shows the General Botany laboratory. The steel apparatus case in the far-

ther corner is another standard unit. The tables are exactly like those in the Biology laboratory, with the addition of an individual bracketed lamp with a frosted blue bulb under an aluminum-finish reflector. Two sockets at the base of the upright allow for plugging-in individual microscope lamps, spot-lights, or any other light desired. All lamps are removable from the cross-arms.

Each table is wired separately, under the ledge at the back; the tables are connected by short couplers, and the wires finally reach a socket on the wall at the outer end of the row. All the table legs have adjustment bolts, so a table can be made absolutely steady. The steel-framed stools are adjustable. The microscope goes into the cupboard at the student's right, so we buy our new ones without the boxes. For quiz purposes the tables can be separated and spaced over the entire floor of the room.

The lighting scheme for this laboratory is a modification of that used at the University of Minnesota; the unit table idea came from a University of Chicago man; the locker cabinet was derived from Carleton College; the counter-balanced blackboard originated at the University

of California; and the lumières in the Biology laboratory were developed from a Western Reserve University lamp. So it will be seen that the Biology Department at the University of Rochester is cosmopolitan, claiming credit only for its adaptations and combinations of equipment.

The Second and Third Floors

Two more laboratories on the same general plan as those already described are located on the second floor, which also contains the departmental office and a recitation room seating 40 students. On the third floor are Vertebrate Zoological, Ecological and Entomological laboratories, four offices, a private laboratory, a Collection Room and (between the two wings) a joint Geology and Biology Library. So far as possible, the larger classes are taken care of on the lower floors, letting the more advanced students do the climbing and rewarding them with the greater degree of quiet.

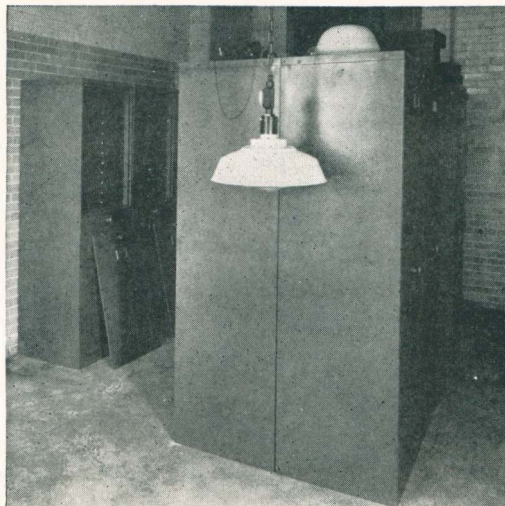
The Equipment Is Durable and Standardized

In the Collection Room of the Entomology suite are insect cabinets, one of which is illustrated. A fireproof vault is provided for the safety of type specimens and other especially valuable material. The use of steel for all cabinets, herbarium cases, table frames, stools, etc., ensures durability and the possibility of exact duplication when more units are needed. All laboratories are equipped with the standardized units already described, the number and arrangement being easily fitted to the size of the room. The unit tables are being used in all combinations from one to six, according to present needs. With interchangeable tables, lockers and cabinets, and with all furniture units on one "Lab. Master" key, the entire equipment is perfectly flexible.

Other Practical Features of the Building

The arrangement of the coat rooms is borrowed from our own Chemistry Department. For reasons of safety, each group of laboratories has its coat room as a sort of anteroom, with its door in plain sight of those at work. With a buzzer on this outer door, any one entering the coat room will attract attention, and prowling will be effectually discouraged.

The office of each member of the staff is usually directly adjacent to his laboratory. By an inside stairway, materials can be carried from floor to floor without using the regular corridors. The building has one electric freight elevator, which is extremely useful. A large photography room on the ground floor is for the use of both the Biology and Geology Departments.



A GROUP OF INSECT CABINETS

The Future Has Been Considered

In planning and locating the buildings for the new Men's College, the trustees and the architects have provided for the future extension of every building, when the enrolment makes it necessary. The addition to the Biology-Geology building will take the form of an extension of the Museum southward and then two new cross-wings, one for each department. Thus all four wings, the old and the new, will be connected directly to the Museum, which is an adjunct to the teaching in all of them. When this addition is built, the present greenhouse will have become inadequate and will be removed, and an entirely new one will be placed on a new site.

The entire south end of the campus is to be developed as a botanic garden, informally landscaped, and devoted chiefly to native trees, shrubs, and all of the smaller plants that can be induced to grow there. Two large city parks, one adjacent to the campus and the other about a mile away, may also be used for field work by students in the Biology Department.

PRINCIPAL TYPES OF EQUIPMENT INSTALLED

Acoustical Treatment—Insulite Co.
 Auditorium Seating—American Seating Co.
 Classroom Furniture—Indian Splint Co.
 Cleaning Equipment—Spencer Turbine Co.
 Clocks and Signal Systems—Hamilton-Sangamo Corp.; Graybar Electric Co.
 Doors—Metal Door & Trim Co.; Art Metal Construction Co.
 Exterior Building Materials—Indiana Limestone Co.
 Heat Regulating System—Johnson Service Co.
 Laboratory Furniture and Office Equipment—Yawman & Erbe Co.
 Lighting Globes and Fixtures—Graybar Electric Co.
 Lockers—Lyon Metal Products Co.
 Window Shades—E. I. duPont de Nemours & Co.
 Windows and Sash—Richey, Browne & Donald, Inc.

COLLEGE
PRESIDENT

SUPER
INTENDENT

STATE
DEPTS

ARCHITECT

SCAPE
ARCH

DEALERS

IFTLY
INDEX