

and its very numerous effects in the atmosphere of the earth. The expense of the necessary instruments and the theoretical complexity of the problems will limit these special researches to a comparatively few students, but every encouragement is extended to those who are able to work along these lines.

FRANK H. BIGELOW

BERLIN,

September 30, 1910

#### LECTURES ON PUBLIC HEALTH

A COURSE of lectures on public health problems and the prevention of disease will be given at Teachers College, Columbia University, on Mondays at 5 P.M. throughout the year. The lectures, which are open to the public, are to be given during the first half year as follows:

October 10—"The Development of Public Health Work," Dr. Hermann M. Biggs, Medical Officer of the Department of Health of the City of New York.

October 17—"Water Pollution and Water Purification," Dr. C. E. A. Winslow, Associate Professor of Biology, College of the City of New York; Curator of Public Health, American Museum of Natural History.

October 24—"Clean Streets as a Factor in Public Health" (to be announced later).

October 31—"The Collection and Disposal of Municipal Waste," George A. Soper, Ph.D., Metropolitan Sewerage Commission.

November 7—"Communicable Diseases, Diphtheria, Typhoid Fever, Scarlet Fever, etc.—Their Transmission," Dr. William Hallock Park, Director, Research Laboratories, New York City Health Department.

November 14—"Communicable Diseases—Their Prevention," Dr. William Hallock Park.

November 21—"Some Examples of the Control of Infectious Diseases," Dr. Simon Flexner, Director of the Rockefeller Institute.

November 28—"The City Milk Supply and its Control," Dr. Ernst Lederle, President and Commissioner, New York City Health Department.

December 5—"Flies and other Insects as Carriers of Disease" (to be announced later).

December 12—"Housing and Health," Mr. Lawrence Veiller, Secretary, National Housing Association.

December 19—"Tuberculosis: The General

Problem; The Organized Campaign against the Disease," Dr. Livingston Farrand, Executive Secretary, National Association for the Study and Prevention of Tuberculosis.

January 9—"Tuberculosis as a Social Problem. Methods of Treatment," Dr. James Alexander Miller, Associate Professor, Clinical Medicine, College of Physicians and Surgeons.

January 16—"What the Teacher should know of the Tuberculosis Problem," Dr. S. Adolphus Knopf, Associate Director of Clinic of Pulmonary Diseases, Department of Health.

January 23—"What the Teacher could do toward the Solution of the Tuberculosis Problem," Dr. S. Adolphus Knopf.

#### LOWELL LECTURES

EIGHT courses of Lowell lectures are announced for the present season, of which five are in the sciences. These are as follows:

Eight lectures by Franz Boas, LL.D., professor of anthropology in Columbia University, on "Cultural Development and Race." (1) "Human Faculty and Race," (2, 3) "Hereditary Stability and Adaptation in Human Types," (4) "Human Faculty as a Result of Cultural Development," (5) "Relations between Type, Language and Culture," (6) "Unconscious and Rational Elements in the Mental Development of Mankind," (7) "Can the History of Civilization be considered as a Single Evolutionary Series?" (8) "Types of Thought in Primitive and in Advanced Society." On Wednesdays and Fridays at 8 P.M., beginning Wednesday, October 19.

Eight lectures by Edward Bradford Titchener, LL.D., Sage professor of psychology in the Graduate School of Cornell University, on "The Structure of Mind." (1) "The Problem," (2) "The Method," (3) "Sensation," (4) "Attention," (5) "Perception; the Problem of Meaning," (6) "Conscious Attitude," (7) "Memory and Imagination," (8) "Patterns of Consciousness." On Tuesdays and Thursdays at 5 P.M., beginning Tuesday, November 1.

Eight lectures by William Ernest Castle, professor of zoology in Harvard University, on "Heredity in Relation to Evolution and Animal Breeding." (1) "Biological Discov-

eries Leading to the Rediscovery of Mendel's Law," (2) "Mendel's Law of Heredity and the Mendelian Ratios," (3) "Evolution by Loss or Gain of Unit Characters or by Variations in their Potency," (4) "Mendelian Unit Characters and Selection," (5) "Blending Inheritance and its Relation to Mendelian Inheritance," (6) "Reciprocal Crosses and Fixed Hybrids; Sex-limited Inheritance," (7) "Effects of Inbreeding and Cross-breeding," (8) "Sex Determination and Sex Control." On Mondays and Thursdays at 8 P.M., beginning November 28.

Eight lectures by Sir John Murray, K.C.B., F.R.S., LL.D., etc., of the *Challenger* Expedition, on "The Ocean." On Mondays and Thursdays at 8 P.M., beginning Monday, February 6.

Dr. Svante Arrhenius, of Stockholm, Sweden, will give a course on "Cosmology." Detailed announcements concerning this course will be made later.

#### THE BIOLOGICAL BUILDING OF THE UNIVERSITY OF WISCONSIN

WORK on the new biological building has begun at Wisconsin University. The structure will occupy a space 42 by 240 feet square, will be built of Madison sandstone and will follow the general style of architecture of University Hall. It is to be four stories high with a basement and sub-basement.

A room for the study of hibernating animals is to be the most novel feature of the new structure. Little work on the hibernation of animals has been done by zoologists up to the present time and many interesting findings are anticipated when work begins in the new building. Conditions of temperature, moisture, light, etc., will be kept at a uniform point to insure the best possible environment for the animals while hibernating.

Both a vivarium and an aquarium will be installed in the basement where many land and water animals will be kept for purposes of instruction, study and research. In the six greenhouses, which are to be built adjoining the main building on the south, a number of very rare tropical plants will be kept. An ef-

fort to secure data concerning their peculiar characteristics is the object of their culture.

The greater part of the main floor will be taken up by the museum. Collections of both botanical and zoological specimens will be installed there. At the rear of the museum will be the entrance to the lecture auditorium. This will be arranged in amphitheater form around a central raised platform, and will seat 500 students. A small room on the main floor will be devoted to the study of the effect of different lights on plants. A special study of the effect of violet rays will be made.

#### SCIENTIFIC NOTES AND NEWS

THE National Academy of Sciences will hold a scientific session in St. Louis, beginning Tuesday, November 8, 1910, at 10.30 A.M. The meeting will be held in the graduate lecture room, at the Missouri Botanical Garden.

DR. ARTHUR MICHAEL, who has had his private research laboratory at Tufts College for the past twenty-five years, has removed the laboratory and scientific library to Newton.

THE "prix de Léonide Spendiarow" was established by a Russian gentleman of distinction who deposited with the International Geological Congress the sum of four thousand rubles, the interest to be awarded at the triennial sessions of the congress "for the best work on geological questions designated by the congress." The award is made by an international committee and was first given to Karpinsky, director of the Geological Survey of Russia; next to Professor Brögger, of Christiania; then to Tschernyschew, the successor of Karpinsky. At the recent Stockholm meeting of the congress the prize was given to John M. Clarke, New York state geologist, for his work on the Devonian of New York and eastern North America.

DR. FRANK H. BIGELOW, recently of the U. S. Weather Bureau, has accepted an appointment under the Argentine government, and his address will be *Oficina Meteorologica Argentina, Buenos Aires*, beginning with December, 1910. He was elected member of the