

agreement between it and the activities reported here. In all three cases of high activity, half maximum growth of *T. geleii* W was obtained with approximately 10 times the concentrations necessary for *L. casei*. These figures should be useful in comparing the folic acid requirements of other animals when methods can be devised for precise testing.

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## News and Notes

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### Support for S. 1850

Senator Magnuson has assured *Science* that he is ready to try again in the next session of Congress, to secure the passage of a bill providing for a National Science Foundation. He regretted the failure of the Kilgore-Magnuson Bill, S. 1850, in the House Committee which killed it, although it had been passed by the Senate.

Senator Magnuson said that he could speak for the continued cooperation of his colleague, Senator Kilgore, who was at the time, 2 August, absent from Washington in the interest of his renomination, which was subsequently achieved in the West Virginia primary.

Senator Magnuson's original bill was based on the Bush Report and it differed in several important details from Senator Kilgore's Bill, but the differences were adjusted in a series of conferences as previously related in *Science*.

### About People

Ruth R. Puffer, director of statistical service, Tennessee Department of Public Health, has been appointed visiting professor in the School of Public Health, University of Chile, for the term, June-August 1946. In addition to her duties in connection with the University, she is a consultant on statistical and tuberculosis work for Chile. Dr. Puffer's visit is being sponsored by the Rockefeller Foundation, which has been instrumental in the establishment of the School of Public Health and a training program for public health specialists for Chile.

Eugene Fischer, professor of physical anthropology, University of Berlin, and director of the Kaiser Wilhelm-Institut für Physische Anthropologie, Menschliche Erblehre und Eugenik, is completing an extensive work, *Comparative human morphology*. Dr. Fischer was pensioned in 1942 and has lived in Sontra Bebra, Province of Hessen-Nassau, since 1944, when he was bombed out in Freiburg.—Bruno Oettingking

(Museum of the American Indian, Heye Foundation, New York City).

James F. Kerwin and James W. Wilson have been added to the staff of the Division of Organic Chemistry at Smith, Kline and French Laboratories, Philadelphia.

Kenneth C. Blanchard, special investigator, Survey of Antimalarial Drugs, spoke on "Chemotherapy of Malaria" before a meeting of the Virginia Chapter of Sigma Xi on 13 May. Eight members and nine associates were initiated on the same occasion.

F. Woodbridge Constant, associate professor of physics at Duke University, will become head of the Department of Physics at Trinity College this fall, succeeding Henry A. Perkins, who has taught at the College for the past 42 years.

M. M. Leighton, chief of the Illinois State Geological Survey, addressed the staffs and graduate students of the Departments of Geology at Harvard University on 22 April, at Columbia University on 25 April, and at Yale University on 26 April. His subject was: "The Operation of a Modern State Geological Survey."

David Shakow has been appointed chief psychologist in the Psychiatric Division, Illinois Neuropsychiatric Institute, and professor in the Department of Psychiatry, University of Illinois College of Medicine. Dr. Shakow has been chief psychologist at the State Hospital, Worcester, Massachusetts, for 18 years. He will assume his new duties on 1 September.

George E. Cottral has returned to the U. S. Regional Poultry Research Laboratory, East Lansing, Michigan, as pathologist after serving in the Veterinary Corps, U. S. Army, for four years. As liaison veterinarian he accompanied a unit of the Chinese 38th Division to the Burma front. Later he went over the Hump to China to become liaison veterinarian for the Chinese 71st Army on the Salween front.

*Aaron J. Sharp* has returned to his duties at the Department of Botany, University of Tennessee, after two years study on a Guggenheim Fellowship in Mexico and Guatemala.

*Reuben G. Gustavson*, biochemist, vice-president and dean of the faculties at the University of Chicago since 1945, became chancellor of the University of Nebraska, Lincoln, effective 1 August. He succeeded Chancellor C. S. Boucher, who retired because of ill health.

*Fred R. Cagle*, formerly director of the Museum and assistant professor of zoology at the Southern Illinois Normal University, Carbondale, has been appointed associate professor of zoology at Tulane University.

*Lt. Col. Carl E. Otto* will return to his position as associate professor of chemistry at the University of Maine after six years of active duty in the Chemical Warfare Service.

*Arnold B. Grobman*, formerly instructor in zoology at the University of Rochester and at present associated with the Manhattan District (U. S. Army Corps of Engineers) at the University of Rochester Medical School, will join the staff of the University of Florida this fall as assistant professor of biology.

*Frank Perlmutter*, formerly with the U. S. Department of Agriculture, Soil Conservation Service, has been appointed associate horticulturist at the New York Branch Office of the Veterans Administration.

*Harry Burrell* and *C. P. Neidig*, both formerly associated with the Heyden Chemical Corporation, have announced the formation of Burrell & Neidig, Inc., an industrial chemical consulting firm with offices at 115 Broadway, New York City. The firm plans to consult on formaldehyde and its uses, plastics and their raw materials, protective coatings, sales development work on new products, research administration, and market surveys for the chemical and allied fields.

*H. M. Pendlebury*, former director of the Selanger Museum at Kuala Lumpur, Federated Malay States, died in Bangalore, India, in October 1945, according to a letter from Bachik bin Mohd Tahir, caretaker of the Museum. Dr. Pendlebury's death was a result of ill-treatment by the Japanese during his three and a half years internment in Singapore.

The letter also stated that the museum had been destroyed by bombing in March 1945.—*W. D. Funkhouser* (University of Kentucky).

*Henry M. Fox* has been appointed assistant professor of psychiatry at the Harvard Medical School and senior associate in psychiatry at the Peter Bent

Brigham Hospital, directing a program coordinating the teaching of psychiatry and internal medicine under a grant from the Commonwealth Fund. Dr. Fox was formerly associated with The Johns Hopkins University and Hospital and recently returned from service in the Army Medical Corps.

*Kenneth G. Brill*, head of the Department of Geology, University of Chattanooga, has been appointed assistant professor in the Department of Geology at Saint Louis University, of which Victor T. Allen is director. Dr. Brill will teach paleontology and stratigraphy in the Institute of Geophysical Technology.

*J. N. Mrgudich*, associate chief engineer, Burgess Battery Company, Freeport, Illinois, for five and one-half years, has become senior chemist and chief of electron microscopy in the Micro Optical Section, Components and Materials Branch, Squier Signal Laboratory, Signal Corps Engineering Laboratories, Fort Monmouth, New Jersey.

## Announcements

*The Social Science Research Council*, aided by a grant from the Rockefeller Foundation, has undertaken to place gift sets of American social science books and monographs published since 1939 in 40 university libraries in European countries occupied by Germany during the war. The basic collection of 250 books which is being sent to each recipient library is valued at over \$1,000 and includes books from the fields of anthropology, demography, economics, history, political science, social psychology, sociology, and statistics. These books were chosen from lists of the outstanding works produced during the last eight years in the designated fields. Library authorities have been invited to choose additional volumes in accordance with their special needs, however, in order to achieve a balanced minimum collection of American social science materials issued during the war as well as a specialized collection adapted to the institution's own particular program.

The project is under the direction of Thorsten Sellin, professor of sociology and chairman of the Department, University of Pennsylvania. Dr. Sellin is also the editor of *The Annals of the American Academy of Political and Social Science*.

*The first postwar meeting of the Pacific Division, AAS, and the first meeting of the Division to be held since 1942*, was held at the University of Nevada, Reno, 17–22 June 1946, with 305 registered members and guests in attendance. This represented the 27th annual meeting of the Pacific Division, and was the second meeting of the Division to be held in Reno.

The general sessions began on the morning of 18 June with a symposium on "Antibiosis," presenting the results of recent research in this field. Thomas L. Jacobs discussed "Antimalarials," David Bonner spoke on "Chemical and Biological Aspects of Penicillin," K. Stephen Pilcher discussed "The Large-scale Production of Penicillin," and Lowell A. Rantz presented a comprehensive summary of "Antibiotics in Medicine."

On Tuesday afternoon President and Mrs. John O. Moseley received the members and guests of the Division and associated societies in the new gymnasium on the University of Nevada campus.

On Tuesday evening Holbrook Working presented the first evening address, on "Research in the Social Sciences," drawing thought-provoking comparisons between methods in the natural and the social sciences and pointing out that many phases of contemporary history are in fact large-scale social experiments.

The presidential address of Linus Pauling, retiring president of the Pacific Division, was given Wednesday evening, on the subject, "The Influence of Molecular Structure on Biological Activity." At the conclusion of his address Prof. Pauling was given an ovation seldom accorded a scientist speaking on a technical subject.

The concluding address on Thursday evening was given by Wendell M. Latimer, who spoke on "Fundamental Particles and Atomic Energy." After a lucid exposition of the present status of our knowledge of the atom, Prof. Latimer expressed an optimistic view of the probability of early and important applications of atomic energy to peacetime uses.

Thomas G. Thompson, director of the Oceanographic Laboratories, University of Washington, was elected to the presidency of the Division, succeeding Prof. Pauling. H. S. Reed was elected vice-president and chairman of the Executive Committee. Vern O. Knudsen and Carl L. Hubbs were elected members of the Executive Committee for five-year terms, and George R. Hill and G. W. Sears were elected members-at-large of the Council for four-year terms.

Resolutions were adopted supporting the National Science Foundation Bill (S. 1850), specifically advocating inclusion of the social sciences, and supporting the McMahon Bill for control of atomic energy by a purely civilian board. These resolutions were telegraphed to the appropriate members of Congress.

The following societies, meeting in conjunction with the Pacific Division, held programs for the reading of scientific papers: American Chemical Society (Pacific Intersectional Division), American Meteorological Society, American Society for Horticultural Science

(Western Section), American Society of Plant Physiologists (Western Section), American Society of Ichthyologists and Herpetologists (Western Division), Astronomical Society of the Pacific, Botanical Society of America (Pacific Division), California Academy of Sciences, Ecological Society of America (Western Division), Society of American Bacteriologists (Southern California Branch), Society for Experimental Biology and Medicine (Pacific Coast Branch), Western Society of Naturalists, and Western Society of Soil Science.—*Robert C. Miller* (Secretary, Pacific Division, AAAS.)

*The Arctic Institute of North America* announces two fellowships of up to \$2,000 each (Canadian currency) for scientific work in the Canadian Arctic or Subarctic during 1947. The fellowships are open to anyone who has demonstrated his ability to carry out research work of superior quality in some field of science.

Applications must be received by 1 November 1946. Fellowships will be awarded on the recommendation of the Board of Governors of the Arctic Institute and will be announced by February 1947. Application forms may be obtained from: The Arctic Institute of North America, 805 Sherbrooke Street West, Montreal, Canada.

The 1946 fellowships of \$1,500 each were awarded to Margaret Lantis, Washington, D. C., for ethnologic study of the Eskimos on Nunivak Island, Alaska, and to Harold C. Hanson, Illinois State Natural History Survey, for wildlife research on the west coast of James Bay, northern Ontario. An additional grant of up to \$1,500 was made to Nicholas Polunin, Oxford University, England, for botanical work on Ungava Peninsula.

*A fellowship in the field of microbiology* has been announced by the Graduate School of the University of Pennsylvania. The fellowship, which has been established by the Pennsylvania Lager Beer Brewers' Association, carries a stipend of \$1,500. Applicants must have had at least one year of graduate work and must have a sight-reading knowledge of two modern languages. Inquiry should be made at the Graduate School, University of Pennsylvania, Philadelphia.

*The trustees of the Worcester Foundation for Experimental Biology* elected the following new trustees at their annual meeting: David Rapport, M.D., professor of physiology, Tufts Medical School; George R. Dunlop, M.D., of Worcester; Richard Perkin, president of the Perkin-Elmer Corporation, Glen-

brook, Connecticut; and Robert W. Stoddard, president of the Wyman Gordon Products Company, Grafton, Massachusetts, and vice-president of the Wyman Gordon Company, Worcester.

All the officers of the Foundation were re-elected as follows: Harlow Shapley, Ph.D., president of the Board of Trustees; Roy G. Hoskins, Ph.D., secretary; Dwight E. Priest, treasurer; J. Z. Buckley, assistant treasurer; Hudson Hoagland, Ph.D., executive director, and Gregory Pincus, Ph.D., director of laboratories.

During 1946 the Foundation is operating on grants from the following institutions: the American Cancer Society; the Donner Foundation; the G. D. Searle Company, Chicago; the Schering Corporation, Bloomfield, New Jersey; the Foundation for Applied Research, San Antonio, Texas; the National Research Council; the U. S. Navy; the American Academy of Arts and Sciences; the American Philosophical Society; the Neuroendocrine Research Foundation of the Harvard Medical School; the Massachusetts Department of Mental Health; and the Committee on Therapeutic Research of the Council of Pharmacy and Chemistry of the American Medical Association.

Studies are under way in relation to animal reproduction, the physiology and biochemistry of cancer, the chemistry of steroid hormones, the physiology and biochemistry of mental disease, and chemical factors involved in the invasiveness of bacteria and in biochemical aspects of fatigue. Clinical facilities at the Worcester State Hospital, the Worcester City Hospital, and the Massachusetts General Hospital are available for these investigations.

*The appointment of three section chiefs in the Metrology Division*, formerly the Division of Weights and Measures, the National Bureau of Standards, was announced recently by E. U. Condon. I. C. Schoenover was designated chief of the Dental Materials Section, Peter Hidnert, of the Thermal Expansion Section, and H. Haig Russell, of the Large-capacity Scales Section.

## Meetings

*The American Chemical Society* will hold its fall meeting in Chicago on 9-13 September. At the same time 18 divisions of the Society will meet. The Chicago Section of the Society will sponsor the Fourth National Chemical Exposition from 10-14 September.

*The American Psychological Association* will hold its 54th annual meeting at the University of Pennsylvania, Philadelphia, on 3-7 September. A new feature of the meeting will be an Invited Address, to be given this year by A. C. Kinsey, University of Indi-

ana, on "Studies on Human Sex Behavior" on the evening of 4 September.

*The Ninth Meeting of the Society for Research on Meteorites*, the first since the close of the war, will be held on 9 September at Arizona State College, Flagstaff, and on 10 September at the Canyon Diablo Meteorite Crater. The opening session will take place at 9:00 A.M. on 9 September. Any person interested in meteorites is cordially invited to attend the meeting, all sessions of which, except those of the Council, will be open to the public. C. H. Clemenshaw, Griffith Observatory, P. O. Box 9866, Los Feliz Station, Los Angeles 27, California, is secretary of the Society.

*The American Physical Society* will hold its 274th meeting on 19-21 September at the Engineering Societies Building, 29 West 39th Street, New York City, under joint sponsorship with the American Society of Mechanical Engineers, the Metropolitan Section of the American Physical Society, and the Metropolitan Section of the American Society of Mechanical Engineers. The program will consist of papers and discussions on accelerators, cosmic ray and subnucleonic physics, and theories of the elementary particles.

The meeting has been planned to take advantage of the presence in the East of a number of distinguished physicists from abroad and from home who are being invited to take part in a conference to be held shortly afterward as a feature of the bicentennial celebration of Princeton University.

*The Biological Photographic Association* will hold its 16th annual meeting at the Hotel Bismarck, Chicago, on 6-8 September. The planning and production of teaching motion-picture films will be discussed. New equipment for both still and motion picture photography will be demonstrated. Discussions will be held on the preparation of scientific exhibits; the classification, indexing, and filing of medical illustrative material; and the Veterans Administration's program for obtaining medical illustration material will be described. Practical papers on fundamental techniques will be presented, as well as more specialized work on endoscopic photography, photomicrography, etc. Photographs by many of the leading biological photographers and new materials and equipment will be on display. Jay Garner, of Winnetka, Illinois, is convention chairman, and Ralph Creer, of the Motion Picture Committee, American Medical Association, is in charge of the program.

The Biological Photographic Association, a non-profit organization, was formed in 1931 to raise the standards in photography for teaching and research, and to act as a clearing house for information on

photographic methods. Its members are scientists with an interest in photography as applied to their fields and designers of precision equipment. The Association's journal is published quarterly constituting a volume of about 250 pages. Further information about the Association may be obtained by writing the Secretary of the Biological Photographic Association, University Office, Magee Hospital, Pittsburgh 13, Pennsylvania.

"*The Chemical Trail Blazers*," a display epitomizing new discoveries, ideas, developments, and applications in industrial chemistry, will be featured at the Fourth National Chemical Exposition to be held on 10-14 September at the Coliseum, Chicago. The exhibit, sponsored by the Chicago Section, American Chemical Society, and under the chairmanship of James K. Stewart, will be a major development of a comparatively small collection of sketches, panels, and specimens shown under the same title at the last National Chemical Show in the same building in 1944. It will be presented on a more elaborate, more comprehensive, and broader scale this year and will occupy more space. The following will be a few of the featured exhibits: The heredity factor in red hair; some diverse products made from shavings; an extremely light form of rubber; the utilization of waste from such diverse materials as oat hulls and sulfite liquor; the sources of rare chemicals; paint as a protective agent against rust; and the power of color.

*The Cordoba Observatory*, Cordoba, Argentina, is celebrating the 75th anniversary of its foundation with a scientific meeting to be held on 20-23 September.

*The American Ornithologists' Union* will hold its first annual meeting since 1942 on 2-5 September in Urbana and Champaign, Illinois. This will be a regular meeting with the presentation of papers, a banquet, social gatherings, and field trips. Headquarters will be in the new Illini Union Building, of the University of Illinois, where the business meetings will be held on Monday, 2 September. The meeting is sponsored by the Department of Zoology and Physiology, University of Illinois; the Illinois Natural History Survey; and the Champaign County Audubon Club. The chairman of the Local Committee on Arrangements is S. Charles Kendeigh, Vivarium Building, Wright and Healey Streets, Champaign, Illinois.

Reservations for rooms should be made immediately at either the Inman Hotel, Champaign, or the Urbana-Lincoln Hotel, Urbana. Rooms in private homes will be found for guests who cannot be accommodated by the hotels.

*The Division of Sugar Chemistry and Technology* is planning as part of its program for the Chicago meeting of the American Chemical Society, 9-13 September, a celebration in honor of C. S. Hudson, of the National Institute of Health. The opening session will include the following papers covering Prof. Hudson's contributions to the field of carbohydrate chemistry: "An Historical Review of the Contributions of the Hudson School to Carbohydrate Chemistry": R. C. Hockett, Sugar Research Foundation; "Reflections on the Hudson Contributions on Academic Carbohydrate Researches": C. B. Purves, McGill University; and "The Influence of Hudson's Fundamental Research on Industrial Carbohydrate Chemistry": W. W. Moyer, A. E. Staley Manufacturing Company. An address by Prof. Hudson will follow.

Another feature of the program is a symposium on "Current Progress in Carbohydrate Chemistry." W. N. Haworth, University of Birmingham (England), and G. F. Davidson, Shirley Institute at Manchester (England), will present papers at the symposium.

The celebration will be climaxed by a banquet in honor of Dr. Hudson. K. P. Link, University of Wisconsin, will act as master of ceremonies, and H. O. L. Fischer, University of Toronto, will be the main speaker. A special event will be the presentation of the *Collected works of C. S. Hudson* to Dr. Hudson by a representative of the editorial division of the Sugar Division. This collection, a two-volume edition being published by the Academic Press, includes all the papers which have been published by Dr. Hudson and his associates. Two of his present associates, R. W. Hann and N. K. Richtmeyer, National Institute of Health, have acted as editors.

*The American Mathematical Society* announces its 52nd Summer Meeting and 28th Colloquium, to be held at Cornell University, Ithaca, New York, on 20-23 August, in conjunction with the summer meetings of the Mathematical Association of America and the Institute of Mathematical Statistics. The program follows:

*Tuesday*, 8:00 P. M.—Council meeting; *Wednesday*, 10:45 A. M.—"General Principles of Functional Representation": Marshall Stone, Harvard University; *Thursday*, 2:00 P. M.—"Probability in Function Space": J. L. Doob, University of Illinois.

The Colloquium will consist of four lectures on "Topology of Smooth Manifolds," by Hassler Whitney, Harvard University. These are scheduled for Tuesday at 2:00 P. M., and Wednesday, Thursday, and Friday at 9:00 A. M.

Baleh and Risley dormitories, Cornell University, will be available to members of the mathematical organizations, their families, and guests. Reservation

cards for dormitory rooms will be sent out with the program. Hotel reservations should be made directly with the Clinton and Ithaca Hotels.

### Recent Deaths

*Edward Godfrey Huber*, 64, associate dean, Harvard University School of Public Health, died in Boston on 24 July. Dr. Huber had been acting dean of the School since 1942 and was named associate dean only a short time ago.

*A. W. Rogers*, 74, formerly director of the South African Geological Survey, died on 23 June at Capetown.

*George Alfred Olson*, 71, formerly of the Agricultural Experiment Station, University of Wisconsin, died on 29 July at Madison.

*Clement Samuel Brimley*, 82, entomologist, North Carolina Department of Agriculture, died on 23 July in Raleigh.

*Arturo Posnansky*, 72, leading Bolivian archeologist of old Inca ruins, died on 28 July at La Paz, Bolivia.

*Rolf Nugent*, 44, economist and deputy chief of supply for UNRRA, drowned near Yokohama, Japan, on 27 July, according to an announcement by UNRRA. Dr. Nugent was on leave from Russell Sage Foundation and had been in Japan only a few weeks.

*Cornelius Ubbo Ariens Kappers*, 68, professor of comparative anatomy of the central nervous system at Amsterdam Municipal University, died on 29 July.

*Clay B. Freudenberger*, 42, former acting dean of the University of Utah Medical School, died on 28 May 1946 in Salt Lake City.

*J. L. Baird*, 58, well known for his work in the field of television, died on 14 June in England.

*Charles C. Haworth, Jr.*, 31, physicist, died on 28 July as a result of a fall while mountain climbing in the Selkirk Range near Golden, British Columbia. During the war Dr. Haworth worked at The Johns Hopkins Institute of Applied Physics, Silver Spring, Maryland, and since 1 March had been with the Naval Ordnance Test Station, Inyokern, California.

*Wilhelm Caspari*, 72, head of the Department for Cancer Research at the Institute for Experimental Therapy in Frankfurt am Main from 1920 to 1936, died in 1944 in Lodz, Poland.

*T. H. Laby*, 66, former professor of natural philosophy, University of Melbourne, died recently in Australia.

*Herbert Gastineau Earle*, 64, director of the Henry Lester Institute of Medical Research, Shanghai, died at sea on 5 June after a stroke. Dr. Earle was formerly professor of physiology and dean of the Medical School at Hongkong University.

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## Letters to the Editor

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### History of a Three-color Mixer

The growth of apparatus, like the growth of ideas, is often hindered by the independent rediscovery of what has been done before. Often this is due to the description appearing in an obscure journal, and often the investigators fail to search adequately the more prominent journals.

Recently I found the same color-mixing apparatus described in three separate sources, none of which made any references to the others. The apparatus is a three-color mixer whose colors are mixed by the optical properties of two lenses. This rather ingenious device was filed with the U. S. Patent Office on 4 October 1928 by L. T. Troland (U. S. Pat. 1,971,737). The patent was assigned to the Technicolor Corporation and granted on 28 October 1934. The apparatus was again described in great detail in a manuscript by G. N. Hunter, dated 4 February 1929, which was submitted to the Royal So-

ciety of Edinburgh and published shortly thereafter (*Proc. roy. Soc. Edinb.*, 1929, 49, 232-244). The third description, by W. F. Grether, is fairly recent (*Science*, 1943, 98, 248). It too appears in some little detail.

The similarity between these three papers is striking. The methods of placing the filters, the mechanism for moving the filters, the position of the lenses, the position of the light sources, the position of the screens, the method of diffusion, and the general diagrams are almost exactly alike. Here is a remarkable example of similarity of independent invention.

JOZEF COHEN

Cornell University

### Social Theory and Social Engineering

The recent article by Bateson (*Science*, 1946, 103, 717) and the reply by Burhoe (*Science*, 1946, 104, 62) raise issues of such importance that some further discussion