News and Notes

About People

Dinsmore Alter has returned to his duties as director of the Griffith Observatory, Los Angeles, after more than four years of service in the Transportation Corps of the Army.

Marshall H. Stone, Harvard University, has been appointed Andrew MacLeish distinguished service professor of mathematics and chairman of the Department at the University of Chicago, beginning with the fall term.

T. D. Luckey, Department of Biochemistry, University of Wisconsin, has joined the staff of the Laboratories of Bacteriology, University of Notre Dame, as biochemist.

Mary Landon Sague, chairman of the Department of Chemistry, Vassar College, was awarded the degree of Doctor of Science by Middlebury College on 17 June.

S. S. Cairns, Queens College, Flushing, New York, has been appointed professor of mathematics and chairman of the Department of Mathematics at Syracuse University.

Raymond T. Ellickson, assistant professor of physics, Polytechnic Institute of Brooklyn, has been appointed associate professor of physics, Reed College, Portland, Oregon.

L. E. Cunningham has been appointed assistant professor of astronomy in the Berkeley Astronomical Department, University of California. The appointment became effective on 1 July.

Graham L. Moses, L. R. Hill, and *James DeKiep,* Westinghouse East Pittsburgh Division, received the American Institute of Electrical Engineers' award and $100 prize for the best paper on engineering practice, at the summer meeting of the AIEE in Detroit, Michigan. Their paper dealt with the application of silicones, the outstanding new materials made from sand, oil, coal, and brine, that are setting aside thermal limitations in the insulation field.

M. D. Farrar, secretary-treasurer of the Central States Branch, American Association of Economic Entomologists, left the Midwest on 1 July to become associate director of the Crop Protection Institute, Durham, New Hampshire. J. W. Apple will take over Dr. Farrar's duties as secretary-treasurer.

K. S. Quisenberry, who has been stationed at the College of Agriculture, Lincoln, Nebraska, since 1936, has been made head of the Office of Cereal Crops and Diseases, Department of Agriculture, Washington, D. C. He replaces M. A. McCall, who will devote full time to his position as assistant chief, Bureau of Plant Industry, Soils, and Agricultural Engineering.

Richard C. Webster has been appointed an instructor in the Department of Anatomy, University of Kansas Medical School, Lawrence.

Laurence L. Sloss, formerly associate professor of geology, Montana School of Mines, has been appointed lecturer in paleontology at Northwestern University. During the late summer and fall, he will do consulting work in petroleum geology in eastern Montana and Wyoming and will be in residence at Northwestern for the winter and spring quarters.

Capt. A. Chapanis has been appointed instructor in psychology and research associate in the Systems Research Project, The Johns Hopkins University. Prior to his release from active duty, Capt. Chapanis had been assigned to the Aero Medical Laboratory, Air Materiel Command, Wright Field, Dayton, Ohio, as aviation psychologist.

H. L. Ansbacher has been appointed associate professor in the Department of Psychology, University of Vermont.

Leonard S. Wilson, formerly of OSS, has been appointed professor of geography, Carleton College, Northfield, Minnesota.

H. Bruce Collier, formerly associate professor of biochemistry, Dalhousie University, Halifax, Nova Scotia, has been made professor of biochemistry, University of Saskatchewan, Saskatoon.

William King Gregory was guest of honor at a banquet on his 70th birthday, 19 May, in New York City. Prof. Gregory was presented with a bound volume of letters from friends and former students and a large portrait of himself, painted for the occasion. The portrait was given by him to Columbia University and is to be hung in the Columbia Classroom, American Museum of Natural History. Dr. Gregory told of his 50 years association, as student and teacher, with the Department of Zoology, Columbia University. The final speaker, James H. McGregor, spoke entertainingly on Prof. Gregory's career and some of the factors influencing it.

Announcements

A very significant change in Selective Service regulations dealing with scientific faculty personnel is embodied in the new Local Board Memorandum 115, issued by Selective Service and dated 12 August. According to this new memorandum, faculty personnel generally is deferrable and will be certified by the U. S. Office of Education upon request by the employing institution on Selective Service Form 42A (Special Revised). In the sciences and engineering, registrants can be certified by the Office of Research and Development if they are graduate students accepted for an advanced degree or are engaged in university or industrial research. Further details may be secured from any Selective Service Local Board by asking for LBM 115 or by writing to the Office of Scientific Personnel, National Research Council, Washington, D. C., for a recent bulletin giving details.

An Office of Technical Services, headed by John C. Green, has been established recently, according to an announcement by the Department of Commerce. The new Office consolidates the work of the Office of the Publication Board, Technical Industrial Intelligence Branch, National Inventors Council, and Production Research and Development Division. According to Mr. Green, who has served as executive secretary of the Publication Board and chief engineer of the National Inventors Council, the Office will continue the work of the consolidated units and launch a new program of technical aid to business and industry. The 1946–47 appropriation, just approved by Congress, includes increased administrative funds for the new Office, as well as $1,500,000 for research and development.

OTS will consist of four major units: Invention and Engineering Division, Industrial Research and Development Division, Library and Reports Division, and Technical Industrial Intelligence Division. The latter is responsible for investigation of German industry and the collection of German scientific and technical information.

A Service on Feed Composition, parallel to that on Food Composition under the Food and Nutrition Board, is being set up by the Agricultural Board of the National Research Council. Both services are administered through the Division of Biology and Agriculture. The new Service is financed in part by a grant of $18,000 from Swift & Company. It is under the charge of a committee composed of: R. V. Boucher, chairman; F. E. James, executive secretary; K. C. Beeson, L. E. Bopst, C. F. Huffman, J. E. Hunter, H. L. Lucas, F. B. Morrison, E. M. Nelson, and B. H. Schneider.

The Edison Laboratory, central research organization of Thomas A. Edison, Inc., West Orange, New Jersey, announces the formation of a new laboratory section for fundamental research in the branches of science which are the bases of the company's business in dictating machines, batteries, electrical instruments, and other electrical devices. The technical staff of the new group includes: Robert S. Weisz, Richard W. Iskraut, S. S. Jaffe, and Robert L. Tichenor.

The National Society for Medical Research, a clearing house for information on medical studies and discoveries, has been organized under the sponsorship of the Association of American Medical Colleges with the cooperation of 101 scientific organizations. National offices are at 25 East Washington Street, Chicago 2, Illinois. The Society has as its purpose the advancement of research in medicine, biology, pharmacy, dentistry, and veterinary medicine. Anton J. Carlson, president of the Society, has emphasized that an important function of the Society is to analyze and expose the propaganda of small but highly vocal groups which object to the use of animals in the experiments without which medical science would still be in its infancy.

Ralph A. Rohweder, 1946 president of the Chicago Junior Association of Commerce and former consultant and editor for the National Safety Council, has been appointed executive secretary, and A. C. Ivy, head of the Department of Physiology, Northwestern University, secretary-treasurer. On the Board of Directors are: R. B. Allen, University of Illinois; Alfred Blalock, The Johns Hopkins University; C. S. Burwell, Harvard University; E. J. Carey, Marquette University; L. R. Chandler, Stanford University; W. C. Davison, Duke University; R. E. Dyer, National Institute of Health; H. S. Gasser, Rockefeller Institute; E. W. Goodpasture, Vanderbilt University; J. G. Hardenbergh, American Veterinary Medical Association; J. C. Hinsey, Cornell University; Victor Johnson, American Medical Association; C. D. Leake, University of Texas; E. M. MacEwen, University of Iowa; W. S. McEllroy, University of Pittsburgh; B. O. Raulston, University of Southern California; A. M. Schwitalla, St. Louis University; Isaac Starr, University of Pennsylvania; E. L. Turner, University of Washington; and Floyd S. Winslow, Medical Society, State of New York.

The Department of Physiology and Pharmacology, Chicago Medical School, has received a second $2,000 grant from the John and Mary R. Markle Foundation to support the investigation of Piero P. Foa and

Jay A. Smith on the metabolism of thiamine in the diabetic animal. The Department is also the recipient of a $3,000 grant from the Upjohn Company, Kalamazoo, for the establishment of an Upjohn fellowship in physiology, under Dr. Foa. Dr. Foa has just returned from a lecture tour in Brazil.

Maj. Merrill Moore, formerly of Harvard University and at present surgeon for the Military Advisory Group in China, has drafted a health sanitation program to halt cholera and typhus in the Nanking camps and prevent their spread to Shanghai and through the Orient. Maj. Herbert K. B. Jemmott, of Phoebus, Virginia, working with Maj. Moore, devised a special spraying system, mounted the equipment on an Army C-47, and thoroughly dusted the repatriation staging areas with a mixture of DDT and water from an altitude of 75 to 100 feet. Since the Chinese obtain drinking water from open pools, the Army is unable to use the normal spraying mixture of kerosene and DDT which, being heavier, gives greater insect-killing effect.

Elections

The International Association for Dental Research elected the following officers at a recent meeting in Kansas City: Samuel W. Chase, president; Harold C. Hodge, president-elect; and Alan G. Brodie, vice-president.

Robert R. McMath, director of the McMath-Hulbert Observatory, University of Michigan, has been elected chairman of the Board of Trustees of Cranbrook Institute of Science, Bloomfield, Michigan.

Donald G. Marquis is president-elect of the American Psychological Association for 1947, according to an announcement made to the membership during the annual meeting at Philadelphia on 6 September.

Bennett T. Simms, chief of the U. S. Bureau of Animal Industry, was installed on 22 August as president of the American Veterinary Medical Association at the closing session of its 83rd annual meeting at Boston. Dr. Simms was elected at the Association's last meeting at Chicago in 1944, but since no meeting was held in 1945, he could not be installed until this year.

The Scarcity of Scientific Man Power in Great Britain

A report on scientific man power of interest to readers in the United States was published on 27 May 1946 by a committee appointed by the Rt. Hon. Herbert Morrison, M.P., Lord President of the Council. This committee was headed by Sir Alan Barlow, and its members included Sir Edward V. Appleton, Prof. P. M. S. Blackett, Mr. Geoffrey Crowther, Sir Alfred Egerton, Sir George Nelson, and Prof. S. Zuckerman.

The committee considered the immediate problem of reconversion as well as the long-range problem of matching supply and demand for scientific personnel. With regard to the immediate problem, the committee merely recommended certain additional procedures for expediting the return of scientific and technical personnel to their former activities and emergency accommodations at the universities, particularly those having suffered war damage.

With regard to the long-time problem, the committee attempted to estimate the scientific position in 1950 and 1955. They presented the following conclusions:

	1950	1955
Minimum requirement of qualified scientists	70,000	90,000
Maximum number likely to be available if expansion in the output of graduates is limited to that envisaged in the returns to University Grants Committee	60,000	64,000
Deficit	10,000	26,000

It is essential, therefore, that the output of scientific graduates should be increased very much above the level of expansion at present envisaged by the universities; the immediate aim should be to double the present output, giving approximately 5,000 new scientists every year, at the earliest possible moment.

The report calls attention to the fact that there is in England a reservoir of innate intelligence that has not been tapped and that by additional financial assistance on a larger scale, much of this talent could be saved for the universities. It calls attention to the fact that even if the total student population in British universities were doubled, the country would still lag behind European countries and the United States in the relative provision made for higher education. They recommend the establishment of a number of technical colleges giving full-time technological courses of university degree standard, and that the universities accept the responsibility for training an additional number of first-class technologists.

It is interesting that this report dealing with the sciences emphasizes that substantial expansion in the number of students studying the humanities should occur, *i.e.* the humanities should not be sacrificed to the need for an increased output of scientists and technologists. It calls attention to a problem which will strike a responsive chord in American ears, namely, that of finding additional teachers, improving teacher efficiency, and giving individual teachers adequate time for their own research. The committee emphasizes

that additional student population should be met with a proportionate expansion in the number of teachers if the quality of the work and the standing of the university are not to suffer.

The committee recommends that in the allocation of the limited supply of scientists during the reconversion period the order of preference should be: (1) teaching and fundamental research; (2) civil science, both government and industrial; and (3) defense science.

Attention is called to the importance of maintaining an adequate nucleus of able scientists working on the problems of defense, but the committee feels that the most important immediate task is to reconstruct the central core of fundamental research and teaching. As one means of implementing the order of priority improvement of the attractions of an academic career is called for.

The report represents the deliberations of the committee since its appointment in December 1945. A copy may be secured from His Majesty's Stationery Office. A review of the article appeared in *Nature* for Saturday, 15 June.—*M. H. Trytten* (Director, Office of Scientific Personnel, National Research Council).

In the Laboratory

Agar Technique for Arresting Movement in Protozoa

W. S. Bullough
Department of Zoology, McGill University

Of the several well-known methods of hindering the movements of active Mastigophora and Infusoria so that they can be examined easily through a high-power microscope, none appears to be entirely adequate, and a new technique based on the use of agar has been developed. The idea came from the papers of Whitaker and Berg (*2*), who used agar solutions when studying the development of Fucus eggs, and of Holtfreter (*1*), who adopted the same method when working on the growth of amphibian embryos.

The modification developed for the Protozoa is as follows: Place a *small* drop of the culture solution on a glass slide. Avoid including sand grains or other large pieces of detritus, as these will hold up the cover glass and prevent the use of high-power objectives. Place an equal-sized drop of a melted solution of agar on a cover glass (a 1-per cent aqueous solution kept liquid at about 40° C. in a water bath or oven), immediately invert the cover glass, center the drop of agar solution directly over the drop of culture solution and let the cover glass fall. As the two drops merge and the agar rapidly cools, the mixture becomes solid. The jelly formed in this way contains large numbers of tiny water spaces, most of which are smaller than the field of a high-power microscope, and in these the protozoans are confined. Large species are often held so tightly that they are unable to turn around, but smaller ones can swim about in small circles. If required, animals can be held more tightly by increasing the size of the agar drop relative to the drop of culture solution or by using a 1.5-per cent solution of agar.

The animals continue living in these conditions for at least half an hour and often for many hours (the actual time apparently depending both on size and on species). The cover glass is held sufficiently firmly for an oil-immersion objective to be used. However, care must be taken not to press upon or otherwise move the cover glass, since this will break the jelly reticulum and release the animals.

In the case of marine Protozoa, the agar solution must be made up in sea water, and in the case of parasitic Protozoa, such as those found in the rectum of the frog, it must be made up in normal saline.

References

1. Holtfreter, J. *Anat. Rec.*, 1945, **93**, 59.
2. Whitaker, D. M., and Berg, W. E. *Biol. Bull.*, 1944, **86**, 125.

A Simple and Accurate Soil Fumigant Injection Apparatus[1]

Carl T. Schmidt
Pineapple Research Institute, Honolulu, Hawaii

The accurate application of liquid soil fumigants for experimental purposes is somewhat difficult when

[1] Published with the approval of the director as Miscellaneous Paper No. 42 of the Pineapple Research Institute, University of Hawaii.