

Dr. Lusk reported for Dr. Du Bois that 142 observations had been made upon patients and on some normal controls during the past year and a half, using the respiration calorimeter established in the second medical division of Bellevue Hospital. In certain individuals an exact agreement between the actual heat production and the heat calculated from the gaseous exchange during hourly periods, was obtained for the first time in man. In the total of all experiments involving the measurement of 23,000 calories, these two methods of direct and indirect calorimetry agree both in health and disease within  $1\frac{1}{2}$  per cent. The investigated cases included nine cases of typhoid during both fever and convalescence, one cretin, seven cases of exophthalmic goiter, one of splenic anemia, another with pernicious anemia, one man with acromegaly, one with hypopituitarism, one with malaria, and one with auricular fibrillation, mitral stenosis and greatly enlarged heart.

#### SCIENTIFIC NOTES AND NEWS

DR. ROBERT S. WOODWARD, president of the Carnegie Institution of Washington, will give the address on the occasion of the dedication on July 10 of the new laboratory building of the Marine Biological Laboratory at Woods Hole.

THE Croonian lecture of the Royal Society was delivered on June 11, by Professor E. B. Wilson, of Columbia University, on the bearing of cytological research on heredity.

THE Franklin Institute of Philadelphia has awarded its Edward Longstreet medal of merit to Dr. W. J. Humphreys for his paper on "Volcanic Dust and Other Factors in the Production of Climatic Changes and their Possible Relation to Ice Ages," which appeared in the August, 1913, issue of its journal.

THE triennial Parkin prize of \$500 of the Royal College of Physicians of Edinburgh, has been awarded to Dr. Johnson-Lavis for his work on the effects of volcanic action in the production of epidemic diseases in the animal and in vegetable creation, and in the produc-

tion of hurricanes and abnormal atmospherical vicissitudes.

THE University of Manchester proposes to confer the following honorary doctorates of science: Professor W. H. Bragg, University of Leeds; Professor W. J. Pope, University of Cambridge, and Dr. J. E. Stead, Middlesbro'.

PROFESSOR R. G. D. RICHARDSON, of the department of mathematics at Brown University, has been elected to membership in the American Society of Arts and Sciences.

PROFESSOR R. C. ARCHIBALD, of Brown University, has been made a member of the editorial board of the *Bulletin* of the American Mathematical Society. Professor Archibald has also had a book by him on "The Lost Book of Euclid" accepted for publication by the Cambridge University Press.

THE Royal Society of Edinburgh has awarded the Neill prize to Dr. W. S. Bruce, in recognition of the scientific results of his Arctic and Antarctic explorations, and the Keith prize to Mr. J. Russell, for his investigations relating to magnetic phenomena in metals and the molecular theory of magnetism.

PROFESSOR A. W. GOODSPEED, director of the Randal Morgan Laboratory of Physics, University of Pennsylvania, has been granted leave of absence for the session of 1914-15. He leaves with his family for Germany on June 25.

PROFESSOR METCHNIKOFF, of the Pasteur Institute, is to be presented with a memorial volume to celebrate his scientific jubilee and his seventieth birthday.

DR. J. J. STEVENSON, emeritus professor of New York University, was entertained on May 28 at a dinner at Pottsville, Pa., by Mr. Baird Halberstadt. There were present a large number of those engaged in the mining industry, to which Professor Stevenson's researches have so greatly contributed. Among those who spoke were Dr. I. C. White, of the University of West Virginia, and representatives of the

Pennsylvania Geological Survey and of the coal industry.

At the meeting of the Cambridge Philosophical Society held on May 18, as we learn from *Nature*, the following were elected honorary members of the society: Dr. H. E. Armstrong; Professor J. Bordet, the University, Brussels; Madame Curie, the Sorbonne, Paris; Professor F. Czapek, the German University, Prague; Professor T. W. Edgeworth David, the University, Sydney; Colonel W. C. Gorgas, Medical Corps, U. S. A. Army; Professor P. H. von Groth, the University, Munich; Professor Jacques Hadamard, the Collège de France, Paris; Dr. G. E. Hale, director of the Mount Wilson Solar Observatory; Dr. François A. A. Lacroix, Natural History Museum, Paris; Professor C. Lapworth, late professor of geology, the University, Birmingham; Professor H. Lebesgue, the Sorbonne, Paris; Dr. Jacques Loeb, the Rockefeller Institute, New York; Professor Arthur Looss, the Government School of Medicine, Cairo; Professor H. A. Lorentz, the University, Leyden; Professor M. Planck, the University, Berlin; Lieut.-Col. Leonard Rogers, the Medical College, Calcutta; Professor Gustav Schwalbe, the University, Strassburg; Dr. Karl Schwarzschild, the University, Berlin; Dr. D. H. Scott, foreign secretary, Royal Society; Professor E. B. Wilson, Columbia University, New York; A. F. Yarrow, Blanefield, Glasgow; Professor P. Zeeman, the University, Amsterdam. The society will celebrate in 1919 the centenary of its foundation.

DR. W. H. R. RIVERS has been appointed to represent the University of Cambridge at the nineteenth International Congress of Americanists to be held at Washington in October next.

THE Hon. Bertrand A. W. Russell, lecturer in Trinity College, Cambridge, has been elected Herbert Spencer Lecturer for the year 1914-15 at Oxford.

SIR JOSEPH WILSON SWAN, known for his important discoveries in connection with the carbon filament lamp, electro-chemistry and

photography, died on May 27, in his eighty-sixth year.

DR. PHILIP HENRY PYE-SMITH, a distinguished London physician and man of science, died on May 23, at the age of seventy-five years.

THE death is also announced of Dr. George Dean, regius professor of pathology in the University of Aberdeen.

THE U. S. Civil Service Commission announces an examination for an assistant physicist, qualified in metallography, to fill a vacancy in this position in the bureau of standards, Department of Commerce, Washington, D. C., at a salary of \$1,400 to \$1,800 a year.

THE magnetic survey yacht *Carnegie* left Brooklyn, on June 8, under the command of Capt. J. L. Ault, for a cruise in the North Atlantic Ocean to Norway (Hammerfest) and Iceland. The vessel will return to Brooklyn again about December 1.

THE schooner *George B. Cluett*, of the Grenfell Association, has been chartered by the department of terrestrial magnetism of the Carnegie Institution of Washington for a cruise to Hudson Bay this summer. The expedition will be in charge of W. J. Peters, assisted by D. W. Berky, and will leave Battle Harbor, Labrador, on July 1.

OWING to the fact that the Cartier celebration will be held in Montreal during the week beginning on September 6, and the resultant congestion of hotel and transportation facilities, the meeting of the American Chemical Society in that city has been changed to September 15-18.

THE seventh congress of the International Association for Testing Materials will be held under the patronage of the Czar of Russia, in St. Petersburg, on August 12-17, 1915. After the congress extensive excursions in the interior of Russia have been arranged.

By the will of Harris Charles Fahnestock, of New York, \$550,000 is bequeathed to New York city hospitals and charities.

THE Council of Mathematical Teachers in New England has recently appointed a special committee on the status and welfare of mathematics in secondary schools, to investigate and report on current criticisms of high school mathematics. The membership of the committee is as follows: Mr. G. W. Evans, Charlestown High School; Professor F. C. Ferry, Williams College; Mr. A. V. Galbraith, Middlesex School; Mr. F. P. Morse, Revere High School; Mr. C. D. Meserve, Newton High School; Professor S. E. Smith, Mount Holyoke College; Miss H. R. Pierce, Worcester High School, and Professor H. W. Tyler, Massachusetts Institute of Technology, *chairman*. Correspondence with persons having special information is invited.

A CONVENTION of Tau Beta Pi, the honorary engineering society, will be held in Ithaca on June 11, 12 and 13. One delegate from each of the twenty-seven chapters and the five alumni chapters will attend. The general program includes business meetings on each of the three days and numerous excursions and social meetings.

As we have already announced there will be held a celebration on July 24 to 27 under the auspices of the Royal Society of Edinburgh, of the tercentenary of the publication of Napier's "*Mirifici Logarithmorum Canonis Descriptio*," the work which embodies the discovery of logarithms. Lord Moulton will deliver the presidential address on July 24; and many distinguished mathematicians, astronomers, actuaries and engineers will make communications on July 25 and 27. An exhibition of calculating machines, apparatus and books, and of objects associated with Napier and the history of mathematics, will be held in connection with the celebration. Immediately following a mathematical colloquium will be held on July 28 to 31, under the auspices of the Edinburgh Mathematical Society. The following courses have been arranged for in connection with the colloquium: Two lectures on Nomography, by M. d'Ocagne, professeur à l'Ecole Polytechnique, Paris; four lectures on Infinity in Geometry, by H.

W. Richmond, King's College, Cambridge; four lectures on Critical Studies of Modern Electric Theories, by E. Cunningham, St. John's College, Cambridge; two lectures on The Solution of Algebraic and Transcendental Equation in the Mathematical Laboratory, by E. T. Whittaker, professor of mathematics in the University of Edinburgh.

#### UNIVERSITY AND EDUCATIONAL NEWS

AFTER several months' investigation the plan of the presidential commission for national vocational education has been presented in the senate in a bill introduced by Senator Hoke Smith, one of the commissioners. It proposes an expenditure by the federal government of \$1,500,000 next year for the salaries of teachers of agriculture, trade, industrial and home economics. The amount would increase automatically each year until 1924, when the total would reach \$7,000,000. An equal amount must be expended by states. A federal board of vocational education would consist of the postmaster general and the secretaries of interior, agriculture, commerce and labor. State boards of not less than three members each would be provided.

THE Sheffield Scientific School, Yale University, has received a provisional gift from a graduate of \$100,000. This gift is contingent upon the securing of an additional \$100,000; the money to be used for the development of a graduate course of one year, and, if possible, two years, as an addition to the present undergraduate course known as the select course, in preparation for business and business administration.

AT the annual commencement of Gustavus Adolphus College, St. Peter, Minnesota, announcement was made of the completion of an endowment fund of \$250,000. The two largest contributors were James J. Hill, of St. Paul, and C. A. Smith, of Minneapolis, each of whom gave \$50,000. On the same occasion Oscar J. Johnson was formally inducted into office as president of the institution.