

motor problems now prominent in psychology.

WHILE experimental psychology has been successful in extending its work from sensation to movement, it has found great difficulty in devising suitable experiments on the feelings. We may, therefore, welcome a paper by Prof. Joseph Jastrow, which will appear in the January number of the *Popular Science Monthly*, entitled 'The Popular Æsthetics of Color.' At the Columbian Exposition Prof. Jastrow arranged a psychological laboratory and many visitors were tested. The results have not yet been published, but the preferences of 4,500 people for color were separately determined, and these have now been collated with interesting results.

J. McK. C.

SCIENTIFIC NOTES AND NEWS.

PROF. G. SCHIAPARELLI, the Italian astronomer; Prof. A. Heim, the Swiss geologist; Prof. G. Lippmann, the French physicist, and Prof. G. Mittag-Leffler, the Swedish mathematician, have been elected foreign members of the Royal Society.

THE subject of the lecture by Mr. Alexander Agassiz before the American Society of Naturalists will be 'Methods and Problems of Deep Sea Investigation.'

DR. FRITZ WESTHOFF, docent in zoology in the Academy at Münster, died on November 12th at the age of forty years. He had published several works on the natural history of Westphalia. Dr. Strauss, professor of pathology at the Paris Medical School, known for his writings on tuberculosis and cholera, has died at the age of fifty-one. Dr. Ernst Engel, formerly director of the Prussian Statistical Bureau, has died at Lössnitz at the age of seventy-six. The death is also reported of M. Alfred Nobel, the inventor of dynamite.

LORD RAYLEIGH and Prof. W. Ramsay have been elected corresponding members of the Berlin Academy of Sciences.

THE celebration of Lord Kelvin's jubilee as professor of natural philosophy in the Univer-

sity has been followed, says the *Lancet*, by the recognition of his jubilee as a member of the Glasgow Philosophical Society. The society have presented Lord Kelvin with an address and elected him an honorary member. A bust, subscribed for by the members, has been placed in the Society's rooms and a replica presented to Lady Kelvin. The proceedings in connection with these events were presided over by Dr. Ebenezer Duncan, the president of the Society, and the address was read by Dr. Freeland Fergus, the honorary secretary.

A MONUMENT in honor of the engineer Grashof was unveiled at Karlsruhe on October 26th. An address was made by Prof. J. Hart, giving an account of Grashof's contributions to Science.

THE annual *Fest Sitzung*, of the Munich Academy of Science was held on November 14th. Prof. Walther Dyck made an address on the relations between pure and applied mathematics.

THE German Geographical Congress will hold its eleventh meeting at Jena on April 21st, 22d and 23d. Among the subjects proposed for discussion are polar investigations, physical questions (earthquakes, etc.), biological geography, the topography and natural history of Thuringia, and the teaching of geography in schools.

THE celebration at Lisbon of the fourth centenary of the discovery of the maritime route to India, by Vasco da Gama, has been postponed from July, 1897, the anniversary of his sailing from Lisbon, until May, 1898, the anniversary of his arrival at Calicut.

UNDER the auspices of the Academy of Science, Letters and Arts of Rovereto, a committee has been appointed which is making arrangements to celebrate at Rovereto, in the spring of 1897, the centenary of the birth of the eminent philosopher, Antonio Rosmini.

THE *Lancet* states that there will be held in Berlin in October, 1897, a conference of delegates of different Governments to discuss the steady increase of leprosy and the apparent failure of all measures to check this plague. The date of the conference had been fixed for the month of March, but Prof. Koch's absence necessitated a

postponement, it being decided to await his return. The organizing committee comprises the following names: A. Hansen, Bergen, Norway; Robert Koch and O. Lassar, Berlin, and Edward Ehlers, Copenhagen (secretary).

At the 111th meeting of the American Institute of Electrical Engineers, held at New York on December 16th, a discussion on the Röntgen rays was opened by Prof. Rowland.

THE American Historical Association holds its twelfth annual meeting at Columbia University, New York, December 29th-31st.

It is proposed, says *Nature*, to hold an international electrical exhibition at Turin in 1898. The Executive Committee and the Special Commission invite exhibits from all parts of the world, and the exhibition will comprise the following classes: (1) Apparatus for teaching electro-technics; (2) materials for the conduction of electricity; (3) instruments for electric and magnetic measurements; (4) telegraphs and telephones; (5) signalling apparatus and safety appliances on railways, lighting and heating of carriages; (6) dynamos and motors; (7) mechanical appliances and electric traction; (8) electric lighting; (9) electro-chemistry and electro-metallurgy; (10) miscellaneous; (11) apparatus of historic interest. Signor Galileo Ferraris has been appointed President of the Commission.

THE College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1897, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the secretary of the College on or before May 1, 1897.

THE Walsingham gold medal, Cambridge University, has been awarded to W. McDougall, B. A., of St. John's College and St. Thomas's Hospital, for original researches in physiology.

WE learn from *Natural Science* that a memorial statute to Dr. H. Burmeister is being erected by subscription in Buenos Ayres to

commemorate his long and important services to science, and especially to the National Museum. The Argentine government is said to have refused permission for it to be set up in a public place, because Dr. Burmeister was a foreigner, and it will occupy a position in the hall of the University.

It is reported that Mrs. H. M. Converse, of New York City, will present to the State Regents Department, Albany, her fine collection of Indian relics. The State Legislature last winter appropriated \$5,000 to classify and arrange the relics now in the State Museum.

COL. COLERIDGE GROVE has given the Royal Institution, London, a bust of his father, the late Sir William Grove.

Nature quotes from the *Daily Chronicle* news of a meteorological observatory to be placed by Italian men of science on the summit of Monte Rosa. Queen Margherita, herself an expert mountaineer, supports the project by a donation of 160*l.*, the Duke of the Abruzzi gives 200*l.*, and the Italian Alpine Club, the Ministers in their private capacity, and the physical faculty of the University of Turin, figure among its chief contributors. It is intended to utilize the hut on the Gniffetti peak, built three years ago as a shelter for climbers. Situated at a height of about 14,000 feet above sea-level, the observatory will, as regards elevation, rank fourth among the twenty-seven mountain observatories of the world, being surpassed in altitude only by those of Arequipa, Mont Blanc and Pike's Peak.

CABLEGRAMS to the daily papers report earthquake shocks throughout Great Britain occurring at 5:30 a. m. on December 17th. The shocks lasted from 4 to 30 seconds and are said to have been the most violent experienced in England.

THE Association of American Steel Manufacturers, at a meeting held in New York on October 23d, adopted resolutions endorsing the decimal system as the proper standard for measuring all materials. The British Chamber of Commerce of Alexandria are unanimously of the opinion that it would be an advantage for commerce with Great Britain, should the metric system be adopted by that country.

THE *Medical Record* states that Dr. Luys, of the Salpêtrière Hospital, Paris, has presented the Faculty of Medicine with his collection of twenty-two hundred brains, carefully prepared and catalogued. The collection is the result of thirty years' investigations, and includes the brains of idiots, of blind persons, of persons who had undergone amputation, and of those who had suffered from various forms of mental disorders.

By a vote of 196 to 41 the congregation of Cambridge University passed a grace, on December 10th, setting aside a portion of the Downing College site, recently acquired by the university, for the Sedgwick Memorial Museum.

PROF. ANGELO HEILPRIN will contribute to the January number of *Appleton's Popular Science Monthly* a summary of our present knowledge of the Antarctic region, with a sketch map giving the more important points that have been named by navigators.

A PRELIMINARY meeting, with the object of founding a memorial to Edward Jenner, was held at St. George's Hospital, London, on December 7th, under the presidency of Sir Joseph Lister. According to the report in the *London Times* the chairman said that it was hardly creditable to England that, while other nations were in different ways celebrating the centenary of Jenner's great discovery, we in his own country should not be doing so in any adequate manner. It had been suggested that the statue of Jenner in Kensington gardens might be moved to the open space in front of the hospital, to correspond with the Wellington statue. The cost would be very slight in comparison with the funds which they might fairly hope to collect. The Bishop of Rochester, in moving "That the present year, being the centenary of the first successful vaccination, is a proper time to inaugurate a work of national utility in honor of Edward Jenner," said that it was a matter of general human and national concern, and if there was any profession which was bound to seize opportunities of going along with the medical profession in a matter of that kind it was the profession to which he belonged. The resolution was carried after speeches from Lord Reay, Sir R. Quain and Prof. M. Foster.

Lord Glenesk moved "That a subscription be set on foot with the view of founding some institution, of a nature to be hereafter determined, in connection with the British Institute of Preventive Medicine, to be distinguished by Jenner's name." The resolution was supported by a number of speakers and the nature of the memorial was discussed. It was finally decided that a public meeting be called early in 1897 to decide on the form of memorial.

WE quoted recently from an article by Prof. D. T. MacDougal, recommending the establishment of an American tropical laboratory for botanical research. The last number of the *Botanical Gazette* also urges in an editorial article the establishment of such a laboratory. It is suggested that this might be accomplished most easily by the cooperation of several universities. "Perhaps the original cost should be borne by private subscription, and the running expenses met by the different universities pledging themselves for so many tables. At least the subject deserves to be taken in hand by a committee of botanists and investigated in all of its bearings. A study of the map will show that the conditions to be met favor either the east coast of Mexico or the islands near the Caribbean Sea. It is estimated that a trial station might be maintained on one of these islands for one year at a cost of \$5,000; and after the selection of a permanent station the laboratory buildings might be constructed and extended according to the demand. The use of grounds necessary could be obtained from the government, and the area should embrace all levels so far as possible, a feature at Buitenzorg which is nearly ideal. It is to be hoped that a reconnaissance party of American botanists will soon visit the region proposed and report as to possible sites. Such a visit should be made before the botanical meetings of next summer, to which the report would be most appropriately made."

AMONG the lectures to be given during the winter at the Royal Institution are the following: Prof. Augustus D. Waller, twelve lectures on 'Animal Electricity'; Prof. Henry A. Miers, three lectures on 'Some Secrets of Crystals'; Dr. J. W. Gregory, three lectures on 'The

Problems of Arctic Geology;' Prof. W. Boyd Dawkins, three lectures on 'The Relation of Geology to History;' Mr. Walter Frewen Lord, three lectures on 'The Growth of the Mediterranean Route to the East,' and Lord Rayleigh, six lectures on 'Electricity and Electrical Vibrations.' The Friday evening meetings will begin on January 22d, when a lecture will be given by Prof. Dewar.

ACCORDING to a note in *Natural Science* the report of the trustees of the Australian Museum, Sydney, is chiefly remarkable for the record of 2,231 mollusca added to the collections in 1895. Among the donors, the chief was Mr. W. A. Horn. A large collection of fossil Bryozoa was presented by Mr. R. Etheridge, jr. The usual want of funds has prevented the trustees from acquiring many specimens of great value, and this same want has seriously stopped collecting work, from which alone one can acquire duplicates to exchange with other institutions. One of the most important acquisitions during the year was one of Captain Cook's original MS. journals, the Log of the 'Endeavor,' presented by Mr. F. H. Danger. A curious and unfortunate event was the destruction of the entire roof over the central part of the main building by white ants. This had to be shored up immediately on discovery, and the erection of a new roof will at once be proceeded with.

In a recent issue *Nature* gives a detailed account of the report of the royal commission on vaccination. As to the effect of vaccination in reducing the prevalence of, and mortality from, small-pox, they conclude: (1) that it diminishes the liability to be attacked by the disease; (2) that it modifies the character of the disease, and renders it (a) less fatal, and (b) of a milder or less severe type; (3) that the protection it affords against attacks of the disease is greatest during the years immediately succeeding the operation of vaccination. It is impossible to fix with precision the length of this period of highest protection. Though not in all cases the same, if a period is to be fixed, it might, we think, fairly be said to cover in general a period of nine or ten years; (4) that after the lapse of the period of highest protec-

tive potency the efficacy of vaccination to protect against attack rapidly diminishes, but that it is still considerable in the next quinquennium, and probably never altogether ceases; (5) that its power to modify the character of the disease is also greatest in the period in which its power to protect from attack is greatest, but that its power thus to modify the disease does not diminish as rapidly as its protective influence against attacks, and its efficacy during the later periods of life to modify the disease is still very considerable; (6) that re-vaccination restores the protection which lapse of time has diminished, but the evidence shows that this protection again diminishes, and that, to ensure the highest degree of protection which vaccination can give, the operation should be at intervals repeated; (7) that the beneficial effects of vaccination are most experienced by those in whose case it has been most thorough. We think it may fairly be concluded that where the vaccine matter is inserted in three or four places it is more effectual than when introduced into one or two places only, and that if the vaccination marks are of an area of half a square inch they indicate a better state of protection than if their area be at all considerably below this."

UNIVERSITY AND EDUCATIONAL NEWS.

DR. E. N. POTTER has resigned from the presidency of Hobart College.

DR. W. E. CASTLE has been appointed instructor in biology in Knox College, Galesburg, Ill.

DR. F. B. PECK has been made associate professor of geology and paleontology at Lafayette College.

DR. G. A. TAWNEY, assistant in Princeton University, has been appointed to the chair of philosophy in Beloit College, vacant by the death of Prof. Blaisdell.

AT Cornell University an Oliver Graduate Scholarship in Mathematics, of the annual value of \$300, has been founded in memory of James Edward Oliver.

THE number of students registered in the College of Physicians and Surgeons, Columbia University, up to November 1st, were 625, of whom there are in the first