THE AMERICAN ACADEMY OF TROPICAL MEDICINE

THE third annual meeting of the American Academy of Tropical Medicine was held in Baltimore, on November 18, with President Richard P. Strong, of the Harvard Medical School, presiding. The academy has no scientific program, since it meets with the American Society of Tropical Medicine. At the annual dinner, at which members of the American Society of Tropical Medicine were guests, Dr. Robert Hegner, of the Johns Hopkins School of Hygiene and Public Health, presided as toastmaster. The guest speaker, Dr. Ernest Muir, was introduced by Perry Burgess, president of the Leonard Wood Memorial. Dr. Muir spoke on "Recent Progress in Tropical Medicine in India." The dinner program was concluded with an address by President Strong.

At the business session of the academy, Dr. Edmund V. Cowdry, professor of cytology at the Washington University Medical School, St. Louis, and Dr. Fred L. Soper, of the Division of International Health of the Rockefeller Foundation, were elected to active membership, and Professor W. A. P. Schüffner, of the School of Tropical Medicine, Amsterdam, was elected to honorary membership. The newly elected officers consist of: *President,* Dr. Wilbur A. Sawyer, Rockefeller Foundation, New York City; *Vice-president,* Dr. F. G. Novy, University of Michigan; *Secretary,* Dr. Ernest Carroll Faust, Tulane University; *Treasurer,* Dr. W. W. Cort, the Johns Hopkins University; *Councillors,* Dr. Herbert C. Clark, Gorgas Memorial Laboratory, Panama City; Dr. Thomas T. Mackie, New York City; Dr. Maurice C. Hall, National Institute of Health, Washington, D. C.; Dr. William H. Taliaferro, University of Chicago, and Dr. George C. Shattuck, Harvard Medical School.

ERNEST CARROLL FAUST,
Secretary

RECENT DEATHS

FRANK P. MCKIBBEN, consulting engineer, formerly professor of civil engineering at the Massachusetts Institute of Technology, Lehigh University and Union College, died on November 27 at the age of sixty-five years.

WILLIAM SAMUEL ROWLAND, chemical engineer, president of the Stanley Chemical Company, died on November 12. He was fifty-five years old.

DR. DAVID JUDSON LINGLE, physiologist, until his retirement in 1925 for thirty-three years a member of the faculty of the University of Chicago, died on November 27 at the age of seventy-three years.

DR. J. M. H. MUNRO died on November 6 at the age of eighty-one years. He was one of the founders in 1880 of the Downton Agricultural College in Wiltshire, England, and lectured on agricultural chemistry there.

Nature reports the death of Professor F. Hendrickx, emeritus professor of veterinary medicine in the Belgian Veterinary School, and of Dr. Gustaf Schack-Sommer, a pioneer in the sugar-beet industry in Great Britain, aged eighty-two years.

EDOUARD GOURSAT, professor of mathematics at the Sorbonne, Paris, and member of the Academy of Sciences, died on November 26 at the age of seventy-eight years.

SCIENTIFIC NOTES AND NEWS

THE John Fritz Gold Medal for 1937 has been awarded to Dr. Arthur Newell Talbot, professor emeritus of municipal and sanitary engineering in the University of Illinois. The medal is awarded for scientific achievement by a board composed of sixteen past presidents of the National Societies of Civil, Mining and Metallurgical, Mechanical and Electrical Engineers.

DR. EDWARD KASNER, professor of mathematics at Columbia University, has been awarded the Townsend Harris Medal of the College of the City of New York.

THE Chadwick Gold Medal and Prize for excellence in municipal engineering and hygiene has been presented to E. A. Drew, of University College, London.

THE Leonard Prize and Medal of the German Colloid Society has been awarded to Dr. Leo Ubbelohde, professor of applied chemistry in the University of Berlin.

A DINNER was held on October 19 in honor of Dr. John Harvey Kellogg, now eighty-four years old, on the completion of sixty years as head of the Battle Creek Sanitarium, Michigan.

HAROLD H. BEVERAGE, research engineer of R. C. A. Communications, Inc., a member of the board of editors of the *R. C. A. Review,* has been elected president of the American Institute of Radio Engineers.

DR. REGINALD FITZ, Wade professor of medicine at the Boston University School of Medicine and director of Evans Memorial Hospital, has been appointed lecturer in the history of medicine at Harvard University Medical School for three years. Dr. Fitz resigned in 1935 as associate professor of medicine at the medical school to go to Boston University.

DR. PAUL E. FIELDS, of Maryville College, Tenn.,

has become head of the department of psychology at the Ohio Wesleyan University.

H. E. GROSS, petroleum engineer in the Exploitation Department for the Shell Petroleum Company, Tulsa, Okla., for the past three years, has become a member of the faculty of the School of Petroleum Engineering of the University of Oklahoma.

DR. J. MARVIN WELLER, geologist and head of the Division of Paleontology and Stratigraphy of the Illinois Geological Survey, will teach, for the remainder of the semester, the courses in petroleum geology hitherto given by Professor Frank W. DeWolf, head of the department of geology and geography at the University of Illinois. Due to ill health Professor DeWolf will be absent from the university.

DR. WILLIAM MARSHALL SMART, John Couch Adams astronomer, chief assistant in the observatory and lecturer in mathematics at the University of Cambridge, has been appointed Regius professor of astronomy at the University of Glasgow in the place of Professor Ludwig Becker, who has retired.

Nature states that during the interregnum between the departure of Professor James Ritchie from the University of Aberdeen to the University of Edinburgh and the arrival of a successor, Professor Walter Garstang, formerly of the University of Leeds, will take charge of the department of natural history.

DR. FREDERICK SODDY has resigned from the chair of inorganic and physical chemistry at the University of Oxford, which he has held since 1919.

DR. CHARLES-EDOUARD GUILLAUME, director of the International Bureau of Weights and Measures, Paris, has retired after serving for fifty-three years. He will be succeeded by M. Albert Pérard, assistant director of the bureau.

HERBERT K. ALBER, instructor in chemistry at New York University, has become research microanalyst at the Biochemical Research Foundation of the Franklin Institute, Philadelphia.

L. S. KASSEL, for the past five years physical chemist in the U. S. Bureau of Mines, has been appointed research engineer of the Universal Oil Products Company.

DR. PERCY M. BARR, formerly chief of the Research Branch of the British Columbia Forest Service, who has been for the last four years a member of the Division of Forestry of the University of California, has leave of absence during the present semester to aid in a general reorganization of the department of forestry of the University of British Columbia.

DR. CARL ANDERSON, of the California Institute of Technology, left on November 30 to attend the ceremonies at Stockholm to receive the Nobel prize in physics that has been awarded to him. He will give an address on his work.

NORMAN B. TINDAL, ethnologist in the South Australia Museum at Adelaide, is visiting the United States.

DR. VLADIMIR KARAPETOFF, professor of electrical engineering at Cornell University, who recently was granted a patent on his invention of an electrical distribution system, has assigned the patent rights to the General Electric Company, Schenectady.

THE New York *Herald-Tribune* reports that Viacheslav Volgin, geologist, and Nikolai Bukharin, publicist, members of the Academy of Science at Leningrad, have been asked to appear before the Communist party organization to explain how they happened to allow "Trotskyist Fascist" tendencies to develop in the academy.

AT a meeting of the Board of Trustees of the American Museum of Natural History on November 9, Charles Hayden, member of the firm of Hayden, Stone and Company, was elected a member of the board. Mr. Hayden gave the sum of $100,000 toward the erection of the Zeiss projector and the solar system exhibit in the planetarium, which was named the Hayden Planetarium in his honor. At the same meeting a committee was appointed by the board to cooperate with other groups in preparation for the forthcoming World's Fair to be held in New York City. The committee consists of Frederick Warburg, *chairman;* Charles Hayden, Arthur S. Vernay, Douglas Burden, Clarence L. Hay, Junius S. Morgan, Dr. Roy Chapman Andrews and F. Trubee Davison.

DR. R. W. WOOD, of the Johns Hopkins University, will give three Christmas week lectures for young people of the James Mapes Dodge Foundation of the Franklin Institute, Philadelphia, on December 28, 29 and 30. The subject of the lectures is "Crystal Magic." Dr. Wood gave ten years ago the first series of lectures on this foundation.

DR. ERNEST W. GOODPASTURE, professor of pathology at the School of Medicine of Vanderbilt University, will deliver the thirteenth Ludvig Hektoen Lecture of the Frank Billings Foundation on January 22. His subject will be "Vaccinia."

PROFESSOR DOUGLAS JOHNSON, of Columbia University, delivered the annual fall lecture of the Department of Geology and Geography at Syracuse University on November 11. In the afternoon he addressed the advanced students of the department on "The

Correlation of Coastal Terraces," and in the evening before a general audience spoke on the "Evolution of the Grand Canyon District."

DR. ARTHUR C. CHRISTIE, formerly professor of radiology at the George Washington University Medical School and at Georgetown University, delivered the Silvanus Thompson Lecture before the British Institute of Radiology at its annual congress in London on December 2.

SIR FRANK SMITH, secretary of the Royal Society and secretary of the Department of Scientific and Industrial Research, delivered the first Parsons Memorial Lecture before the North-East Coast Institution of Engineers and Shipbuilders on November 6. Arrangements for honoring the memory of Sir Charles Parsons, who died in 1931, have been made by the Royal Society. They take three forms—a memorial in Westminster Abbey, a Memorial Library in London House and an annual lecture, which is to be delivered every fourth year on the North-East Coast, the other lectures being in London.

A MEETING of the American Shore and Beach Preservation Association, under the presidency of J. Spencer Smith, of Newark, N. J., will be held on December 14 in Washington, under the auspices of the National Research Council.

BY the will of the late Dr. Edward Weston, who died on August 20 at the age of eighty-six years, the Newark College of Engineering will receive his scientific library of more than fifteen thousand volumes, together with his early electrical apparatus and drawings. The will also provides sufficient funds for the housing and maintenance of the library.

GIFTS amounting approximately to $90,000 have been announced by the Yale Corporation. These include $28,333 from the Rockefeller Foundation for varied research and $16,376 for the Edward R. Pidgeon Fund for general purposes.

LORD NUFFIELD, chairman of Morris Motors, Ltd., has added £750,000 to his recent gift to the University of Oxford, making the total sum £2,000,000. His original gift was insufficient for full development of the medical school on the lines he had intended.

THE London *Times* reports a bequest of £20,000 by the late Edith Mary Valentine Scott Lang to St. Andrews University, Scotland, for a Napier lectureship in astronomy in memory of Baron Napier of Merchiston. The bequest is subject to the condition that the university provides an observatory and instruments. Miss Lang's father, Sir Peter Redford Scott Lang, was regius professor of mathematics at St. Andrews for forty-two years.

The New York Times states that a center to include a permanent museum of health and hygiene is planned for the World Fair of 1939. The Oberlaender Foundation and the Carnegie Corporation have pledged financial assistance, and other grants will be sought. Dr. Louis I. Dublin, chairman of the advisory group which will formulate plans for the buildings and exhibits, has sailed for Europe, where he will seek to interest health and hygiene organizations in meeting in New York during the fair. Dr. James R. Reuling is vice-chairman of the committee and Homer N. Calver is secretary. Health Commissioner John L. Rice and Hospitals Commissioner S. S. Goldwater represent the city. Medical groups are represented by Dr. George Baehr, of the New York Academy of Medicine, and Dr. Reuling, of the American Academy of Medicine. Public health groups are represented by Dr. Victor Heiser, chairman of the General Council on Medicine and Public Health; Dr. Dublin, of the National Health Council, and Mr. Calver, of the American Public Health Association. The committee will be increased later. A museum patterned after the Museum of Hygiene in Dresden, Germany, is planned, also a complete health and medical exhibit, a model health village, use of safety devices and services throughout the fair for the benefit of visitors and control of all products sold or promoted on a health basis.

A NEW six-hourly system of reports of the U. S. Weather Bureau is expected to be in operation by January 1. About thirty of these stations will be established at existing first order Weather Bureau stations and ninety new stations will be located geographically so as to give a fairly well-spaced and dense network of reports over the entire country. These stations are intended primarily to facilitate the preparation and improve the accuracy of six-hourly airway forecasts by use of the methods of air-mass analysis. Full instrumental equipment, including an anemometer, mercurial barometer and an open-scale barograph will be supplied to all new stations. The new station on the summit of Mt. Mitchell, N. C. (6,639 ft. M.S.L.), provides a mountain observatory station in the southeastern United States similar to Mt. Washington, N. H., in the northeastern United States. A national distribution will be given to all six-hourly reports, except that reports from the new stations in the far eastern or western portions of the country will be given distribution only to local districts concerned.

Museum News states that the Boston Society of Natural History has named its museum the New England Museum of Natural History; and is making alterations in its building and rearranging its exhibits with the view of making the museum more attractive to the public. A huge stair-well in the

center of the building connecting the main and second floors is being eliminated. New stairways are being constructed on either side, leaving the central space free for exhibits. The main entrance hall will have new cases for changing exhibits and at the back, opposite the front door, a group of herring gulls and common terns on sand dunes at Plymouth harbor. The lecture room floor is being leveled so that the room can be used for children's work also. A new room for study collections is provided in the basement. Exhibits are being rearranged by all the departments with the idea of appealing to the public rather than of adhering to the purely scientific point of view. Herpetological exhibits, for instance, will emphasize life histories and economic value of reptiles and amphibians; birds are grouped by habitat and status as residents. New labels to interest the visitor are being worked out. The museum is closed while alterations are being made. The date for the reopening of the building has not yet been set, but it will probably be early in the coming year.

A COLLECTION of several hundred Californian plants which has all but encircled the earth is now being studied in the herbarium of the California Academy of Sciences in San Francisco. The specimens were collected in 1840 and 1841 by the Russians in the region then known as Russian California ("California boreal. Ross." the labels read) and were sent from California to the herbarium of the Russian Academy in St. Petersburg by way of Vladivostok and across Siberia. These same specimens which have remained unnamed for nearly a hundred years are being determined by J. T. Howell at the California Academy of Sciences after which they will be returned to the herbarium of the Academy of Sciences in Leningrad. The plants, which were collected in different parts of the Russian territory, were obtained by Vosnesensky ("Wosnessensky"), who was in the first party to climb Mt. St. Helena in the Californian Coast Ranges north of San Francisco. Fort Ross, the chief Russian port and settlement on the Californian coast, is about sixty miles north of San Francisco.

DISCUSSION

LENS-LIKE ACTION OF A STAR BY THE DEVIATION OF LIGHT IN THE GRAVITATIONAL FIELD

SOME time ago, R. W. Mandl paid me a visit and asked me to publish the results of a little calculation, which I had made at his request. This note complies with his wish.

The light coming from a star A traverses the gravitational field of another star B, whose radius is R_o. Let there be an observer at a distance D from B and at a distance x, small compared with D, from the extended central line $\overline{AB}$. According to the general theory of relativity, let α_o be the deviation of the light ray passing the star B at a distance R_o from its center.

For the sake of simplicity, let us assume that $\overline{AB}$ is large, compared with the distance D of the observer from the deviating star B. We also neglect the eclipse (geometrical obscuration) by the star B, which indeed is negligible in all practically important cases. To permit this, D has to be very large compared to the radius R_o of the deviating star.

It follows from the law of deviation that an observer situated exactly on the extension of the central line $\overline{AB}$ will perceive, instead of a point-like star A, a luminius circle of the angular radius β around the center of B, where

$$\beta = \sqrt{\alpha_o \frac{R_o}{D}}.$$

It should be noted that this angular diameter β does not decrease like $1/D$, but like $1/\sqrt{D}$, as the distance D increases.

Of course, there is no hope of observing this phenomenon directly. First, we shall scarcely ever approach closely enough to such a central line. Second, the angle β will defy the resolving power of our instruments. For, α_o being of the order of magnitude of one second of arc, the angle R_o/D, under which the deviating star B is seen, is much smaller. Therefore, the light coming from the luminous circle can not be distinguished by an observer as geometrically different from that coming from the star B, but simply will manifest itself as increased apparent brightness of B.

The same will happen, if the observer is situated at a small distance x from the extended central line $\overline{AB}$. But then the observer will see A as two point-like light-sources, which are deviated from the true geometrical position of A by the angle β, approximately.

The apparent brightness of A will be increased by the lens-like action of the gravitational field of B in the ratio q. This q will be considerably larger than unity only if x is so small that the observed positions of A and B coincide, within the resolving power of our instruments. Simple geometric considerations lead to the expression

$$q = \frac{l}{x} \cdot \frac{1 + \frac{x^2}{2l^2}}{\sqrt{1 + \frac{x^2}{4l^2}}},$$

where

$$l = \sqrt{\alpha_o D R_o}.$$