

dental health in the army and in industry, the American Dental Association adopted a three-point program to mobilize America's dental resources for national defense as follows:

(1) Sending to every registered dentist in the nation a questionnaire giving complete information on the dental personnel available for military purposes and for civilian needs.

(2) Launching a program for cooperation with the Surgeon-General of the Army and Navy to reduce the percentage of rejections for dental defects among volunteers and prospective draftees under the conscription law.

(3) Setting in motion a special education program for dentists by distributing courses in military dentistry now under preparation by the War Department.

MEMORIALS

EXERCISES in honor of the centennial of the death of Constantine Rafinesque were held at Transylvania College, on October 30. An address was given before the student convocation by Dr. Francis W. Pennell, of the Philadelphia Academy of Natural Sciences, and at the luncheon by Dr. A. E. Emerson, of the University of Chicago, who spoke on "The Modern Naturalist." In the afternoon there was a symposium entitled "Rafinesque's Interests—a Century Later," at which Dr. W. D. Funkhouser, of the University of Kentucky, spoke on "Archeology in Kentucky"; Dr. W. E. Ricker, of Indiana University, on "Research in the Biology of Fish" and Dr. W. M. Clay, of the University of Louisville, on "Herpetology." At the dinner addresses were given on "The Life and Works of Rafinesque" by Dr. Francis W. Pennell, and on "Constantine Rafinesque, the Man," by Dr. L. R. Dingus. The remains of Rafinesque were removed from Philadelphia in 1923 and were placed in a crypt on the campus of Transylvania College. The college has in its possession a collection of the manuscripts, books and letters, and two of the three known portraits of Rafinesque.

WASHINGTON AND JEFFERSON COLLEGE, Washington, Pa., dedicated on October 26 a new building for chemistry to the memory of Dr. Jesse W. Lazear, who died in Cuba in 1900 of yellow fever while serving as a member of the Yellow Fever Commission of the U. S. Army. Dr. Lazear was an alumnus of the college. John R. Kissinger, Huntington, Ind., and John J. Moran, Habana, Cuba, two of the group of soldiers who allowed themselves to be bitten by mosquitoes during the investigation, were guests at the dedication ceremonies. At a banquet in the evening Dr. Philip S. Hench, of Rochester, Minn., made an address on the work of the Yellow Fever Commission. The Jesse W. Lazear Chemistry Hall is one of three buildings dedicated. One of these was named in honor of the late Dr. Edwin Linton, for many years professor of biology and geology at Washington and Jefferson College.

THE "Cradle of Dental Education in America" will be dedicated on November 24 by the Ohio State Dental Society at Bainbridge. This dental monument is a small brick building which served as the office of Dr. John Harris from 1825 to 1850. It has been purchased and restored by the society and will be maintained as a permanent museum and memorial. Addresses will be given at the dedication by Dr. B. W. Weinberger, Dr. Arthur H. Merritt and Dr. J. Martin Fleming. Dr. Harris served as preceptor to a group of students, several of whom later became prominent in dental education and practice. Dr. Chapin A. Harris received his dental training at the Ohio State University and then went to Baltimore. There he and Dr. Horace Hayden founded, in 1840, the first chartered dental college in the world, the Baltimore College of Dental Surgery. Dr. James Taylor also secured his dental training under Dr. John Harris and in 1845 founded the second dental college. This was the Cincinnati College of Dental Surgery whose influence was, perhaps because of its central location, more far-reaching than that of the Baltimore School.

SCIENTIFIC NOTES AND NEWS

DR. HENRY E. SIGERIST, professor of the history of medicine and director of the Institute of the History of Medicine at the Johns Hopkins School of Medicine, and Dr. Esmond R. Long, professor of pathology at the University of Pennsylvania and director of the Henry Phipps Institute, have been elected honorary members of the athenaeum of the chair of the history of medicine in Buenos Aires.

ON the occasion of the installation of President Kenneth Irving Brown at Denison University on October 18, the degree of doctor of science was conferred on Daniel Sheets Dye, who has been head of the de-

partment of science at Union University, Chengtu, West China, since 1910.

CITATIONS of merit have been awarded by the Park Association of New York City for "outstanding service" to the parks of the city. The nine awards made included one to Dr. W. Reid Blair, who retired as director of the New York Zoological Park last May. Dr. Blair joined the staff of the park in 1902, and was appointed director in 1926. The citation said that for thirty-eight years he had carried out his work at the New York Zoological Park with "untiring zeal and devotion."

Nature states that the Academy of Sciences of the USSR has awarded the Pavlov Prize for 1940 to Professor Maria K. Petrova, of the Pavlov Institute of Physiology and the Institute of Evolutionary Physiology and Pathology of the Higher Nervous Activity, who is known for her study of experimental neuroses, their mechanism and therapy. The annual Pavlov Prize of 20,000 roubles, for the best work in the field of physiology, was instituted by the Soviet Government in 1936.

DR. FREDERICK B. HUTT, professor and head of the department of poultry husbandry and animal genetics at Cornell University, has been appointed head of the department of zoology in the College of Agriculture and professor of zoology and chairman of that department in the College of Arts and Sciences. Dr. Herbert Bruckner has been appointed acting head of the department of poultry husbandry.

DR. LYMAN E. JACKSON, junior dean of the College of Agriculture of the Ohio State University, has been elected president of the South Dakota State College of Agriculture and Mechanic Arts at Brookings. He will also be head of the South Dakota Agricultural Experiment Station and of the Agricultural Extension Service.

CHANGES in the department of physics of Harvard University are as follows: Professor G. W. Pierce has retired and Professor E. L. Chaffee has taken his place as director of the Cruft Laboratory. Professor N. H. Black has also retired. Professor F. A. Saunders has resigned the chairmanship of the department and Professor E. C. Kemble has been appointed to succeed him.

PROFESSOR GERTRUDE M. COX, of the Statistical Service of the Iowa State College, has become director and head of a newly organized laboratory of experimental statistics at North Carolina State College.

DR. R. C. ERNST, professor and head of the department of chemical engineering, has been appointed director of the Division of Industrial Research at the Speed Scientific School of the University of Louisville, Kentucky.

JOHN G. DEAN recently resigned his position with the Permutit Company as director of the Laboratory Research Division to become a member of the science faculty of Sarah Lawrence College, Bronxville, N. Y.

THE following appointments have been made at Parsons College, Fairfield, Iowa: Dr. J. R. Jenness, of the College of the Ozarks, head of the department of physics and mathematics; Dr. S. Porter Miller, of Buena Vista College, head of the department of chemistry; Dr. J. W. Hancock, of Michigan City, Ind., High School, assistant professor of psychology; Miss

Louise Reed, Westphalia, Kans., High School, head of the department of home economics; Malcolm McDonald, of the State University of Iowa, assistant professor of biology.

DR. W. A. CLEMENS, director of the Pacific Biological Station at Departure Bay, Canada, has been appointed head of the department of zoology of the University of British Columbia.

DR. ANTONIO G. SISON, dean of the College of Medicine, has been appointed director, and Dr. Agerico B. M. Sison, assistant professor of medicine, secretary, of the newly established Post-Graduate School of the College of Medicine of the University of the Philippines.

DR. THOMAS F. ANDERSON, instructor in physical chemistry at the University of Wisconsin, has been awarded the RCA Electron Microscope Fellowship. In collaboration with the Fellowship Committee, by whom he was appointed, Dr. Anderson will devote a year to research at the RCA Research Laboratory at Camden, N. J., with the electron microscope which was recently developed in the research laboratories of the corporation, and has now been made available for research workers. Dr. Stuart Mudd, of the School of Medicine of the University of Pennsylvania, is chairman of the committee of award. Other members are Dr. M. Demerec, Station of Experimental Evolution, Carnegie Institution of Washington; Dr. J. H. Kempton, U. S. Bureau of Plant Industry; Dr. C. W. Metz, department of zoology, University of Pennsylvania; Dr. W. M. Stanley, Rockefeller Institute for Medical Research, Princeton, N. J.; Dr. Caryl P. Haskins, Haskins Laboratories, and Dr. V. K. Zworykin, RCA Research Laboratories. The terms of the fellowship provide for investigation of biological problems with the RCA electron microscope, and for experimentation to develop techniques for obtaining the fullest benefits from the electron microscope.

THE Institute of Medicine of Chicago announces that the Elizabeth McCormick Child Research Grant of \$1,500 for 1940-41 has been divided among Dr. Clayton J. Lundy, Dr. Mila I. Pierce and Dr. Heyworth N. Sanford for the continuation of the investigations begun under their 1939-40 grants, Dr. Lundy's on heart sound records in rheumatic heart disease, Dr. Pierce's on leukosis, and Dr. Sanford's on the role of qualitative platelet factors in the coagulation of the blood.

F. G. FRIEDLANDER, who was born in Germany, but was educated in England, has been elected to a fellowship at Trinity College, Cambridge, for his contributions to mathematics. Mr. Friedlander is at present interned in Canada, on account of his German origin.

DR. JOHN B. YOUNG, associate professor of med-

icine and director of postgraduate instruction in the School of Medicine of Vanderbilt University, who has leave of absence to serve as a member of the Health Commission of the Rockefeller Foundation, has sailed for Europe. Dr. Youmans will serve as dietitian in charge of the nutritional phases of the health program of the commission. The work of this commission, consisting of six or eight specialists in medical and health fields, will be to aid the French in reestablishing and reorganizing the health service of that country.

DR. DANIEL MELNICK, of the University of Michigan, has been appointed chief chemist of the Food Research Laboratories, Inc., of which Dr. Philip B. Hawk is director.

DR. MELVILLE T. COOK, plant pathologist at the Agricultural Experiment Station at Rio Piedras, Puerto Rico, who retired on July 1, will make his headquarters for the present with his son, Dr. Harold T. Cook, at the Virginia Truck Experiment Station at Norfolk, Va.

DR. HENRY E. SIGERIST, director of the Institute of the History of Medicine at the Johns Hopkins University, is delivering at Cornell University a series of six Messenger Lectures on "Civilization and Diseases."

DR. EDWARD L. THORNDIKE, professor emeritus of psychology at Teachers College, Columbia University, gave on November 13 a lecture entitled "The Development, Retention and Attraction of Superior Men" at a meeting of the American Academy of Arts and Sciences.

PROFESSOR ROBERT S. WOODWORTH, of Columbia University, will give an address entitled "Recent Results on Heredity and Environment" at a meeting to be held at the American Museum of Natural History on November 18 of the Section of Psychology of the New York Academy of Sciences.

DR. QUINCY WRIGHT, professor of international law at the University of Chicago, gave an address on October 31 at a joint meeting of the Chicago branch of the American Association of Scientific Workers and the Midwest Association of Sigma Xi. He spoke on "The Influence of Invention on Warfare."

DR. KARL K. DARROW, of the Bell Laboratories, Inc., of New York, addressed the student body of Rutgers University on November 13 on the occasion of the second of the series of seven convocations celebrating the one hundred and seventy-fifth anniversary of its founding. He spoke on "New Radio-Active Substances Produced by Transmutation." In the afternoon a symposium was conducted by Dr. Darrow, at which members of the faculties of the science depart-

ments, advanced students, physicists from industrial organizations in the vicinity and from neighboring colleges and universities were present.

THE second annual meeting of the Sigma Xi Club of Hawaii was held on October 18 at the University of Hawaii. Election of seven new members brought the membership up to seventy. New officers elected for the ensuing year are: *President*, Dr. C. H. Edmondson, professor of zoology, University of Hawaii; *Vice-president*, Dr. J. H. Beaumont, director, Hawaii Agricultural Experiment Station; *Secretary-treasurer*, Dr. S. S. Ballard, assistant professor of physics, University of Hawaii; *Councilors*, C. E. Pemberton, executive entomologist, Experiment Station of the Hawaiian Sugar Planters' Association; Dr. J. L. Collins, geneticist and acting director, Experiment Station, Pineapple Producers Cooperative Association, and Dr. C. J. Hamre, *ex-officio*, professor of zoology, University of Hawaii. The address of the evening was given by the retiring vice-president, Dr. Martha Potgieter, associate nutritionist, of the Hawaii Agricultural Experiment Station. She spoke on "The Family Diet and Its Relation to Child Health," a report of the findings to date of the Nutrition Department of the Hawaii Agricultural Experiment Station regarding local food habits, adequacy of family diets and possible effects of dietary deficiencies on the physical and dental status of children in Hawaii.

THE fourteenth annual meeting of the Colorado-Wyoming Academy of Science was held on October 18 and 19 at the University of Wyoming. One hundred and twenty-five papers were presented. President Roy M. Green, of the Colorado State College of Agriculture and Mechanic Arts, gave the main address, which was entitled "A Scientific Approach to Agricultural Problems." The newly elected officers are: *President*, Dr. C. T. Hurst, Western State College, Gunnison; *Vice-president*, Dr. Wm. Warren Howe, Colorado School of Mines, Golden; *Executive Secretary*, Dr. Essie White Cohn, University of Denver, and *Treasurer*, Dr. Charles F. Poe, University of Colorado.

IN order to ensure opportunities for the publication of the scientific results of cancer research, a group of representatives of interested organizations will cooperate in making possible a new journal, to be called *Cancer Research*, to be devoted to articles and abstracts of articles having to do with cancer research. This journal is sponsored by the American Association for Cancer Research, the Anna Fuller Fund, The International Cancer Research Foundation and The Jane Coffin Childs Memorial Fund for Medical Research. The conduct of the journal will be in the hands of an Advisory Board consisting of the chairman of the editorial committee and representatives of the con-

tributing Funds, an editorial committee and a business manager. Those serving are: *Advisory Board*: S. Bayne-Jones, representing The Jane Coffin Childs Memorial Fund for Medical Research; C. C. Little, as chairman of the Journal Committee of the American Association for Cancer Research; James B. Murphy, as chairman of the Editorial Committee of *Cancer Research*; Mildred W. S. Schram, representing The International Cancer Research Foundation, and G. M. Smith, representing the Anna Fuller Fund. *Members of the Editorial Committee* are: James B. Murphy, chairman; S. Bayne-Jones, for immunology and the viruses, and secretary of the committee; John Bittner, for genetics; Alexander Brunschwig, for physiology; L. F. Fieser, for organic chemistry; Jacob Furth, for the leukemias; W. U. Gardner, for hormones; Balduin Lucké, for general biology, including tissue culture and cytology; M. J. Shear, for biochemistry, and Shields Warren, for pathology. The business manager is A. Vaughn Winchell, American Oncologic Hospital, Philadelphia. It is hoped to start publication with the issue of January, 1941. Manuscripts should be addressed to the Secretary of the Editorial Committee, 333 Cedar Street, New Haven, Conn.

A "Bibliography on Orthogonal Polynomials" has been published as a Bulletin of the National Research Council. A Committee of the council, consisting of Professors Hille (Yale), Shohat (Pennsylvania), and Walsh (Harvard) has spent several years in the compilation of the bibliography, with the cooperation of several other mathematicians here and abroad. The Faculty Research Committee of the University of Pennsylvania and its Sigma Xi Chapter has given financial aid.

THE British Royal College of Physicians has an-

nounced that the Harveian Oration, the Bradshaw, the Fitzpatrick and the Lumleian Lectures for 1940 have been postponed.

IN spite of the war, the Engineering Societies Library reports that it is experiencing no difficulty in its receipt of technical periodicals from Great Britain. However, only a few engineering magazines reach the library now from continental Europe. The three hundred and fifty or more periodicals from England and other parts of the British Empire are coming through with unusual regularity except in one or two instances since the beginning of the war when the ship carrying a batch of them was sunk by a torpedo or a mine. However, correspondence with the publishers soon brought replacements for all lost copies. The Allied blockade of Germany failed to stop the flow of German magazines to the library through Italy. But, with the entrance of the latter country into the war, the library failed to receive German and Italian publications for several months. Now, some of the German periodicals are being received again through Siberia and Japan, as indicated by the postmarks on the wrappers. *Genie Civil* and other French periodicals ceased arriving a few weeks after the surrender of France. To avoid the loss of valuable publications being sent to and received from the British Isles and continental Europe through exchange agreements between engineer institutions there and the Engineering Societies Library and its cooperating organizations, arrangements have been completed to store them in the country of origin until the end of hostilities. Similar arrangements during the world war proved so satisfactory that only one or two sets of foreign periodicals failed to be completed with the resumption of commerce between belligerents.

DISCUSSION

CORAL-REEFS AND THE FORMATION OF PETROLEUM

IN his recent article on the "Progress in Petroleum" Egloff¹ has presented a brief discussion of a theory of continual petroleum formation from marine sediments, as for example diatoms, foraminifera and radiolaria. In reference to this theory the preliminary results of investigations which are in progress in this laboratory may be of some interest, because they indicate that coral-reefs should also be taken into consideration as one of the possible sources of petroleum.

Reef-building corals contain a by no means inconsiderable quantity of organic material. One hundred years ago, Silliman² in his classical paper on the composition of stony corals has stated that the organic

matter of various corals amounted to from 4 to 8 per cent. of the total, and that it was intimately united with the inorganic material throughout the structure of the coral. Silliman's observations have been verified in recent years by Clarke and Wheeler³ (1922), who found that the organic matter of twenty-eight species of corals amounted to from 2 to 7 per cent. It is also of considerable interest that Silliman called attention to the fact that part of the organic matter consists of some wax-like material which can be separated from its inorganic surroundings by boiling with water. After the boiling of the corals it was found floating on the surface of the water in "transparent, jelly-like masses of yellowish color. It was insoluble

¹ G. Egloff, *SCIENCE*, 91: 533, 1940.

² B. Silliman, *Am. Jour. Sci.*, (2) 1: 189, 1846.

³ F. W. Clarke and W. C. Wheeler, *U. S. Geol. Surv. Paper* No. 124, Government Printing Office, Washington, 1922.