

the county has begun the construction of roads which will connect the zoo with the main boulevards of the vicinity.

It is felt that the plan for the park embodies some noteworthy features made possible by a study of existing parks in Europe and in this country, and by the fact that the entire park is being planned at one time upon a large scale. Automobile traffic is being entirely separated from pedestrians and will follow a circular roadway just inside the fence.

A system of deep moats is to be used in the place of bars to confine the animals whenever possible. This and other arrangements will do much to avoid the cramped conditions often prevailing in zoological gardens.

While nothing has been done as yet toward acquiring a collection for the new park, a tentative list of inhabitants has been worked out. This includes 876 specimens of mammals divided into 269 species; 2,398 birds of 794 species; 300 reptiles representing 75 species, and 90 batrachians of 30 species. There will also be an insect collection including about 200 species.

SCIENTIFIC NOTES AND NEWS

DR. FREDERIC A. LUCAS, honorary director of the American Museum of Natural History, has been elected an honorary member of The Museums Association, Great Britain. This is the first time that the distinction, restricted to fifteen persons, has been conferred upon any one outside of Great Britain.

IN addition to the medals awarded to Dr. W. D. Coolidge, Professor A. A. Noyes and Professor J. C. McLennan previously announced in *SCIENCE*, the Royal Society has awarded a royal medal to Sir Thomas Lewis, F.R.S., for his researches upon the vascular system, following upon his earlier work on the mammalian heart-beat; the Copley medal to Sir Charles Sherrington, O.M., F.R.S., for his distinguished work on neurology, and the Buchanan medal to Dr. Major Greenwood for his statistical researches and other work in relation to public health.

DR. GRAHAM LITTLE, member of parliament, for London University, has been elected an honorary member of the Royal Academy of Medicine of Rome, and a fellow of the Royal Society of Physicians of Budapest.

A SPECIAL number of the *Zeitschrift für physikalische Chemie* has been dedicated to Professor Ernst Cohen, of the University of Utrecht, to commemorate the twenty-fifth year of his professorship.

PROFESSOR PAUL LECENE, who occupies the chair of surgical pathology in the Paris Faculty of Medicine,

has been nominated an officer of the Legion of Honor.

DR. LEE K. FRANKEL, former president of the American Public Health Association, will be guest of honor at a testimonial dinner to be given on December 9 at the Biltmore Hotel by friends associated with him in health work. The speakers will include Felix M. Warburg, Professor C-E. A. Winslow and Haley Fiske.

SIR CHARLES MARTIN, director of the Lister Institute, upon whom the honor of knighthood was recently conferred, has been presented with his portrait by the staff of the institute as a token of personal esteem and appreciation of his great services during the twenty-four years of his directorship. The presentation of the portrait took place in the library of the institute on October 28, when Professor Harden presided over a large company of past and present members of staff and research workers.

FREDERIC S. LEE, research professor of physiology in Columbia University, has resigned the presidency of the board of managers of the New York Botanical Garden after a service of five years.

AT the annual meeting of the American Ornithologists' Union held at the U. S. National Museum from November 14 to 17, the following officers for the year 1926-1927 were elected: Alexander Wetmore, assistant secretary of the Smithsonian Institution, *president*; T. S. Palmer and W. L. McAtee, of the U. S. Biological Survey, *secretary and treasurer*.

THE following officers have been elected by the American Society of Agronomy: Dr. A. G. McCall, *president*; Dr. E. F. Gaines, *first vice-president*; Dean M. J. Funchess, *second vice-president*; Professor W. W. Burr, *third vice-president*; Dr. A. B. Beaumont, *fourth vice-president*; Professor J. D. Luckett, *editor*, and Dr. P. E. Brown, *secretary-treasurer*.

DR. WALTER L. NILES, dean and professor of clinical medicine of Cornell University Medical College, was elected president of the Association of American Medical Colleges at its recent annual meeting in Montreal; Dr. Burton D. Myers, assistant dean and professor of anatomy, Indiana University School of Medicine, Indianapolis, *vice-president*; Dr. Irving S. Cutter, dean and associate professor of medicine, Northwestern University Medical School, Chicago, chairman of the executive committee, and Dr. Fred C. Zapffe, 25 East Washington Street, Chicago, *secretary-treasurer*. The next annual meeting will be at Indianapolis from October 29 to 31, 1928.

AT the annual general meeting of the Mineralogical Society, England, held on November 1, Dr. G. T.

Prior, keeper of the department of minerals in the British Museum, was elected president.

DR. SYLVAN J. CROOKER, formerly with the U. S. Bureau of Standards, has resigned his position as chief engineer of the Whitlock Coil Pipe Company, Hartford, Conn., to become vice-president of the Heat Transfer Products, Inc., a division of the Staten Island Shipbuilding Company, New York City.

HAAKON WEXELSEN, who has been a graduate student in genetics at the University of California for the past year and a half, has been appointed director of Felleskjoepels Experiment Station at Vidarshof, Norway.

A. W. ALLEN was recently appointed editor of *Engineering and Mining Journal*, succeeding J. E. Spurr.

DR. WILBERT W. WEIR, associate soil technologist of the U. S. Bureau of Chemistry and Soils, has accepted a position on the staff of the Chilean Nitrate of Soda Educational Bureau, with headquarters in New York City.

DR. R. E. CLAUSEN, associate professor of genetics at the University of California, has recently returned from sabbatical leave after an absence of fifteen months in Europe. The first twelve months were spent at Stockholm, where he worked in the cytological laboratories of Dr. O. Rosenberg. During the remaining three months he was engaged in an inspection of the research in genetics under way in Europe for the International Education Board, under which he held a fellowship.

DR. FREDERICK G. KEYES, head of the department of chemistry at the Massachusetts Institute of Technology, has arrived in Boston from Paris after an absence of five and a half months, to resume his duties with the department. While in Paris Dr. Keyes acted as representative of the institute at the Marcelin Berthelot centenary memorial.

DR. ROBERT L. PORTER, recently appointed dean of the University of California Medical School, has arrived in San Francisco to take up his new duties after spending three years in study in Rome. While on leave Dr. Porter visited medical schools in Italy, France, Great Britain, Canada and the United States.

DR. H. NOGUCHI, of the Rockefeller Institute, arrived in Accra, on the British Gold Coast, on November 17, to investigate the yellow fever problem.

DR. NIELS NIELSEN, the Danish explorer, has returned to Denmark after a difficult expedition to unknown parts of the interior of Iceland, on which expedition he was accompanied by P. Hannesson and Sturla Jonsson, both Icelanders.

DR. A. W. HILL, director of the Royal Botanic Gardens at Kew, sailed for Australia on November 4 on the invitation of the Commonwealth Council for Scientific and Industrial Research, Melbourne. He will visit the various botanical, agricultural and forestry Institutions in Western Australia, and will then proceed to Adelaide, Melbourne, Sydney and Brisbane.

DR. ANTOINE LACASSAGNE, assistant director of the Radium Institute of the University of Paris, and Professor Hermann Holthusen, of Hamburg, recently spent a few days in New York visiting hospitals and institutions where radium and X-rays are used in the treatment of cancer. Both expect to visit other American cities before going to New Orleans to attend the meeting of the Radiological Society of North America.

PROFESSOR H. N. RUSSELL, of Princeton University, gave a talk at the U. S. Bureau of Standards on November 4, on "The Structure of the Elements of the Iron Group." On October 15, J. W. French, technical director of Barr and Stroud, Ltd., manufacturers of military optical instruments, Glasgow, lectured on "Optical Glass" at the bureau.

DR. W. V. BINGHAM gave an address before the British Psychological Society at the Royal Anthropological Institute, London, on November 2, on "Individual Differences in Susceptibility to Accidents." He has now returned to New York, after visiting technopsychological laboratories in France, Switzerland, Holland, Germany and England. While in Paris he contributed to the Fourth International Conference for Technopsychology a paper on "Neglected Methods in Employment Psychology," and was elected a member of the board of directors of the association.

DR. WALTER S. ADAMS, director of the Mount Wilson Observatory of the Carnegie Institution of Washington, will give a lecture on "The Interior of a Star and how it maintains its Life" on December 6 in the administration building of the institution in Washington.

PROFESSOR ROSWELL JOHNSON, head of the oil and gas school at the University of Pittsburgh, addressed the Sigma Xi alumni club of the University of Pittsburgh on November 29 in the physics lecture room. His topic was "Science in Russia."

DR. DANIEL T. MACDOUGAL, director of the laboratory of plant physiology of the Carnegie Institution of Washington, will read a paper on "Substances regulating the Passage of Materials into and out of

Plant Cells—the Lipoids” before the American Philosophical Society, Philadelphia, on December 2.

DR. HENRY J. VAUGHAN, commisisoner of health of Detroit, gave one of the DeLamar lectures in hygiene at the Johns Hopkins University School of Hygiene and Public Health, November 15, on “Municipal Health Administration.”

DR. A. F. SHULL, professor of zoology in the University of Michigan, recently addressed the department of biology of Princeton University on “Photoperiodism and the Wings of Aphids.”

A MEETING commemorating the bicentenary of the death of Sir Isaac Newton was held at the American Museum of Natural History on November 26 and 27, under the auspices of the History of Science Society and other scientific organizations, at which many distinguished speakers took part. It is hoped to print a full account of the meeting in an early issue of SCIENCE.

A FORMAL ceremony was held at the Warren Anatomical Museum on November 18, when a framed portrait of Dr. William Fiske Whitney, former curator of the museum, was unveiled and presented to the Harvard Medical School. Dr. Burt Wohlbach introduced Dr. George Burgess Magrath, who presented the painting. Dr. Magrath outlined his contact with Dr. Whitney, first as a student and later as a colleague. He portrayed Dr. Whitney as a pioneer clinical microscopist, a counselor of surgeons, a gentleman. Dr. Edsall, dean of the medical school, received the portrait in the name of the school. He showed that Dr. Whitney, in his forty-two years of service from 1879–1921 as curator, made the museum what it is to-day, and yet through all the hard work carried himself graciously and kindly.

DR. ISRAEL C. WHITE, state geologist for West Virginia since 1897, died on November 24 at the age of seventy-nine years.

PROFESSOR FRANK WASHINGTON VERY, director of the Westwood Astrophysical Observatory at Westwood, Mass., and formerly professor of astronomy at Brown University, died on November 23, aged seventy-five years.

DR. GEORGE ABBOTT OSBORNE, Walker professor emeritus of mathematics at the Massachusetts Institute of Technology, died on November 20, aged eighty-eight years.

DR. ALFRED J. M. PAGET, formerly regius professor of physie, University of Cambridge, died on September 15.

SIR WILLIAM GALLOWAY, the distinguished British

mining engineer, died on November 2, aged eighty-seven years.

THE death is announced, at the age of seventy-six years of Professor Carlo Fedeli, formerly director of the institute of special medical pathology at the University of Pisa.

THE next World's Dairy Congress will be held in London, England, from June 26 to July 14, 1928. The program as outlined in the preliminary announcements includes papers on all phases of the milk industry and discussions will be led by various American scientists including H. E. Van Norman, O. F. Hunziker, E. V. McCollum, M. D. Munn and R. S. Breed. An official delegation of dairy scientists from the United States will leave Montreal for the congress on May 15 and June 15, under the direction of R. S. Breed and G. J. Hucker, of Geneva, N. Y.

A SPECIAL meeting was held on November 22 at the New York Academy of Medicine at which various aspects of the cancer problem were discussed. Dr. H. Gideon Wells, of the University of Chicago, spoke on “The Significance of Cancer Statistics,” and Dr. I. V. Hiscock, associate professor of public health at Yale University, discussed his paper. Dr. Maud Slye, associate professor of pathology at the University of Chicago, talked on the relation of heredity to cancer. Her paper was discussed by Dr. James Ewing, professor of pathology, of Cornell University Medical College. “How the Cancer Problem is handled in Massachusetts” was the title of a paper by Dr. Kendall Emerson, of the State Cancer Clinic, Worcester, Mass., which was discussed by Dr. E. H. Lewinski-Corwin, committee on public health relations, New York Academy of Medicine. Dr. Samuel W. Lambert, president of the New York Academy of Medicine, presided.

THE United States Civil Service Commission announces an open competitive examination for senior chemical engineer (pulp and paper), applications for which must be on file with the Civil Service Commission at Washington, D. C., not later than December 27. The examination is to fill a vacancy in the Forest Products Laboratory at Madison, Wis., and vacancies occurring in positions requiring similar qualifications. The salary ranges from \$5,200 to \$6,000 a year, depending upon the qualifications of the appointee as shown in the examination and the duty to which assigned.

THE American Society of Agronomy, at its recent annual meeting, voted to sponsor a \$5,000 nitrogen research award, provided by the Chilean Nitrate of Soda Educational Bureau. The award is given annu-

ally to individuals who have performed outstanding nitrogen research in relation to economic crop production to be used in furthering nitrogen investigations or for professional advancement. The award is to be made by a committee of six appointed by the president of the American Society of Agronomy and the amount of the award is to be determined by the committee in each individual case. In making the award the committee shall consider the work accomplished as indicated by publications and the facilities and funds available for the particular research project. The award may be made to any research worker in the United States or Canada. The award is to be made annually at the meeting of the American Society of Agronomy. The award committee has not yet been named but will be announced soon.

DR. LESLIE A. KENOYER, of Western State Teachers College, Kalamazoo, has presented to the U. S. National Herbarium a collection of about six hundred plants obtained on Barro Colorado Island, Panama, during July and August. The collection contains about 190 species previously unreported for the island, about four of which are new species. The collector is collaborating with Dr. Paul C. Standley in a publication of these additions to the flora of the island.

AT the direction of King Albert a national scientific research fund was constituted on November 26 at a special meeting of the Belgian Academy, called to meet the urgent necessity of raising money to promote research in connection with Belgian institutions of learning.

IT is announced that James N. Gamble, of Cincinnati, plans to give funds to Christ's Hospital for the establishment of an institute for medical research. The amount is not stated but is said to be several millions of dollars. Mr. Gamble recently gave \$500,000 to the building fund of the hospital.

THE class of '30 at Lehigh University has raised \$3,000 for two chemical research fellowships, to which H. C. Jones, of Wilkes-Barre, and R. J. De Gray, of Ramsey, N. J., have been appointed.

A GIFT of \$40,000 from the John A. Finch estate will make possible the erection of a thirty-five bed hospital on the campus of Washington State College at Pullman which, it is expected, will be completed by September, 1928, and will cost about \$85,000.

THE department of mineralogy and petrography at Harvard University was enabled, through the Holden Travel Fund, to send out four parties during the past summer for the collection of material for research and exhibition at the university museum. Harry Ber- man, museum assistant, went to Mexico on a joint collecting trip with Dr. W. F. Foshag, of the United

States National Museum. A third expedition was made by Professor E. S. Larsen, who went to southern California in the vicinity of Elsinore, where he mapped the geology of a region hitherto undescribed. The research will be continued next summer. Professor Charles Palache and L. W. Lewis visited a number of mines in Canada, bringing back collections for exhibition from the silver mines of Cobalt, Ontario and the Lucey Mica Mine at Sydenham, Canada.

AT the opening of the present academic year four members of the staff of the Clark School of Geography went into camp with twenty-five graduate students, with plans for making an economic survey of Greenfield, Massachusetts, and vicinity. The camp was placed in the Berkshire Hills, three miles west of Greenfield. There is a two-fold purpose in the establishment of this field school of geography: one is to provide definite training in field methods for those entering the profession; the other is to experiment in the development of field methods in geography, and in the working out of an economic survey of a portion of the Connecticut Valley and bordering uplands, which would be of value to the people living in that community. The plans have been made to take successively portions of the Connecticut Valley lowland and continue the work until a considerable section of that part of New England has been studied intensively. The instructional work was under the direction of Drs. Wallace W. Atwood, Clarence F. Jones, W. Elmer Ekblaw and Charles F. Brooks.

THE topographical department of the Danish general staff despatched a survey expedition to Greenland last May. It is under the command of Captain F. C. Jorgensen and is based on Disko Island. The projected program of survey work will probably take thirty years to carry out. In addition, the expedition will supervise the construction of seismographic and wireless stations at Scoresby Sound.

AN Italian Arctic expedition by airship is being planned for next year. According to the foreign press, the expedition will be organized and led by General U. Nobile, who accompanied Captain R. Amundsen in his polar flight in 1926. The Italian government has offered airship N.4, which is a sister ship of the *Norge*, used on that occasion, and the Norwegian Aero Club has promised the use of airship sheds at Vadsö and King's Bay. General Nobile intends to make his Arctic base in Spitzbergen and to explore eastward to the north of Siberia, intending no doubt to throw light on the unknown northward extension of Nicholas Land. He proposes also to make a flight to the Pole. The Soviet government has expressed a wish to help by establishing a base with supplies at the mouth of the Yenisei River. At present a com-

mittee at Milan is considering the cost of the project. The Royal Italian Geographical Society has promised its support.

THE U. S. National Museum recently received as a gift the collection of insects belonging to Geo. M. Greene, of Harrisburg, Pennsylvania. Mr. Greene began to form this collection in 1893 and devoted himself principally to Coleoptera, although his collection contains several thousand named and arranged specimens in other orders. The collection is of unusual value because the specimens are neatly and completely labeled, well mounted and thoroughly classified. The beetles alone number over 42,000 specimens. H. S. Barber and C. T. Greene, of the U. S. Bureau of Entomology, made a trip by automobile to Philadelphia on October 21 and 22, to bring the Geo. M. Greene collection to the museum.

UNIVERSITY AND EDUCATIONAL NOTES

UNDER the will of Frank Thorne Patterson, of Philadelphia, his estate, after the death of his widow, is to be divided between Jefferson Medical College, the hospital of the University of Pennsylvania, Pennsylvania Museum and the School of Industrial Art and Bryn Mawr Hospital. The value of the estate is estimated at approximately \$2,120,000.

THE late Nina Lea, of Philadelphia, has bequeathed to the University of Pennsylvania and Harvard University \$150,000 each, to endow professorships in memory of her father, Henry Charles Lea, well-known historian.

DR. A. F. O. GERMANN has been granted a leave of absence from Valparaiso University, to return to his former position of research director for the Laboratory Products Company, Cleveland. Harry V. Fuller, formerly professor of chemistry at Pei Yang University, China, has accepted the position of acting professor of chemistry at Valparaiso University in Professor Germann's absence.

DR. GORDON WHYBURN has been promoted to a full professorship of mathematics at the University of Texas.

BRENTON R. LUTZ, of the department of biology at Boston University, has been promoted from assistant professor to professor in the department.

DR. ELMER L. SEVRINGHAUS has been transferred from associate professor of physiological chemistry to associate professor of medicine and associate physician to the Wisconsin General Hospital, Madison, and Dr. Edgar J. Witzemann, formerly of the Mayo Clinic, has been appointed assistant professor of physiological chemistry, to succeed Dr. Sevringhaus.

DR. LESLIE HELLERMAN, who has been research instructor at the University of Chicago, has received an appointment in the department of physiological chemistry of the Johns Hopkins University Medical School as associate.

MISS MINNIE A. GRAHAM, associate professor of chemistry at Mills College, has been appointed professor of chemistry in the Dominican College of San Rafael.

DISCUSSION AND CORRESPONDENCE TUMORS IN THE LOWER CARBONIFEROUS

UNUSUAL growths on the fin spines of modern fishes have been known for a long time under the name of Osteomae. They are hard, dense and almost ivory-like. I do not know what produces these pathological growths, since no one has studied them for the determination of this point, so far as I know. While summarizing our knowledge of pathological conditions¹ among fossil vertebrates I mentioned these growths as possible tumors, and stated that they were unknown among fossil fishes.

Recently Mr. Errol Ivor White² has sent me his paper describing a collection of fishes from sections of the Lower Carboniferous rocks below Newton Farm in the parish of Foulden, five miles west of Berwick-on-Tweed, by the youthful Thomas M. Ovens, whose death at the age of nineteen cut short what might have been a marvelous intellectual career.

One of the incomplete specimens of *Phanerosteon mirabile* Traquair shows on the anal radials "bladder-wrack"³ osteomae, which are so common in some types of living fishes. This discovery is not only the first of the fossil osteomae, but it is the earliest geological record of any pathological growth in the vertebrate group. It is the earliest pathological record.

ROY L. MOODIE

SANTA MONICA, CALIFORNIA

MASTODON REMAINS IN WASHINGTON

ABOUT the middle of August there was found on the property of Virgil Schaefer, about four miles northeast of the village of Blyn, Clallam County, Washington, some remains of a mastodon. Because of the

¹ "Paleopathology, an Introduction to the Study of Ancient Evidences of Disease." Chapter iii. Urbana, 1923.

² "The Fish Fauna of the Cement Stones of Foulden, Berwickshire." *Trans. Roy. Soc. Edinburgh*, LV, pt. I (No. 11), p. 268, 1927. Text figure 19, A.

³ A seaweed, *Fucus vesiculosus*, yielding material prescribed for obesity, goiter, etc.