ancient (Bull. de la Soc. d'Anthropologie de Paris, 1898, Fasc. 2).

THE STIGMATA OF DEGENERATION.

THIS is the title of an article of thirty-five pages by Dr. W. C. Krauss in the *American Journal of Insanity*, July, 1897, of great merit. There is no question in anthropology of more actual interest than that of Degeneration, what it is, what it means, what are its signs. In one sense, every step of progress involves degeneration, while in another sense, degeneration is the antithesis of progress. There is no such thing as 'the normal type,' the perfect man, and never was. What some writers assert is the acme of perfectibility—complete adaptation to environment—is, in fact, typical degeneration and a pathological condition.

Dr. Krauss treats very fully the stigmata of degeneration, first the physical, and next the mental or psychical and moral, and concludes with an attempt to answer the question: Is the human race degenerating? He replies with a negative, and adds the pleasing information that, 'as compared with foreigners, Americans exhibit the fewest signs of degeneracy, and the most marked degenerate types found here are imported individuals.'

D. G. BRINTON.

UNIVERSITY OF PENNSYLVANIA.

SCIENTIFIC NOTES AND NEWS.

THE 'HUMANE' SOCIETY.

THE current issue of the *Philadelphia Medical Journal* contains an interesting article by Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, on diseases and abuses of animals in the United States, describing what has been done by the federal government towards their alleviation and prevention, and what the Humane Societies of the country may do to assist in these efforts. This address was prepared at the request of the officers of the American Humane Society to be read at their present meeting in Washington. But the Washington Humane Society protested that if Dr. Salmon's name were not removed from the program they would lose all interest in the meeting, and the paper was omitted. The Chairman of the Sub-executive Committee wrote to Dr. Salmon that he was deeply humiliated by the action of the Society, and to this letter Dr. Salmon replied as follows:

Your favor of the 21st instant is received, and I assure you there is no cause for you to feel embarrassment on my account. It is remarkable, however, that the Washington Humane Society should so greatly fear the reading of a paper before your body, upon such a practical subject as I was to present, that it would lose all interest in the meeting in case that part of the program were carried out. If the cause which they are advocating would be so seriously endangered by one man and one paper, with a convention predisposed in their favor, should not this confession of the fact prove embarrassing to them rather than to any one else?

The Washington Humane Society is making a great effort to secure legislation to stop experimentation upon animals even for the advancement of medical science. In this I sincerely hope they will never succeed; but they are alienating from cooperation with the humane societies the great humane forces of the country, viz., the medical and veterinary professions, the biologists, the universities and the Agricultural Department of the Government. In the meantime the value of such experimentation is becoming more and more apparent, and we are slowly learning, by means of it, how to control the destructive diseases affecting mankind and the lower animals. This Bureau has distributed, upon request of the owners of cattle, 500,000 doses of blackleg vaccine during the past year, reducing the loss from about 15 per cent. to 1 per cent. This year we have demonstrated that Texas fever can be prevented without serious restriction to the traffic in Southern cattle, and this discovery will save millions of dollars annually to the people of the Southern and Southwestern States and Territories. We are also introducing a serum treatment for hog cholera which saves 80 per cent. of the animals in diseased herds. These discoveries, made by experimenting upon animals, mean not only many millions of dollars to the country, but they mean the cheapening of the food supply, which is always equivalent to saving human suffering and prolonging human life, and they also mean the prevention of infinite suffering among the species of animals affected by these diseases.

Under these circumstances is it not time for the

liberal and intelligent members of the American Humane Association, who joined that organization to prevent cruelty to animals rather than to secure personal notoriety, to stop and consider whether they are called upon to further support and encourage those narrow-minded and intolerant people whose efforts are a hindrance rather than an aid to the cause of humanity.

Assuring you again of my appreciation of your invitation, and of my sympathy with every intelligent effort for lessening the great sum of misery and suffering to which both our own race and the lower animals are subject, I am, etc.

THE SEVENTH INTERNATIONAL GEOGRAPHICAL CONGRESS.

It will be remembered that at the Sixth International Geographical Congress held in London in 1895 two invitations were presented for the next meeting, one from the United States and one from Germany. The latter invitation was accepted, and the Geographical Society of Berlin, which is assisted by a General German Council, undertook to carry out the necessary preparations. The London *Times* states that invitations are now being issued to the friends and promoters of geography in all countries, and especially to the members of all geographical societies and cognate scientific bodies. The meeting of the Congress will take place from Thursday, September 28, to Wednesday, October 4, 1899. Before the beginning and after the close of the Congress excursions will be arranged through such parts of Germany as may be of interest with regard to physical or economic geography. The Geographical Society of Hamburg will issue invitations for a visit to that city under the auspices and with the sanction of the Senate. Further information respecting the organization and the general program of the Congress will be issued as early as possible.

The subjects which may be treated or discussed at the Congress are embraced in the following groups: (1) Mathematical Geography, Geodesy, Cartography, Geophysics; (2) Physical Geography, Geomorphology, Oceanography, Climatology; (3) Biological Geography; (4) Industrial and Commercial Geography; (5) Ethnology; (6) Local Geography, Exploring Travels; (7) History of Geography and of Cartography; (8) Methodology, School Geography, Bibliography, Orthography of Geographical Names. It is probable also that some step may be taken to render the work of the Congress more continuous and permanent. Something was done in this direction at the London meeting, but, as the committee of the Congress have no funds at their disposal, it is difficult to carry out any practical work. Some attempt may, therefore, be made to institute a fund out of which grants may be made for special purposes, as is done by the British Association.

The subscription for membership is £1 for either ladies or gentlemen. Members will receive all publications of the Congress free of charge. Ladies accompanying members are also admitted as associates on payment of 10s. All who wish to contribute communications to the Congress are requested to give notice before April 1, 1899, and to send their manuscripts to print not later than June 1, 1899. The time allowed for each discourse or paper will, as a rule, not exceed twenty minutes, but exceptions may be made in the case of subjects of general interest or importance.

According to custom, the English, French, German and Italian languages are admitted as languages of the Congress, and all papers must be written in one of them. All propositions, applications, notifications and manuscripts of papers which are addressed in due time to the Congress will be submitted for examination to a special committee, and, if found suitable, incorporated in the general program, so far as the time at disposal shall allow. If it is desired that full notice of any communication thus admitted be given in the daily bulletin which is to be published during the meeting, an abstract of it, not exceeding 1,500 words, must be delivered before August 1st. Any motion to be laid before the Congress must be formulated in writing, and should be transmitted not later than June 1, 1899. All correspondence relating to matters of the Congress is to be addressed 'To the Seventh International Geographical Congress, 90, Zimmerstrasse, Berlin, S. W.'

STATE OWNERSHIP OF THE TELEGRAPH AND THE TELEPHONE.

The presidential address given by Mr. W. H. Preece, C.B., F. R. S., before the British Insti-

tution of Civil Engineers, on November 1st, is of such interest that we regret that limits of space do not permit its publication in full. The government of the United States must soon face the problem of the control of the telegraph and telephone, and the account given by Mr. Preece of the condition of affairs in Great Britain may be quoted. He says: "I was sent, in 1877, together with Sir Henry Fischer, to investigate the telegraph system of the American continent, and especially to inquire into the accuracy of the incredible report that a young Scotchman named Bell had succeeded in transmitting the human voice along wires to great distances by electricity. I returned from the States with the first pair of practical instruments that reached this country. They differed but little from the instrument that is used to-day to receive the sounds. The receiver, the part of the telephone that converts the energy of electric currents into sounds that reproduce speech, sprang nearly perfect in all its beauty and startling effect from the hands of Graham Bell. But the transmitting portion, that part which transforms the energy of the human voice into electric currents, has constantly been improved since Edison and Hughes showed us how to use the varying resistance of carbon in a loose condition, subject to change of pressure and of motion under the influence of sonorous vibrations. The third portion, the circuit, is that to the improvement of which I have devoted my special attention. Speech is now practically possible between any two postoffices in the United Kingdom. We can also speak between many important towns in England and France. It is theoretically possible to talk with every capital in Europe, and we are now considering the submersion of special telephone cables to Belgium, Holland and Germany. The progress of the use of the telephone in Great Britain has been checked by financial complications. It fell into the hands of the company promoter. It has remained the shuttlecock of the Stock Exchange. It is the function of the Postmaster-General to work for the public every system of inter-communication of thought which affects the interests of the whole nation. Telephony is an Imperial business, like the Post and the Telegraph. It ought to be in the hands of the State. * * * Two causes exist to impede this desirable absorption, the fear of being 'done' by watered and inflated capital, and the assumed bad bargain made in absorbing the telegraphs in 1869. The former is a mere bugbear. The public does not want to purchase stock. It wants to acquire a plant and business, which can be easily and fairly valued. The latter is a gross fallacy. The business of the telegraph companies — practically an unlimited monopoly — was purchased on absolutely fair terms, viz.: 20 years' purchase of the net profits. The sum paid was £4,989,048. The number of messages then sent in one year was about 5,000,000, and the gross income about £500,000. The income has now grown to £3,071,723, the number of messages has reached 83,029,999, and the capital account which was closed in 1891, viz.: £10,131,129, including the cost of the Post Office extensions, remained the same. If a syndicate desired now to re-purchase the business and acquire the plant they would have to find a capital of over £30,000,000. In what respect, then, was the transfer of the telegraphs to the State a failure? Our magnificent system has been built virtually out of revenue; our tariff is very cheap; scarcely a village of any consequence is without its telegraph; our press is virtually subsidized by having its news supplied at much less than cost price; we can rely upon safe and accurate delivery and upon speedy despatch of messages. We lead the world. There has been no failure and there was no bad bargain.

GENERAL.

LORD LISTER, President of the Royal Society, has addressed an official letter to the Paris Academy of Sciences, asking its opinion as to the advisability of forming an International Scientific Association, representing the chief scientific academies and societies of the world. The Paris Academy has decided to discuss this question in a secret session.

PRESIDENT PUTNAM has called a meeting of the Council of the American Association for the Advancement of Science, on Tuesday, December

27th, at 4 p. m., in Schermerhorn Hall, Columbia University, New York City.

THE Dutch Academy of Sciences has elected the following foreign members: Professor E. C. Pickering, Harvard University; Professor W. C. Röntgen, Würzburg; M. L. V. Delisle, Paris, and Professor F. E. Thorpe, London.

THE French Academy has elected as correspondent in the section of mineralogy M. Deperret, who has been for many years professor at Lyons, and is the author of numerous contributions to geology and paleontology. The other nominees were M. M. Gonnard, O'Ehlert and Péron.

PROFESSOR A. S. PACKARD has been given leave of absence from Brown University, and will spend nine months in a trip to Egypt, Palestine and the countries on the Mediterranean.

PROFESSOR JOSIAH ROYCE, of Harvard University, leaves New York on December 20th for Aberdeen, where he will give the Gifford Lectures on 'Natural Religion.' He will return to America in February.

PROFESSOR A. H. CHURCH has been elected President of the Mineralogical Society, London.

PROFESSOR KOCH, who, as we have already stated, has been spending several months investigating malaria at Rome, now proposes to return to Africa to continue his studies on the subject.

THE anniversary meeting of the Royal Society was held on November 30th, and the annual dinner on the evening of the same day. Officers were elected and medals conferred in accordance with the arrangements that we have already announced. Lord Lister referred to the Fellows of the Society who had died during the year, of which there were sixteen, and described the advance of science more especially as related to the activities of the Society. At the dinner in the evening, speeches were made by the Lord Chancellor, the Bishop of London, Lord Lister, Professor Oliver Lodge, Lord Curzon and Lord Kitchener.

THE U. S. Fish Commission steamer *Fish Hawk* is expected to leave Norfolk this week for Porto Rico, where it will remain during the winter. The party it carries will make a careful study of the various forms of life in the waters about the island, and incidentally the fauna and flora of the land will be studied and collections made in various branches of natural history. On the return of the steamer the material gathered will be submitted to specialists, and their united papers will form a comprehensive report on the natural history of the island. The presence of Mr. A. H. Baldwin as artist to the expedition ensures good illustrations and will make it possible to obtain figures of many marine animals colored from life. Professor B. W. Evermann is in charge, and he will be assisted on the part of the Fish Commission by Mr. H. F. Moore, E. C. Marsh and others. Entomology will be cared for by Mr. August Brusck, of the Department of Agriculture, while Mr. A. B. Baker will represent the National Zoological Park.

THE authorities of the American Museum of Natural History have consented to open the Museum to members of the scientific societies visiting New York on Tuesday, December 27th, although ordinarily the Museum is closed on Tuesdays. On presenting a card to any of the curators, the visitor will be personally shown the objects that may specially interest him.

THOMAS SANDERSON BULMER, M.D., C.M., F.S.A., died by suicide, at Sierra Blanca, Texas, on October 5th. He has pursued amateur researches in American archæology and ethnology for several years; he made contributions of some note to Pilling's bibliographies of Indian linguistics; during the past year he made journeys through northern Mexico, visiting ruins and collecting information concerning Indian tribes.

DR. EWALD GEISSLER, professor of chemistry in the Veterinary School at Dresden, died on October 15th, aged fifty years.

MR. EDWIN DUNKIN, F.R.S., the distinguished astronomer, died on the 26th inst. in Kidbrooke-park-road, Blackheath. The London *Times* states that he was the third son of Mr. William Dunkin, of the 'Nautical Almanac' office, and was born at Truro in 1821. After being educated partly in England and

partly in France, he joined the staff of the Royal Observatory at Greenwich in 1838, and remained there for 46 years, being promoted successively to be First-class Assistant and Chief Assistant. During this period he represented the Astronomer Royal in several important expeditions, notably the observations of the total solar eclipse at Christiania in July, 1851, and the determination of the telegraphic differences of longitude between the Royal Observatory and the observatories in Brussels, Paris and Valencia, in Ireland. Mr. Dunkin had the sole charge of the Astronomer Royal's pendulum experiments, undertaken to determine the mean density of the earth, at the Harton coalpit, near South Shields, in 1854. Elected a Fellow of the Royal Astronomical Society in 1854, he served as Honorary Secretary from 1871 to 1877, and in 1884 he was chosen President. He was elected a Fellow of the Royal Society in 1876, and from 1879 to 1881 was a member of the Council of the Society. Mr. Dunkin published a number of works on astronomy, including 'On the Probable Error of Transit Observations,' 'The Midnight Sky,' 'Familiar Notes on the Stars and Planets,' 'Obituary Notices of Astronomers,' and a work on the movement of the solar system in space determined from the proper motions of 1,167 stars. In addition he contributed from time to time to various scientific and other periodicals.

WE take also from the London *Times* the following particulars in regard to the work of Professor George James Allman, whose death we were compelled to record last week: He devoted the greater part of his life to investigating the lower organisms of the animal kingdom. For his researches in this branch of biology he received in 1872 the Brisbane prize from the Royal Society of Edinburgh; in the following year a Royal medal was awarded to him by the Royal Society of London, and in 1878 he received the Cunningham gold medal from the Royal Irish Academy. He was appointed by the government in 1876 one of the Commissioners to inquire into the condition of the Queen's Colleges in Ireland, and soon after his election to his professorship in Edinburgh he was appointed one of the Commissioners of Scottish Fisheries. The latter post he held until the abolition of the Board in 1881. When Mr. Bentham resigned the presidency of the Linnæan Society Professor Allman was elected, and he retained the position until 1883, when he resigned in favor of Sir John Lubbock. He He was President of the British Association for the Advancement of Science in 1879. The large collection of Hydroida made during the exploring voyage of the Challenger was assigned to Professor Allman for determination and description. He had previously dealt in a similar manner with the Hydroida collected during the exploration of the Gulf Stream by the United States government. Professor Allman has served on the Councils of the Royal Societies of London and Edinburgh, and of the Royal Irish Academy, and has filled the post of Examiner in Natural History for the Queen's University of Ireland, the University of London, the Army and Navy and Indian Medical Services, and for the Indian Civil Service. He has published the results of his original investigations in the Philosophical Transactions, the Transactions of the Royal Society of Edinburgh, of the Royal Irish Academy, and of the Linnæan and Zoological Societies of London. Other of his original contributions took the form of reports to the British Association, to the Museum of Comparative Zoology, Harvard University, and to the Commission of the Challenger Exploration, and of communications to the *Annals of Natural History*, the *Quarterly Journal of Microscopic Science* and other scientific publications. His larger works were: 'A Monograph of the Fresh-water Polyzoa,' 1856, and 'A Monograph of the Gymnoblastic Hydroids,' 1871–72, both published by the Ray Society.

MR. C. B. CRAMPTON has been appointed Assistant Keeper in the Geological Department of the Manchester Museum.

DR. KARL FREIHERR VON TUBEUF, Privatdocent at Munich, has been called to the newly established Division for Agriculture and Forestry in the Royal Department of Health, Berlin.

THE Alvarenga prize of the Philadelphia College of Physicians, of the value of about $180, has been awarded to Dr. S. A. Knopf, of New York City, for an essay on pulmonary tuberculosis.

M. BISCHOFFSHEIM has undertaken to construct and endow an observatory to be placed on Monte Cinto, in the Island of Corsica. Surveys are at present being made, with a view to finding the most suitable site for the observatory.

M. CHAUCHARD, who gives annually large sums for public purposes, has this year set aside 130,000 fr. for various Paris institutions and charities, 10,000 fr. being for the Pasteur Institute.

THE late William E. Hale, of Chicago, has bequeathed $300,000, to be held in trust, the income to be used for public purposes at the discretion of the trustees.

MR. T. B. BLACKSTONE, of Chicago, who gave more than $500,000 for the erection and endowment of a library at Brandford, Conn., has now added $100,000 to its endowment.

A BIOLOGICAL station has been established on Lake Bologoy by the Society of Naturalists of St. Petersburg.

A GRANT of £25 from the Craven University Fund, Cambridge University, has been awarded for the purpose of assisting George B. Grundy, M.A., Brasenose College, to complete surveys and explorations, mainly in northern Greece.

Natural Science states that Mr. Alan Owston, of Yokohama, has recently sent to England a magnificent collection of hexactinellid sponges from the seas of Japan. Most of these have been purchased by the Trustees of the British Museum, but a fair number have gone to Oxford. Among the specimens are many studied by Professor Ijima for the monograph that he is writing on the group.

AN expedition has been sent from France to explore the upper course of the Cavally River, which separates the Republic of Liberia from the French possessions. The French government is also about to send a hydrographic expedition to make surveys of the coast of Madagascar.

PROFESSOR MCMURRICH, of the department of anatomy of the University of Michigan, has recently been asked by the authorities of the Bremen Museum to investigate a collection of actinia, commonly known as animal flowers or sea-anemones, obtained from the south Pacific islands. This offer he was regretfully compelled to decline, as he is at the present time engaged in the study of a similar collection from the coast of Chili, made by the authorities of the Royal Museum of Natural Sciences of Berlin.

THE committee of the Royal Society appointed to investigate the Tsetze-fly disease, consisting of Professor Kanthack, Mr. H. E. Durham and Mr. W. H. Blandford, have made a report showing that the parasite is capable of infecting a larger variety of animals than was previously supposed, and giving some details in regard to methods of infection, but they have not been able to discover a preventative or cure.

THE arrangements for providing a school of tropical medicine at the branch hospital of the Seaman's Hospital Society, Victoria and Albert Dock, London, E., are, says the *British Medical Journal*, making satisfactory progress. A subcommittee, consisting of Mr. Nairne, Chairman; Sir C. Gage Brown, K.C.M.G.; Mr. Macnamara, Dr. Lauder Brunton, Dr. Stephen Mackenzie, Dr. Manson, Dr. James L. Maxwell, Mr. Johnson Smith, F.R.C.S.; Mr. William Turner, F. R.C.S., and Mr. James Cantlie, F.R.C.S., is now engaged in drawing up a constitution for the school and defining the curriculum. The new buildings will, it is expected, be completed by October 1, 1899, and it is announced that Mr. Chamberlain intends to preside at a festival dinner to be held during the coming Parliamentary session. A valuable collection of paintings of skin diseases and ulcers, common in British Guiana, has been presented to the school by Dr. D. Palmer Ross.

A CORRESPONDENT of the London *Times* telegraphs from Bombay that the hearing of evidence before the Plague Commissioners began on November 29th. The first witness was Mr. A. Wingate, Acting Chief Secretary. He gave a history of the plague in the Bombay Presidency. Segregation in the small towns had destroyed the plague, but it was impossible in the big towns on account of the requirements of trade, though it had been advantageous in certain wards of some towns. The shortest time during which evacuation of villages had been

enforced was three weeks, and the longest three months. Dr. Haffkine was next examined. He described the constituents of his plague prophylactic, the method of its application, and the general result. After the sittings at Bombay the Commission will proceed to Calcutta, which will be reached about Christmas. Having taken evidence in the Northwestern Provinces and the Punjab as to the outbreaks, the Commissioners will visit Sind, ultimately returning to the Bombay Presidency, where the proceedings are likely to be protracted, as this has been the principal seat of the epidemic.

PRESIDENT MCKINLEY'S message to Congress contains almost no reference to the scientific work under the government. It is said in regard to forest reservations that at the close of the year thirty forest reservations, not including those of the Afognac forest and the fish-culture reserve in Alaska, had been created by Executive proclamations under Section 24 of the Act of March 3, 1891, embracing an estimated area of 40,719,474 acres. The Department of the Interior has inaugurated a forest system, made possible by the Act of July, 1898, for a graded force of officers in control of the reserves. This system has only been in full operation since August, but good results have already been secured in many sections. The reports received indicate that the system of patrol has not only prevented destructive fires from gaining headway, but has diminished the number of fires.

DR. ERWIN F. SMITH, of the Department of Agriculture, has been investigating the peach orchards of southwestern Michigan which are suffering from a damaging disease known as 'little peach.' The symptoms of the disease are: (1) dwarfing of the fruit; (2) retarded ripening of the fruit, or at least absence of any premature ripening; (3) absence of any red spotting of skin or flesh; (4) dwarfing or yellowing of the foliage from start; (5) absence of the sprouting winter buds. Dr. Smith concludes that the disease is due to a shutting-off of the water supply, but whether this is brought about by some parasite, or by droughts combined with overbearing and with unsatisfactory soil or subsoil conditions, can only be determined by long and careful study.

MR. FREDERICK W. CHRISTIAN, after an absence of nearly nine years, has recently returned from his explorations in the Caroline Islands. We learn from the London *Times* that Mr. Christian stayed nearly three years in Samoa, studying the language and customs of the peoples, especially those who are farthest removed from the settlements of the white man. In Tahiti and the Marquesas he spent two years, carefully and minutely studying and noting down the language, the genealogies, folklore and traditions of the inhabitants. He visited single-handed Spanish Micronesia, in order to obtain some further and minuter information upon certain mysterious ruins reported to exist upon Bonate, or Ponape, and Lele, two islands lying farther to the eastward of the extensive Caroline chain. The results of Mr. Christian's explorations were as follows: A Pampanga native, since executed by the Spanish for joining the late Philippine rebellion, took some 150 photographs in the districts of Kiti, U, Metalanim, Not and Chokach (wrongly styled Jekoits and Jokoits in the present charts). The walled islets of Nan-Matal, the mysterious Venice of Micronesia, were explored and mapped out fairly accurately. The phonesis of very many native names and their spelling were changed from a meaningless jargon to their correct native renderings and accompanying significations. He also made excavations in the central vault of the sanctuary of Nan-Tanach, bringing to light a considerable number of curious tools, implements and shell ornaments of an ancient date. Many of the old native legends and fairy tales were rescued from oblivion. Some new information was obtained about the flora and marine life of the archipelago. The former presence of an early Negrito race, conquered and absorbed or overlapped by later waves of Polynesian, Malayan and Melanesian immigrants was fairly established. Also evidence was collected as to the obtrusion of many Japanese words upon the Micronesian area. This was elaborately demonstrated by an exhaustive list of 450 English keywords—nouns, verbs and adjectives—in the various Micronesian dialects. Mr. Christian

spent some three months upon Yap, in the western Carolines. Some of the ancient platforms and burial places—of a Japanese design—and the remarkable village council lodges were sketched. After putting the results of his work on record through the Royal Geographical Society and otherwise, Mr. Christian intends to revisit the Carolines and Mariannes, taking particular notice of Ruk, Tinian, Saipan, Pulawat and Nuku-Oro and the Pelew Islands.

Consul Mayer writes to the Department of State from Buenos Ayres, under date of October 12, 1898: The locust advices are not reassuring, as, though the extinction goes on briskly, the invasions are tremendous, and it is apprehended that they will soon be in the Province of Buenos Ayres. Entre Rios and parts of Santa Fé and Cordoba are overrun. In the first three days of October 398 tons of locusts were gathered in Entre Rios alone; but the sub-commissions complain that in some quarters the inhabitants refuse to work at the extinction, and that the police does not lend its authority to compel them. The central commission has issued a circular urging that prompt notice be given of all desoves (egg despositing) and samples sent in, with dates and all other particulars pertinent. The news from Paraguay is that the locusts are thick there and doing wholesale damage. In the colonies south of Santa Fé there have been no invasions as yet, and the farmers are of the opinion that if they escape until the 15th instant both wheat and linseed will be safe. The Jewish colonies in Villaguay have been invaded and the crops destroyed. The colonization company owns 70,000 hectars there, of which 25,000 to 30,000 are under cultivation; so that the great loss to the farmers can easily be imagined, should the crops not come on again. For this, rain is absolutely necessary. The farmers made no move whatever to cope with the plague, and the sub-commission recommends the head commission to be inexorable in imposing fines. The work of extinction is being briskly pushed in other Provinces and is giving good results. Buenos Ayres has not suffered yet, but the plague is coming down apace.

Dr. George F. Becker has sent to the U. S. Geological Survey a report on the mineral resources of the Philippine Islands, in the course of which he says that, so far as is definitely known, the coal of the Philippine Islands is all of the Tertiary age, and might better be characterized as a highly carbonized lignite. It is analogous to the Japanese coal and that of Washington, but not to the Welsh or Pennsylvania coals. Such lignites usually contain much combined water (8 to 18 per cent.) and bear transportation ill. They are also apt to contain much sulphur, as iron pyrites, rendering them subject to spontaneous combustion and injurious to boiler plates. In these islands it would appear that the native coal might supplant English or Australian coal for most purposes. Lignite is widely distributed in the archipelago; some of the seams are of excellent width and the quality of certain of them is high for fuel in this class. Coal exists in various provinces of the Island of Luzon, and a number of concessions for mining have been granted. Many of the other islands contain coal and in the great Island of Mindanao it is known to occurr at eight different localities. In the Island of Cebu petroleum has been found associated with coal at Toledo, on the west coast, where a concession has been granted. It is also reported from Asturias, to the north of Toledo on the same coast, and from Alegria to the south. Natural gas is said to exist in the Cebu coal fields. On Panay, too, oil is reported at Janinay, in the province of Iloilo, and gas is reported from the same island. Petroleum highly charged with paraffin is also found on Leyte at a point about four miles from Villaba, a town on the west coast. Gold is found at a vast number of localities in the archipelago, from northern Luzon to central Mindanao. In most cases the gold is detrital, and is found either in existing water courses or in stream deposits now deserted by the current. Copper ores are reported from a great number of localities in the Philippines. They are said to occur in the following islands: Luzon (provinces of Lepanto, Benguet and Camarines), Mindora, Capul, Masbate, Panay (province of Antique) and Mindanao (province of Surigao). Many of these occurrences are probably unimportant. A lead mine has been partially devel-

oped near the town of Cebu, and there is iron ore in abundance in Luzon, Caraballo, Cebu, Panay and doubtless in other islands. Sulphur deposits abound about active and extinct volcanoes in the Philippines.

UNIVERSITY AND EDUCATIONAL NEWS.

THE fund being collected by the New York Chamber of Commerce as a memorial to the late Colonel Waring, which it is hoped will reach $100,000, three-fourths of this sum having now been given, is to be used, after the death of Mrs. Waring and her daughter, for the endownment of a chair of instruction in municipal affairs in Columbia University.

MR. E. D. MORGAN has given $5,000 for the equipment of a pathological laboratory at the Bussey Institute, Harvard University, of which Professor Theobald Smith is the Director. A new greenhouse, costing $7000, has been given anonymously to the Botanical Garden of the University.

WE regret to note that the will of the late Colonel Bennett, which gave a large endowment to the women's department of the University of Pennsylvania, is being contested.

IT is perhaps not generally known that Cornell University possesses the largest school of naval architecture in America. There are this year fifty students taking naval architecture and marine engineering as their chief subjects.

AT the anniversary dinner of the Royal Society on November 31st Lord Kitchener announced that he had received £40,000 for the foundation of a college at Khartoum. As a further indication of what Great Britain is doing for its imperial subjects we note that plans are being made to establish a Mohammedan University in India.

DR. M. E. WADSWORTH has resigned the Presidency of the Michigan College of Mines. In his letter of resignation he says: "When I came to take charge of this institution it had no hold anywhere and its death was hourly expected. I leave it with you firmly established, a recognized part of the great educational system of the State, a college that ranks with any in the world of its kind, and with many of its graduates leaders in their chosen field. It is now successful, prosperous and of world-wide fame. No mining engineering school in United States ever had such a phenomenal growth in numbers and standing as this one has had in the same space of time, and that, too, under extremely disadvantageous circumstances."

THE *Experiment Station Record* announces the following appointments: At the Idaho College and Station, J. P. Blanton has been appointed President of the University of Idaho and Director of the Station; M. T. French, professor of agriculture in the College and Agriculturist of the Station; Thorn Smith, Assistant Chemist; Professor A. S. Miller, Geologist, and J. A. Huntley has been elected to the newly established chair of horticulture. Elmer D. Ball has been made Assistant Entomologist at the Colorado Station, and A. H. Bryan and R. W. Clothier Assistant Chemists at the Indiana and Kansas Stations, respectively. Charles W. Burkett has been appointed associate professor of agriculture at the New Hampshire College and Station, and James Withycombe Assistant Director and Agriculturist of the Oregon Station. A. W. Blair has been made State Chemist of North Carolina. At the Vermont Station, L. R. Jones and F. A. Waugh have been granted a half year's leave of absence for special studies in botany and horticulture.

THE Council of the University of Paris has authorized courses under the faculty of science by M. Chabrié in applied chemistry, and by M. Favre in methods of experimental science.

THE following appointments and promotions abroad are announced: Dr. Heinrich Obersteiner, assistant professor of physiology and pathology of the central nervous system in the University of Vienna, has been promoted to a full professorship; Dr. Robert Haussner, of Giessen, to an assistant professorship of mathematics, and Dr. K. W. Zimmermann, of Bern, to an associate professorship of anatomy. Dr. Lepetet has been made professor of histology in the University of Clermont, Dr. Oskar Zoth professor of physiology in the University of Gratz, Dr. de Marignac professor of hygiene in the