

AMERICAN MATHEMATICAL SOCIETY.

FOR several years the need of greater facilities for the publication of mathematical investigations has been strongly felt by the members of the American Mathematical Society. This Society has maintained during the past eight years an historical and critical review, known as the *Bulletin of the American Mathematical Society*, and throughout the whole of this period there has been a constantly growing demand for the publication in the pages of this journal of articles not properly falling within its scope. The Society, feeling that the time has come when further provision must be made for the publication of such articles, recently invited the cooperation of several American colleges and universities in a plan whereby such articles may be afforded suitable means of publication.

The necessary cooperation has now been secured, and the publication of the *Transactions of the American Mathematical Society* has been definitely undertaken to begin January 1, 1900. The cooperating institutions are Harvard University, Yale University, Princeton University, Columbia University, Haverford College, Northwestern University, Cornell University, The University of California, Bryn Mawr College and The University of Chicago. It is the desire of the Society that the *Transactions* may cooperate with existing journals in developing a wider and more active interest in mathematical research. Among American journals the *Annals of Mathematics* will encourage papers of pedagogic nature and brief researches of general interest; the *Bulletin of the American Mathematical Society* will maintain its character as an historical and critical review, and the *American Journal of Mathematics* and the *Transactions of the American Mathematical Society* will together, it is hoped, afford adequate facilities for the publication of the rapidly increasing volume of the more technical mathematical papers.

The *Transactions* will be devoted primarily to research in pure and applied mathematics. The editors will welcome all papers containing investigations of sufficient mathematical interest and value. Such papers, in many cases, will be, necessarily, of considerable length; but the editors will be very glad to receive, also, short contributions which are of such a char-

acter as to fall within the scope of the *Transactions*. Papers from mathematicians not belonging to the Society will be welcomed; such papers, if accepted for publication, will be presented to the Society by the editors.

The *Transactions of the American Mathematical Society* will be published quarterly. The first number will appear January 1, 1900. The page of the *Transactions* will be the same size as that of the Berlin *Sitzungsberichte*. The subscription price for the annual volume of at least four hundred pages is five dollars, twenty shillings, twenty Marks, or twenty-five francs. A reduction in price will be made, however, to the members of the American Mathematical Society. Subscriptions and payments should be sent to the office of the American Mathematical Society, 501 West 116th Street, New York. Cheques and postal money orders should be made payable to the American Mathematical Society.

Manuscripts intended for publication in the *Transactions* should be addressed either to Professor E. H. Moore, University of Chicago, Chicago, Ill., or to Professor F. W. Brown, Haverford College, Haverford, Pa., or to Professor T. S. Fiske, Columbia University, New York, N. Y.

SCIENTIFIC NOTES AND NEWS.

LORD KELVIN, who for fifty-three years has occupied the chair of natural philosophy at Glasgow, presented to the University Court on July 13th a petition for leave to retire. The Court granted the leave asked, and accepted Lord Kelvin's resignation with deep regret. A remit was made to the Principal to prepare a minute to be signed by all the members of the Court, expressing their sense of the great loss that the University is now to sustain.

PROFESSOR F. ZEEMAN, of Amsterdam, has been awarded the Baumgartner Prize of the Vienna Academy of Sciences, and Dr. K. Natterer, docent in chemistry in the University of Vienna, the Lieben Prize of the Academy.

THE Academy of Sciences of Berlin has given Professor Engler 4,000 Marks for work in botany.

THE third Conference of Astronomers and

Astrophysicists will be held at the Yerkes Observatory on Wednesday, September 6th, and the two following days.

A MONUMENT to Gauss and Weber was unveiled at Göttingen on June 17th, the chief address being made by Professor Voigt, Weber's successor. As part of the ceremonies the honorary doctorate was conferred on Professor Moore, of Chicago; Professor Darwin, of Cambridge; Professor Hadamard, of Paris; Professor Lorenz, of Leiden; Professor Righi, of Bologna, and Professor von Sterne, of Vienna.

THE Volta Exhibition at Como has been completely destroyed by fire, attributed to the fusing of electric wires. Many precious relics of the great electrician were lost in the flames, notwithstanding the precaution taken to preserve the objects by placing them in a receptacle of solid masonry. The committee has decided that the *fêtes* in honor of Volta shall be continued. The International Congress of Electricians will also be held, as previously arranged.

It is reported that Mr. R. T. Glazebrook, Principal of University College, Liverpool, has been appointed Director of the recently established National Physical Laboratory of Great Britain.

SIR WILLIAM MACCORMAC has been for the fourth time elected President of the Royal College of Surgeons, London.

DR. J. WIESNER, professor of plant physiology, of the University of Vienna, has been elected a member of the Berlin Academy of Sciences.

DR. F. WÄHNER, privatdocent in geology in Vienna, has been elected a member of the Leopoldinisch-Carolinisch Academy at Halle.

A DINNER was given to Sir John Burdon-Saunderson, Bart, and Professor Michael Foster, K.C.B., by British physiologists on July 25th, to congratulate them on the honors recently conferred on them by the Queen.

It is reported that Professor Sanarelli is about to visit the United States to study the effects of his serum in the treatment of yellow fever.

THE British Cancer Society has commissioned Mr. Arthur C. Buffey, M.B., B.Ch., to go to the United States to report generally on matters affecting the objects of the Society, and especially as to the operations of the State Laboratory for the study of cancer at Buffalo, N. Y.

WE learn from *Nature* that Mr. H. H. Howell, who joined the British Geological Survey under De la Beche in 1850, has retired from the service. Mr. Howell, after surveying some portions of Wales and the south of Scotland, and large areas in the midland counties of England, became District Surveyor of the north-eastern counties of England in 1872; he was appointed Director for Scotland in 1882 (when Sir Archibald Geikie became Director-General), and he was further promoted to be Director for Great Britain in 1888. Mr. Ernest E. L. Dixon, who has for the past two years acted as assistant to Professor Judd at the Royal College of Science, has been appointed Assistant Geologist on the Geological Survey of England.

A MARBLE bust of the late William Rutherford, professor of physiology at Edinburgh, given by his recent students, was unveiled on July 8th. After the bust, which is by Mr. John Hutchinson, had been unveiled, a speech was made by Sir William Turner.

WE regret to learn of the death of Mrs. Elizabeth Thompson, of Stamford, Conn., who made many gifts for benevolent and scientific purposes. She contributed towards the telescope for Vassar College, was one of three 'patrons' of the American Association for the Advancement of Science, and endowed the Elizabeth Thompson Science Fund, the income of which is now being so advantageously used for the promotion of scientific research.

W. P. JOHNSON, LL.D., President of Tulane University, New Orleans, and a Regent of the Smithsonian Institution, died on July 16th.

MR. CHARLES M. FAUNCE, formerly instructor in descriptive geometry at the Massachusetts Institute of Technology, has died at the age of 32 years.

PROFESSOR H. R. GEIGER, from 1846 to 1882, professor of science in Wittenberg College, and

later connected with the U. S. Geological Survey, died at Springfield, Ohio, on July 18th.

DR. WILHELM WHITMANN, professor of mechanical engineering in the School of Technology at Munich, has committed suicide.

MR. J. W. HENDRIE, a Life Member of the California Academy of Sciences, has presented to the Academy, without condition or qualification, securities to the value of \$10,000. By action of the Council and Trustees of the Academy, the gift has been set aside to be known as the Hendrie Publication Fund, the interest of which shall be applied towards the publication of the papers of the Academy. Each paper published from the income of this fund will bear the inscription, 'Printed from the Hendrie Publication Fund.'

BY the will of the late Frau M. Jankowska, of Warsaw, the Academy of Sciences at Cracow has received 20,000 roubles.

PRINCE JOHANN LICHTENSTEIN has given the Vienna Academy of Sciences 25,000 florins for explorations in Asia Minor. The Academy has also received 18,000 florins for the increase of the Lieben foundation.

ANDREW CARNEGIE has offered from Scotland to give \$50,000 towards a public library building at Steubenville, Pa., if the citizens will furnish a site and maintain it. Mr. Carnegie in his letter refers to his early days when a telegraph operator in Steubenville. His offer will be accepted.

THE Union Pacific Scientific Expedition left Laramie on July 21st. The company was made up of twenty teams and nearly 100 men, including representatives from many leading colleges and universities. The expedition will remain in the field for forty days.

A PARTY of between twelve and fifteen advanced students of geology from the University of Chicago are to make a trip to Arizona and New Mexico during the later part of the summer for field study. The party will leave Chicago on the 10th of August and be gone about five weeks. The party is under the direction of Professor Rollin D. Salisbury, and will in the course of its work make a trip to the Grand Cañon of the Colorado north of Flagstaff.

A party of fifteen from the University is now in the field in south-central Wisconsin, and another party is to go into the same region in August. A party of students of botany, under the direction of Dr. Henry C. Cowles, will take a field course during the later part of the summer. These field courses, both in geology and botany, are reckoned as a regular part of the University work.

DR. F. W. SARDESON, of the University of Minnesota, accompanied by Rev. F. S. Moore and W. B. Stewart, has gone on a collecting expedition into the Big Horn River Valley of northwestern Wyoming. The rocks are Tertiary and locally are said to be very fossiliferous. The party will be gone until September. The expenses of the season will be met by several business men of Minneapolis and St. Paul.

AMERICAN men of science visiting Paris may be interested to learn that there are meetings of naturalists held monthly at the Paris Museum of Natural History. They are held at 4 o'clock in the afternoon on the last Tuesday of the month.

A NEUROLOGICAL Society was formed in Paris on June 8th, with Professor Joffroy as President. The Society will issue the *Revue Neurologique*, which will appear on the 15th of each month.

A CONGRESS of Aerial Navigation with M. Janssen as President is being arranged to meet at Paris during the Exposition. There will be five sections devoted respectively to balloons, flying machines, scientific instruments, applications to science and legal questions.

THE British Colonial Office announces that the bubonic plague has spread from Hong Kong and Mauritius to Reunion. There were thirty-six cases at Mauritius during the week ending July 20th, of which twenty-nine resulted fatally.

WE learn from the London *Times* that the annual meeting of the Society of Chemical Industry was opened on July 12th, at Newcastle-on-Tyne. Mr. George Beilby, of Edinburgh, President of the Society, was in the chair. At the Durham College of Science, where the delegates were welcomed to the city by the mayor, Professor C. F. Chandler, of Columbia Univer-

sity, was elected President for the ensuing year. The Council's report, which was adopted, stated that the number of members on the register was 3,312 compared with 3,185 at the last annual meeting. The President, in the course of his address, dealt with the rapid exhaustion of British coalfields and the serious increase of smoke pollution. The remedies were broadly divided into two classes: first, improved appliances for the combustion of raw coal and distribution of the air supply in furnaces; and, secondly, the transformation of the raw coal into smokeless fuel by preliminary treatment. The effects of the natural development of certain industries on the markets for by-products were next considered. It was pointed out that if any considerable part of the 137 million tons of coal which is at present burned in the raw condition were to be converted into gas, coke and ammonia an altogether new condition of things would arise which would need to be foreseen and provided for. A careful study of the whole subject has led to the conclusion that the natural outlet for the coke and pitch would be found in the manufacture of fuel briquettes, and the President advocated the turning of the very best technical skill to the perfecting of the manufacture. He believed that with skill and enterprise it would be possible to make briquettes exactly suited for every purpose from boiler firing to domestic cooking. As a means of bringing all of the different interests which are concerned in this matter into line, it was suggested that the Society might arrange for the holding of a conference on the subject of fuel and smoke, at which the leading technical societies, as well as the actual industries concerned, should be fully represented.

UNIVERSITY AND EDUCATIONAL NEWS.

O. HÖLTERHOFF, a banker of Honnet, has bequeathed his property valued at about 1,000,000 Marks to the University at Bonn.

MRS. JOHN L. NEWBERRY, of Detroit, Mich., has given to Western Reserve University, Cleveland, O., \$2,500 to found the Handy philosophical prizes, in honor of her father, Mr. J. P. Handy, of Cleveland.

PROFESSOR BENJAMIN IDE WHEELER, of Cornell University, has accepted the presidency of the University of California.

MR. E. A. MINCHIN, Fellow of Merton College, Oxford University, has been elected to the Jodrell professorship of zoology in University College, London, in succession to Professor W. F. R. Weldon, who, it will be remembered, was recently called to Oxford.

DR. A. FICK, professor of physiology at Würzburg, has retired. The chair was offered to Professor W. Biedermann, but he has refused to leave Jena.

DR. B. PETER has been made associate professor of astronomy at Leipzig and sub-director of the observatory.

DR. A. PHILIPPSON, geography, and Dr. K. Mönnichmeyer, astronomy, docents at Bonn, have been made titular professors.

AN associate professorship for physical anthropology has been established at Zurich and filled by the election of Dr. R. Martin.

At the University of Paris courses have been authorized by M. Guignard on the application of chemistry to brewing and distilling; by M. Loisel on comparative embryology, and by M. Martel on speleology or subterranean geography.

THERE are during the present summer semester 4,997 students matriculated at the University of Berlin, which is an increase of 349 as compared with last year. There are 655 foreigners.

ACCORDING to the *Hochschul-Nachrichten* 22% of the professors in the German universities are engaged in lecturing or laboratory supervision 2 to 6 hours a week and 51% from 7 to 12 hours. Of the associate professors 60% are engaged from 2 to 6 hours per week and of the privatdocents 82%. Only 4% of all privatdocents are engaged in lecturing or laboratory supervision more than 12 hours a week. The leisure, accompanied it must be admitted by poverty, of the German associate professors and docents explains in large measure the amount of research work accomplished in German universities.