

THE NEED FOR NUTRITION OFFICERS IN MILITARY CAMPS

THE Surgeon-General has been authorized to station in each of the larger military camps and cantonments in this country a nutrition officer whose duties will be those of an adviser to the camp commander, the camp surgeon and the camp quartermaster on all matters relating to the nutritive value of foods. There is still need for a considerable number of men well trained in food chemistry and physiology of nutrition, who can qualify as lieutenants and captains in the Sanitary Corps for this assignment. Upon receiving commissions these officers will be given training for a period at the Medical Officers' Training Camp, Camp Greenleaf, Fort Oglethorpe, Georgia, and will then be subject to appointment as nutrition officers, or to duty of a similar nature overseas. This work has proved to be of signal importance in the interest of proper nutrition of the soldiers and of the economic use of foods both in this country and overseas. Application for information should be made to Lieutenant Colonel John R. Murlin, Sanitary Corps, Office of the Surgeon General, 7th and B Sts., NW., Washington, D. C.

The following officers of the Division of Food and Nutrition of the Medical Department, U. S. Army, are on duty overseas:

Majors Phillip A. Shaffer, A. J. Carlson, Ernest B. Forbes, John P. Street.

Captains Frank C. Gephart, Walter H. Eddy, Fred F. Flanders, J. Garfield Riley, Ernest L. Scott, Leon A. Congdon, H. A. Mattill, F. B. Kingsbury, Marion G. Mastin, Arthur W. S. Thomas, Drury L. Weatherhead.

Lieutenants Cleon C. Mason, Willard R. Line, C. A. Cajori, A. G. Hogan, S. C. Dinsmore, A. A. Reithwiesner, A. F. Wussow, F. J. Funk, L. V. Burton and A. A. Schaal, Sanitary Corps.

Lieutenants A. D. Shohl, Rolla B. Hill, R. W. Bury and A. T. Higgs, Medical Reserve Corps.

SCIENTIFIC NOTES AND NEWS

DR. EDWARD A. SPITZKA has been promoted to be lieutenant colonel in the Medical Corps, U. S. A.

MR. WILLIAM BOWIE, hydrographic and geodetic engineer and chief of the division of

geodesy of the U. S. Coast and Geodetic Survey, has been commissioned a major in the Corps of Engineers, U. S. Army and has been assigned to duty in the department of map making.

PROFESSOR ROSS P. ANDERSON, of Cornell University, has received a captaincy in the Chemical Warfare Service of the United States Army and has been sent to France. For the last year, Captain Anderson has been absent from Cornell on leave, carrying investigations on the removal of gasoline from natural gas for the United Natural Gas Company, of Oil City, Pa. While at Cornell he had charge of the courses in gas analysis.

CAPTAIN J. F. MCCLENDON, Sanitary Corps, U. S. A., has been ordered to Camp Fremont, Menlo Park, California, to serve as nutrition officer of that camp. He has leave of absence for the period of the war from his position as associate professor of physiology, University of Minnesota Medical School, Minneapolis.

A. H. HOLT, of the college of applied science, University of Iowa, has been appointed captain in the Engineering Corps of the Army and is stationed at Camp Lee, Va.

DR. FLOYD K. RICHTMYER, assistant professor of physics at Cornell University, has left Ithaca to accept a temporary civilian appointment as radio engineer in the Signal Corps of the United States Army at Washington. The appointment was made as a result of research work done by Professor Richtmyer this summer. He plans to return to Ithaca before the university reopens in October.

THE experimental ammonia plant and laboratory of the Bureau of Soils at Arlington, Virginia, has been transferred to the Nitrate Division of the Ordnance Department of the Army. The work is in charge of Dr. R. O. E. Davis and Mr. L. H. Greathouse.

DR. WILLIAM T. MCCARTY has been appointed physical director of the aviation unit at Mineola, N. Y.

MR. STEPHEN C. BRUNER, formerly assistant pathologist at the Estación Experimental Agronómica, Santiago de las Vegas, Cuba, has been appointed pathologist to succeed Mr.

John R. Johnston, now head of the Office of Sanadad Vegetal, Habana.

DR. VERN B. STEWART has accepted an appointment in the Bureau of Plant Pathology at Washington, and is now engaged in work on the pathological aspects of market inspection of vegetables.

MISS ZELMA ZENTMIRE has been appointed to fill the place of J. J. Hinman, water chemist and bacteriologist at the University of Iowa, who leaves soon for service in the Sanitary Corps of the Army.

H. F. TAYLOR, assistant for developing fisheries and for saving and use of fishery products in the Bureau of Fisheries, has visited Boston, New York, Pittsburgh and Chicago for the purpose of studying the equipment of industrial laboratories and the assemblage of equipment to be installed in the Bureau's laboratory when built.

THE University of Pennsylvania expedition to the hitherto unknown Indian tribes in the mountains between Venezuela and Colombia in charge of Theodore De Booy, curator of the University Museum, has returned, having accomplished its purpose in a much shorter time than was believed possible. This was due largely to the assistance of the Venezuelan government.

ACCORDING to a press dispatch Vilhjalmur Stefansson, arrived at Dawson, Yukon, on August 29. He is recovering from his serious illness and intends to make a Red Cross lecture tour, beginning in New York in October.

THE Royal College of Surgeons, London, has accepted the invitation of the Royal College of Physicians to appoint a joint committee to consider the proposals for the establishment of a Ministry of Health. This committee has co-opted representatives of the Society of Medical Officers of Health, and Dr. Hamer, London, Dr. H. R. Kenwood, Chadwick professor of hygiene in the University of London, and Dr. Robertson, Birmingham, will join the committee. The representatives of the college of physicians are the president, Dr. Norman Moore, Sir Bertrand Dawson, Sir J. F. H. Broadbent, and Dr. Ormerod (registrar). The

representatives of the college of surgeons are the president, Sir George Makins, Sir Berkeley Moynihan, Mr. Waring and Mr. Ryall.

THE trustees of Cornell University have passed resolutions in memory of Professor Henry Shaler Williams, in which they say:

As a teacher he was very conscientious; he was especially strong as a teacher in his laboratory, where his close personal attention and his constructive criticism gave his students a training of incalculable value.

As an investigator he attained a very high rank. His studies of Devonian paleontology, of the geological history of organisms, and of the evolution and geographical and geological modification of fossil faunas stand out as important contributions to the literature of these subjects. He was honored by election to the more important American and foreign geological societies.

Although his devotion to his students and his attainments as an investigator gave him eminence, yet to those of us associated with him he will be remembered especially because of his personality. His sweetness and gentleness of character and his thoughtfulness of others won him the love of all who were so happy as to know him.

DR. BYRON D. HALSTED, for nearly thirty years professor of botany in Rutgers College and botanist for the New Jersey Agricultural Experiment Station, died at his home in New Brunswick, N. J., on the night of August 27, as the result of paralysis.

PROFESSOR F. P. TREADWELL, the author of widely used text-books of analytical chemistry, died suddenly of heart-disease at his home in Zürich, Switzerland, on June 24 last. Treadwell was an American by birth (1857, Portsmouth, N. H.), but spent most of his life abroad. His professional activity after serving as Bunsen's lecture assistant from 1878 to 1871 was at the Eidgenössische Polytechnische Schule in Zürich.

THE death is reported of M. Maurice Chevreux, the naval engineer. M. Chevreux laid claim to having drawn the plans of the first Zeppelin which succeeded in navigating the air.

THE Board of Agriculture of Great Britain has made an order authorizing in England and Wales the killing on and after August 1, until

the next close season, of certain migratory wild birds to increase the food supply.

THE twelfth annual report of the British Science Guild has been published, and copies can be obtained (price 1s. each) on application to the secretary, British Science Guild, 199, Piccadilly, W. London. The report contains addresses by Lord Sydenham, Sir Henry Newbolt and Sir Algernon Firth, delivered at the recent annual meeting of the guild, with particulars of the British Scientific Products Exhibition which is being organized by the guild, and memoranda on the British dye industry, the introduction of the metric system, scholarships for higher education, the teaching of science and other subjects.

As has been noted in SCIENCE active steps are being taken with a view to the establishment at Cambridge of an Institute of Agricultural Botany, the primary function of which will be the breeding and distributing of improved varieties of agricultural crops. We learn from *Nature* that the scheme in question was very fully described by Mr. Lawrence Weaver, of the Board of Agriculture, at a meeting of the Agricultural Seed Association held on July 15. It appears that the new institute will be modelled on the famous Swedish plant-breeding station at Svälof, and that its activities will be to follow two distinct lines, one of which will be purely scientific, while the other will have a commercial outlook. More precisely, the scientific wing will be concerned with the producing of pure cultures of new varieties on the field-plot scale; the economic wing will deal with the growing and distribution on a large scale of these varieties. Presumably, on the Svälof model, the scientific side will oversee the operations of the commercial to the extent of guaranteeing the purity of the stocks distributed by the latter. It has been announced that subscriptions towards the establishment of the new institute amounting in the aggregate to upwards of £30,000, have already been received, including a sum of £10,000 down and £2,000 a year for five years from the firm of Sir Robert McAlpine and Sons. It has also been announced

that the Board of Agriculture will provide the necessary buildings and equipment.

A TEMPORARY exhibition was opened in a few of the galleries of the British Museum on August 1. The exhibition galleries were closed by order of the government as a measure of economy in the spring of 1916, and, owing to the necessity of increased precautions against air raids, all the most valuable objects have been removed to places of greater safety. The trustees, however, have deeply regretted the closing of their doors to visitors, and especially to soldiers from the oversea Dominions. An exhibition has accordingly been arranged, consisting chiefly of casts and facsimiles, which it is hoped will both be instructive in itself and representative of some parts of the treasures of the British Museum. The exhibition will include Greek sculpture, classical coins, British coins and medals, historical documents and autographs (naval and military), illuminated manuscripts, early Bibles and other printed books of interest and beauty. If the experiment of reopening is successful, it may be possible to extend it later to other galleries of the Museum. The exhibition is open from 10 A.M. to 1 P.M. and from 2 to 5, each week day. A guide-book to the exhibition is in preparation and photographs and museum publications are obtainable in the entrance hall.

A SPECIAL general meeting of the Royal Society was called on July 31 to consider the advisability of expelling enemy foreign members, and notice of the following motion to be submitted to the meeting was given by Sir George Beilby and Dr. M. O. Forster:

That, in view of the war having continued during nearly four years without any indication that the scientific men of Germany are unsympathetic towards the abominable malpractices of their government and their fellow-countrymen, and having regard to the representative character of the Royal Society among British scientific bodies, as recognized by the patronage of his Majesty the King, the council forthwith take steps necessary for removing all enemy aliens from the foreign membership of the society.

The London *Times* says: Although Sir George Beilby and Dr. Forster are both members of

the council this resolution is apparently not put forward by the council officially. The notice convening the meeting states that on July 4 the council had under consideration the question of expelling the enemy foreign members. They considered that, if possible, unity of action between the Allied nations should be secured, and in view of the fact that a conference between representatives of Allied academies will take place in October next they resolved to refer the question to that conference. In the meantime they desire to obtain the opinion of the Fellows of the society on the subject for the guidance of their representatives at the conference which has been called for the purpose of discussing the future of scientific work hitherto carried out by international organizations.

FROM a White Paper published on July 10 *Nature* reports that among the supplementary estimates for the year ending March 31, 1919, is the sum of £1,000,000 which is to be devoted through the Board of Trade to the purpose of assisting the dye-making industry. This is the first instalment of a total sum of £2,000,000 to be provided in the shape of loans and grants to be spread over three years, and divided as follows: £1,250,000 in loans at not less than 1 per cent. above the Bank rate, with a minimum of 5 per cent., repayable in twenty years or earlier if the profits of the manufacturer are more than 9 per cent.; £600,000 in aid of extensions of plant and buildings; and £150,000 in grants in aid of research. It will be remembered that early in 1915 a grant of £1,000,000 was made to one firm at Huddersfield, out of which was created the company known as British Dyes Ltd. This, not unnaturally, created a feeling of dissatisfaction on the part of those dye-making firms which received nothing. The sum mentioned is to be distributed among these firms, besides the substantial amount allocated to the purposes of research. Presumably the £100,000 given for this purpose in 1915 has been spent, but it would be interesting to know how and by whom the money has been used and with what results, in view of the fact that the central research laboratory originally contemplated

has never been erected, nor the Technical Committee announced in July, 1915, called into existence.

THE provisions of a law enacted by the Congress of Uruguay require the use of the metric system in all trade transactions. Merchants are forbidden to sell by the piece, package, or for a fixed sum of money, even at the request of the customer, articles susceptible of sale by weight or measure without the use of the metric system. The law provides that when merchandise is sold in sealed packages, tin cans, boxes, bundles, bottles, etc., the net contents or weight must be clearly indicated on the wrappers. In pass books used for sales on credit the weight or quantity of the merchandise sold must be stated, and this must also be done in the case of invoices. Staple articles, such as sugar, maté, kerosene, rice, flour noodles, beans and other dry legumes either ground or in the grain, coffee, tea, salt, liquors, coal and wood in general, meats (including canned meats), lard, fresh vegetables, bread, crackers, milk, fish, cheese, sweet and white potatoes, etc., are required when offered for sale to show prices and weights.

THE autumn lectures of the New York Botanical Garden will be delivered in the Lecture Hall of the Museum Building of the Garden, Bronx Park, on Saturday afternoons, at four o'clock, as follows:

August 31. "Autumn flowers," by Dr. N. L. Britton.

September 7. "Gladioli," by Professor A. C. Beal.

September 14. "Evergreens," by Mr. G. V. Nash.

September 21. "Dahlias," by Dr. M. A. Howe. (Exhibition of Dahlias, September 21 and 22.)

September 28. "Flora of the vicinity of New York," by Mr. Norman Taylor.

October 5. "Autumn coloration," by Dr. A. B. Stout.

October 12. "Cut flowers and how to use them," by Mr. E. I. Farrington.

October 19. "The value of birds in a garden," by Dr. G. Clyde Fisher.

October 26. "Some plant diseases of New York and Virginia," by Dr. E. W. Olive.

November 2. "Plants as insect traps," by Dr. J. H. Barnhart.

UNIVERSITY AND EDUCATIONAL NEWS

A BEQUEST of \$5,000 was made to Cornell University by Dr. William M. Polk, dean of the Medical College, who died on June 23. His purpose in making it was to continue the John Metcalf Polk scholarship in medicine.

A FELLOWSHIP in applied chemistry, of the annual value of £200, has been established at Glasgow University by the trustees of the Ferguson Bequest Fund.

PROFESSOR RAYMOND BINFORD, head of the department of zoology at Earlham College, Indiana, has been elected president of Guilford College, North Carolina.

THE vacancy in the deanship of the medical college of Cornell University has been filled temporarily by the appointment of Walter Lindsay Niles, M.D., 1902, who will act as dean through the summer. Further action will be taken by the trustees in the autumn.

DR. A. J. BIGNEY, on leave from Moores Hill College, has been appointed associate professor of zoology in Syracuse University for the ensuing year. Irving H. Blake, A.M., instructor in Syracuse University has been appointed assistant professor of zoology in the University of Maine.

DR. IVAN E. WALLIN, who was recently advanced to an associate professorship in the school of medicine of Marquette University, has been appointed acting professor and head of the department of anatomy in the University of Colorado school of medicine.

AT Glasgow University Dr. Thomas Walmley has been appointed lecturer in anatomy, with special reference to embryology. Mr. A. McL. Watson has been appointed lecturer in physiology, with special reference to histology. Dr. John McL. Thompson has been appointed lecturer in botany, with special reference to plant morphology.

DISCUSSION AND CORRESPONDENCE.

THE PREVENTION OF ROPE IN BREAD

DURING the course of an investigation of the physical and chemical properties of bread, which is being carried on by officers of the Sanitary Corps under my direction, our attention has been drawn to ropy bread. The development of rope at present causes a serious loss of wheat and leads to much annoyance and uncertainty in the manufacture of bread.

Quite recently Lieutenant E. J. Cohn has made certain observations which, if they could be made widely known, might greatly aid in controlling the present epidemic. Accordingly I venture to report upon them here.

The familiar practise of adding acid to the dough as a means of checking the development of rope turns out to depend upon the fact that what seems to be the common cause of the condition, the growth of *B. mesentericus*, can not take place in bread at a greater hydrogen ion concentration than $10^{-5}N$. At the present time the addition of wheat substitutes in bread-making complicates the situation in two ways; first, because such substances commonly produce a less acid bread, and, secondly, because it is more difficult to find out what quantity of acid is desirable on account of the constantly changing conditions.

It is possible, however, to measure the hydrogen ion concentration of bread by the addition of the ordinary solution of methyl red (0.02 per cent. in 60 per cent. alcohol) to the freshly cut surface of the loaf. Three or four drops of the indicator should be placed upon a single spot and five minutes should be allowed to pass. Then, if the color is a full red without an orange nuance, the hydrogen ion concentration is approximately $10^{-5}N$, or more. If an orange tint develops, greater amounts of acid should be added to successive batches of dough until the test with bread just gives the desired color. Our experience seems to show that the growth of rope is inhibited as the hydrogen ion concentration approaches $10^{-5}N$, and that bitter flavor in bread appears only at greater acidities.

Professor Wollbach, of the Harvard Medical