treasurer of the union at the meeting of the council of the union in New Orleans on December 28. The results of the solicitation of subscriptions in recent months have thus far led to cash receipts to *Biological Abstracts* that exceed by several hundred dollars all the funds expended during 1931. This is comparable to turning over cash to the *Abstracts* in excess of all money contributed by the societies and in addition financing all activities of the union on behalf of the *Abstracts*. Moreover, the newly acquired subscriptions are likely to be continued in subsequent years, and the activities of the union have been given publicity that should have a continuing value.

In addition to the contributions listed, the American Society of Zoologists passed the following motion by unanimous vote of the forty-five members in attendance at the business meeting held in New Orleans December 30, 1931:

It is moved, subject to approval by two thirds of the members voting in a mail ballot to be sent out by January 10 and returned by February 1, 1932:

(1) That the annual dues be advanced to $5.00 of which $3.00 shall be paid by the Treasurer to *Biological Abstracts* with the proviso that any member or associate member subscribing to this publication shall have this $3.00 credited upon his subscription.

(2) That for the year 1932 and for any later years the Executive Committee be authorized to reduce this addition to the dues by such amounts paid from funds then in the treasury as may be possible without undue reduction of the balance desirable for current activities of the society.

The returns from this mail ballot among life and active members are: 256 for the motion; 60 against. Ballots were also sent to the associate members, who pay the same dues as the full members of this society but have no votes, in order that their sentiment might be recorded. The returns from this vote by associate members are: 48 for the motion; 8 against.

In addition to the substantial amount involved, this action by the zoologists is important because it points the way for societies to support the *Abstracts* even though there may be no immediate prospect of making full subscription a condition of membership.

W. C. CURTIS,
President of the Union of American Biological Societies

SCIENTIFIC NOTES AND NEWS

ON the occasion of his sixtieth birthday anniversary on February 5 Dr. Lafayette B. Mendel, professor of physiological chemistry at Yale University, was presented with a portrait of himself painted by John Quincy Adams, the Viennese artist. Over four hundred students and associates participated in making the gift "in recognition of Professor Mendel's long and distinguished service as a teacher and as a leader in his field of science."

DR. JOHN M. T. FINNEY, professor of clinical surgery at the Johns Hopkins University, received on February 1 the Bigelow medal of the Boston Surgical Society. At the meeting when the presentation was made he spoke on "Changing Methods of Surgery."

THE faculties of Northwestern University gave a dinner on February 19 in honor of their colleagues who had taught in the university for twenty-five years. These included Dr. Thomas F. Holgate, professor of mathematics and dean emeritus of the College of Liberal Arts. Dr. Holgate was acting president of the university from 1904 to 1906 and from 1916 to 1919.

DR. W. B. MERCIER, director emeritus of the agricultural extension division of the Louisiana State University, was awarded the distinguished service ruby of Epsilon Sigma Phi, honorary agricultural extension fraternity, at a recent meeting in Chicago. Only three others have received this honor, which is given in recognition of meritorious service to agriculture.

AT the recent elections of the Société de Biologie of Paris, Dr. A. F. Blakeslee, of the Department of Genetics of the Carnegie Institution of Washington, was made an associate, having previously been a corresponding member of the society.

THE Duddell Medal of the Physical Society of London has been awarded to Professor C. T. R. Wilson, Jacksonian professor of natural philosophy in the University of Cambridge.

DR. DAVID HILBERT, professor of mathematics at Göttingen, celebrated his seventieth birthday on January 23. Dr. Carl Duisberg, professor of chemistry, celebrated on January 21 the fiftieth anniversary of his doctorate.

DR. L. H. ADAMS, of the Geophysical Laboratory of the Carnegie Institution, has been elected president of the Washington Academy of Sciences. Dr. W. S. Eichelberger, director of the Nautical Almanac Office of the U. S. Naval Observatory, and Dr. W. H. Wilmer, director of the Wilmer Institute of Ophthalmology of the Johns Hopkins University, have been elected non-resident vice-presidents.

AT the thirty-ninth annual meeting of the Geological Society of Washington, Dr. François E. Matthes, of the U. S. Geological Survey, was elected president.

AT the annual meeting of the Southern Division of the American Phytopathological Society at New Orleans, Dr. L. E. Miles was elected to represent the division on the council of the society, and an executive council for the division was elected consisting of Dr. R. F. Poole, Dr. C. D. Sherbakoff, Dr. Miles and Dr. W. N. Ezekiel. At a subsequent meeting of this council, Dr. Poole was designated as chairman and Dr. Sherbakoff as secretary.

MR. FRANCIS P. GARVAN, president of the Chemical Foundation, was elected president of the U. S. Institute for Textile Research, at a recent meeting of the directors. Mr. Garvan succeeds the late Dr. Samuel W. Stratton, formerly president of the Massachusetts Institute of Technology, who had been the first president of the institute.

DR. CONRAD BECK, director of R. and J. Beck, Limited, scientific instrument manufacturers, has been elected president of the Royal Microscopical Society; Mr. A. Earland, Dr. R. Ruggles Gates, Mr. J. Reinberg and Dr. G. S. Sansom have been elected vice-presidents.

THE title of professor of biochemistry has been conferred on Dr. Robert Robinson, of the Lister Institute of Preventive Medicine, and that of reader in biochemistry on Dr. J. M. Gulland, also of the institute, and on Dr. William Robson, of King's College.

THE following appointments have been made at the University of Sheffield: Mr. B. H. Bentley, at present lecturer in botany, as professor of botany; Dr. R. N. Rudmose Brown, at present lecturer in geography, as professor of geography; Mr. L. E. S. Easthem, as professor of zoology; Dr. J. Florey, as professor of pathology, and Dr. J. W. Edington, as professor of bacteriology.

MR. ANDREW THOMSON, previously aerologist for the Meteorological Service of New Zealand and for some years director of the Apia Observatory, has been appointed meteorologist in the Canadian Meteorological Service.

DR. A. B. STOUT, director of the laboratories of the New York Botanical Garden, is spending February and March in southern Florida in further studies of flower behavior and fruit production of avocados.

LEAVE of absence from the University of Michigan has been granted to Dr. Warren Weaver, professor of mathematics; F. P. Woy, professor of engineering administration, and Dr. Gordon Ritchie, assistant professor of pathology.

DR. GEORGE C. SHATTUCK, assistant professor of tropical medicine at the Harvard Medical School, sailed from New York on January 23 for Pt. Barrios, Guatemala, where he will undertake research work under the auspices of the Carnegie Institution. Accompanying Dr. Shattuck is Dr. John L. Bremer, Hersey professor of anatomy. The party will explore also the Mayan ruins in northern Guatemala.

DR. J. W. GREGORY, professor of geology in Glasgow University, has arrived in Lima, Peru, at the head of a scientific expedition to study geological formations of the mid-Andean range. The expedition will continue from Peruvian territory into Bolivia and Chile.

PROFESSOR H. J. MULLER, of the University of Texas, delivered two addresses at the Johns Hopkins University on February 8. He spoke before the genetics seminar of the department of zoology on "Mutation, Positive and Negative" and at the Johns Hopkins Hospital on "X-ray Mutations in Relation to Medicine."

DR. E. V. MCCOLLUM, of the Johns Hopkins University School of Hygiene, lectured on January 15 before the North Carolina section of the American Chemical Society, on "The Chemical Background of the Science of Nutrition."

DR. THOMAS S. CULLEN, professor of gynecology at the Johns Hopkins Medical School, delivered the Phi Beta Pi Lecture at the Vanderbilt University School of Medicine on February 16. His subject was "Gynecology of Yesterday and of To-day."

DR. ALBERT EINSTEIN gave a lecture on "The Geometric Interpretation of the Gravitational and Electric Field" at the University of California at Los Angeles, on February 15. Dr. Einstein spoke in German, and his address was translated by Dr. Richard Chase Tolman, professor of physical chemistry and mathematical physics, of the California Institute of Technology.

THE annual public Darwin Anniversary Address, under the auspices of the Botanical Seminar of Michigan State College at East Lansing, was given on February 12 by Professor Charles E. Allen, head of the department of botany of the University of Wisconsin.

THE Non-Resident Lectureship in Chemistry at Cornell University was established by Mr. George Fisher Baker in 1925. Up to the present time the lecturers under this plan have come from abroad, each of them remaining at the university for a full term. It is now planned to expand the program by inviting leading chemists of this country to give one or two lectures before the department on the Baker Foundation. Lecturers and their subjects for the coming university term are as follows: March 7, Professor

Roger Adams, University of Illinois, "Stereochemistry of Substituted Diphenyls"; March 22 and 23, Dean S. C. Lind, University of Minnesota, "Chemical Action under Alpha Radiation" and "Chemical Action in Electrical Discharges"; April 19, Mr. George W. Morey, Geophysical Laboratory, Carnegie Institution, "Transport of Material through a Vapor Phase"; May 2 and 3, Professor R. A. Gortner, University of Minnesota, "Biochemistry and the World To-day" and "The Electrical Value of Forces at Interfaces," and May 17, Mr. R. S. Wilson, Standard Oil Company, Chicago, "The Mechanics of Lubrication."

DR. E. MOLES, general secretary of the Ninth International Congress of Pure and Applied Chemistry, which was to have been held at Madrid, April 3–10, writes as follows: "We have the honor to inform you that the Bureau of the International Union of Chemistry has met with the Delegates of the Organizing Committee specially invited to this meeting, Professor Biilmann acting as president. They considered with care the situation produced all over the world by the economic crisis. If our congress has to be held under such unfavorable circumstances it would necessarily be limited in its efficacy. Subsequently the bureau resolved by common consent with the Organizing Committee to postpone the Ninth International Congress of Chemistry until happier times, that we eagerly hope will arrive quickly. In any case the postponement will affect at least the whole year of 1932. Madrid will be kept as the place of meeting of the next congress. You collaborated very kindly in announcing the congress. Would you be kind enough now to publish the postponement?"

THE American Association of Physical Anthropologists will hold its annual meeting at the Smithsonian Institution, Washington, D. C., on March 21, 22 and 23.

THE Graduate School of Tropical Agriculture at the University of Hawaii announces four graduate research fellowships: two in chemistry in the Experiment Station of the Hawaiian Sugar Planters Association and two in entomology in the Experiment Station of the Association of Hawaiian Pineapple Canners. The stipend of the fellowships is $1,500 for the year 1932–33. Fellows are eligible for reappointment the second year.

THE annual meeting of the committee on the C. M. Warren Fund for Chemical Research of the American Academy of Arts and Sciences will be held in May, 1932. Applications for grants not exceeding $500 in amount should be in the hands of the chairman, Professor James F. Norris, Massachusetts Institute of Technology, Cambridge, Massachusetts, not later than April 1. Applicants should submit a statement of the significance and plan of the proposed research, and the manner in which the money requested is to be used.

The Experiment Station Record reports that a citrus laboratory is to be erected by the Bureau of Chemistry and Soils of the U. S. Department of Agriculture on the grounds of the substation at Weslaco, Texas, in the Rio Grande Valley, for the study of citrus fruit culls and their by-products. A building for this work is to be erected by the chambers of commerce of Weslaco and Mercedes. The first year's program will center largely around problems of grapefruit utilization, including the stage of maturity most favorable for preservation, the utilization of waste from canneries and juice factories, and the feasibility of preparing grapefruit oil, pectin, naringin and other valuable constituents from oil and waste material.

THE London *Times* reports that a British expedition is being formed under the leadership of Mr. Frank Smythe which, subject to permission from the political authorities, will this year attempt to climb Nanga Parbat, in Kashmir, the highest peak in the Western Himalaya. Nanga Parbat stands 26,629 feet high. It is the sixth or seventh highest peak in the world. It was visited in 1895 by a party consisting of A. F. Mummery, General (then Major) Bruce, Professor Norman Collie and Geoffrey Hastings. Mummery made an attempt to climb it accompanied by a single Gurkha, and got to 20,000 feet. Subsequently Mummery, with two Gurkhas, left the base camp to cross the Diamir Pass. They disappeared, and no trace of them was ever discovered. The new British expedition will go prepared for a three months' "siege." It is thought that the knowledge gained in recent British and German expeditions to Kamet and Kanchenjunga may be of use. Mr. Smythe was the leader of the small party which last year conquered Kamet, and a member of the Dyhrenfurth Expedition which attempted Kanchenjunga the previous year.

ACCORDING to the *Journal* of the American Medical Association the new Edward Mallinckrodt Institute of Radiology, at Washington University School of Medicine, St. Louis, representing an investment of $1,220,000, is now in almost complete clinical operation. The eight-story building houses the roentgenologic activities of the school of medicine and the allied hospitals. The second, third and fourth floors are reserved for general roentgenologic, surgical urologic and gastro-intestinal diagnoses; the waiting rooms have been planned to eliminate confusion in separating hospital and dispensary cases and making further division of patients by sex and race. The time necessary for a diagnosis has been shortened by having dark rooms on each of these floors, all the chem-

icals for which are mixed in central tanks on the fifth floor and fed to the individual dark rooms below through specially constructed pipes. The fifth floor has been set aside for treatment work, the sixth for research in the physics of radiation, and the seventh for roentgen research on animals, but these are not yet in use. Since treatments comprise less than 5 per cent. of the work done at the institute, they are now being given in smaller quarters in the basement. The institute was erected under the direction of Dr. Sherwood Moore with funds provided by the late Edward Mallinckrodt, Sr., and Mr. Edward Mallinckrodt, Jr. Special apparatus, worth $20,000, was provided by John F. Queeny and his son, Edgar M. Queeny, and the General Education Board gave the endowment of $750,000. A memorial room is planned on the main floor of the institute for Dr. R. Walter Mills, who, as director of the department of radiology, planned the development of the institute. Dr. Mills died in 1924 from over-exposure to x-rays. Since his death, the project has been carried on by Drs. Moore, Evarts A. Graham and W. McKim Marriott, dean of the medical school.

ACCORDING to the *Journal* of the American Medical Association the Henry Barton Jacobs collection of medical books, prints, medals and autograph letters was formally presented to the Institute of the History of Medicine of the Johns Hopkins University, on January 14, by Dr. Henry Barton Jacobs. What is believed to be the world's only complete collection of the writings of Réné-Théophile-Hyacinthe Laënnec (1781–1826) is included in the gift. Included also are complete collections in all editions and all western languages of the writings of Edward Jenner (1749–1823), Louis Pasteur (1822–1895) and Sir William Osler (1849–1919). The collection consists of 5,000 volumes, about 2,500 medical prints, 500 medical medals and about 300 autograph medical letters and manuscripts. Stained glass windows commemorating Laënnec, Jenner, Pasteur and Osler have been placed in the room which Dr. Jacobs has equipped on the institute floor of the library for housing the collection as a unit. Dates, medical symbols and works associated with the men they commemorate are worked into the design of the windows. The collection was accepted on behalf of the university by Mr. Daniel Willard, president of the board of trustees; President Joseph S. Ames presided. The speakers included Dr. William H. Welch, Dr. Harvey Cushing, Colonel Fielding H. Garrison and Dr. Jacobs. Dr. Jacobs was recently elected president of the Friends of the Johns Hopkins University Library.

IT was announced a few months ago that the International Institute of African Languages and Cultures had received from the Rockefeller Foundation a substantial grant for the development of sociological research in Africa. The London *Times* now reports that the council of the institute, after consultation with anthropologists in several countries and with African administrators and educators, has decided that the best use that can be made of the resources at its disposal is to encourage and assist studies directed to a single main objective. It has selected as this objective the problem of the cohesion of African society. Native society in Africa is subjected to a severe strain through contact with the ideas and economic forces of European civilization. The object of the proposed study will be to obtain a better knowledge of the bonds which hold African society together and unite its members in a common discipline and mutual loyalty, of the ways in which these bonds are being modified or destroyed by the new forces that are invading the continent, and of the new social groupings which are replacing those that are unable to survive in the changed conditions.

Nutrition Abstracts and Reviews, a new periodical dealing comprehensively with the nutrition of man and the lower animals, has just been issued under the direction of the Imperial Agricultural Bureaux Council, the Medical Research Council, and the Reid Library, Aberdeen, Scotland. Its editorial staff, headed by John Boyd Orr, is assisted by corresponding editors in twenty-nine other countries. The corresponding editors in the United States are Dr. H. C. Sherman, Columbia University, and Dr. J. R. Mohler, chief of the Bureau of Animal Industry, U. S. Department of Agriculture. *Nutrition Abstracts and Reviews* contains editorial comment and brief articles by leading authorities, but consists principally of abstracts classified in six main sections for the convenience of workers in various fields. The abstracts present scientific findings reported in about 450 periodicals. A short book-review section concludes the volume, the first of which contains 351 pages and covers the period January 1 to June 30, 1931.

A LIBRARY of British Empire films has been formed by the Empire Marketing Board and the first catalogue, containing the names of over 130 films, has been issued. Schools in all parts of the country are now receiving regularly short films of life and work oversea. These have been catalogued under countries, and practically every school in the United Kingdom will receive a catalogue. Mr. John Grierson, the board's film officer, recently visited Canada and brought back much material from the Canadian Government Motion Picture Bureau. There is now a particularly good selection of Canadian films, ranging from pictures of production—the felling of lumber, harvesting of apples and catching of salmon—to fight-

ing forest fires with seaplanes, camping in the Rockies and other aspects of life in the Empire. Films of how people live and how the Empire's food is raised in other Dominions and in several of the Colonies are included in the catalogue. Over 2,000,000 people, of whom about half were school children, have now attended the Imperial Institute cinema at Kensington, where the Empire Marketing Board films are shown continuously. One of these pictures is described as a "dramatized lesson in economic history," and shows, in a series of swift, vivid flashes, the development of the North American prairies. Another is a one-reel version of *Drifters,* a film epic of the North Sea.

FORTY of the states and territories will spend a total of $201,917 for growing and distributing trees for planting of farm forests in 1932, according to budget figures received by A. B. Hastings, chief of state cooperation in the forest service. The federal government will allot $73,288 to these states under the cooperative farm-forest planting clause of the Clarke-McNary Act. The cooperating states have budgeted $645,298 for various forest-tree production and distribution purposes for the fiscal year 1932, which is only about $5,000 less than the 1931 total. About 31 per cent. of the total state funds will be used for farm-forest planting arrangements in which the federal government is cooperating. In addition to the $73,288 in federal allotments for 1932, $3,150 is to be available for administrative purposes and $18,561 as a contingent fund for allotments to new states entering the cooperative arrangements, making a total federal budget of $95,000 for aid in farm forestation. With the 1931 state and federal funds the states furnished approximately 25,000,000 trees for planting in farm forests. Comparatively large increases in cooperative state funds devoted to farm-forest planting projects were budgeted in New Jersey, Indiana, Florida, Nebraska, Louisiana, Oklahoma, Pennsylvania and South Carolina, with lesser increases in Delaware, Maryland, Washington, Michigan and Wisconsin.

DISCUSSION

ASYMMETRIC VALLEYS AND CLIMATIC BOUNDARIES

IN a recent article in SCIENCE[1] Russell discusses the coincidence of position of the January isotherm of 32° F. with certain asymmetric valleys having the steeper slopes facing north. The writers believe that Russell is correct in emphasizing climatic conditions as a cause for asymmetry and in considering the freezing of soil water as of great importance. They doubt, however, that he has established any association between a given type of asymmetry and any isothermal line.

In enumerating the causes of asymmetry, Russell neglected to mention the factor of stream deflection due to the earth's rotation. This factor was given more consideration by Gilbert and his contemporaries than is now customary. However, before climatic generalizations are established, asymmetric valleys attributed to this cause must be satisfactorily eliminated. One of the best known examples lies on the January isotherm of 32° F. and one lies far south.

Fuller,[2] in regard to asymmetric valleys of southern Long Island, declares that a full four fifths of these valleys have a steeper western slope. In his opinion, the deflection hypothesis of the early workers is the best explanation available. On Martha's Vineyard are similar valleys to which the same argument is applicable. Thus we have, directly under the isothermal line in question, examples of an asymmetry apparently unrelated to climatic conditions.

The marked asymmetry of the valleys of the coastal plain of North and South Carolina is characterized by steeper, north-facing slopes. These valleys lie several hundred miles south of Russell's line and nearer the January isotherm of 40° F. According to Kerr,[3] these valleys are due to right-hand deflection of streams.

The detailed, irregular, isothermal line on Russell's maps[4] appears to cross the Pajarito Plateau of New Mexico, described by Henderson.[5] Here are asymmetric valleys with the steeper slope facing the south. A comparison of Henderson's description with Culbertson's[6] description of the wooded, asymmetric valleys of southern Indiana brings out clearly how—along the same (January, 32° F.) isothermal line—the same processes may produce diametrically opposite results in arid and in humid climates.

Asymmetry is not uncommon in arid regions and has been observed by Bryan at many localities in southern Arizona. Generally the south side of the valley has the gentler slope and is marked by heavier vegetation. The interrelation seems obvious: shelter from the sun's rays decreases soil evaporation and transpiration; consequently plants thrive and in turn protect the slope from the violent erosive action which makes the north slope bare and steep.

[1] R. J. Russell, "Geomorphological Evidence of a Climatic Boundary," SCIENCE, 74: 484–495, 1931.

[2] M. L. Fuller, "Geology of Long Island," Prof. Paper 82: 50, 1914.

[3] W. C. Kerr, "Topography as Affected by Rotation of the Earth," *Proc. Am. Phil. Soc.*, 13: 190–192, 1873.

[4] R. J. Russell, "Dry Climates of the United States: I, Climatic Map," *Univ. Calif. Publ. Geog.*, 5: 1–41, 1931.

[5] E. L. Hewett, J. Henderson, W. W. Robbins, "Physiography of the Rio Grande Valley, N. M., etc.," *Bull. Bur. Amer. Ethnol.*, 54: 1913.

[6] G. Culbertson, "Some Evidence Indicating the Importance of Frost Action in Widening Valleys," *Proc. Ind. Acad. Sci.*, 1899: 167–170, 1900.