

King's College, London : opening of new scientific laboratories by Lord Lister, P.R.S., Tuesday, October 30th, 1900.

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KING'S COLLEGE, LONDON.



OPENING OF NEW
SCIENTIFIC LABORATORIES

— BY —

LORD LISTER, P.R.S.

Tuesday, October 30th, 1900.

PROGRAMME OF PROCEEDINGS.

AT FIVE O'CLOCK.

IN THE GREAT HALL.

The Principal will introduce Lord Lister.

Lord Lister will deliver an Address and declare the Laboratories open.

Vote of Thanks to LORD LISTER, proposed by the LORD MAYOR and seconded by the Hon. W. F. D. SMITH, M.P., Treasurer of the College.

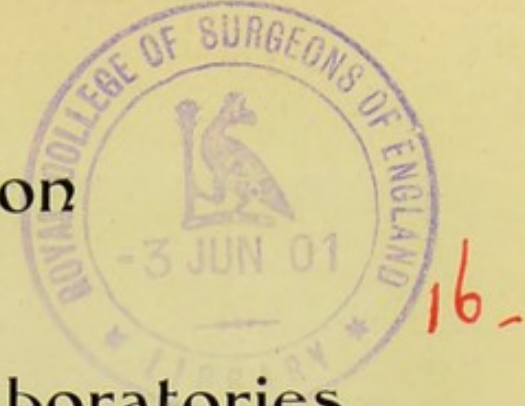
LORD LISTER, and the LORD MAYOR, and those on the Platform, will be conducted to the new Laboratories in the following order:—Physics, Bacteriology, Physiology, Comparative Anatomy, Botany, Geology, Architecture.

The Laboratories will then be open for inspection to all visitors.

It is requested that the audience will remain seated until the procession has passed out of the Hall.

N.B.—In addition to the new Laboratories, all the other departments of the College will be open to visitors for inspection—the Anatomical Department, Laboratories of Pathology, Neuro Pathology, Public Health, Chemistry, the Departments of Mechanical and Electrical Engineering and Metallurgy.

Tea and Coffee will be provided in the Library.



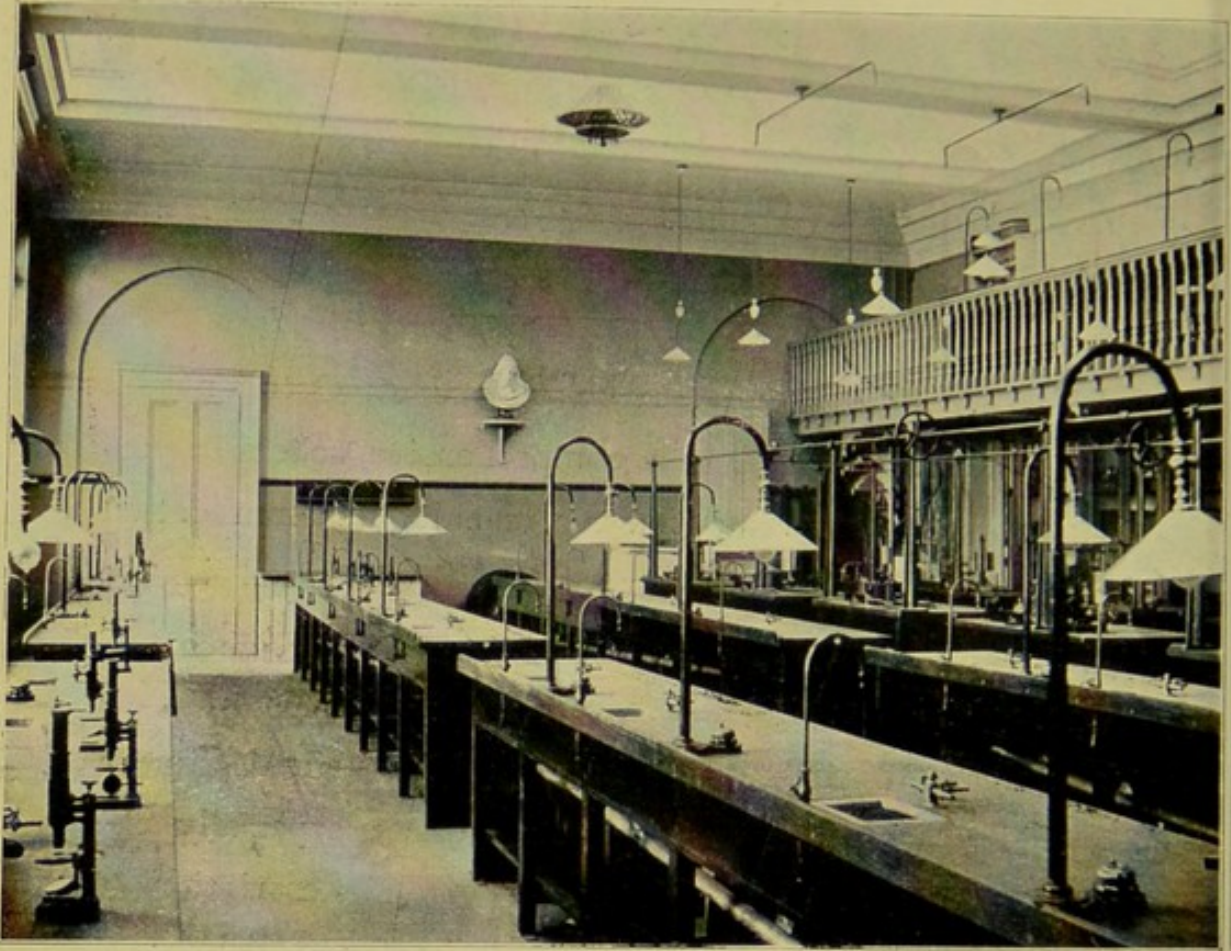
Description

OF THE

New Scientific Laboratories.

THE Laboratories to be opened on October 30th are the result of a comprehensive scheme of extension and improvement of the teaching accommodation of the College, resolved upon by the Council in the Summer of 1899, and now practically completed. The **Biological, Architectural, Anatomical, and Mechanical** departments have all benefited to a considerable extent by the new works; especially the departments first mentioned. A detailed description of the rooms now ready for use will be found below; it may be mentioned here that the whole South Wing of the College has been raised by an additional story, which includes the new **Geological, Comparative Anatomy and Botanical** departments, while the second story of the North Wing, comprising the **Physiological and Bacteriological** departments, has been largely reconstructed, as has also the very fine room on the first floor now allotted to the **Architectural** department. The reconstruction of the **Anatomical** department and **Medical Museum** is also approximately complete, but the equipment is at present in progress.

A Plan of the new rooms will be found on the last page.



GENERAL LABORATORY AND CLASS ROOM—PHYSIOLOGICAL DEPARTMENT.

Department of Physiology.

The new Physiological Laboratory is situated on the second floor, adjacent to the Bacteriological department.

The necessity for increased accommodation in this department has been felt for a long time. The number of students attending the advanced and special classes has increased steadily year by year, and last session reached the large total of 84. At the same time research, which has always formed a large feature in the work of the laboratory, has been carried out under difficulties. These difficulties are now removed, and both teaching and research will be able to progress side by side.

The first thing that will strike the visitor is the splendid light in all the rooms; this, which it is so difficult to get in crowded parts of London, and which is so necessary for microscope work has been secured by a combination of side windows and sky-lights. Electric light, gas and water are

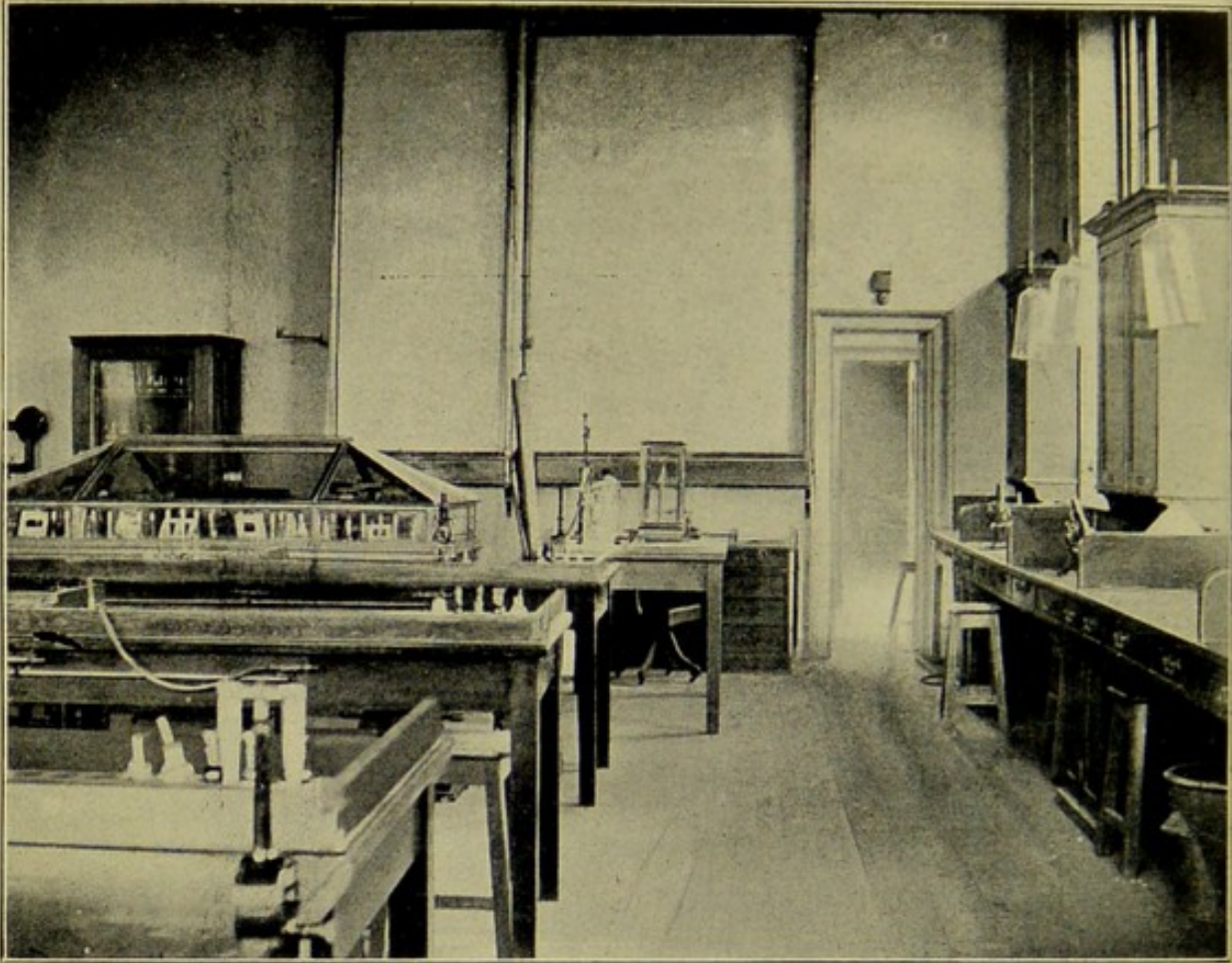


LABORATORY OF CHEMICAL PHYSIOLOGY.

provided throughout. All the fittings are of the latest kind, and much new apparatus has been provided.

The resources of the laboratory naturally divide themselves into two parts—(1) those for the students, and (2) those for workers at original research. The rooms devoted mainly to students' work are a **Lecture Theatre**, which is shared with the Bacteriological Department (which see), and a spacious **Central Laboratory**. This will seat over 100 students; the work tables are suited either for microscope work, or for practical work in Chemical Physiology. There are in addition sixteen separate tables provided with shafting and all the necessary electrical apparatus for the study of experimental physiology, a branch of the science which is becoming every year of greater importance.

In addition to this there are four rooms devoted to the exigencies of research; (1) a large room for investigations in **Chemical Physiology**; (2) a spacious and well-fitted room



GENERAL LABORATORY—BACTERIOLOGICAL DEPARTMENT.

for **Experimental Physiology**; (3) a dark room for photographic and galvanometer work; (4) a private work room for the Professor.

These, with the necessary store rooms and accommodation for the laboratory attendants, make up a very complete suite of rooms.

Anatomical Department.

The provision of a new physiological laboratory has benefited the College in another way, for the old laboratory has become available for increased accommodation in the Anatomical Department. The dissecting room, which was previously far too small, has been nearly doubled in size, and all the accessory rooms necessary in a well equipped anatomical department are now provided. The section of the College Museum which relates to Pathology will also be housed in part of the old physiological rooms in the basement, and a new and very handsome room, near the dissecting room, has been built for the anatomical portion of the museum.



RESEARCH ROOM AND LIBRARY.—BACTERIOLOGICAL DEPARTMENT.

Department of Bacteriology.

King's College was the pioneer in England in providing laboratories, in 1886, devoted to this special branch of Medical and Scientific Education, and continues to hold a unique position in giving systematic technical instruction to Medical Men in Practice, Medical Officers of Health, Colonial and Foreign Practitioners, Veterinary Surgeons, Agriculturists and Analysts who may or may not have received their previous education at this College, or have been in any way connected with it.

This subject has recently been added to the course of training for Students of the Medical School, and of the Institute of Chemistry.

Practical Class Room.—This is a very large classroom devoted to the **Technical Education** of post-graduate and other students from all parts of the world. Every student with his own hands goes through the whole practical course

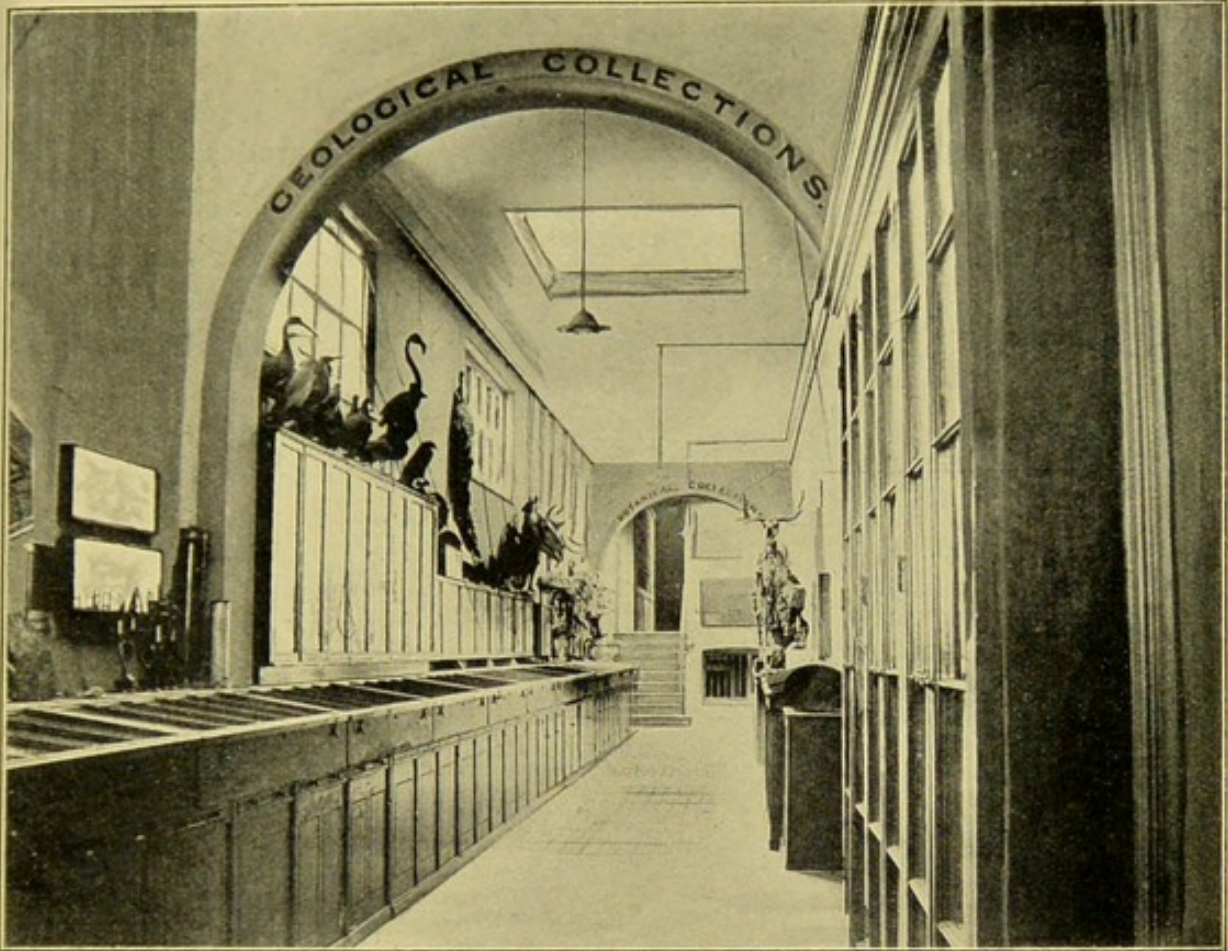
and is further assisted by lectures and practical demonstrations. About 1,500 students have worked in this laboratory, mostly qualified medical practitioners, and many holding important and responsible positions in the Colonial, Naval, Indian, and Army Medical Services. The list of registered names include those of medical and scientific men from Egypt, West Coast Africa, Uganda, the Cape, British Guiana, Jamaica, Trinidad, Straits Settlements, India, Ceylon, China, Japan, Fiji, Queensland, New South Wales, Canada, Chili, Buenos Ayres, and a great many from the United States of America. Several have been especially trained with a view to investigating plague, cholera, yellow fever, madura and other tropical diseases, as well as the diseases of farm stock which are prevalent in our Colonies and in Foreign countries.

The Colonial Secretary of State has recognised the public services of the College by intimating to the Council that in selecting candidates for the Colonial Medical Services, preference will be given (other things being equal) to qualified medical men who have received such bacteriological or similar special training as King's College provides.

Technical Laboratory.—In this laboratory research work has been undertaken for the Board of Agriculture and for Colonial Governments, while a number of workers have published researches on various bacteriological subjects. In this room also analytical researches are undertaken for County Councils and other Local Governing Bodies, but private analytical work is not admitted.

Research Room and Library.—This room is used by advanced Students, and by the Professor. Any overlapping of classes or overcrowding of students is now prevented, and senior students can work undisturbed. A new feature is the Bacteriological library of about 1,000 volumes and pamphlets, lent by the Professor for the use of the senior students. The library is unique and of the greatest value in providing works of reference, as well as the standard textbooks ready at hand for those studying the subject or undertaking original research.

Lecture Theatre.—A Lecture Theatre has been built with the usual equipment, including an electric lantern and screen. The theatre is jointly for the use of the bacteriological and physiological departments, and will accommodate about 200 students.

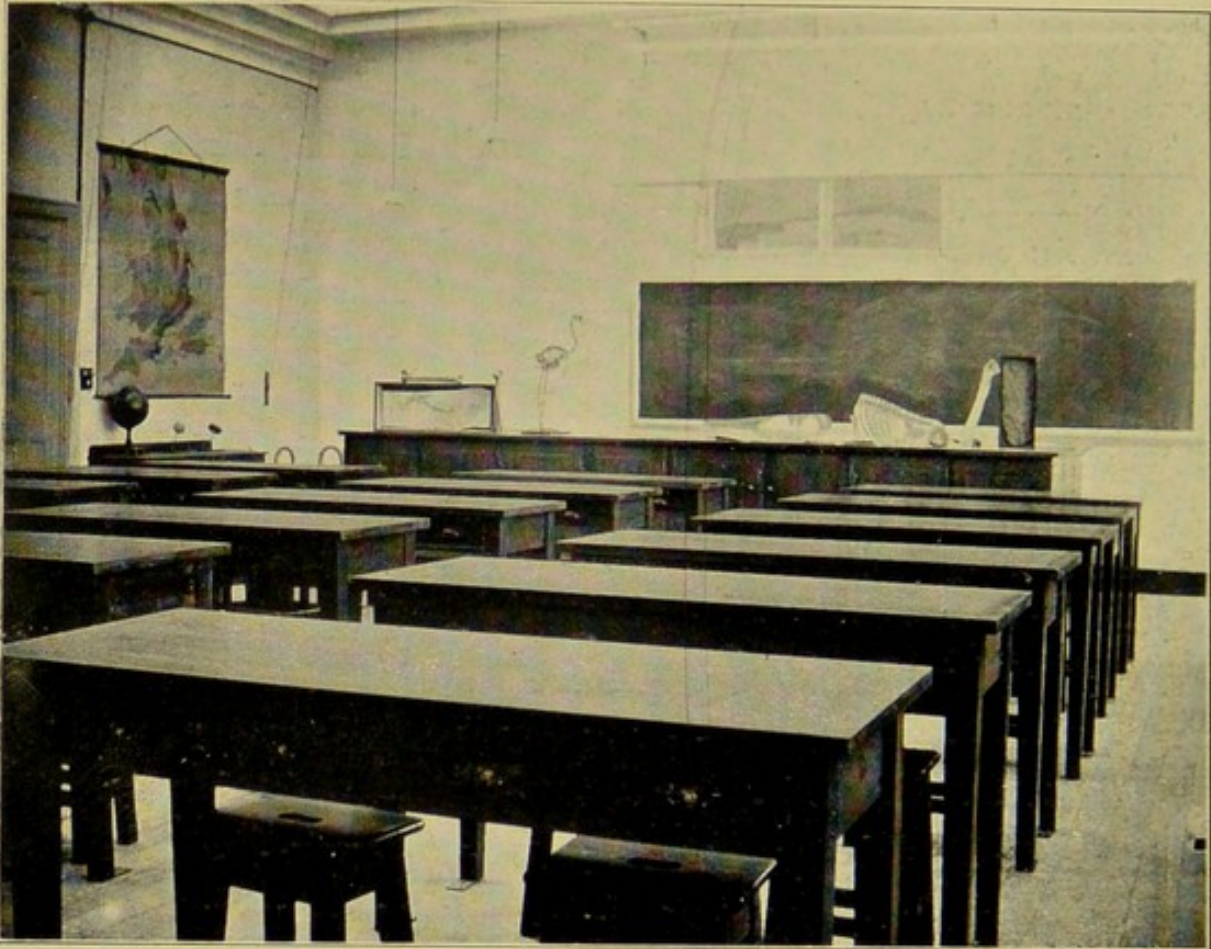


MUSEUM OF GEOLOGY, COMPARATIVE ANATOMY, AND BOTANY.

Departments of Geology, Comparative Anatomy, Botany, and Materia Medica.

The principal collections used in teaching these subjects are now housed in the 2nd floor north corridor, where there is a splendid light. A few specimens are exhibited in glass cases, but the larger part are contained in the cabinets underneath, while the adjoining geological and botanical laboratories also contain additional collections.

On the east side of the corridor the preparations are all recent and chiefly refer to comparative anatomy, and illustrate the soft and hard parts of animals. On the west side the cases hold specimens of rock-forming minerals, the chief types of rocks, fossils grouped as primary, secondary and tertiary, with recent and fossil elephants, fossil plants, recent and fossil shells,

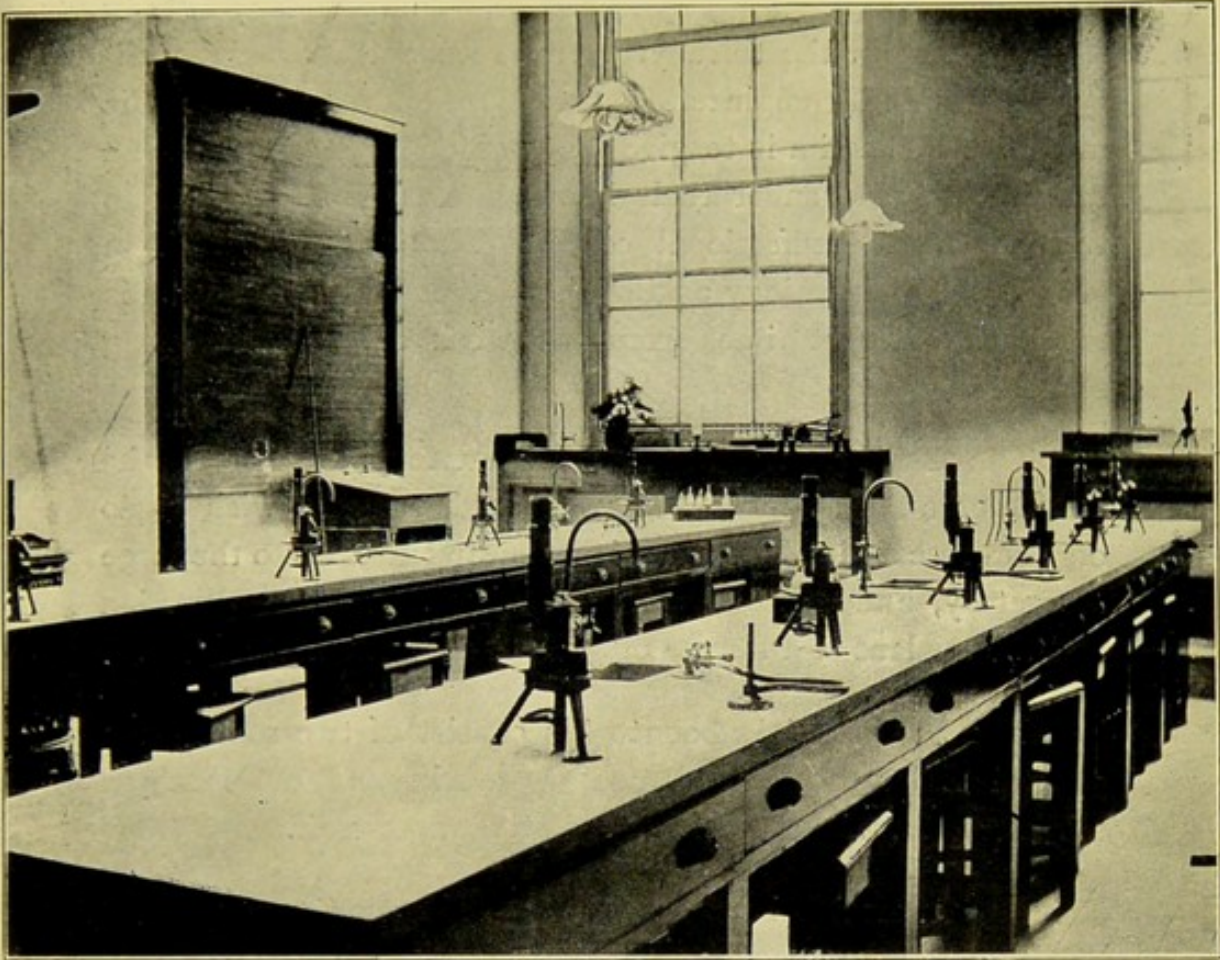


GENERAL LABORATORY AND LECTURE ROOM—GEOLOGICAL DEPARTMENT.

crustacea, echinoderms and corals, and ores of common metals. On the walls are casts of fossil remains, skulls, and stuffed and dry specimens.

Botany is represented by the following collections:—

1. A series of selected types illustrating the more important natural orders of vegetable kingdom, mounted on large sheets with printed text and coloured diagrams.
2. A complete British Herbarium named throughout and arranged in accord with the "London Catalogue of British Plants."
3. The well-known Indian Herbarium of Dr. Pottler.
4. A collection of Brazilian Plants.
5. A collection of Arctic Plants obtained during Captain Perry's Arctic Expedition.
6. Various collections of characteristic Algæ, Fungi, Mosses, Ferns, &c., also series illustrating fruit and seed dispersal, germination, &c.



BOTANICAL LABORATORY.

The General Geological Laboratory and Lecture Room will accommodate fifty students. The large lecture table is fitted with all conveniences for demonstrations, and underneath the lecture table and the side tables are the teaching collections of minerals. Arrangements are made for the exhibition of slides by the aid of an electric lantern fitted with microscope and polariscope.

The room is fitted both for lecturing purposes and practical work, gas, water, and the electric light being laid on. In the practical class the engineering students are divided into several sections; one set of students use the petrological microscope, another set make blowpipe and chemical examinations of minerals, a third draw sections from geological maps, while a fourth set examine and draw fossils; the work of each class follows a regular schedule. In the first year students begin practical work immediately the elementary ideas are understood, and gain a practical knowledge of minerals in the

laboratory, before taking up mineralogy and petrology in their second year; in the third year those students who are qualifying for mining engineering examine more fully the metallic minerals. The aim is to give the engineering students such a training as will render their knowledge of geology useful to them in their professional career. The practical work in geology and mineralogy as a subject for degree examination is taken at different times from the work of the engineering students.

The Geological Research Laboratory is used by the Professor and the more advanced students, who wish to do original research. The room is fitted up similarly to the large laboratory, and contains a portion of the teaching collection and the nucleus of a library of geological works and reports.

The **Botanical Laboratories** consist of two rooms—the general laboratory for elementary work, and the research laboratory for advanced work and private research.

The General Laboratory provides table accommodation for 24 students, and is equipped with all the necessary appliances for the practical study of plants, either fresh or dry. Each student is supplied with a microscope, ordinary reagents, and mounting materials, and in connection with this laboratory a large collection of botanical specimens, preserved in spirit, formalin, &c., is maintained, from which material is drawn for practical work.

The **Botanical Research Laboratory** provides accommodation for 12 students. In this laboratory provision is made for the practical study of the chief physiological processes of plants, and for chemical investigations.

The laboratories contain an exceptionally large number of useful botanical collections.

The Materia Medica and Pharmacological Collection of specimens used in teaching is contained in the upper part of the corridor, and is open to students for purposes of study; the lectures are given in another part of the building.

Architectural Department.

The rooms recently provided for the Architectural department comprise a large room about 60 feet by 30 feet, used both for lectures and for instruction in drawing. It is provided with accommodation on the ground floor enabling 40 students to draw or 60 to attend lectures, and there is further drawing accommodation in the gallery for 20 more students. The room is lighted with Electric Light and is provided with a powerful Electric Lantern for lecturing purposes, and the walls of the ground floor are lined with cases containing specimens of building materials, models of structures and joints, together with diagrams and drawings, forming a very complete Building Construction Museum. A small and carefully selected Library of Books is provided by the Carpenters Company for the use of the students in this department and is kept in a separate room on the ground floor, and there is also a private room for the Professor.

The Studio is entered from the gallery level, and provides, with some seats in the gallery, accommodation for about 14 students. It is provided with an excellent collection of casts of architectural subjects. On the opposite side is a similar room available either as lecture room or studio.

Physics.

The **Wheatstone Laboratory** is well equipped for delicate balance work, heat and electrical measurement, and the determination of the general physical constants.

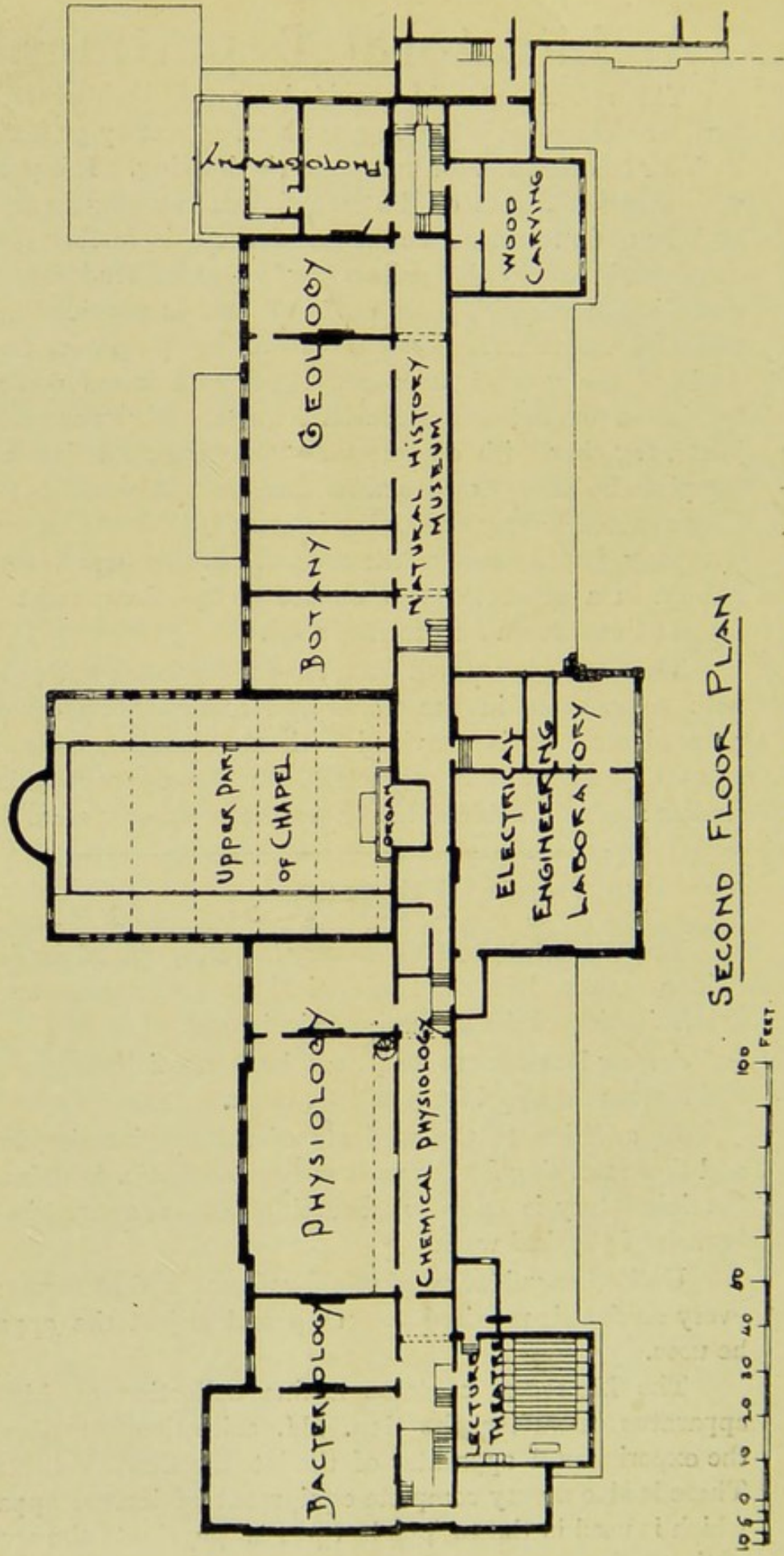
A **new Dark room** has now been specially constructed, and a room set apart for magnetic work.

In addition to the students of the Engineering Faculty and those working for the various London B.Sc. examinations, the laboratory is open to research students engaged in every branch of physical work.

Under the guidance of the Professor and Demonstrators every student is required to set up and adjust the apparatus he uses.

The **Museum** contains a fine collection of historical apparatus, including the Geo. III. collection from Kew, and the experimental apparatus of the late Sir Chas. Wheatstone. There is also a very complete equipment of lecture apparatus which is used in the various lectures on physics to the students of the College.

- KING'S COLLEGE LONDON .



SECOND FLOOR PLAN

SHOWING NEW LABORATORIES