

I wish to repeat that I should like to receive your answer as soon as possible.

#### SCIENTIFIC NOTES AND NEWS

THE following officers of the Medical Corps, U. S. A., have been promoted from major to lieutenant-colonel: Edward J. G. Beardsley, Philadelphia; Thomas P. Lloyd, Shreveport, La.; James A. Mattison, Hot Springs, S. D.; Joseph Sailer, Philadelphia; Oliver H. Campbell, St. Louis; Bertram F. Alden, San Francisco; Walter W. Crawford, Hattiesburg, Miss.; Jonathan E. Burns, Baltimore; Charles N. B. Camac, New York; William C. LeCompte, Bristol, Pa.; Harry T. Summersgill, San Francisco; Charles H. Schlichter, Elizabeth, N. J.; Edward W. Pinkham, New York; William J. Bell, Washington, D. C.; Warren A. Dennis, St. Paul; Joshua C. Hubbard, John H. Blackburn, Bowling Green, Ky.; Edmund J. Doering, Chicago; John E. Jennings, Brooklyn; William W. Percy, Rochester, N. Y.; John H. Blackburn, Bowling Green, Ky.; Edmund Moss, New Orleans; Henry R. Brown, Albuquerque, N. M.; Robert Smart, Coronado, Calif.; Herbert H. Smith, Highland, Kan.

COLONEL EDWARD L. MUNSON, for twenty-five years an officer of the Medical Corps, U. S. A., has been promoted to the rank of brigadier-general, and with the promotion selected for duty on the general staff. The new commission is in the line of the army. General Munson is the third medical officer of the army to be given general officer's rank for duty outside the Medical Department of the army, the previous appointees being Generals Ainsworth and Leonard Wood.

RECALL to the active list of Major-General William C. Gorgas, former Surgeon-General of the army, who recently was retired for age, and his assignment to active duty in the same rank of the Medical Corps has been announced by Secretary Baker. General Gorgas will complete the inspection of medical conditions in France and England, on which he now is engaged, and then will return to the United States to submit a report. His next assignment may take him to Italy.

LIEUTENANT-COLONEL FRANK P. UNDERHILL, professor of experimental medicine at Yale University, in charge of the New Haven Station, Chemical Warfare Service, has arrived safely overseas. Lieutenant-Colonel Underhill is accompanied by the following officers of the station: First Lieutenants Henry D. Hooker, Jr., and Carl H. Greene; Second Lieutenants Alfred Chanutin and Arthur H. Smith.

DR. PIERRE A. FISH, professor of physiology, and head of the physiology department of the college of veterinary medicine of Cornell University, has been commissioned a major in the Veterinary Corps, U. S. Army. He has been granted a leave of absence from the university for the duration of the war.

ALFRED J. LARSON, Ph.D. (Harvard), assistant professor of chemistry, Carleton College, has been in the chemical service of the government for a year and was recently commissioned as captain.

JAMES EWING, D.Sc. (Aberdeen), assistant professor of biology, Carleton College, has been since a year ago in the Canadian Army and is at present an instructor in the Canadian university back of the lines with the rank of sergeant.

DR. ROSWELL P. ANGIER, professor of psychology at Yale University, is a captain in the Sanitary Corps, National Army, at the Hazelhurst Field Medical Research Laboratory, Mineola, L. I.

ASSISTANT PROFESSOR JACOBS, of the zoological department of the University of Pennsylvania, has received a captain's commission in the Food Administration.

PROFESSOR LIGHTNER WITMER, head of the department of psychology at the University of Pennsylvania, has returned from his work with the Red Cross in Italy and will be on active duty this year.

INFORMATION has been received through private sources to the effect that Professor Charles Barrois, well known to many geologists in the United States, is still in Lille and in good health. His movements have been restricted and no communication was held with

him by his friends in France; but he has been occupied in lecturing at the university to some young Frenchmen who were wounded at the time of the evacuation of the city four years ago and to others who have recovered from typhoid fever. As he could not undertake out-of-door studies, his attention has been turned to the paleontological material on hand in the museum collections. Professor Barrois now has the satisfaction of welcoming his compatriots after their recovery of Lille.

PROFESSOR L. R. CARY and Dr. Alfred C. Mayor have returned from an expedition of the department of marine biology of the Carnegie Institution of Washington to Samoa and Fiji. The expedition discovered that the growth-rate of Pacific corals is fully twice as fast as that of corresponding genera in the Atlantic. Also the occasional currents set toward the coast against the prevailing westerly drift of the surface waters of the Pacific are relatively acid in comparison with the water of the westerly drift.

PROFESSOR F. S. EARLE has gone to Porto Rico, where he is to investigate for the United States government a serious and rather obscure disease of sugarcane.

IN giving the teaching staff of the department of chemistry of the College of the City of New York in the issue of SCIENCE for October 4 the word "emeritus" was misplaced by a printer's error so that it occurred after the name of Professor Charles Baskerville, head of the department, instead of after the name of Professor L. H. Friedburg, who has retired after teaching in the college for some thirty years.

PROFESSOR ELLWOOD B. SPEAR, of the department of chemistry of the Massachusetts Institute of Technology, gave an illustrated lecture on "Some of the Problems of Gas Warfare" at the Brooklyn Institute of Arts and Sciences on October 19. Much of the material presented was first-hand experience since, as consulting expert to the Bureau of Mines, Professor Spear has dealt with problems of defense and offense, including gas masks and mustard gas.

DR. HERBERT G. KEPPEL, head of the department of mathematics at the University of Florida, died on October 5 at the age of fifty-two years. Dr. Keppel had been serving as a member of a National Commission to supervise the mathematics instruction given by the Y. M. C. A. at military camps, and while away from home on this duty contracted Spanish influenza, which resulted in his death.

LIVIO MORELLI, professor of medicine at the Pisa University, died on October 16, as the result of an infection contracted during a bacteriological research he recently conducted for the purpose of isolating the germ causing Spanish influenza.

*The Journal* of the American Medical Association states that at the request of the Surgeon-General of the U. S. Public Health Service, the officers of the American Public Health Association announce the postponement of their annual meeting, which was to have been held in Chicago October 14-17, to December 9-12, at the same place. This action was deemed advisable especially because it was considered unwise to ask sanitarians to leave their posts under present health conditions. Owing to the influenza epidemic prevalent throughout the country and the resultant increased demand for the services of doctors in their home communities, it has been considered advisable by the executive committee of the General Medical Board to cancel the meeting scheduled to be held in New York City at the Waldorf Astoria, on October 20. The regular annual session of the Clinical Congress of the American College of Surgeons, arranged for the week beginning October 21, has been cancelled for the same reason.

WE learn from the London *Times* that a royal commission has been appointed "to consider and report whether it is advisable to make any changes in the denominations of the currency and money account of the United Kingdom with a view to placing them on a decimal basis, and whether, if an alteration of the present system is recommended, it is desirable to adopt with or without modification the proposals embodied in the Bill recently introduced into the House of Lords by Lord Southwark or

some other scheme, and in the latter alternative to make specific recommendations for consideration by Parliament." The members of the Commission are: Lord Emmott, Lord Southwark, Lord Faber, Lord Ashton of Hyde, Lord Leverhulme, Sir Richard Vassar Vassar-Smith, Bt., Sir Joseph Larmor, Kt., Sir George Croydon Marks, Kt., Sir Alfred William Watson, Kt., Mr. John Westerman Cawston, C.B., Deputy Master and Controller of the Royal Mint; Mr. Sydney Armitage Smith, Mr. Charles Godfrey, headmaster, Royal Naval College, Osborne; Mr. James Bell, Mr. Joseph Burn, Mr. Harold Cox, Mr. George Hayhurst, Mr. Theodore McKenna, Mr. Geoffrey Marks, Mr. James Francis Mason, Mr. Abert Smith, Mr. George Murray Smith and Mr. Gilbert Christopher Vyle. Lord Southwark moved the second reading of his Coinage (Decimal System) Bill in the House of Lords on June 4. He said it had the support of Chambers of Commerce, the Institute of Bankers, the Decimal Association, and many scientific societies. Lord Hylton, for the government, offered a joint committee of both Houses, and the debate was adjourned. Early in July Lord Hylton, in reply to a question by Lord Southwark, announced the forthcoming appointment of this Royal Commission. The Treasury announces that, pending the appointment of a secretary to the Commission, communications may be addressed to "The Royal Commission on Decimal Coinage, Treasury Chambers, London, S.W. 1."

A SPECIAL diploma course for the training of merchants in the woolen and worsted industry has been introduced at Leeds University, according to a report received from Consul Percival Gassett. The course includes work in textiles, economics and languages. It is proposed to use the fine equipment of the clothworkers' department of the university in giving the student knowledge of the materials, whether wools, tops, yarns, or fabrics, with which he is to deal, in order that he may learn intelligently the best means of producing goods to meet the requirements of each particular market. As for economics, it is intended to include not only economic geography,

but also industrial history and accountancy with, if possible, lectures by leaders of the industry dealing with the special features of the larger commercial life. The language training will be so designed that while the literature of the various countries will not be overlooked, opportunity will be given for acquiring technical knowledge of the languages essential to particular industries. The following is the plan as approved by the university council: *First year*: Textiles, economic geography, a modern foreign language, and accountancy (prescribed subjects); and one of the following subjects: A second modern language, mathematics, European history, and industrial history. *Second year*: Textiles, economics, two modern foreign languages, and accountancy. *Third year*: To be spent at some colonial or foreign university or institution of university rank.

THE objects sought by Brazil in establishing state zootechnic stations in Amazonas, Para, Maranhao, Ceara, Piauhy, Rio Grande do Norte, Alagoas, Sergipi, Espirite Santo, Parana, Goyaz and Matto Grosso are thus given in the order of the Minister of Agriculture quoted in the New York *Evening Post* authorizing such stations: (1) Acclimation and immunization of imported animals. (2) The breeding of pure-bred bovines, swine, goats and sheep. (3) The breeding of crossbred horses of native stock with Arabic, English or English-Arabic types when possible. (4) The selection of domestic types of animals, in respective states. (5) The raising of breeding animals, to be loaned upon a reasonable fee to farmers and breeders in the state. The zootechnic stations are obliged to possess: (a) An area of not less than 200 hectares (489 acres), of which 150 (371 acres) must be artificial pastures and 50 (123 acres) cultivated with forage; (b) proper installation, such as stables, cattle dips and similar apparatus; (c) a stock of not less than 3 horses, 8 bovines and 12 sheep and goats of such breeds as the Bureau of Animal Industry may direct. The zootechnic stations will be supervised by the director of the Bureau of Animal Industry. To obtain

government assistance, documents must be presented showing the existence of suitable lands and other facilities to maintain such establishments.

#### UNIVERSITY AND EDUCATIONAL NEWS

It is planned to build a hospital on the campus of the University of Washington, Seattle, to cost a million dollars and which is to form the nucleus for a medical department of the university.

WILLIAM P. BROOKS, Ph.D., director of the Massachusetts Agricultural Experiment Station, has resigned his position. Dr. Brooks has been connected with the Massachusetts Agricultural College since 1889, previous to which he was professor of agriculture for twelve years in the Imperial College of Japan. He will continue in the service of the experiment station as consulting agriculturist.

PROFESSOR W. C. SABINE, acting director of the Jefferson Physical Laboratory of Harvard University, has retired and is succeeded by Professor Edwin H. Hall.

DR. PAUL F. GAHR, of the department of physics at Wells College, has been appointed acting professor at Cornell University, where he will assist in the Students' Army Training Corps two days a week.

E. C. AUCHTER, associate professor of horticulture at the University of West Virginia, has been employed by the Maryland State College to head the department of horticulture.

ROBERT O. CALDWELL, Ph.D. (Princeton, '18) formerly professor of physics at Geneva College, has accepted a position as assistant professor of physics at West Virginia University.

THE following appointments have been made at Marquette School of Medicine: Mrs. Paul M. Smith, M.A. (Wisconsin), formerly assistant in botany at University of Wisconsin, as instructor in bacteriology. Mr. C. A. Hills, M.A., formerly instructor in physiology at the University of Kansas, now in charge of laboratory work in physiology and pharmacology, as

instructor. Mr. A. H. Hersch, M.A., formerly instructor in biology at the Kansas State Agricultural College, as instructor in the department of anatomy and biology.

#### DISCUSSION AND CORRESPONDENCE

##### MR. ABBOT'S THEORY OF THE PYRHELIO-METER

TO THE EDITOR OF SCIENCE: Referring to Mr. Abbot's open letter to me, published in SCIENCE, June 21, 1918, I should like to make a few remarks. The important points can be taken as two, which require attention.

1. The first is that my research ranks as an "interesting speculation" without "quantitative value." After adapting the Boyle-Gay-Lussac Law,  $P = \rho RT$ , to atmospheric physics, the computations proceed by using only the standard formulas of thermodynamics, kinetic theory of gases, and electron physics; the checks are always complete and numerous; the results are in full agreement with observational data, so that Mr. Abbot's statement implies that these laws have no application in free atmospheres, which few will admit. The results have succeeded in clearing up a long series of heretofore unsolved problems, circulation, thermal data of various types from the adiabatic strata to the top of the various atmospheres, the origin of atmospheric electricity and magnetism, the thermodynamic environment of several spectra in the sun, and the end is not in sight. The Planck theory of radiation, the Bohr origin of spectrum lines, and the electron-atomic data are already seen from a new point of view. There are few computations whose data interpenetrate and are supported by so many distinct series of physical laws as are these, and the evidence is that they form the basis for future developments in atmospheric physics.

2. The second point is that Mr. Abbot reiterates this argument: that his well-known method of discussing the pyrheliometric observations must be correct, because it produces the same solar constant,  $1.94 \text{ } 9^2 \text{ cal./cm.}^2 \text{ min.}$ , when repeated many times at many stations. If the method is erroneous it can not be made valid by repetition. It will be recalled that