

means of advancing the national economy, and to promote a knowledge of, and the use of, approved American industrial and engineering standards, both in the United States and in foreign countries, and to act as the authoritative channel in international cooperation in standardization work, except in those fields adequately provided for by existing international organizations.

### THE STUDY OF RADIATION AT CORNELL UNIVERSITY

THE Heckscher Foundation for the Promotion of Research in Cornell University has awarded grants amounting to \$34,550 to members of the Cornell faculty for the year 1928-29 for a concentration of effort on a single field of research—radiation.

While considerable research has already been done in this field by individual members of the departments of physics and chemistry at Cornell, the new program involves for the first time the full cooperation and interchange of facilities of both departments. Twelve professors and a large number of assistants will engage in nine major projects, each of which will concern itself with radiant energy of a particular wavelength ranging from the visible or short light rays to the invisible radio wave of unusual length.

The Heckscher research council's plan involves the cooperation of the Cornell departments of physics and chemistry. Both departments were already engaged in a number of researches in the field of radiation. These studies have been coordinated, other studies are being planned to strengthen the whole program and the work will proceed as a unit.

Following is an outline of the investigations proposed to be carried on, some of them jointly, by the departments of physics and chemistry:

1. Professor F. K. Richtmyer, of the department of physics: X-rays. In particular, X-ray spectra and the absorption of X-rays by different materials.

2. Professor C. C. Murdock, of the department of physics: The use of X-rays in studying the size and shape of colloidal particles. And, in cooperation with Professor T. R. Briggs, of the department of chemistry, it is planned to use the same method in the study of catalytic agents.

3. Professor W. D. Bancroft, of the department of chemistry, researches in photochemistry as follows: The chemistry of radicals; the action of light on catalytic agents; the theory of photochemical reactions. In addition, Professor Bancroft will collaborate with Professor J. R. Johnson, of the chemistry department, in a study of the synthesis of optically active substances.

4. Professor R. C. Gibbs, of the department of physics: Spectroscopy. The study of line spectra, especially in the extreme ultra-violet. Professor Jacob Papish, of the

department of chemistry, will assist in supplying pure materials.

5. Professor John R. Johnson (chemistry) and Professor R. C. Gibbs (physics): The absorption of visible and ultra-violet light by different materials, and the relation between absorption and chemical constitution.

6. Professor M. L. Nichols (chemistry) and Professor Ernest Merritt (physics), in cooperation with Professor E. H. Kennard (physics) and Professors Johnson and Papish (chemistry): Luminescence. In particular, the relation between phosphorescence and fluorescence and the chemical constitution of different materials.

7. Professor J. R. Collins (physics): Emission and absorption in the infra-red. The first experiments planned deal with the effect of extremely high pressures on absorption—an entirely new field.

8. Professor Merritt (physics): The use of short radio waves in studying the conditions in the upper part of the atmosphere. Apparatus loaned to Professor Merritt by the Magnetic Observatory of the Carnegie Institution has been set up and will be used for observations of the reflection of short radio waves by the upper atmosphere, and valuable cooperation is assured from the Bell Telephone Laboratories, the General Electric Company and the Carnegie Magnetic Observatory. Similar cooperation is expected from the United States Navy and from certain stations in foreign countries as soon as it is needed.

9. Professor Frederick Bedell and H. J. Reich (physics): Alternating current investigations. Several of the problems proposed have a direct bearing upon the experimental methods used in the other parts of the general program.

### AWARDS FOR SCIENTIFIC EXHIBITS BY THE AMERICAN MEDICAL ASSOCIATION

AWARDS for scientific exhibits made in connection with the recent meeting of the American Medical Association were made as follows:

#### CLASS I

[Awards in Class I are made for exhibits of individual investigations which were judged on basis of originality and excellence of presentation.]

The gold medal to Edward Francis, U. S. Public Health Service, Washington, D. C., for his thorough and important scientific contributions to the knowledge of tularemia, illustrated by his exhibit.

The silver medal to Eben J. Carey, Marquette University Hospital, Milwaukee, for an exhibit showing the results of excellent experimental work on the dynamics of origin, structure and repair of bone.

The bronze medal to Adelbert Ames, Jr., and Gordon H. Gliddon, Dartmouth Medical School, Hanover, N. H., for exhibit showing significant application of physics to ophthalmology.

Certificates of merit, Class I, to the following (alphabetically arranged):

B. J. Clawson, University of Minnesota, Minneapolis, for an exhibit emphasizing clinical and experimental phases of the study of endocarditis.

Richard E. Scammon, University of Minnesota, for exhibit illustrating growth and structure of the human body.

Harry Steenbock, University of Wisconsin, for an exhibit illustrating the results of studies of vitamin D.

#### CLASS II

[Awards in Class II made for exhibits which do not exemplify purely experimental studies, and which were judged on the basis of the excellence of correlating facts and excellence of presentation.]

The gold medal to Walter M. Simpson, Miami Valley Hospital, Dayton, Ohio, for exhibit of the gross and microscopic changes in tularemia and for excellence of presentation.

The silver medal to Arthur J. Bedell, Albany, N. Y., for an instructive exhibit of stereophotographs of the living eye.

The bronze medal to O. E. Denny, National Leprosarium, Carville, La., for excellent exhibit of color photographs illustrating various manifestations of leprosy.

Certificates of merit, Class II, to the following (alphabetically arranged):

John O. Bower and Jefferson H. Clark, Samaritan Hospital, Philadelphia, for exhibit of skin prints in the diagnosis of cancer of the breast.

Dr. T. Horton, Mayo Clinic and Foundation, Rochester, Minn., for exhibit illustrating pyloric block.

David Steel, Cleveland City Hospital and Western Reserve University, Cleveland, for exhibit illustrating roentgenologic and anatomic observations in cardiac diseases.

Honorable mention was made to the following:

C. Latimer Callender, San Francisco, and Cyrus Newton Callender, Fargo, N. D., for exhibit of surgical anatomic drawings.

James T. Case and W. O. Upson, Battle Creek, Mich., for roentgenographic exhibit of cholecystography.

Robert A. Moore and Earnest Scott, Ohio State University, Columbus, Ohio, for exhibit illustrating cardiovascular diseases.

Leo G. Rigler, University of Minnesota, for exhibit showing relation of esophagus and heart and aorta.

Fred D. Weidman, Zoological Society of Philadelphia, for exhibit illustrating comparative helminthology.

The committee made special mention of Benjamin Terry, Albert E. Sterne and Harry Spiro, for the excellence of personal demonstrations.

#### EDUCATIONAL EXHIBITS

A special certificate of merit was awarded to the U. S. Pharmacopeial convention for the best exhibit in the educational (national organizations) classifications. Mention was also made of the exhibit of the Committee on the Grading of Nursing Schools.

#### NATIONAL RESEARCH FELLOWSHIPS IN THE BIOLOGICAL SCIENCES

THE Board of National Research Fellowships in the Biological Sciences, in meeting on May 25 and 26, awarded fellowships to the following individuals:

#### Reappointments

Dean Turner Burk, Biochemistry  
David R. Briggs, Zoology  
James M. Fife, Botany  
Frederick H. Frost, Botany  
Theodore F. Karwoski, Psychology  
E. A. Swenson, Zoology

#### New Appointments

J. A. Gengerelli, Psychology  
Helen A. Purdy, Botany  
Malcolm R. Irwin, Zoology  
Attilio Rizzolo, Psychology  
D. H. Nelson, Botany  
Morgan Upton, Psychology  
L. H. Warner, Psychology  
Wayne N. Plastryge, Botany  
Samuel E. Hill, Zoology  
Anna H. Gayton, Anthropology  
Robert C. Robb, Zoology

The first meeting of the coming year for the consideration of applications for 1929-30 appointments, both American and foreign, will be held around the first of February. Applications for this meeting should be received by the latter part of December.

FRANK R. LILLIE, *Chairman,*  
*Board of National Research Fellowships*  
*in the Biological Sciences*

#### SCIENTIFIC NOTES AND NEWS

DR. E. G. CONKLIN, professor of biology at Princeton University, will give the seventh William Thompson Sedgwick memorial lecture at the Marine Biological Laboratory, Woods Hole, on July 27. Dr. Conklin's subject will be "Problems of Development."

THE gold medal of the Linnaean Society of New York, awarded to Dr. C. Hart Merriam, research associate of the Smithsonian Institution, was presented to Dr. Merriam by Dr. Frank M. Chapman, of the American Museum of Natural History, on May 30.

DR. HERBERT OSBORN, research professor at the Ohio State University, by vote of the fellows of the Entomological Society of America has been elected to honorary fellowship in the society. Other honorary fellows are C. J. S. Bethune, J. H. Comstock, S. A. Forbes, L. O. Howard and E. A. Schwarz.

DR. HUGH S. CUMMING, surgeon-general of the United States Public Health Service, has been elected a corresponding member of the Royal Society of Medicine of Great Britain for "meritorious work and ability as a scientist and leader in public health affairs."

DR. THOMAS BARBOUR, director of the university museum at Harvard University, has been elected an honorary member of the Phi Beta Kappa Society.