

their dues to the permanent secretary so far in advance of the meeting as possible. In this way they will receive their cards by mail at once and avoid the necessity of waiting in line to make payment at the meeting. Do not forget to bring your white Registration Card to Pittsburgh.

Members who have not previously paid their dues for the Pittsburgh meeting will please call at the office of the permanent secretary, Main Building, Carnegie Institute, after 9 o'clock on Friday, December 28, to receive their members' tickets. The office of the permanent secretary will be used throughout the week for registration purposes. Members will register and receive their badges after paying their dues.

All members of affiliated societies who are not also members of the American Association for the Advancement of Science are earnestly requested to register their names at the desk provided for that purpose in the office of the permanent secretary, in the Main Building, Carnegie Institute, in order that an estimate may be made of the number of persons in attendance at the meetings.

Attention is called to the following rule relating to members' families and other associates:

Every member of the association shall have the privilege of registering members of his family as *associates* (not including men over twenty-one years of age) by paying the sum of three dollars for each person so registered, and shall receive for them badges which will entitle the holder thereof to such privileges as may be extended to the members generally by the local committee for the meeting.

Members of scientific societies whose meetings are contemporaneous with or immediately subsequent to that of the association, and which are recognized by votes of the council as "affiliated societies," may become associate members for that meeting on the payment of three dollars. They shall be entitled to all the privileges of membership except voting or appointment to office, but their names shall not appear in the list of members printed in the report.

All dues and admission fees must be paid at the office of the permanent secretary, and the annual dues for 1918 should be paid before

registering and receiving the association badge and program.

As changes of address in the printed list of members are made only by request of a member, members will please be particular in reporting any changes of permanent address, also the decease of other members, at the office of the permanent secretary.

The register for the Pittsburgh meeting will be open on Friday, December 28, and succeeding days, from 9 A.M. to 5 P.M., in the permanent secretary's office, Main Building, Carnegie Institute.

L. O. HOWARD,

Permanent Secretary, A. A. A. S.

SMITHSONIAN INSTITUTION,
WASHINGTON, D. C.

SCIENTIFIC NOTES AND NEWS

DR. WILLIAM GILSON FARLOW, professor of botany at Harvard University, has been elected a corresponding member of the French Academy of Sciences.

PROFESSOR VERNON KELLOGG has accepted an invitation to give the annual address to the Entomological Society of America, at the annual meeting in Pittsburgh, on December 29.

MR. DOUGLAS STEWART, assistant director of the Carnegie Museum, Pittsburgh, is chairman of the Committee on Scientific Exhibits for the meeting of the American Association for the Advancement of Science in Pittsburgh, December 28, 1917, to January 2, 1918. Those interested in these exhibits are requested to correspond with Mr. Stewart.

THE de Morgan medal of the London Mathematical Society has been awarded to Professor W. H. Young, of the University of Liverpool and the University of Calcutta.

SIR J. J. THOMSON has been nominated by the council of the Royal Society for reelection as president. Other officers nominated by the council are as follows: *Treasurer*, Sir A. Kempe; *Secretaries*, Professor A. Schuster and Mr. W. B. Hardy; *Foreign Secretary*, Professor W. A. Herdman; *Other Members of the Council*, Dr. H. K. Anderson, Sir G. T. Beilby, Professor G. C. Bourne, Professor A.

R. Cushny, Dr. M. O. Forster, Professor P. F. Frankland, Dr. J. W. L. Glaisher, Professor B. Hopkinson, Mr. J. H. Jeans, Professor W. H. Lang, Major H. G. Lyons, Dr. W. H. R. Rivers, Professor C. S. Sherrington, Professor R. J. Strutt, Mr. J. Swinburne and Professor W. W. Watts.

THE July number of the *Observatory* contained a letter from Professor H. G. v. de Sande Bakhuyzen explaining the present position of the association, whose convention expired on December 31, 1915, the majority of the belligerent states having refused to continue their support under the existing convention. The death of General Bassot, the president; of Dr. Backlund, the vice-president, and of Professor Helmert, director of the Central Bureau, has left Professor H. G. v. de Sande Bakhuyzen the sole survivor of the committee of the International Geodetic Association. He had, in December, 1915, appealed to the members of the permanent commission of the association in the neutral states of Europe and in the United States, and had obtained from them sufficient support to keep the association alive until a date two years after the conclusion of peace. M. Raoul Gautier, of Geneva, has been elected president, and General Madsen, of Copenhagen, vice-president. Professor Bakhuyzen retains the office of secretary.

DR. RICHARD M. PEARCE, professor of research medicine, University of Pennsylvania, has been made director of the recently established bureau of medical service of foreign commissions of the American Red Cross.

DR. RESTON STEVENSON, assistant professor in charge of physical chemistry in the College of the City of New York, has been commissioned a captain in the Sanitary Corps of the Army. As one of a group of five selected men he will shortly go to France, where he will be assigned to a French laboratory for special work, preliminary to its extension among the other chemists attached to the U. S. Army.

AT the University of Michigan leaves of absence have been granted to Professor John D. Rue, who becomes captain in the Ordnance Officers' Reserve Corps; to Dr. Peter Field, who is captain in the United States Coast

Artillery; to Dr. R. A. McGarry, instructor in dermatology, who leaves to take up military service; to Dr. Orlow B. Snyder, instructor in anatomy; Winthrop R. Wright, who has accepted a temporary position in connection with War work in the Bureau of Standards at Washington; and Assistant Professor C. W. Cook, of the department of geology, now engaged in special advisory work with a large steel corporation.

PROFESSOR L. D. ROWELL, of Purdue University, has been commissioned a captain in the Engineer Officers' Reserve Corps and is now in active duty as the recorder of the Board of Engineer Troops, Washington, D. C.

GUY R. MCDOLE, assistant in soils in the University of Minnesota and formerly research assistant in agricultural chemistry in the University of Nebraska, has enlisted in the Gas and Flame Regiment (Thirteenth Engineers), and has left for his new work.

MR. DANIEL WILLARD, of Baltimore, trustee of Johns Hopkins University and chairman of the advisory commission of the Council of National Defense, has been appointed to serve as chairman of the War Industries Board.

PROFESSOR GEORGE B. THOMAS, of Colorado College, is on a year's leave of absence, during which time he will work with the Western Electric Company along lines of interest to the military authorities.

MR. JOHN W. GILMORE, professor of agronomy in the University of California, is carrying on a wheat campaign in California—handling the problems of proper seed, varieties for different regions, time of planting and related topics. Mr. Charles F. Shaw, professor of soil technology in the university is in charge of the soil survey in California, and is carrying on a state campaign for increasing the acreage of wheat lands now in pasture or idle.

PROFESSOR W. S. FORD, of Cornell University, who had charge of the senior electrical laboratory work, has left to accept a position as superintendent of power with the Vacuum Oil Company, Paulsboro, N. J.

PROFESSOR H. P. BARSS, plant pathologist of the Oregon Experiment Station, presented an

address before the California State Horticultural Commission on November 19, on the bacterial gummosis of stone fruits with special reference to the serious outbreak along the Pacific coast this year.

WE learn from *Nature* that at the annual general meeting of the London Mathematical Society, held on November 1, the following were elected as officers for 1917-18: *President*, Professor H. M. Macdonald; *Vice-Presidents*, Professor H. Hilton, Professor E. W. Hobson, and Sir J. Larmor; *Treasurer*, Dr. A. E. Western; *Secretaries*, Dr. T. J. P. A. Bromwich and Mr. G. H. Hardy; *Other Members of the Council*, Professor W. Burnside, Dr. S. Chapman, Mr. A. L. Dixon, Miss H. P. Hudson, Mr. A. E. Jolliffe, Mr. J. E. Littlewood, Professor A. E. H. Love, Major P. A. MacMahon, and Professor J. W. Nicholson.

MR. W. DUDELL, F.R.S., past-president of the Röntgen Society and of the Institution of Electrical Engineers, died on November 4, aged forty-five years.

SIR DAVID C. McVAIL, professor of clinical medicine in St. Mungo's College, Glasgow, from 1889 to 1906, and author of contributions to physiology, died on November 4 at the age of seventy-two years.

THE deaths are also announced of Dr. J. Rambousek, professor of factory hygiene at the University of Prague, and an authoritative writer on industrial poisonings; of P. Malerba, professor of physiological chemistry at the University of Naples, and of M. E. Huet, one of the pioneers in electrology in France.

IN connection with or in response to the call of the President for volunteers, the attention of all technical men, *i. e.*, men skilled in any line of science or mechanical or electrical or chemical or ordnance or explosives or mining or ship-building or railroad or motors or metallurgy or building of aeroplanes or water supply or sanitation, etc., is especially invited to the need of the Army for such men—aged eighteen to forty—in sundry branches of the technical troops. Information may be obtained from Major J. E. Bloom, U. S. A., 266 Market Street, Newark, N. J.

A NUMBER of American military surgeons arrived in England during the fortnight prior to September 22, and took up duty in a number of hospitals in London and the provinces, and also in France, to which country about fifty of the seventy-five had been sent. These will only attend the military patients in the institutions to which they have been assigned, and have been so allotted that a number of doctors may be released for work among the civil population. There are now over 900 American medical men serving with the British forces in Great Britain and France.

A JAPANESE medical corps of one hundred men has gone to Rumania to help in the effort to control the epidemic of typhus fever in that country. The corps is divided into three sections—internal diseases, surgery and epidemics—each with its own chief. The headquarters of the corps will be at Jassy.

WILLARD E. CASE, of Auburn, N. Y., has made a gift to the New York Electrical Society the amount of which has not yet been made public, but which is sufficient to defray all the liabilities of the society and leave a substantial sum for the carrying on of its special work.

THE fifth annual Pennsylvania Welfare and Efficiency Conference was held in the House of Representatives, Harrisburg, on November 21 and 22. These conferences are held annually for the purpose of stimulating discussions on the problems of industries and labor, with special reference to the reduction of the enormous number of diseases and deaths, and the numerous industrial accidents. The fifth conference of industrial physicians and surgeons was held at Harrisburg, on November 20. At the morning session the medical and surgical problems of the staff of the largest industries representative of Pennsylvania were considered, and in the afternoon the question of industrial diseases was taken up.

CHILDREN in various parts of Great Britain are now busy collecting the horse chestnuts required for the manufacture of war munitions. The nuts have ripened more quickly in some districts than in others, and in some parts of

London the collection is well forward. It should again be pointed out that every ton of nuts gathered means a saving of half a ton of grain. Present indications are that at least 25,000 tons of nuts will reach the Ministry of Munitions, but this is only about one eighth of the estimated crop for the country.

UNIVERSITY AND EDUCATIONAL NEWS

A BEQUEST of \$200,000 is left to Yale University by the terms of the will of the late Richard P. Sewell of Boston.

H. P. WOOD, head of the department of electrical engineering at the Georgia School of Technology, Atlanta, Ga., has been appointed president of the Academic Board of the United States Army School of Military Aeronautics, which has been established at the Georgia School of Technology.

PROFESSOR J. F. WILSON, who during the past year was professor of electrical engineering at Queen's University, Kingston, Ontario, has been appointed assistant professor of electrical engineering at the University of Southern California, Los Angeles.

DR. JOHN EDWARD MARR, F.R.S., fellow of St. John's College since 1881, university lecturer in geology at Cambridge University, has been elected to the Woodwardian professorship of geology in succession to the late Professor Hughes.

DISCUSSION AND CORRESPONDENCE METHODS FOR PREPARING ANIMAL MATERIAL TO BE DISSECTED

POSSIBLY the most common fixing and preserving fluid used for dissecting material is formalin. It is relatively inexpensive and especially convenient for collecting expeditions where a concentrated fluid is desirable. Animals preserved in it have rigid joints, however, and every one is familiar with the disagreeable characteristics of such material during dissection. Alcohol is much better from the standpoint of the dissector, but it has limitations when used alone.

Some of the "embalming fluid" mixtures used in preparing human cadavers for dissec-

tion are also splendid for smaller animals. Those containing phenol, alcohol and glycerine with no formalin give relatively flexible joints and pliable tissues. They also render the material resistant to a large amount of drying in the open air of a laboratory during dissection. Phenol is a relatively non-volatile antiseptic, and glycerine is very effective in preventing drying. Alcohol counteracts the action of the phenol in the solution, on the hands of the dissector. A good and much used solution consists of equal parts of phenol, alcohol and glycerine. Another less expensive fluid with arsenic and considerable water added to the above was described by Dr. W. C. Lusk some years ago¹ with an excellent discussion of principles involved in preparing cadavers for dissection.

As penetration by such fluids is slow, the mixture should be injected through some large artery, a femoral or carotid in the case of mammals. Small animals may be placed in solutions of about 80 per cent. alcohol in water when it is not practicable to inject them. In such cases, the usual practise of making a slit, at least in the ventral abdominal wall, should be followed. After all the tissues have been fixed, the material may be removed to a container which holds an "embalming fluid," such as I have mentioned, much diluted with water. Ten or more parts of water to one of the "embalming fluid" may be used. In fact, I have kept material which had already been thoroughly fixed in either formalin or alcohol, for several years in a solution consisting of water with 1 to 2 per cent. of phenol and 5 to 10 per cent. glycerine, with or without a little alcohol. Single specimens thus preserved have been used in dissection for many months without deterioration, so long as they were not kept out of the solution for more than a few hours or so at a time.

It is customary in human anatomy to leave cadavers on the dissecting tables for months without soaking. The glycerine in their tissues is wonderfully effective in checking drying. Nevertheless, unless the atmosphere of the room is very moist a good deal of drying

¹ *Anat. Record*, Vol. 3, No. 1.