

SCIENTIFIC NOTES AND NEWS

As noted in *SCIENCE* last week, Dr. George D. Birkhoff, Perkins professor of mathematics at Harvard University, has been elected an honorary fellow of the Royal Society of Edinburgh. Other Americans elected to honorary fellowships were Dr. H. S. Gasser, director of the Rockefeller Institute for Medical Research; Dr. Herbert S. Jennings, Walters professor of zoology, emeritus, of the Johns Hopkins University, and Dr. Oswald Veblen, professor of mathematics at the Institute for Advanced Study at Princeton, N. J.

SIR HENRY HALLETT DALE, president of the Royal Society, London, a member of the Scientific Advisory Committee of the British Cabinet, was presented on July 8 with the Harben Gold Medal of the Royal Institute of Public Health. The Smith Award was presented to Dr. James Fenton, medical officer of health for Kensington. Former recipients of the Harben Medal include Pasteur, Lister, Koch, Metchnikoff, Gorgas, Baron Kitazato, Sir Ronald Ross and Sir Leonard Hill.

DR. JOHN J. GREBE, director of the Physical Research Laboratory of the Dow Chemical Company, Midland, Mich., will be presented with the Medal of the Society of Chemical Industry for 1943 at a meeting in November of the American Section in New York.

KANSAS STATE COLLEGE recently conferred the honorary doctorate of science on Dr. P. J. Parrott, formerly director of the New York Agricultural Experiment Station at Geneva.

Nature states that the University of Aberdeen has conferred the honorary degree of LL.D. on Dr. D. M. S. Watson, Jodrell professor of zoology and comparative anatomy, University College, London. The degree of D.Sc. has been awarded to W. Burns for a thesis on "An Oscillographic Study of the Activity in Nerves Associated with the Viscera"; and on Dr. R. D. Stuart, for a thesis on "A Study of Leptospirosis in the South-West of Scotland with Special Reference to Laboratory Investigation, Epidemiology and Specific Prophylaxis."

THE Council of the Royal College of Surgeons of England has conferred honorary fellowship on the Right Honorable Winston Churchill, Prime Minister, First Lord of the Treasury and Minister of Defense.

DR. EDWARD FRANKLAND ARMSTRONG has been elected president of the Royal Society of Arts, London.

THE retirement on July 1 is announced of Dr. E. M. Freeman, dean of the College of Agriculture, Forestry and Home Economics of the University of Min-

nesota. He is succeeded by Dr. Henry P. Schmitz, professor and chief of the Division of Forestry.

DR. CHARLES C. ADAMS, since 1926 director of the New York State Museum, retired on July 31, having reached the statutory age of seventy years.

THE title of professor emeritus of the history of medicine in the University of London has been conferred on Dr. Charles Singer on his retirement from the professorship of the history of medicine at University College.

PROFESSOR WILLIAM I. MYERS, head of the department of agricultural economics, a former governor of the Farm Credit Administration, has been appointed acting dean of the New York State College of Agriculture at Cornell University, filling the vacancy caused by the death of Dr. Carl E. Ladd.

PROFESSOR GEORGE D. SCARSETH, of Purdue University, has been appointed head of the department of agronomy. He succeeds Professor A. T. Wiancko, who had served since 1903 as professor of agronomy and head of the department.

DR. RUSSELL A. RUNNELLS, associate professor of pathology in the Division of Veterinary Medicine of Iowa State College, has resigned to become head of the department of anatomy in the Division of Veterinary Science of the Michigan State College, East Lansing.

DR. RALPH G. SMITH, of the Medical School of the University of Michigan, has been appointed to succeed Dr. Erwin E. Nelson as professor of pharmacology and head of the department of pharmacology of Tulane University.

DR. ANTHONY A. PEARSON, assistant professor of anatomy at the Loyola University School of Medicine, Chicago, has become associate professor of anatomy at the College of Medicine of Baylor University at Houston, Texas.

DR. LESLIE L. LUMSDEN, of New Orleans, medical director of the U. S. Public Health Service, retired, has become lecturer in epidemiology at the Medical Branch at Galveston of the University of Texas.

Chemical and Engineering News states that Roy Erwin Swift, formerly instructor of metallurgy in the School of Mines, University of Alaska, has been appointed associate professor of chemistry at the university. The School of Mines has been discontinued for the duration of the war, but the first two years of the basic engineering sciences are to be continued.

DR. EDWARD B. MATHEWS has retired as head of the Maryland Geological Survey. Dr. Joseph T. Singe-

wald, Jr., has been appointed his successor as director of the Department of Geology, Mines and Water Resources.

DR. WILLIAM E. MARTIN has resigned as associate horticulturist in the Arizona Agricultural Experiment Station to become senior agriculturist with the Office of Foreign Agricultural Relations in Peru of the U. S. Department of Agriculture.

DR. L. GRANT HECTOR, chief engineer with the National Union Radio Engineering Company of Newark, N. J., has been appointed production consultant of the War Production Board. He will advise on miniature tubes in the radio division to increase production and improve quality through the coordinated efforts of the manufacturers.

GEORGE W. BURPEE, a director of the American Society of Civil Engineers, a past president of the American Institute of Consulting Engineers, a partner in the engineering firm of Coverdale and Colpitts, has been elected president of the General Aniline and Film Corporation to succeed Robert E. McConnell, who has resigned.

DR. ERNEST W. LANDEN, research physicist with the Armour Research Foundation, Chicago, has become research engineer with the Caterpillar Tractor Company, Peoria, Ill. He will continue studies on Diesel combustion.

DR. MARY LOUISE QUAIFFE, assistant in the department of physiology of the University of Illinois, has become research biochemist at Distillation Products, Inc., Rochester, N. Y.

DURING the summer Professors Edward D. Allen and Albert G. Hart, of the department of economics of Iowa State College, are engaged in tax research for the Treasury Department at Washington.

THE annual meeting of the Corporation of the Marine Biological Laboratory will be held in the auditorium of the laboratory at Woods Hole, Mass., on Tuesday, August 10, at 11:30 A.M., for the election of officers and trustees and the transaction of such business as may come before the meeting.

THE Alabama legislature at its recent session made an annual appropriation of \$100,000 to the State University for research purposes. This was in addition to the usual maintenance and building grants.

THE Alabama Research Institute, recently organized by a group of Alabama business men, is setting up research fellowships in the state university and state colleges.

THE Winthrop Chemical Company has announced plans for a large increase in the production of peni-

cillin. Additional facilities for its manufacture have been acquired in Rensselaer, N. Y., and according to Dr. Theodore C. Klumpp, president of the company, will be devoted entirely to the manufacture of the drug which is now allocated exclusively to the armed forces. Penicillin is now under direct allocation of the War Production Board for national defense and there is no prospect that a surplus will soon be available for civilian use.

THE *Journal* of the American Dental Association announces that the United States Department of State, in a letter from Secretary Cordell Hull to Daniel F. Lynch, chairman, has commended the work of the Pan-American Relations Committee of the American Dental Association, stating that "it is contributing in no small measure to that international understanding which is fundamental to world peace." The Pan-American Committee, in conjunction with the Department of State and the W. K. Kellogg Foundation, is sponsoring the Inter-American Postgraduate Course in Dentistry, which opened at the University of Michigan on August 2.

THE *Journal* also announces that certain changes have been made in the dental program at Harvard University now being carried forward by the new School of Dental Medicine, including reduction of the course from five years, as set in 1940, to four academic years or three calendar years under the accelerated wartime schedule; award of the D.M.D. degree only on the completion of the course, and the permission of students successfully completing the course for the D.M.D. to register subsequently in the medical school and qualify for the M.D. degree on the completion of one and a half additional academic years or one additional calendar year in the medical school. When the activities of the Harvard School of Dental Medicine were planned with funds of \$1,350,000 in July, 1940, a five-year course was established, at the end of which the successful student was given both the M.D. and the D.M.D. degree. According to an official statement by President James B. Conant, it was predicted from the start that difficulty would be encountered under the plan because a man enrolled for the joint degrees might shift his interest to some other branch of medicine rather than to continue with the course for the D.M.D. degree. Dr. Conant said: "The prediction of difficulty was accurate. Whether or not this would have been the case except for the war, no one can tell. Instead of the course of five academic years we planned, Army and Navy regulations now make mandatory the limitation to three calendar years in courses leading to the medical and the dental degree."

The Times, London, reports on July 10 that the Combined Food Board has made arrangements for an

investigation to be made into available statistical records and other data concerning food supplies and consumption in the United States of America, the United Kingdom and Canada. Three United States officials have arrived in England to confer with officials of the Ministry of Food. They are Dr. John M. Cassels, Dr. Montell Ogden and Dr. L. A. Maynard, all of the U. S. Department of Agriculture. The Canadian Government is also participating in this inquiry. Ian Mearthur, of the Canadian Dominion Bureau of Statistics, has also arrived in England. Personal discussions will supplement the full exchange of information on food matters which is already taking place through the established channels of the Combined Food Board.

Chemical and Engineering News reports that the embargo placed on the export of scientific periodicals by the United States is proving a heavy blow to Swedish investigators. Several prominent research workers in the April 7 *Stockholm's-Tidningen* express serious concern over their inability to keep abreast of scientific progress and new discoveries made in the United States. Professor Arne Tiselius, of the University of Uppsala, is quoted as saying, "It is vital for Swedish science to maintain contact with American research." Since the United States entered the war no scientific literature, with but few exceptions, has entered Sweden. A list of a hundred indispensable periodicals is being compiled and will be submitted to the authorities with an appeal that steps be taken for them to be regularly sent to Sweden. The *News* further reports that Swedish-British scientific cooperation has been made possible through an offer by the British Council to underwrite the printing in English of such Swedish doctors' theses as are of in-

terest to the English-speaking scientific world. This offer, much appreciated in Swedish scientific circles, has been submitted to all universities and colleges in Sweden.

THE British Medical Research Council has arranged with the London Hospital for the establishment there of a department for research in industrial medicine. Dr. Donald Hunter, physician to the hospital, has accepted a part-time appointment to the staff of the council as physician-in-charge of the department, and the council has appointed Dr. Kenneth Perry and Dr. Norman Spoor as full-time research assistants to work under his direction. The hospital is providing accommodation and facilities, and will be responsible for the treatment of cases under investigation. The primary purpose of the department is to undertake clinical researches into disorders affecting industrial workers, including both occupational diseases and others of a more general kind. This work will be done mainly in the department itself, but the staff will make visits from time to time to other parts of the country where special problems for investigation may be brought to the notice of the council. The department will also be responsible for teaching and instruction in the subject. This arrangement supersedes that made last year for the appointment of a whole-time director of research in industrial medicine attached to the council's headquarters. The post had become vacant through the appointment of Professor A. W. M. Ellis to the regius chair of medicine at the University of Oxford.

It is reported that an institute for typhus research has been opened at Lemburg. It has been named after Emil von Behring.

DISCUSSION

THE DIGESTION OF LIVING TISSUES BY PROTEOLYTIC ENZYMES¹

THE insusceptibility of living bacteria, yeast cells, etc., to digestion by proteolytic enzymes has intrigued many investigators and a number of explanations for this resistance have been suggested.² Whatever the nature of this insusceptibility it is of a type which is easily lost. On death or injury a change occurs (protein denaturation?), which permits digestion to take place. In striking contrast to the resistance of these living forms is the susceptibility to digestion which mammalian tissues exhibit.³ The present observations

appear to suggest an explanation for the ability of proteolytic enzymes to digest living mammalian tissues in spite of the strong probability that these tissues possess the same protoplasmic and cellular characteristics upon which the insusceptibility to digestion of the freely living forms depends.

Trypsin has been shown to be capable of liberating histamine from mammalian tissues. This has been demonstrated for the perfused lungs of guinea pigs,⁴ for the blood cells of rabbits⁵ and for the liver of dogs.⁶ Some recent observations with the trypan blue

¹ This research has been aided by a grant from the Clara A. Abbott Fund of Northwestern University.

² J. H. Northrop, "Crystalline Enzymes." New York: Columbia University Press. 1939.

³ L. R. Dragstedt, *Arch. Surg.*, 44: 438, 1942.

⁴ M. Rocha e Silva, *Arquivos d. Inst. Biol.*, 10: 93, 1939.

⁵ C. A. Dragstedt and M. Rocha e Silva, *Proc. Soc. Exp. Biol. and Med.*, 47: 420, 1941.

⁶ M. D. Ramirez de Arellano, A. H. Lawton and C. A. Dragstedt, *Proc. Soc. Exp. Biol. and Med.*, 43: 360, 1940.