

adjusted at the discretion of the Policy Committee. A certificate of registration shall be required for each year.

(9) There shall be a paid physician who shall be chief executive.

(10) The best interest of the patient and the solvency of the plan will consider that the hours for receiving panel calls shall be from 8 A.M. to 8 P.M., except in case of emergency. Calls after these hours shall entail an additional fee at the expense of the patient. The amount of extra compensation to be determined by the Policy Committee.

(11) On due notice, physicians shall have the right to refuse these patients and the patient may change physician if he desires. The physicians involved shall pro-rate the fee.

(12) Since it is recognized that individuals on relief are the responsibility of the city, it is apparent that the plan must be reimbursed for services rendered to individuals on relief if and when the recipient is unable to pay in full or in part for the services rendered.

NEW AND RARE INSTRUMENTS

THE Committee on Location of New and Rare Instruments has the following requests and offers:

Instruments Offered

L. & N. thermionic amplifier
 Ammeters—Whitney and Jewel
 Various balances
 Schmidt & Haensch colorimeter
 Platinum calorimeter
 Weston D.C. electric meters, voltmeters, ammeters, galvanometers
 Spindler and Hoyer electroscope
 Two-circle Goniometer (to loan for war use)
 Microscopes—Bausch and Lomb centrifuge, Zeiss binocular, Leitz (suitable for photomicrography), Poeller
 Optical wedge pyrometer
 4 L. & N. portable potentiometers
 L. & N. Type K potentiometers
 Polarizer and analyzer for microscope
 Abbe refractometer
 R. Fuess reflectometer
 Spectrographs, spectroscopes, spectrophotometers
 Saccharimeters
 Saybolt Universal Viscosimeter

Instruments Requested

Western Electric electrometer
 Flexaform set

Amsler No. 4 integrater
 Micromanipulators

Information concerning these offers and requests for rare instruments that can be sold, loaned or leased for essential war research work can be obtained from D. H. Killeffer, chairman of the committee, 60 East 42nd Street, New York 17, N. Y.

THE VIRGINIA ACADEMY OF SCIENCE RESEARCH ENDOWMENT

FOR some years the Virginia Academy of Science has had an endowment fund of about \$12,000, which was raised by Dr. J. Shelton Horsley as a research fund when he was president in 1926-27. This fund is administered by a research committee which awards a prize of \$50 each year for a meritorious paper read at the meeting, and makes grants in aid of research.

Some months ago, Dr. Gillie A. Larew, of Randolph-Macon Woman's College, who has been a valued member of this committee for some years, was asked to write a short account of its work for the *Alumnae Magazine* of her college. She did so and shortly thereafter was surprised to learn that Mr. and Mrs. C. M. Goethe, of Sacramento, Calif., on reading her account, became so much interested in the work of the committee and its need of greater funds that they generously agreed to offer to contribute \$200 a year (\$100 each) so long as they conveniently could, provided the academy would raise an additional \$400 on similar terms.

At the recent meeting in Richmond, the academy completed the raising of the required \$400. Not only were the required pledges obtained, but well over \$400 has already been deposited in the bank and checks and cash are in hand that will bring the total to \$439. This additional \$600 will about double the amount of money available to the committee each year and will make possible some modifications and enlargements of their present policies.

This is directly in line with the policy of the American Association for the Advancement of Science in encouraging research work through its affiliated state academies of science. For several years now it has fostered, encouraged and directed them through the academy conference and has allotted them money for research purposes.

SCIENTIFIC NOTES AND NEWS

THE Marcellus Hartley Public Welfare Medal and Certificate of the National Academy of Sciences was presented on June 14 to John D. Rockefeller, Jr.

THE Society of Chemical Industry has awarded the Chemical Industry Medal for 1943 to Dr. John J. Grebe, director of the Physical Research Laboratory

at the Dow Chemical Company, Midland, Mich. The presentation will be made next November.

THE appointment of Dr. Boris Petrovitch Uvarov, of the Imperial Institute of Entomology, as an Hon. Companion of St. Michael and St. George for valuable services in connection with anti-locust measures,

is reported in *The Times*, London. Dr. Uvarov has been on the staff of the Imperial Institute of Entomology since 1920 and is at present the technical adviser of the anti-locust campaign which is being carried on throughout North Africa and the Middle East.

DR. WESTON A. PRICE will be honored by the Cleveland Dental Society with a testimonial dinner on Thursday evening, October 7, at the Hotel Statler in Cleveland. After fifty years of active practice in Cleveland, Dr. Price plans to go to California to continue his investigations on the influence of diet on dental diseases.

OFFICERS for 1943-44 of the American Society of Plant Physiologists have been elected as follows: *President*, B. S. Meyer, of the Ohio State University; *Vice-president*, Paul J. Kramer, of Duke University, and *Secretary-treasurer*, Earl S. Johnston, of the Smithsonian Institution of Washington.

THE following officers of the American Rocket Society, 130 West 42nd Street, New York City, have been elected for the coming year: *President*, Cedric Giles; *Vice-president*, Constantine Lent; *Secretary*, J. H. Wyld, and *Treasurer*, Dr. Samuel Lichtenstein.

AT the last regular meeting of the Society of Sigma Xi at the University of Oklahoma, Dr. Charles E. Decker was elected president; Dr. Richard L. Huntington, vice-president, and Dr. Leslie Hewes, secretary-treasurer. A celebration of the four-hundredth anniversary of the death of Copernicus was sponsored by the society on June 29.

HONORARY professorships at Columbia University have been awarded as follows: Dr. William K. Gregory, who has been on the staff since 1925 and has been associated with the American Museum of Natural History since 1911, has been named DaCosta professor of vertebrate paleontology. Dr. William Duncan Strong, professor of anthropology, has received the title of Loubat professor of American anthropology. Professor Douglas Johnson, since 1937 executive head of the departments of geology and mineralogy, has been given the title of Newberry professor of geology.

RONALD AYLMER FISHER, F.R.S., professor of eugenics at University College, London, has been elected to the Balfour professorship of genetics of the University of Cambridge, the appointment to take effect on October 1.

DR. T. SHIRLEY HELE, master of Emmanuel College and representative of the University of Cambridge on the General Medical Council, has been elected vice-chancellor of the university for the ensuing academic year.

VARD M. SHEPARD, who had been temporarily assigned to the Emergency Farm Labor program, has been appointed to the post of extension specialist in animal husbandry at the University of California at Berkeley.

DR. JAMES A. ADAMS, formerly assistant professor of zoology at Grinnell College, has been appointed assistant professor in entomology at the New York State Experiment Station at Geneva, N. Y. For the present, he will devote his attention to studies on the biological control of the Japanese beetle.

THE appointment is announced of Dr. Reginald C. Sherwood, food chemist of St. Paul, Minn., as assistant chief to Dr. Russell M. Wilder in the civilian food requirements branch of the Food Distribution Administration of the Department of Agriculture in Washington, D. C.

DR. JAMES M. SCHOPF has succeeded George M. Sprunk in the microscopical laboratory of the U. S. Bureau of Mines in Pittsburgh. He will continue studies on the origin and constitution of coal varieties that were originally instituted by Reinhardt Thiessen.

DR. VICTOR E. JOHNSON, associate professor of physiology and dean of students in the division of biological sciences of the University of Chicago, on July 1 became secretary of the Council on Medical Education and Hospitals of the American Medical Association. Dr. Basil C. H. Harvey, who retired in September, 1940, after thirty-eight years as a member of the faculty, will return to active duty as acting dean.

BRIGADIER GENERAL JAMES STEVENS SIMMONS, director of the Preventive Medicine Division, Office of the Surgeon General, U. S. Army, was appointed on May 27 by the Board of Overseers of Harvard College a member of the visiting committee for the Harvard School of Public Health.

SIR LAWRENCE BRAGG, Cavendish professor of experimental physics at the University of Cambridge, and Dr. C. G. Douglas, professor of general metabolism at the University of Oxford, have joined the council of the British Gas Research Board.

DR. FRANK WILCOXON, of the Atlas Powder Company, has become group leader in charge of the Insecticide and Fungicide Laboratory of the Stamford, Conn., Research Laboratory of the American Cyanamid Company.

DR. L. M. CLINE, assistant professor of geology at Iowa State College, has resigned to join the Standard Oil Company of Texas, and Dr. N. E. Fabricius, assistant professor of dairy industry at the college, will join the Golden State Company of San Francisco.

DR. SHERWIN F. WOOD, of La Crescenta, Calif., instructor in the department of life sciences at Los Angeles City College, has recently been commissioned a lieutenant (j.g.) in the U. S. Naval Reserves. He is now in training as a malariologist at the National Naval Medical Center in Bethesda, Md.

DR. REGINALD D. MANWELL, professor of zoology in Syracuse University, has been commissioned First Lieutenant in the Sanitary Corps, and has been assigned to Tilton General Hospital, Fort Dix, N. J., for temporary duty.

RESEARCH projects on quinine and other alkaloids of *Cinchona* are announced as follows: Cornell University Medical College, "The action of Cinchona alkaloids on experimental infections," under the direction of Dr. Harry Gold and Dr. McKeen Cattell; New York University, a threefold investigation on (a) "Quantitative study of intestinal absorption and subsequent distribution of the alkaloids between blood, brain and body fluids," (b) "Mode of action on myoneural systems and micro-organisms" and (c) "Action of the alkaloids on isolated enzyme systems," under the direction of Dr. Dugald Brown; the Johns Hopkins University, "A study of quinine and malaria in the Upper Mississippi Valley," by Dr. Erwin H. Ackerknecht, under Dr. Henry E. Sigerist, of the Institute of the History of Medicine; Battelle Memorial Institute, "A preliminary study of the industrial uses of *Cinchona* alkaloids," under the direction of Dr. M. M. Baldwin and Dr. Frank C. Croxton. All the investigations are sponsored by the Cinchona Products Institute, New York, which also announces the availability of two research fellowships for accredited workers in this field.

THE *Journal* of the American Medical Association states that the National Research Council recently sponsored the visit of a group of investigators to the Nutrition Clinic at the Hillman Hospital, Birmingham, Ala., to study the work of Dr. Tom D. Spies with a view to determining the possibility of extending corn meal to meet special nutritional needs of the South. The visit, it is said, was financed by private contributions and by the Research Council. Among the group were Dr. Russell M. Wilder, Washington, D. C.; Dr. William H. Sebrell, Jr., Bethesda, Md.; Dr. Robert F. Griggs, Elmer M. Nelson and Dr. Frank L. Gunderson, Washington; Dr. Charles G. King and Dr. Robert R. Williams, New York, and Dr. James S. McLester, Birmingham.

A SERIES of lectures on tropical diseases was recently given by Captain Paul W. Wilson, of the Medical Corps of the U. S. Navy, at the Mayo Foundation, Rochester, Minn.

DR. FREDERICK C. LEONARD, chairman of the department of astronomy of the University of California at Los Angeles, on May 26 addressed the student body of George Pepperdine College, Los Angeles, on "Copernicus and the Foundations of Modern Astronomy."

PROFESSOR C. L. METCALF, head of the department of entomology, University of Illinois, has completed a fifteen weeks' series of lectures to the officers at Chanute Field, Rantoul, Ill., on medical entomology and insect control.

IN view of the need for pathologic material in undergraduate and graduate education, the Committee on Pathology of the National Research Council urges that all who have suitable anatomic specimens forward them to the curator of the Army Medical Museum, Washington, D. C., for correlation and distribution to other central agencies and to teaching institutions. Material from the following is particularly wanted: the malarial diseases, bacillary dysentery, endamebiasis, the schistosomiasis, filariasis, the trypanosomiasis, the relapsing fevers, the leishmaniasis, the rickettsial diseases, yellow fever, cholera, plague and yaws. On application to the curator, arrangements for transportation will be made.

THE *Experiment Station Record* reports that the Kansas legislature has appropriated \$2,653,000 for the support of Kansas College and four branch stations during the biennium that began on July 1. In addition to lump sum appropriations for salaries and maintenance for instruction and research, the total includes \$102,000 for the four branch stations, \$52,000 for outlying experimental fields, \$10,000 for bindweed experimental work, \$30,000 for research work on diseases of livestock, \$15,000 for milling and baking research, \$20,000 for laboratory equipment, \$200,000 for extension work and \$60,000 for a 16-week wartime summer session. This total also includes \$64,500 for the completion of a military science building, \$50,000 for a small animal laboratory building and \$12,500 for repairs on the power plant. President F. D. Farrell retired on July 1 to become president emeritus. He will be succeeded by M. S. Eisenhower, associate director of the U. S. Office of War Information.

THE Josiah Macy Jr. Foundation, New York City, has made it possible for the National Committee for Mental Hygiene to distribute a limited number of reproductions or reprints of selected scientific articles bearing on war problems in the field of psychosomatic medicine and psychiatry to medical officers in the armed forces of the United Nations. Those who wish to receive such articles should notify the National

Committee for Mental Hygiene, 1790 Broadway, New York 19, N. Y.

It is reported in *The Times*, London, that an official mission from the United States has recently arrived in Great Britain to discuss matters of common interest in connection with the control and production of timber and economy in its use. The mission, which was received by the Minister of Production and the Minister of Supply and officials of both Ministries, is visiting the headquarters of the Timber Control at Bristol to open discussions. Visits were also planned to the Home Timber Production Department, to timber control area offices in the provinces and to important centers of production and consumption.

Chemical and Engineering News reports that cin-

chona tree seeds obtained in the Philippines after the fall of Bataan provide the foundation for development of the quinine industry in the Western Hemisphere. Colonel Arthur F. Fischer, who spent many years in the Philippines raising the cinchona tree, making quinine and fighting malaria, brought 2,000,000 seeds back to the United States after his escape by plane from Mindanao. More than 100,000 seedlings, carefully nurtured by the Department of Agriculture in its experimental greenhouses, are ready for transplanting in Costa Rica. Representatives of Costa Rica and the United States have entered into an agreement under which 10,000 acres of the trees will be planted. A mission soon will leave for Costa Rica to select sites for the large-scale growing program.

DISCUSSION

CONTINENTAL DRIFT AND ANCIENT DUNES

In 1939, von Huene proposed a method for proving or disproving the Wegener hypothesis.¹ In short, he suggested the fixing of climatic zones "for every possible stratigraphic level in every continent, if possible without gap, in order to see how they coincide." If these were to parallel the climatic zones of to-day they would argue against the drifting continent theory. If, on the other hand, the ancient climates showed an aberrant relationship to modern climatic zones, that would strengthen the Wegener hypothesis.

Von Huene suggests the distribution of gypsum as a criterion for the recognition of climatic zones. Does not the wide latitudinal range in which gypsum forms seriously lessen, if not completely eliminate, its use as such a criterion?

Evidence confined to narrow latitudinal limits is the most suitable. While engaged in field work in some of the eolian Jurassic deposits in the southwestern United States, it occurred to the writer that this type of sedimentary record, properly considered, might supply part of the evidence which, amassed in sufficient amounts, might either strongly support, or seriously question, continental drifting.

Examination of the system of planetary winds for an earth of homogeneous surface shows that under these ideal conditions six distinct wind belts are encountered in the distance between the poles. Of course, the actual wind conditions conform only in a general way to this idealized picture, because geomorphic aspects of the continents, land-sea distribution and ocean currents are not without their effects.

This general conformance of surface winds to the idealized arrangement should be reflected in the dunes formed in the larger deserts and semi-arid areas. The

same should be true of ancient dune accumulations with relation to their contemporary wind belts. If the continents have always occupied their present positions and there have been no changes in the positions of the poles, then the direction of movement of ancient winds (as reflected in their deposits) should parallel in a general way the idealized wind direction arrangement. If these ancient winds are found to have blown in directions that largely disagree with the idealized wind direction arrangement as applied to the present positions of the continents, then they should conform in a general way with the earth wind system as applied to the ancient positions of the continents as suggested by Wegener and his supporters.

Cautions must be exercised in studies of this type. Only a general conformance can be looked for, and it is necessary to identify any strata used as definitely of eolian origin.

A limited amount of work has been done, though most of it deals with existing or Recent dune fields. Reiche's classic paper² on the Coconino sandstone of northern Arizona (of Permian age) is of a type that would prove very useful in the type of study here suggested. Among American papers dealing with more recent dune deposits, those of Hack³ and Melton⁴ should be mentioned. It is of interest to note that Reiche's and Hack's papers deal with the same general area (northern Arizona). Winds of Coconino (Permian) time blew from a roughly northerly direction. The winds producing the present dunes in this area are blowing from the southwest, and thus conform to the idealized arrangement of winds for a globe of homogeneous surface.

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² Parry Reiche, *Jour. Geol.*, 46: 905-932, 1938.

³ John T. Hack, *Geog. Rev.*, 31: 240-263, 1941.

⁴ Frank A. Melton, *Jour. Geol.*, 48: 113-174, 1940.

¹ Friedrich von Huene, *Am. Jour. Sci.*, 237: 439, 1939.