Myxophyceae. Professor Guilliermond was a student of the structural elements of the cytoplasm. Professor Chemin studied the physiology of algae.

. . . In spite of many dangers during the past five years I am safe and my family too. My laboratory was only slightly damaged and the work of the University is now going on about as usual. This summer I hope to be able to stay for some months again in my former University of Montreal. . . .

This was dated April 10, 1945, and was signed by Professor Henri Erat, of the Faculté des Sciences de Marseille.

. . . et j'ai le plaisir de vous informer que nos laboratoires et nos collections n'ont pas jusqu'ici souffert de la guerre. . . .

This was dated April 12 and was signed by Professor P. Dangeard, of the Université de Bordeaux.

We also learn from Professor Georges Bioret (Angers) that he and his collections are safe; he confirms the loss of Frémy.

SCIENTIFIC NOTES AND NEWS

IN tribute to his leadership in advancing industrial science, the degree of doctor of science was conferred on Dr. Clyde E. Williams, director of Battelle Memorial Institute, Columbus, Ohio, at the recent convocation ceremonies of the Case School of Applied Science.

KALAMAZOO COLLEGE has conferred the doctorate of science on Dr. Harold W. Brown, professor of parasitology at the College of Physicians and Surgeons, Columbia University, and the degree of humane letters on Dr. Martha J. Gifford, until recently a member of the staff of the Ellen Mitchell Memorial Hospital, Moulmein, Burma.

THE honorary degree of doctor of science has been conferred by Grinnell College on Dr. Ernest E. Charlton, in charge of the X-ray Section of the General Electric Research Laboratory, Schenectady. Dr. Charlton was graduated from the college in 1913.

COLONEL HAROLD B. GOTAAS, Sn.C., director of the Division of Health and Sanitation of the Institute of Inter-American Affairs, has been decorated by the Chilean Government with the Order of Merit. Before joining the Army in 1942, Colonel Gotaas was professor of sanitary engineering in the School of Public Health of the University of North Carolina.

THE British Council of the Institute of Fuel has awarded the Melchett Medal for 1945 to Professor C. H. Lander, professor of mechanical engineering at the Imperial College, London.

THE freedom of the borough of Paddington has been conferred on Sir Alexander Fleming, F.R.S., as a token of the high esteem in which he is held by the civic authority of the borough, where he has carried out his scientific researches at St. Mary's Hospital, in which his discovery of penicillin was made.

DR. GEORGE A. VAN BIESBROECK, professor of astronomy at the University of Chicago, will retire with the title emeritus on July 1.

THE retirement is announced of Professor Mortier F. Barrus, professor of plant pathology at Cornell University. He has been a member of the department for thirty-five years.

PROFESSOR CHARLES F. THOMAS, of the department of mathematics of the Case School of Applied Science, has retired after serving for thirty-nine years.

PROFESSOR CHARLES J. MOORE, for twenty-four years chairman of the department of chemistry of Hunter College, will retire in September.

DR. JOSEPH S. FRUTON, associate in chemistry at the Rockefeller Institute for Medical Research, has been appointed associate professor of physiological chemistry at Yale University, the appointment to take effect on July 1.

MAJOR KARL M. DALLENBACH, of the U. S. Army, on leave from the professorship of psychology at Cornell University, will become Susan Linn Sage professor of psychology on his return from military service. This professorship was established in 1885 as a gift from Henry W. Sage.

AT the University of Minnesota Professor Lorenz G. Straub, now on leave, has been promoted to be head of the department of civil engineering of the College of Engineering, to succeed Professor Frederic Bass, who retired two years ago. Robert H. Cameron, of the Massachusetts Institute of Technology, has been made professor of mathematics. Dr. Herbert S. Wells, of the University of Tennessee, has been appointed professor of biophysics for work in physical medicine, for which the university recently announced a considerable grant.

DR. L. T. MORDELL, since 1923 Fielden professor of pure mathematics at the University of Manchester, has been appointed to succeed Professor G. H. Hardy in the Sadleirian chair of pure mathematics at the University of Cambridge.

DR. G. H. A. CLOWES, who has occupied the position of director of the Lilly Research Laboratories for more than twenty years, will retire on July 1. In the ordinary course of events Dr. Clowes would have retired on January 1, 1943, but on account of the war

emergency he has continued to direct research on various war problems. As research director emeritus, he will still act in an advisory capacity and continue to direct research on certain fundamental problems in which he is particularly interested in Indianapolis and Woods Hole. The Lilly Company has no immediate intention of appointing a research director in his place. The present heads of departments will retain their positions and some new departments may be created. A vice-president of the company will take charge of general administration, so as to leave the heads of individual research units free to devote their entire attention to research.

THE retirement on July 1 is announced of Dr. A. D. Emmett, assistant director of research of Parke, Davis and Company. Dr. Emmett, who has been in charge of the vitamin division for twenty-nine years, will become a consultant for the research department.

DR. O. S. DUFFENDACK, director of research for the North American Philips Company, Inc., previously professor of physics at the University of Michigan, has been appointed vice-president and director of research and engineering of the company. He will be responsible for all research and engineering activities. During the war he has been a director of research with the National Defense Research Committee and has served as chief of one of the sections.

SIR JACK DRUMMOND, D.Sc., F.R.S., chief scientific adviser to the British Ministry of Food, has resigned from the chair of biochemistry at University College, London, which he has held since 1922, to accept the post of director in charge of the scientific research of the Boots Pure Drug Co., Ltd. It is stated, however, that he will not take up the work until the food situation has improved.

DR. S. A. WAKSMAN, of the Agricultural Experiment Station of New Brunswick, N. J., writes to SCIENCE that he has received several communications from the Russian bacteriologist, S. N. Winogradsky, who has been residing during the last twenty-five years at Brie Comte-et-Robert near Paris. Professor Winogradsky, who is now eighty-nine years old, has lived through the period of German occupation under fairly tolerable conditions. He has had very little opportunity to continue his scientific work and has, therefore, devoted his time to summarizing the work that he has done during the past half-century in the field of microbiology. This summary will be published in the French language by the Pasteur Institute as soon as facilities are available.

FOLLOWING a tour of duty in the Office of the Surgeon General of more than three years, Lieutenant Colonel Harrison J. Shull, M.C., has taken up his new assignment as consultant in medicine to the Sixth Army in the Southwest Pacific.

DR. CLAIBORNE G. LATIMER, professor of mathematics at the University of Kentucky, has accepted the invitation of the United States War Department to be one of a selected group of civilian teachers to go to England on July 1, as instructor in the University Study Center in Shrivenham, which the Army is establishing as part of the over-all educational program for troops in the European theater during the demobilization period.

DR. C. C. TAN, professor of genetics at the National University of Chekiang, China, is spending a year in the department of zoology of Columbia University as a research associate of the Rockefeller Foundation.

DR. O. R. CAUSEY and Mrs. Causey are returning to the United States in August for accumulated leave after six years in Brazil. Dr. Causey, who is a member of the field staff of the International Health Division of the Rockefeller Foundation, has been on leave of absence for the past three years for service with the Office of the Coordinator of Inter-American Affairs for the Amazon Program in Belem, Brazil. His permanent address is care of the Rockefeller Foundation, 49 West 49th Street, New York 20, N. Y.

DR. TSO-HSIN CHENG, professor of biology and dean of Fukien Christian University; Dr. Tung-chi Lin, professor of political science at Fuhtan University, Chungking; Dr. Tsi-ze Nay, director of the Institute of Physics, National Academy of Peiping, now in Kunming, and Dr. L. K. (Meng-ho) Tao, director of the Institute of Social Sciences, Academia Sinica, arrived in the United States last week. They were invited by the Department of State to spend a year in this country visiting various American universities, libraries and other cultural centers.

THE commencement address of the University of Rochester was given on June 15 by Dr. Alan Gregg, director of the Division of Medical Sciences of the Rockefeller Foundation.

UNDER the auspices of the Independent Citizens Committee of the Arts and Professions in the Postwar World a program was presented on June 22 and 23 at the Waldorf-Astoria Hotel, New York. There were twelve sections, including one on science and technology, of which Morris Llewellyn Cooke, consulting engineer, was chairman, and one on a national health and welfare program, presided over by Dr. Channing Frothingham, chairman of the Committee of Physicians for the Improvement of Medical Care. At the former, Dr. Paul Sears, professor of botany at

Oberlin College, spoke on "The Role of Science in Regional Resource Development"; Walton Hamilton, professor of constitutional law at the Yale Law School, on "Public Policy in Respect to Technology"; Dr. Walter Rautenstrauch, professor of industrial engineering at Columbia University, on "Science Opens the Door of Production," and Lieutenant Steuart Henderson Britt, U.S.N.R., on "Discovery and Development of Scientific Talent."

AT a dinner of the alumni held as part of the commencement week program of the Massachusetts Institute of Technology, a gift of $350,000 was presented to the institute by Alfred P. Sloan, Jr., chairman of the Board of the General Motors Corporation. A gift of $100,000 was also announced from Gerard Swope, former president of the General Electric Company, to endow a group of post-graduate fellowships in the fields of physics, electrical engineering and industrial management. Fellowships awarded under this fund will go to students who have pursued courses especially planned for the education of superior students, special consideration to be given to students from St. Louis, Mo., Highland Park, N. J., and New Brunswick, N. J., or to students who are employees of the General Electric Company or their children.

THE University of Pennsylvania has received a bequest of $155,000 from the estate of Dr. George E. De Schweinitz, ophthalmologist, which will be used to establish a fund to support the department of ophthalmology and a professorship that will be named "the William F. Norris and George E. De Schweinitz Professorship of Ophthalmology." Dr. Norris was the first professor of ophthalmology in the School of Medicine of the university.

DR. DUNCAN MACINNES, of the Rockefeller Institute for Medical Research, New York City, who had been appointed the first Sigma Xi lecturer-in-residence, gave a series of lectures at Cornell University during the week of May 14 under the auspices of the Cornell Chapter and of the local members of the American Chemical Society. The titles of the lectures were: "Transference Numbers and the Debye-Huckel Theory"; "The Effect of Centrifugal Force on the Potentials of Galvanic Cells"; and "The Study of Proteins by the Electrophoretic Method."

THE Johnson and Johnson Research Foundation has established an annual award at Northwestern University. This consists of a silver medal and an honorarium of $250 to be known as the Malcolm T. MacEachern Award in honor of Dr. MacEachern, associate director of the American College of Surgeons and director of the program in hospital administration at Northwestern University.

SPECIAL ARTICLES

A SEARCH FOR VIRUS-INACTIVATING SUBSTANCES AMONG MICROORGANISMS[1,2]

THE results of studies of the action of antibiotic agents against true viruses have been almost consistently negative. Robinson[3] reported that gramicidin, tyrocidine, tyrothricin, penicillin, streptothricin, citrinin and gliotoxin are inactive against the viruses of the PR8 strain of epidemic influenza and a strain of *Lymphogranuloma venereum;* on the other hand, actinomycin exerted a slight *in vitro* inactivation of the influenza virus. Penicillin was found to be ineffective for experimental infections of vaccinia BH, St. Louis encephalitis and equine encephalomyelitis.[4] Subtilin and other agents were useless against influenza A virus in white mice.[5] Clavacin, in spite of the original claims, proved to be of no value in the treatment of the common cold.[6] Penicillin and clavacin were recently found to be inactive against the virus of fowl pox,[7] and aspergillic acid had no effect upon the encephalomyelitis virus.[8]

As contrasted with these negative results, certain claims have been made that filtrates of various fungi and of an undescribed species of *Actinomyces* have a high virucidal activity, both *in vitro* and *in vivo,* against the Frances strain of neurotropic yellow fever virus in mice.[9] These claims have not been confirmed as yet.

In any attempt to isolate chemical agents active against viruses, one is faced with the fact that these substances act only in the animal body. Whereas the action of antibiotic substances against bacteria, actinomycetes and fungi can be investigated readily by employing various plate methods,[10] the study of antiviral activity of various agents is complicated by the need of employing animals, tissue culture or egg

[1] Journal Series Paper, New Jersey Agricultural Experiment Station, Rutgers University, Departments of Microbiology and Poultry Husbandry.

[2] Supported by a grant made by the Commonwealth Fund of New York.

[3] H. J. Robinson, Thesis, Rutgers University, 1943.

[4] R. F. Parker and H. W. Dieffendorf, *Proc. Soc. Exp. Biol. and Med.,* 57: 351, 1944.

[5] A. P. Krueger, SCIENCE, 98: 348, 1943.

[6] B. H. Robbins, *Proc. Soc. Exp. Biol. and Med.,* 57: 215, 1944.

[7] J. M. Stansfield, A. E. Francis and C. H. Stuart-Harris, *Lancet,* 247: 370, 1944.

[8] S. E. Sulkin and A. Goth, *Proc. Soc. Exp. Biol. and Med.,* 58: 16, 1945.

[9] H. Linhares, *O. Hospital,* 26: 327, 1944.

[10] S. A. Waksman and H. B. Woodruff, *Jour. Bact.,* 40: 581, 1940.