# SCIENTIFIC EVENTS

## JOINT EXPEDITION TO BRITISH INDIA

AN expedition in the high mountain country north of Cashmir, British India, to study the mechanism and effects of adaptation and acclimatization of man and animals to life at high altitudes, is being organized by Harvard University, with the cooperation of Cambridge University, England, and the University of Copenhagen, Denmark. The field work will be carried on for five months in the spring and summer of 1935, from a base camp at 17,500 feet in the Kolumpa Valley, near Leh, in the Himalayas. The expedition is being financed by the universities and by scientific foundations here and abroad.

The Fatigue Laboratory of Harvard is directing the enterprise. Members of the expedition will be Dr. Ancel Keys, of the Fatigue Laboratory, head of the party; E. Hohwü Christensen, laboratory of zoophysiology, University of Copenhagen; Gordon Bowles, department of anthropology, Harvard University; Harold T. Edwards and William Hathaway Forbes, Fatigue Laboratory; Bryan H. C. Matthews, King's College, University of Cambridge, and John H. Talbott, department of medicine, Harvard University. Cooperating work will be undertaken by David Bruce Dill in the Fatigue Laboratory.

Scientific apparatus will be taken that will permit a detailed study of the respiration, circulation, metabolism, acid-base balance, water balance, heat regulation, cardiac performance, excretion, blood gas transport and subjective responses in rest and in work of varying intensity. Continuous observations will be made, but especially detailed programmes will be carried out at sea level, 5,000 feet, 11,000 feet, 14,500 feet, 17,500 feet, 19,500 feet and the same stations coming down. The base camp will be a short distance from the famous Turkestan-Cashmir caravan route, the highest road in the world regularly traversed by man. This road has three passes at about 18,000 feet and three other passes at more than 18,000 feet.

The expedition will study the natives who live in such altitudes. The snow line is at about 18,000 feet here. Grazing is carried on to 17,000 feet, and the natives drive their flocks as high as 18,000 feet. There are a few settlements at 16,500 feet. One monastery is at 16,000 feet, a nunnery at 17,000 and a hermit lives at 18,000 feet.

Anthropological studies of the natives will be made by Mr. Bowles in the Ladak country, in which the base camp will be located. The people are known as Ladaki, and are almost entirely of Tibetan stock. They are Lama Buddhists in religion. The famed Cashmir wool comes from Ladak. The expedition will go from Srinagar, a city of 150,000 in the Vale of Cashmir, up to the base camp, a distance of about 300 miles by caravan.

The only other comparable studies of high altitudes by scientific expeditions were at Cerro De Pasco, in Peru, 22 days at 14,500 feet; Pike's Peak, 7 days at 14,108 feet; Mt. Massive, Colo., 3 days at 14,400 feet, and Mt. Rosa, Italian Alps, overnight at 15,000 feet. N. E. Odell, British geologist, spent nine days at 23,000 feet on Mt. Everest. The highest peak ever climbed was Mt. Kamet, 25,400 feet, in British India, three years ago, by an expedition under F. S. Smythe.

The advisers to the expedition are: Professor Joseph Barcroft, the University of Cambridge; Dr. Hellmut De Terra, Yale University; Professor Lawrence J. Henderson, Harvard University; Professor E. A. Hooton, Harvard University; Professor August Krogh, Copenhagen University; Professor Alfred Redfield, Harvard University; Dr. Donald D. Van Slyke, the Rockefeller Institute.

## THE AMERICAN DAIRY SCIENCE ASSOCIATION AND THE GENEVA STATE EXPERIMENT STATION

THE annual meeting of the American Dairy Science Association will be held in Ithaca and Geneva, from June 26 to 28. It is expected that investigators from all sections of the United States and Canada will attend. Babcock, Sturtevant, Wing, Van Slyke, Jordan, George A. Smith and others carried forward their researches in the field of dairy research at the Geneva station. While some of the early workers in dairy science at Geneva moved to other institutions to complete their life work, much of the early dairy research carried on at the Experiment Station still stands as a foundation for later investigations.

One of the early undertakings of Dr. E. L. Sturtevant, first director of the station, was to assemble on the station grounds representatives of the different breeds of dairy cattle for a comparison of their value as milk animals. This was a unique experiment at the time and formed for some time the basis of recommendations for the selection of dairy cows.

Dr. S. M. Babcock was the first chemist to be employed at the Experiment Station. He later moved to Wisconsin where he perfected the method for measuring the butter fat content of milk that now bears his name. It remained for his successor at Geneva, Dr. L. L. Van Slyke, to introduce the Babcock method to New York dairy farmers and to demonstrate to them that it was practical and that it safeguarded their interests. Dr. Van Slyke also made contributions to the chemistry of milk and of cheese in addition to making other researches of value to agriculture.

George A. Smith, for many years head of the Dairy Division at the Experiment Station, was instrumental in building up the present herd and made important contributions to the cheese industry of the state.

Dr. W. H. Jordan, director of the station from 1896 to 1921, carried on experiments in animal nutrition that laid the groundwork for much of the later research conducted in this field. In recent years, dairy research at Geneva has centered around dairy manufactures, notably ice cream and cheese, the creaming of milk, sanitary milk production in its many phases, the detection and control of mastitis and chemical studies relating to milk. In addition to research much service work is carried on, including the inspection of all the glassware used in the state for testing milk and cream for butter fat and for making bacteriological tests of milk.

## THE CALIFORNIA MEETING OF THE AMERICAN PHYSICAL SOCIETY

THE 192nd regular meeting of the American Physical Society will be held in Le Conte Hall, University of California, on Tuesday, Wednesday, Thursday, Friday and Saturday, June 19–23, in affiliation with Section B of the American Association for the Advancement of Science. An informal dinner has been arranged for Wednesday, June 20, at the faculty club.

In addition to the regular program of papers three symposia have been arranged as follows:

JOINT MEETING WITH THE ASTRONOMICAL SOCIETY OF THE PACIFIC

*Symposium on Spectroscopy in Astrophysics*

1. Tuesday, June 19, at 10:00 A.M.

"Unidentified Interstellar Lines," Dr. Paul W. Merrill, Mount Wilson Solar Observatory.

"Diffraction Gratings and their Applications to Astronomical Problems," Professor R. W. Wood, the Johns Hopkins University, vice-president of American Physical Society.

2. Tuesday, June 19, at 2:00 P.M.

"Light of the Night Sky," Professor Joseph Kaplan, University of California at Los Angeles.

"Spectroscopic Evidence of Galactic Absorption," Dr. R. J. Trumpler, Lick Observatory.

"Forbidden Lines in Astronomical Sources," Professor I. S. Bowen, California Institute of Technology.

*Symposium on Nuclear Structure*

1. Wednesday, June 20, at 9:30 A.M.

"The Production of High Voltage and Its Application to Nuclear Research," Professor R. J. Van de Graaf, Massachusetts Institute of Technology.

"Disintegration Experiments Using Protons and Deutons at 1,200 Kilovolts," Dr. Merle A. Tuve, Department of Terrestrial Magnetism, Carnegie Institution.

"Recent Nuclear Investigations at the University of California," Professor E. O. Lawrence, University of California.

2. Wednesday, June 20, at 2:00 P.M.

"The Emission of Neutrons and Gamma Rays from Various Elements," Professor C. C. Lauritsen, California Institute of Technology.

"Disintegrations with Positron Ejection," Professor Carl D. Anderson, California Institute of Technology.

"The Nature of Cosmic Rays," Dr. Thomas H. Johnson, Bartol Research Foundation.

In addition, Professor Felix Bloch, of Stanford University, and Professor J. R. Oppenheimer, of the University of California, have been asked to discuss the papers from the mathematical physical point of view.

*Symposium on Fundamental Physical Constants*

1. Thursday, June 21, at 10:00 A.M.

"The Value of the Electronic Charge," Professor R. A. Millikan, California Institute of Technology.

"Measurement of the Compton Shift," Professor P. A. Ross, Stanford University.

"Continuous X-Ray Spectra and the Value of $h/e^{4/3}$," Dr. Paul Kirkpatrick, Stanford University.

"A Measurement of the Compton Shift and the Determination of the Constant $h/me$," Dr. J. W. M. DuMond, California Institute of Technology.

2. Thursday, June 21, at 2:00 P.M.

"Spectroscopic Determinations of Atomic Constants," Professor W. V. Houston, California Institute of Technology.

"The Present Status of the Values of $e$, $h$ and $e/m$," Professor R. T. Birge, University of California.

## RECENT DEATHS

THOMAS HUSTON MACBRIDE, president emeritus of the Iowa State University, died after a brief illness at the home of his son in Seattle, Washington, on March 27, in his eighty-sixth year. Besides being an eminent administrator and teacher, he was a distinguished botanist and an authority on the Myxomycetes.

DR. CARL EWALD GRUNSKY, consulting engineer of San Francisco, president of the California Academy of Science, president in 1924 of the American Society of Civil Engineers, known chiefly for his work on the irrigation and drainage problems of California, died on June 9 at the age of seventy-nine years.

THE death is announced of Dr. Carl Arthur Hedblom, since 1926 head of the department of surgery of the Illinois Medical School.

DR. C. FRANCIS JENKINS, inventor of the systems of television and telephotography bearing his name, died on June 6. He was sixty-eight years old.

THE death is announced on May 22 of Dr. Andrew Fullerton, who retired last October from the professorship of surgery at Queen's University, Belfast.

THE death on May 25 is reported of Professor H. G. Chapman, director of cancer research at the University of Sydney, Australia.