the understanding that he will remain in charge of its general policy and continue to give special attention to the development of new methods and the attack upon new problems. On July 1, when the new arrangement goes into effect, Dr. Walter Sidney Adams, who has had long and successful experience as assistant director of the observatory and also as acting director during Dr. Hale's absence, will become director of the observatory in charge of operations. Dr. Hale's purpose in requesting relief is to find a means of accomplishing in the future the greatest possible amount of scientific work that his health will permit. He is still in Europe, but hopes to be able to return to Pasadena in October.

SCIENTIFIC NOTES AND NEWS

AT a meeting of the council of the University of Strasbourg held on May 24, the honorary degree of doctor of the University of Strasbourg was conferred upon Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research.

AT the commencement exercises of Yale University the doctorate of science was conferred on Dr. Walter B. Cannon, professor of physiology in the Harvard Medical School; Dr. Jacques Loeb, of the Rockefeller Institute for Medical Research; Dr. Henry F. Osborn, president of the American Museum of Natural History; the degree of master of arts was awarded to Joseph H. Pratt, state geologist of North Carolina.

PRINCETON UNIVERSITY has conferred the doctorate of science on Dr. Theodore William Richards, Erving professor of chemistry and director of the Wolcott Gibbs Memorial Laboratory at Harvard University; and on General John Joseph Carty, of New York City, chief engineer and vice-president of the American Telephone and Telegraph Company.

AT Harvard University, the doctorate of laws was conferred on Dr. Samuel W. Stratton, president of the Massachusetts Institute of Technology.

AT the commencement of Wesleyan University the doctorate of laws was conferred on Dr. James Rowland Angell, president of Yale University, and the doctorate of science on Dr. Robert M. Yerkes, of the National Research Council.

DR. A. H. GILL, professor of technical chemical analysis at the Massachusetts Institute of Technology, received the honorary degree of doctor of science from the Rhode Island State College at its thirtieth annual commencement. The degree of master of science was conferred on Robert H. Smith, assistant professor of machine construction at the institute.

DR. H. A. LORENTZ, professor of physics in the University of Leyden, who has been lecturing in England, was the guest of the Anglo-Batavian Society at a dinner given in London on June 6. Following the speech of Professor Lorentz, responses for other guests were made by Lord Haldane and Professor G. N. Lewis, of the University of California.

SIR WILLIAM BRAGG has been elected to be Fullerian professor of chemistry at the Royal Institution and director of the laboratory and of the Davy Faraday Research Laboratory, in succession to Sir James Dewar.

DR. D. ROBERTS HARPER 3d, physicist of the National Bureau of Standards, has been detailed to New York for service as liaison officer between the Bureau of Standards and the American Engineering Standards Committee in the Engineering Societies Building, succeeding Dr. A. S. McAllister, of the Bureau of Standards, recalled from New York to Washington. Dr. McAllister takes charge of part of Secretary Hoover's special work in relation to commodity standards and specifications, inaugurated recently under the Bureau of Standards.

THE department of entomology of the University of California, and the staff of the museum of the California Academy of Sciences gave a complimentary dinner at the Hotel Stewart, San Francisco, on June 2, to Professor and Mrs. T. D. A. Cockerell, who were passing through San Francisco on their way to Siberia. Thirty-six were at the table, including many of the leading biological workers of the Bay Region of California. Dr. Barton W. Evermann acted as toastmaster. All present joined in wishing their guests a pleasant voyage and abundant success in their quest for fossil insects.

DR. HARRY R. SLACK, JR., associate in laryngology in the Johns Hopkins Medical School, who has been exchange professor in Peking Union Medical College for the past year, sailed on June 20 from Shanghai. Dr. Slack will spend some time in the clinics of Vienna and Paris before returning to America about October 1.

DR. ADOLPH MEYER, psychiatrist-in-chief of the Johns Hopkins Hospital, has gone to Europe to visit his old home in Zurich, Switzerland, and to inspect psychiatric clinics in England, France and other European countries.

ON May 17 Professor Edward L. Nichols, of Cornell University, lectured before the students of Wellesley College on "Science in the colleges."

DR. EDGAR FAHS SMITH, lately provost of the University of Pennsylvania, delivered the commencement address at the University of Arkansas on June 12. While in Fayetteville he addressed the Arkansas Section of the American Chemical Society, and was guest of honor at a luncheon given by the section.

DR. ARTHUR LACHMAN, research associate at the University of California, spoke on "The present status of organic chemistry" at Northwestern University on May 10, and at the University of Chicago on May 17.

ON Monday evening, June 11, resident members of Sigma Xi and other men interested in scientific research at the State College of Washington, met at a dinner with Dean Edward Ellery, national secretary of Sigma Xi. In the afternoon of the same day, Dean Ellery delivered a lecture on "The structure of the atom," illustrated by the film prepared in the research laboratory of the General Electric Company, and the following morning gave the annual Phi Kappa Phi address on "The rôle of science in the spiritual evolution of man."

PROFESSOR C. MOUREU, president of the Chemical Society of France, gave a lecture on "Les gaz rares des sources thermales, des grisous et autres gaz naturels" at the rooms of the Chemical Society, Burlington House, on June 14.

JOSEPH KEELE, a member of the staff of the Geological Survey of Canada, died on June 11. Mr. Keele spent the earlier years of his connection with the survey in making geological explorations in Yukon and Northwest Territories. He is better known for his work on clays and shales of Canada in their application to the ceramic industries.

DR. G. H. HUME, for many years lecturer on physiology in the University of Durham College of Medicine, died on May 8, aged seventy-seven.

MR. WILLIAM HENRY PEARSON, of Manchester, England, well known for his studies in Canadian and tropical Hepaticae, died recently of pneumonia in his seventy-fourth year.

JOSEPH WRIGHT, the Irish naturalist, died on April 7 at the age of eighty-nine years.

THE *Journal* of the American Medical Association states that a Portuguese merchant who had amassed a fortune in Brazil and returned to Lisbon to live, recently bequeathed his fortune to found an institute for scientific research, naming Professor Ferreira da Mira as the one to have charge of the institution. No specifications as to site, scope or other details were made and no scientists knew of the provisions of the will in advance. As Professor Ferreira de Mira had no personal acquaintance with the testator, and as he is the incumbent of the chair of biology, the council that was organized by the state for the creation of the institute decided that Lisbon should be the location and the biologic sciences the field of the Bento da Rocha Cabral Institute for Scientific Research.

THE Australian Institute of Tropical Medicine was opened at Townsville in 1913, in the part of the great continent that lies within the tropics, with Dr. Anton Breinl as the first director. He resigned in 1921, and the institute became dormant. We learn from the *Journal* of the American Medical Association that, with the creation of the commonwealth department of health, the institute has been reconstructed. Its activities include the establishment of laboratories to render assistance to physicians in bacteriologic, protozoological and biologic work, and the organization of a service to deal with tropical diseases in Australia and her dependencies. Work on hookworm disease has been done with the assistance of the Rockefeller Foundation. The whole of Australia and her dependencies have been surveyed, and the distribution of hookworm disease has been de-

termined. It is proposed to establish permanent measures of control and thus to eradicate the disease. By arrangement with the Rockefeller Foundation, a section of the work will be carried out with the collaboration of the Australian Institute of Tropical Medicine. Also, an inquiry into the incidence of malaria and filariasis has been begun. The staff is being reappointed, and Dr. R. W. Cliento, a recent graduate of Adelaide University, has been appointed director. He has been sent on a tour to Java, Ceylon, India, Italy, England, the United States and the Panama Zone to study the methods of control of tropical diseases. Arrangements have been made with the Universities of Melbourne and Sydney for the instruction in tropical medicine required for a diploma.

THE British Medical Research Council announces officially that insulin, the new treatment for diabetes which was discovered at Toronto by Dr. Banting, and which is an extract of the island tissue of the pancreas, is now being "used in treatment for the relief of patients selected for the purpose at each of the following hospitals: In London, at St. Bartholomew's, Guy's, St. Thomas's, the London and University College; in Sheffield, at the University Departments of Pharmacology and Physiology and at the Royal Infirmary; in Edinburgh, at the Royal Infirmary." Arrangements are in progress for extending this work to other hospitals and institutions "where the necessary conditions both personal and material can be provided. Every effort is being made to increase the supply of insulin, so that it may be available for use in general practice." The following official announcement has been made public: "The council are able to say that the progress towards successful large-scale production has been more rapid than they had ventured last November to hope. . . . Subject to limitations of raw material in particular districts, successful manufacture is now (they believe) assured; but a period of some weeks must pass before laboratory tests and clinical use under special safeguards will have made it justifiable for a supply to be issued generally for routine use under the ordinary conditions of medical practice."

THE British National Poultry Council announces that the Ministry of Agriculture intends to proceed without further delay with those parts of the institute scheme that have to do with research in connection with breeding, disease and nutrition. These sections do not require so much preparation as the other parts of the scheme, and it is anticipated that, as £5,000 of the required contribution from the industry has been secured, the balance of £1,500 will be forthcoming shortly, thus rendering available the whole of the £50,000 grant from the special fund sanctioned in 1921.

SHORTLY before the war the Marquise Arconati-Visconti gave two million francs (then £80,000) for the erection in Paris of an institute for the study of the history of art and of archeology. The work was, however, suspended by the war and the high cost of materials four years later prohibited its resumption. In her will the Marquise provided that for four consecutive years a sum of 250,000 francs (about £3,500 at the present rate of exchange) be drawn from the revenues of her estate and devoted to the construction of the institute, which is to be erected in the Avenue de l'Observatoire.

THE cinema film taken in Australia in connection with the total solar eclipse of the sun at Wallal last September was shown at the Royal Albert Hall, London, on May 12 and following weeks. *The Observatory* writes: "Besides the actual eclipse with pictures of the corona, the film covers the experiences of the different eclipse expeditions (American, Australian, Canadian, English and Indian) from the time of their arrival in Australia to the time of their leaving. The American expedition, for example, is traced from Adelaide. The difficulties of transportation at Broome and of landing at Ninety-mile Beach, where there is a very large range in the tides and a heavy surf, are shown. The camp-life of the astronomers and the nature of the country at Wallal should also prove of interest. The part of the film dealing with the few minutes of totality will, of course, be run through in as many minutes, but the whole film, which should prove of general geographical and educational, as well as of astronomical, interest, will occupy an hour or a little more. The eclipse film will be screened along with other films showing life in Australia.

THE Hancock Life Insurance Company, Boston, has made an additional gift of $20,000 to the Harvard Cancer Commission; $5,000 to be used for purchase and installation of a diagnostic apparatus and $15,000 to be placed in the permanent fund. The insurance company previously gave $30,000 toward the building of the Huntington Hospital, which is devoted exclusively to cancer cases. The new gift will be used in the biophysical laboratory, which is also under the direction of the commission.

UNIVERSITY AND EDUCATIONAL NOTES

AT the commencement exercises of Harvard University President Lowell announced the receipt of gifts during the year amounting to nearly four million dollars. This sum includes the payment of pledges to the Harvard endowment of $1,080,619.

THE Tanners' Council of America has voted to erect a research laboratory at the University of Cincinnati, contributing $110,000 for the erection of the building.

TWO bequests, one of £30,000 and one of £20,000, have been made to the University of Melbourne Medical School.

DR. FREDERICK P. GAY, professor of bacteriology in the University of California, has accepted the chair of bacteriology in Columbia University.

PROFESSOR M. C. BURRITT and Professor W. H. Chandler, vice-deans of the New York State College of Agriculture, will retire at the end of the present academic year.

DISCUSSION AND CORRESPONDENCE

THE PREPARATION OF FIVE KILOGRAMS OF DESICCATED EUGLENA[1]

GOTTLIEB (1850), Kutscher (1898), Bütschli (1906) and others have attempted the collection of *Euglena* in amounts sufficient to warrant biochemical investigation of this relatively accessible microorganism. Their interesting results were in each case limited by the very small quantity of material attained by their methods of filtration and sedimentation. The present communication is offered as a suggestion that *Euglena*, and possibly other unicellular bodies, can be obtained in great quantities with less difficulty than might at first be apparent.

In 1921 a heavy scum, or "bloom" of *Euglena* (Sp.) appeared on one of the campus ponds. To concentrate this scum by filtration is impracticable. It was found, however, that the scum is sufficiently tenacious to permit its accumulation with the following device. By means of cords, a wooden float, consisting of a board 1.5 m. long, 10 c.m. wide and 5 c.m. thick, was suspended parallel to and from the small end of a long bamboo pole. To collect the material the pole was swung in arcs over the surface, dragging, or better, pushing, the scum close to a concrete embankment—an effect suggesting the skimming of cream with a gigantic spoon. The scum was then easily gathered with a large photographic developing tray and transferred in five or ten gallon lots to the laboratory.

After sufficient dilution, the euglenae were shaken until a uniform suspension resulted. This was strained through a "10-mesh" brass sieve to remove the gross débris. The fluid was then forced through a "60-mesh" sieve by stroking the upper surface of the sieve with a strip of pliant rubber. The suspension was allowed to stand in the dark for twelve hours in large jars to which cracked ice had been added. It was found that agitation followed by cold and darkness results in the euglenae settling sharply as a bottom sludge. The supernatant liquid, containing most of the foreign protozoa and some other floating particles, was siphoned off. Microscopic examination revealed that the sludge consisted of euglenae in a state of high purity.

The sludge was dehydrated by adding an equal volume of ninety-five per cent. alcohol, allowing the euglenae to settle, decanting the diluted alcohol and adding fresh; this procedure being repeated until the euglenae were in ninety per cent. alcohol. After a Buchner filtration, the filter-cake was granulated with a potato masher. The resulting damp granules were dried at 50°. From roughly 250 liters of

[1] 1850 Gottlieb, J. *Ann. d. Chemie u. Pharmacie* Bd 75 p. 51; 1898 Kutscher, F. *Zeitschr. f. physiol. Chemie* Bd. 24 p. 360; 1906 Bütschli, O. *Arch. f. Protisten.* Bd. 7 p. 197.