

The funeral services took place at his late residence, 475 Bellefontaine Street, Pasadena, the Rev. Robert Freeman officiating. There were present to do honor to his memory many prominent people from all parts of southern California. The active pallbearers, selected from among the intimate personal friends of Dr. Holder, were: C. D. Daggett, Dr. Francis F. Rowland, Walter Watkins, Walter Raymond, William R. Staats and A. Stephen Halsted. Notable among the many letters of condolence received by Mrs. Holder, was a warm tribute of regard from Gifford Pinchot, who was in strong sympathy with Dr. Holder's tireless work in behalf of the conservation of wild life in our land.

GEORGE F. KUNZ

#### SCIENTIFIC NOTES AND NEWS

OFFICERS of the Royal Society were elected at the anniversary meeting on November 30 as follows: *President*, Sir J. J. Thomson in succession to Sir William Crooks; *Treasurer*, Sir A. B. Kempe; *Secretaries*, Professor A. Schuster and Mr. W. B. Hardy; *Foreign Secretary*, Dr. D. H. Scott; *Other Members of the Council*, Professor J. G. Adami, Sir T. Clifford Allbutt, Dr. F. F. Blackman, Dr. Dugald Clerk, Sir William Crookes, Professor A. Dendy, Professor J. Stanley Gardiner, Dr. H. Head, Mr. G. W. Lamplugh, Professor A. E. H. Love, Major P. A. MacMahon, Professor A. Smithells, Professor E. H. Starling, Mr. R. Threlfall and Sir Philip Watts.

M. MAURICE CAULLERY, professor of organic evolution in the University of Paris and president of the Zoological Society of France, has been appointed to be exchange professor from the French universities at Harvard University and will lecture at Cambridge during the second semester.

CHARLES CLARK WILLOUGHBY has been appointed director of the Peabody Museum of American Archeology and Ethnology of Harvard University.

At the annual dinner of the Geographic Society of Chicago, which will be held in the Congress Hotel on January 8, the gold medal

of the society will be presented to General William C. Gorgas.

DR. ERNST EHLERS, professor of zoology at Göttingen, has celebrated his eightieth birthday.

THE prize of the Martin Brunner foundation in Nürnberg has been awarded to Dr. Jakob Wolff, of Berlin, for his work on cancer.

ON November 23 at Aberdeen, S. D., the South Dakota State Academy of Science was organized with the following officers:

*President*, H. I. Jones.

*First Vice-president*, E. A. Fath.

*Second Vice-president*, O. R. Overman.

*Treasurer*, A. Mahre.

*Secretary*, R. J. Gilmore.

The meetings of the organization are held at the same time and place as the State Educational Association.

At the annual meeting of the American Association of Clinical Research, held recently in Philadelphia, the following officers were elected: *President*, Dr. Coleman, of New York City; *First Vice-president*, Dr. William B. Snow, of New York City; *Second Vice-president*, Dr. Leon T. Ashcraft, of Philadelphia. Dr. James Kraus, of Boston, is *Permanent Secretary* of the organization.

At the annual meeting of the Faraday Society, London, Sir Robert Hadfield was elected president.

THE following, as we learn from *Nature*, have been elected officers of the Cambridge Philosophical Society for the ensuing session: *President*, Professor Newall; *Vice-presidents*, Dr. Shipley, Dr. Fenton, Professor Eddington; *Treasurer*, Professor Hobson; *Secretaries*, Mr. A. Wood, Dr. Arber, Mr. G. H. Hardy; *New Members of the Council*, Dr. Bromwich, Dr. Doncaster, Mr. C. G. Lamb, Dr. Marr, Mr. J. E. Purvis.

THERE is also given in *Nature* the list of officers elected at the anniversary meeting of the Mineralogical Society which follows: *President*, W. Barlow; *Vice-presidents*, Professors H. L. Bowman, A. Hutchinson; *Treasurer*, Sir William P. Beale, Bart.; *General Secretary*, Dr. G. T. Prior; *Foreign Secretary*,

Professor W. W. Watts; *Editor of the Journal*, L. J. Spencer; *Ordinary Members of Council*, Dr. J. J. Harris Teall, F. N. Ashcroft, Professor H. Hilton, A. Russell, W. Campbell Smith, Dr. J. W. Evans, Dr. F. H. Hatch, J. A. Howe, T. V. Barker, G. Barrow, Dr. C. G. Cullis, F. P. Mennell.

DR. W. F. M. GOSS, dean of the College of Engineering of the University of Illinois, has made a final report to the Chicago Association of Commerce on his investigation in railroad smoke abatement. With this report Dean Goss finished his labors as chief engineer of the expert commission that was appointed five years ago, after having devoted two years to it, being on leave of absence from the university in order to serve the commission.

THE annual gardeners' banquet in St. Louis, provided for in Mr. Shaw's will, was held on November 19 at the Liederkranz Club. Mr. John K. M. L. Farquhar, of Boston, president of the Massachusetts Horticultural Society, and past president of the Society of American Florists and Ornamental Horticulturists was the speaker of the evening.

DR. JOSEPH E. POGUE, associate professor of geology and mineralogy of Northwestern University, will lecture before the Geographic Society of Chicago on December 16, his subject being "Through the Heart of Colombia."

At the recent National Conference on Marketing and Farm Credits held in Chicago, Dr. F. H. Newell, head of the department of civil engineering at the University of Illinois, gave an address in which he urged the adoption of a system of rural credits which would meet the needs of farmers operating irrigated lands.

THE Long Fox lecture was delivered by Dr. Richardson Cross, at the University of Bristol, on December 1, on "The Evolution of the Sense of Sight."

THE untimely death of Mr. Chas. F. Adams, well-known physics teacher of Detroit (October 29, 1914), has been the inspiration for many to join in a college scholarship fund in his honor. The Charles Francis Adams Memo-

rial Scholarship Fund raised by citizens, teachers and former students, now amounts to \$1,800, but it is expected will reach \$1,500. Mr. R. V. Allman, former instructor in the University of Michigan, succeeds Mr. Adams. The Detroit Central High School is one of the pioneers giving a full year's junior college work in biology, chemistry, physics and languages, now accepted by the University of Michigan.

THE medical staff and patients of the Workmen's Circle Sanatorium, Liberty, have adopted resolutions regretting the death of Dr. Edward Livingston Trudeau, who had for thirty-one years worked untiringly and unselfishly in the interest of the consumptive workingmen and women, and expressing their appreciation of his work by conferring on the hospital building of the Workmen's Circle Sanatorium, the name "Trudeau."

At a meeting of the directors of the Washington Association for the Prevention of Tuberculosis, resolutions were drafted paying tribute to the unselfish character of General George M. Sternberg, late president of the association, and to his valuable contributions to preventive medicine.

ORVILLE ADELBERT DERBY, distinguished for his work in geology, died by suicide in Rio Janeiro, on November 27. He had been chief of the geological survey of Brazil since 1907 and previously since 1875 connected with the survey and the National Museum, except for two years when he was instructor in Cornell University. He was born in New York State in 1851.

DR. CHARLES CALLAWAY, of Cheltenham, who was one of the pioneers in the study of the Archæan rocks of the British Isles, has died at the age of seventy-seven years.

*Nature* records the death, in his eighty-sixth year, of Mr. Charles Fortey, who was for many years honorary curator of the Ludlow Natural History Society's Museum.

MR. J. SINCLAIR, author of works on stock-breeding and agriculture, died on November 5 at the age of sixty-three years.

THE death is announced of Dr. C. J. Bouchard, emeritus professor of pathology in the University of Paris.

ALL persons who intend to present papers before Section E, geology and geography, of the American Association for the Advancement of Science, at the Columbus meeting, should submit title of paper and abstract to Professor George F. Kay, Iowa City, Iowa.

A NEW method of manufacturing sulphuric acid, for which advantages are claimed, is suggested in United States Department of Agriculture Bulletin No. 283, "The Production of Sulphuric Acid and a Proposed New Method of Manufacture." The essential difference of the method is that the gases employed are drawn downward through a spiral flue in place of being drawn through lead chambers or intermediate towers. It is asserted that the resistance of gases to the downward pull and the constant change in their course through the spiral tend to mix them very intimately. The fact that the gases constantly impinge on the walls of the spiral flue, which can be cooled either by air or water, makes it practicable to maintain the gases at a temperature most favorable for the efficient yield of sulphuric acid. In laboratory tests in which the spiral was utilized, practically all the sulphur dioxide was oxidized to sulphuric acid, only traces being lost through escape or in the system. The lead spiral, the author points out, however, is not intended to replace the Glover tower, nor to do away with the Gay-Lussac tower. It is believed that while the lead spiral will take considerable lead, the great reduction it will effect in the chamber space will make it possible to construct a plant with considerably less lead than is required in the ordinary chamber system. The new type of plant requires no other device to accelerate the reactions, occupies much less ground space, and would not need as large buildings, and therefore should decrease the initial cost of construction. The method, however, has been tried only on a laboratory scale, and the bulletin refuses to predict just how efficient the

commercial plant would be, but states that all indications are that this method offers promise of being economically successful.

THE area of the Chugach National Forest, Alaska, which is to be crossed by the railroad that the government is building from Seward to Fairbanks, is reduced nearly one half by a proclamation, signed by President Wilson, returning approximately 5,802,000 acres to the public domain. This action follows classification of the land by the Forest Service showing that the areas involved are not of high enough timber value to warrant government protection, and means the largest elimination of national forest land ever made by a single presidential proclamation. The boundaries of the forest, as redrawn by the president's proclamation, now contain approximately 5,818,000 acres, supporting about eight billion feet of merchantable timber. On the area thrown out of the forest there is in the aggregate a large amount of timber, but it is so sparse and scattered as to be of little or no commercial value. The land remaining within the forest, however, contains the largest and most accessible supply of timber for the development of the great mineral fields to the north of Bering River, and is the region in which the Alaskan Engineering Commission has been authorized to cut 85 million feet of timber for use in constructing the government's new railroad. On account of the time required for cutting and seasoning construction timber, the commission has had to purchase some lumber from Washington and Oregon, but as cutting has already commenced on the Chugach, it is expected that the Alaskan timber will soon be serving the needs of the railroad builders. The lands eliminated by the proclamation are in three large tracts; one along the entire southerly slope of the Chugach Mountains, the second lying northeast of Seward, between Resurrection Bay and Kings Bay, and the third, northwest of the Kenai Mountains in the region around Tustumena and Skilak lakes. In addition, the towns of Hope, Sunrise, Kenai and Ninilchek are eliminated. According to the Forest Service, the chance of locating homesteads in the

excluded lands is extremely small, since they contain few agricultural areas, although in some localities there are said to be small patches suitable for farming.

WE learn from *Nature* that the council of the Chemical Society has sent to every fellow a letter directing attention to the government scheme for the organization and development of scientific and industrial research. In accordance with this scheme, a committee of the privy council has been appointed, and also an advisory council of scientific men whose primary functions are to advise the committee of council on—(i) proposals for instituting specific researches; (ii) proposals for establishing or developing special institutions or departments of existing institutions for the scientific study of problems affecting particular industries and trades; (iii) the establishment and award of research studentships and fellowships. The council of the Chemical Society considers it to be the urgent duty of every fellow to render all assistance possible to the advisory council by suggesting suitable subjects for research. As pointed out in the White Paper, the results of all researches financed by public funds will be made available under proper conditions for the public advantage, and the council feels assured that every fellow will place patriotic duty before private gain at such a time. Suggestions for purely scientific researches will be appreciated, but those having a direct bearing on chemical industry and its promotion will naturally receive a preference.

FOLLOWING Secretary Lane's instructions to put special effort into its potash investigations, the United States Geological Survey is publishing the suggestion that a possible source of potash may exist in the tailings piled up at the concentrating mills of the big copper mines in the west. The "porphyry" ores which are being mined by the millions of tons annually contain several times as much potash as copper, and this remains in the tailings at the mills, material already finely ground and in condition for treatment, as well as easily accessible for shipment. This potash, however, is locked up in the form of silicate minerals, and the commercial extraction of potash from

silicates has been for several years the subject of earnest study by industrial chemists. If this problem can be solved, it would appear that a large tonnage of potash-bearing material is available in the Western States. The brief report issued this week by the Geological Survey (Bulletin 620-J) contains typical analyses of these "porphyry" ores from the largest copper camps in a half-dozen states, as well as tonnage estimates of the ore reserves and ore already mined and treated. A few check analyses of tailings are also published. Suggestion of a possible potash reserve in these tailings originated with B. S. Butler, the geologist in charge of the Survey's statistical study of copper, who has based this short paper upon the published analyses of specimens collected by the government geologists in their investigations of the mining districts. The significant fact regarding this possible source of potash is that in quantity it is more than adequate to meet all the needs of the country as measured by present consumption of potash. The problem of potash extraction from this by-product of the copper industry therefore becomes an attractive one for the chemical engineer and mineral technologist.

A PRESS bulletin of the U. S. Geological Survey notes that for many years the origin of the peninsula of Florida has been the subject of speculation among scientists. Some sixty years ago the great naturalist Louis Agassiz advanced the hypothesis that the greater part of the peninsula had been produced during comparatively recent times by successive growth of coral reefs along its southern margin, which has thus been extended farther and farther into the waters of the Gulf. A few years later Joseph LeConte restated his view of the organic origin of Florida and suggested that the work of corals has been largely supplemented by mud and other sediments dropped by the Gulf Stream. This hypothesis was generally accepted as correct for many years, but in 1881 Professor Eugene A. Smith discovered that the greater part of the peninsula of Florida is underlain at no great depth by limestones which are not the work of corals and which were formed long before the Re-

cent epoch. For the last thirty-four years these fundamental rocks of Florida, often called the Ocala limestone, have been thought to be nearly equivalent in age to the Vicksburg limestone of Mississippi and Alabama and have been called the Vicksburg group. A short time ago C. Wythe Cooke, of the Geological Survey, discovered that the Ocala or so-called Vicksburg limestone of Florida contains many fossil remains of sea shells of the same species that occur in the marls near Jackson, Miss., and that are known to have become extinct before the rocks at Vicksburg were deposited. It therefore appears that the Ocala limestone is of about the same age as the Jackson formation and is considerably older than has heretofore been supposed. Instead of being of recent origin, as was thought by Agassiz and LeConte, the Floridian plateau was in existence during the Eocene era—probably two million years ago. A copy of Mr. Cooke's paper on the age of the Ocala limestone, which is technical and intended mainly for the use of professional geologists, will be sent free on application to the Director, United States Geological Survey.

#### UNIVERSITY AND EDUCATIONAL NEWS

MRS. RUSSELL SAGE has given Syracuse University a fund to build a college of agriculture as a memorial to her father, Joseph Slocum. The building is to cost several hundred thousand dollars, the exact sum to be decided later. The site for the building is to be determined at a meeting of the university trustees, December 14. Construction will be started early in the spring.

A NEW building will be constructed for the University of Illinois Medical School in Chicago for the clinical courses. The initial cost is to be about \$100,000, which will pay for one wing. This will be added to later as the demand for room increases.

THE trustees of Delaware College have made plans for the expenditure of a gift of \$500,000 to the college by an unnamed donor. A report submitted by H. Rodney Sharp, chairman of

the Plans and Development Committee, which was approved by the board, showed that \$250,000 will be used for a science hall to house the agricultural and chemical departments, \$75,000 to remodel the old dormitory building and turn it into a commons for the students, and \$200,000 will be set aside for maintenance.

FIRE early on December 7 destroyed the Thompson chemical laboratory of Williams College, a three-story brick structure, loss of which is estimated at \$100,000. The fire started in a workroom on the first floor from spontaneous combustion, according to the college authorities and quickly spread through the building.

WARSAW UNIVERSITY and Warsaw Observatory have been transferred by the Russians to Rostow-upon-Don. At the same time the German government has reestablished the University of Warsaw, and added a faculty of medicine. Dr. von Brudsynski has been appointed rector, and Professor Wilhelm Paszkowski, in charge of the academic information bureau at Berlin, has been sent to Warsaw to advise on the reorganization of the university.

DR. EDWIN B. CRAIGHEAD, whom the state board of education failed to reelect as president of the University of Montana, has been elected commissioner of education of the State University of North Dakota. The three professors of the University of Montana which the board of education failed to reelect, Professor Mary Stewart, dean of women, Dr. T. B. Bolton, professor of psychology, and Dr. G. F. Reynolds, professor of English, have been reelected. They have, however, been given leave of absence for the coming year.

DR. WILLIAM OPHÜLS, professor of pathology, has been appointed acting dean of the Stanford University Medical School, in place of Dr. R. L. Wilbur, whose term as president of Stanford University begins January 1, 1916.

At the University of Kansas, Dr. C. H. Ashton has been promoted from an associate professorship to a full professorship of mathematics.