ence and Industry, Chicago, respectively. The 417th meeting will be held on 27 April at the University of California, Berkeley.

The Twentieth Colloid Symposium will be held at the University of Wisconsin, Madison, on 28–29 May 1946. As on the occasion of the First Colloid Symposium, which also met in Madison, Prof. The Svedberg, of the University of Upsala, Sweden, is to be the guest of honor.

One day of the meeting will be devoted to the topic: "The Physical Chemistry of High Molecular Weight Materials." Papers on this topic will be given at two concurrent sessions, one concerned with the proteins and the second with organic high polymers. Dr. Svedberg is to preside at the session on proteins, and Dr. Paul Flory, of the Research Department of the Goodyear Rubber Company, is in charge of the arrangements for the high polymer session.

On the second day a program of general papers has been planned by Dr. H. B. Weiser, with the cooperation of members of the Colloid Symposium Committee.

Arrangements have been made for housing at one of the University dormitories, and meals can be taken at the Commons. Those who expect to attend the Symposium should notify Prof. C. H. Sorum, Department of Chemistry, Madison, Wisconsin, before 20 May to insure accommodations. Rooms will be available for the nights of 27, 28, and 29 May.

Elections

The American Society of Agronomy has elected the following officers for 1946: H. D. Hughes, Iowa State College, president; W. H. Pierre, Iowa State College, vice-president; J. D. Luckett, New York Agricultural Experiment Station, editor; G. G. Pohlman, West Virginia University, secretary-treasurer; E. A. Hollowell, Bureau of Plant Industry, Soils and Agricultural Engineering, chairman of Crops Division; and C. E. Marshall, University of Missouri, chairman of Soils Division.

The Soil Science Society of America reports election of the following officers for 1946: C. E. Marshall, University of Missouri, president; F. L. Duley, University of Nebraska, vice-president.

Recent Deaths

Dr. Harold E. Robertson, 67, senior consultant in the Mayo Clinic section on pathological anatomy and former head of that section, died on 8 March.

Dr. William Morton Barrows, 62, professor of zoology and entomology at Ohio State University, died on 24 February. He had been associated with the University since 1909.

Dr. Bernice L. Maclean, 42, zoologist and former chairman of the Department of Biological Sciences at Hunter College, died in New York City on 8 March.

Mary B. Eyre, 70, professor emeritus of psychology at Scripps College and professor of psychology at the Claremont Graduate School, died on 25 January following injuries sustained in a traffic accident.

William Crowell Bray, 66, professor of chemistry at the University of California, died on 24 February following an illness of several months.

Carl L. A. Schmidt, 60, professor of biochemistry and chairman of the Division in the University of California Medical School for 23 years, died after a long illness on 23 February.

International News and Notes

L. H. Bailey and *A. J. Eames,* of Cornell University, and *E. D. Merrill* and *Frans Verdoorn,* of the Arnold Arboretum of Harvard University, have been elected honorary foreign members of the Botanical Society of Edinburgh.

Dr. Herbert Spencer Gasser, winner of the 1944 Nobel Prize in medicine and physiology, and since 1935 head of the Rockefeller Institute in New York, has been made a member of the Swedish Royal Academy of Science.

Dr. Arthur Stoll of Basle, Switzerland, director of the Sandoz Research Laboratories, is the recipient of an honorary doctorate, conferred by the Sorbonne for his fundamental contributions to the chemistry of the glycosides of digitalis and squill and for his work in the field of the alkaloids of ergot.

Robert S. Tipson, senior fellow in Pure Research at Mellon Institute, was awarded the D.Sc. degree by the University of Birmingham, England. The same degree was also awarded to another scientist, Owen W. Ellis, of the Ontario Research Foundation, Toronto, formerly an industrial fellow of Mellon Institute.

Dr. Cornelio L. Sagui (18 Rue Luchet, Avignon, France) writes to Dr. Charles H. Behre, Jr., pro-

fessor of geology at Columbia University, that geology in France is once more beginning to resume its normal peacetime role, one of its most prominent functions being in the field of reconstruction. The Association International pour l'Etude Scientifique des Pays Mediterraneans is in process of being organized, and some of its problems will lie in the fields of general and economic geology. Dr. Sagui is studying and publishing in several fields. One of his most recent investigations concerns the pressure of magma in intrusive bodies. Fernand Blondel, well known in this country as a Fellow of the Geological Society of America and as a member of the Society of Economic Geologists, has just returned to Paris (24 Rue Vineuse) after prolonged service in French North Africa. Dr. Jean F. Orcel (61 Rue de Buffon) has resumed his post of curator in mineralogy at the Museum National d'Histoire Naturelle. Dr. Gaston Betier is back at his post in Algeria. Mr. J. Durand, still with the Bureau des Mines in Toulouse, has been stationed at intervals at Saint Gaudens, where he has been directing special research on petroleum for the Government.

In Belgium, Prof. Ivan De Magnee writes through Dr. Sagui, theoretical and applied geology are being pursued with renewed vigor. Prof. De Magnee at the University of Brussels (15 Rue des Nations, Bruxelles) has founded a laboratory for geophysical research, in part directed toward new prospecting in the Congo. Prof. Paul F. Fourmarier, after imprisonment by the Gestapo, is once more at his old post at the Institut de Geologie, University of Liège, as is Prof. Victor Brien.

Dr. M. S. Krishnan, superintending geologist of the Geological Survey of India, comments on the difficulties of the war years, among which was a serious paper shortage which cut to about a third the volume of scientific and technical publications. He adds, however, that there are signs that publication will be resumed shortly on the old scale.

Dr. Wallace P. Cohoe, a consulting chemist, 120 East 41st Street, New York, will receive the Messel Medal of the Society of Chemical Industry at the annual meeting of the Society in England on 12 July 1946. In the Messel Lecture he will discuss "The Importance of Science in Anglo-American Relationships."

The Messel Medal is awarded every other year for meritorious distinction in science or in the literature of chemistry or for meritorious service to chemical industry. Two other Americans have received the Messel Medal, Prof. R. A. Millikan in 1928 and Dr. Leo H. Baekeland in 1938. The other 10 recipients, all English, were: Prof. H. E. Armstrong, Rt. Hon. Viscount Leverhulme, Rt. Hon. Earl of Balfour, Rt. Hon. Lord Brotherton of Wakefield, Sir William J. Pope, Sir Harry McGowan (now the Rt. Hon. Lord McGowan), Sir Robert Mond, Rt. Hon. Viscount Samuel, Sir John Russell, and Prof. A. V. Hill.

Dr. Pierre Bonnet, of the Laboratoire de Zoologie, Université de Toulouse, France, writes that he is well in spite of having had some narrow escapes during the bombings. Working under difficulties, he has continued to amass material for his three-volume *Bibliographia Araneorum,* the first volume of which appeared off the press last September. It is a volume of 830 pages and contains 106 portraits of past and present workers in the field of araneology. He also writes that Dr. J. Denis is still at Donchy, and Profs. L. Fage, L. Berland, and J. Millot are still in Paris. All are anxious to receive the publications of their American colleagues.—*B. J. Kaston* (Syracuse University).

Prof. Yun-Pu Liu, organic chemist, who was in the United States as a research fellow of the China Foundation and of the Rockefeller Foundation from 1931 to 1934, receiving his Ph.D. at the California Institute of Technology, writes that he is now teaching in the National University of Chungking. He states that the Chinese Ministry of Education has recently announced that university professors with seven years of service may apply to go to the United States or England on an exchange basis, provided they can secure some kind of appointment, such as research work or teaching jobs by their own arrangement. The Ministry is to pay only the traveling expenses of such individuals. Prof. Liu is among those eager to obtain a suitable appointment in the United States.—*Maurice L. Huggins* (Eastman Kodak Company).

Dr. Luigi Provasoli, of Italy, whose work in the nutrition of green and colorless flagellates is well-known in the field of comparative physiology, writes that he has been isolated from American research literature for the past six years, and that it is still very difficult to secure scientific books or journals in Italy. He would appreciate it very much if the authors of papers dealing with the nutrition of Protozoa could send him their reprints. His address is: Universitá, Camerino, Italy.

Dr. Provasoli feels that he and his family came through the war in a relatively fortunate manner. He experienced only a brief period in a concentration camp. He has not yet been able to return to his prewar position at Milan because conditions in that city are hardly conducive to scholarly work: electricity is available about every other day, gas for two hours a day, and wood is so scarce and expensive that heat is almost unknown.

As Dr. Provasoli says, let us "hope that the few men of good will will succeed to make fully understood that our safety is only in a united world policy and in the strong and truthful building of an organization governing the entire world.—*William Trager* (Rockefeller Institute, Princeton, New Jersey).

Prof. C. Bonne, head of the Department of Pathology in the Government Medical School in Batavia, has written to Dr. Morris E. Dailey, University of California Hospital, San Francisco. Portions of his letter, dated 12 February 1946, follow:

The European staff members of the School have all been interned by the Japanese, most of them, including myself, for three and one-half years. I am recuperating now in Australia with a few of my colleagues; others have gone to Holland and others are still in Java. Many of us have been severely ill, but there were no deaths amongst us. In January this year the Medical School was still in the hands of the Indonesians. School and hospital did not suffer much damage mainly due to the wise cares of our Indonesian assistants. I hope to be able to resume my work in my old position when a settlement between the Dutch and Indonesians is reached.

Prof. Bonne's present address is: c/o Mrs. J. Bonne, Main Avenue, Coorparoo, Brisbane, Queensland, Australia.

An international conference, called by the executive committee of the International Astronomical Union, met in Copenhagen on 7–11 March. The American delegation—Harlow Shapley, director of the Harvard University Observatory; Otto Struve, director of the Yerkes Observatory of the University of Chicago and of the McDonald Observatory of the University of Texas; and Joel Stebbins, director of the Washburn Observatory of the University of Wisconsin and a research associate of the Mount Wilson Observatory at Pasadena, California—left the United States on 2 March, flying from La Guardia Field.

The more precise determination of star positions was one of the matters considered at Copenhagen. This conference is expected to redistribute international services that were assigned to Germany, wholly in German hands, for the interwar period. It is likely that Russia will take over one or two of these service bureaus, which deal with planetary motions, with variable stars, and with the international time services.

In the Laboratory

Inhibition of Fungus Respiration: a Metabolic Bio-assay Method [1]

WALTER J. NICKERSON, LT., SN.C.
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In the search for chemical substances active against disease-producing organisms, one is frequently confronted with difficulties in establishing criteria for activity. In a stimulating series of papers on the principles and practices of laboratory testing of fungicides, McCallan and Wilcoxon (*7*) bring out the close relationship of bio-assay methods in general and speak of two categories of assays: (1) that in which the effect of a toxic agent on an organism is *measured* quantitatively, and (2) that in which some phenomenon in the form of a "response" (an event either does or does not happen) of an organism is *observed.* Nearly all bio-assay methods for fungicides and bacteriocides in current use are examples of Type 2. Among these may be mentioned the various spore-germination tests and the U. S. Food and Drug Administration methods (*11*) for testing antiseptics, wherein the highest dilution of a chemical completely inhibiting growth is observed. The agar cup-plate methods, utilized in penicillin assay, are further examples, since one determines essentially a zone of concentration which inhibits growth.

While observations of certain responses of an organism, *i.e.* the germination or nongermination of spores, growth or absence of growth, have provided much valuable information on antiseptics, disinfectants, and substances with chemotherapeutic activity, need is felt at times for methods that will reveal the extent to which a foreign agent affects a healthy, growing culture. This is particularly true with the pathogenic fungi. We know of chemicals that keep spores from germinating or prevent fungus mycelia from entering a zone of given concentration of chemical on an agar plate. However, in spite of several studies on the correlation between laboratory and clinical findings, our information on what (to say nothing of the mechanism whereby) the chemicals do to "adult" fungi is extremely scanty. In the treat-

[1] The author appreciates the interest and aid of Dr. J. G. Hopkins, Lt.Col. Laurence Irving, and Lt.Col. J. R. Scholtz in the work reported here and to be described.