during 1888. Of the total cases, 210 in number, one-third occurred in the seventh ward, whose population is one-tenth of the entire city. Dr. Williston states that this ward is known to be in poor sanitary condition. The greatest factor in the mortality of the city was pulmonary consumption, which caused 217 deaths; next comes pneumonia, with 142. From infantile diarrhœa there were 137 deaths; from old age, 50; cancer, 40; and typhoid-fever, 38.

NOTES AND NEWS.

THE meeting of the Society of Microscopists will be held at Buffalo, N.Y., beginning on Aug. 21. Professor T. J. Burrill, Champaign, Ill., is the secretary.

— The peasant proprietors in Russia, says a writer in the *Nineteenth Century*, can neither pay the money owing to the government for their land, nor even the state and communal taxes, and are flogged by hundreds for non-payment. In one district of Novgorod, fifteen hundred peasants were thus condemned in 1887. Five hundred and fifty had already been flogged, when the inspector interceded for the remainder. Widespread famine is found over a great part of the country. Usurers, the bane of peasant proprietors in all countries, are in possession of the situation. The Koulaks and Jew "Mir-eaters" supply money on mortgage, then foreclose, and, when the land is in their possession, get the work done for nothing as interest. These bondage laborers, as they are called, are in fact slaves, and are nearly starved, while the small pieces of land are often re-united into considerable estates, and their new owners consider they have only rights, and no duties. Meantime, as forced labor is at an end, and free labor is of the worst possible kind, the old land-owners can get nothing done. They have tried to employ machines, bought by borrowing from the banks, and are now unable to repay the money. The upper class has been ruined, with no advantage to the peasant.

— The thirty-eighth meeting of the American Association for the Advancement of Science will be held at Toronto, Ont., beginning on Tuesday, Aug. 27, 1889, at noon, by a meeting of the council at the Queen's Hotel, where will be the hotel headquarters of the association. On Wednesday, Aug. 28, the first general session of the meeting will begin at ten o'clock in the forenoon in the Convocation Hall, University Buildings. After the adjournment of the general session, the several sections will organize. In the afternoon the vice-presidents will give their addresses before their respective sections; and in the evening there will be a general session, when the retiring president, Major J. W. Powell, will deliver his address. The sessions will continue until the Tuesday evening following, and on Wednesday morning, Sept. 4, a meeting of the council will be held. Saturday, Aug. 31, will be given to excursions. The meeting will close with excursions extending to Sept. 7. The general sessions and the meetings of the sections will be held in the University Buildings, where also will be the offices of the local committee and of the permanent secretary during the meeting. Board and lodging for members and their families may be had at moderate rates in several hotels and boarding-houses within easy reach of the place of meeting; and, as the local committee will provide a lunch, members will not be obliged to return to their lodgings during the heat of the day. In the evening, when not otherwise engaged, it is expected that the members of the association and of the local committee will meet socially in the reception-rooms at the hotel. A special circular in relation to railroads, hotels, excursions, and other matters, will be issued by the local committee, and members who are about changing their address for the summer should notify the local secretary at once. It can now be stated, however, that arrangements have been made by Mr. Dudley and the special committee on transportation by which members and their families will be, in general, able to obtain return tickets for one-third the regular rate, provided members are particular in complying with the conditions of the agreements with the passenger agents of the several railroad associations, which will be given in detail in the local committee circular. Without obtaining such a certificate as will be described in the local committee circular, to be countersigned at the meeting, the reduced rate for return ticket cannot be secured. For all matters pertaining to membership, papers, and business of the association, address the permanent secretary at Salem, Mass., up to Aug. 22. From Aug. 22 until Sept. 9, his address will be A.A.A.S., Toronto, Ont. Members remitting back assessments before Aug. 22 will receive their receipts and volumes of "Proceedings" at once from Salem; those paying by mail after that date (and not present at Toronto) must not expect their receipts and volumes until after the meeting. The Cleveland volume of "Proceedings" will be sent during this month to all members who have paid the assessment for that meeting. The assessment receipt for the Toronto meeting must be shown at the time of registering, in order to obtain the association badge, which entitles the member to the privileges of the meeting. If members pay the assessment for the Toronto meeting in advance, and remember to take the assessment receipt to Toronto, they will save standing in the crowd before the secretary's desk, and can register at once on arrival after the opening of the register on Aug. 27. Under the rule which took effect in 1884, members have the privilege of registering members of their families (not including men over twenty-one years of age) by paying the sum of three dollars for each individual to be registered. These associate members will receive badges entitling them to all the privileges extended to members generally by the local committee. Special information relating to any of the sections will be furnished by their officers. Arrangements have been made for a discussion in Section B on the "Relative Merits of the Dynamometric and Magnetic Methods of obtaining Absolute Measurements of Electric Currents." Professor Thomas Gray of the Rose Polytechnic Institute will open the discussion with a paper on the subject, and he will exhibit one or more of Sir William Thomson's most recent forms of electric balance. Arrangements have been made by the local committee for the proper care and exhibition of instruments and specimens, for the details of which, and for all other local matters, members should address the local secretary. In anticipation of the circular to be issued by the local committee, it is only necessary here to give the names of Charles Carpmael, Esq., president of the committee; and of Professor James Loudon, local secretary, Toronto, Ont. Members of the association arriving in Toronto before the meeting should call for information at the temporary office of the local secretary, near the Union Railway Station.

— The Entomological Club of the American Association will meet at 9 A.M., Aug. 28, in the room of Section F, University Buildings, where members of the club will register, and obtain the club badge. Members of the club intending to contribute papers will send titles to the president, Mr. James Fletcher, Government Experimental Farms, Ottawa, Can. The Botanical Club will hold a meeting, as usual, on Tuesday, Aug. 27, in the room of Section F, University Buildings. Communications should be sent to the president, Professor T. J. Burrill, Champaign, Ill., or to the secretary, Douglas H. Campbell, 91 Alfred Street, Detroit, Mich. The Society for the Promotion of Agricultural Science will hold its tenth annual meeting in Toronto, beginning on Monday evening, Aug. 26, in the room assigned to Section I in the University Buildings, and continuing on Tuesday. For further information address Professor W. R. Lazenby, secretary, Ohio State University, Columbus, O. The American Geological Society will hold its meeting in Toronto on Aug. 28 and 29. Professor James Hall, Albany, N.Y., is the president; and Professor J. J. Stevenson, University of City of New York, secretary.

— Mr. Samuel Butler concludes a whimsical article in the May number of the *Universal Review* — an article which he hopes may give his readers absolutely no food whatever for reflection — with words which, though themselves whimsical, are not without their salt of truth, and might perhaps frustrate the very hope which he expresses. "I have sometimes thought," he says, "that, after all, the main use of a classical education consists in the check it gives to originality, and the way in which it prevents an inconvenient number of people from using their own eyes. That we will not be at the trouble of looking at things for ourselves if we can get any one to tell us what we ought to see, goes without saying; and it is the business of schools and universities to assist us in this respect. The theory of evolution teaches that any power not worked at

pretty high pressure will deteriorate; originality and freedom from affectation are all very well in their way, but we can easily have too much of them; and it is better that none should be either original or free from cant but those who insist on being so, no matter what hinderances obstruct, nor what incentives are offered them to see things through the regulation medium. To insist on seeing things for one's self is to be an ἰδιώτης, or, in plain English, an idiot; nor do I see any safer check against general vigor and clearness of thought, with consequent terseness of expression, than that provided by the curricula of our universities and schools of public instruction. If a young man, in spite of every effort to fit him with blinkers, will insist on getting rid of them, he must do so at his own risk. He will not be long in finding out his mistake." There is a fine flavor of "Hudibras" in this view of the case, which Mr. Sully might use as an example of heredity.

— The university delegates have decided, says the *Educational Times*, to arrange a second meeting of university extension and other students in Oxford in August next. The objects of the meeting are to stimulate and direct systematic home study by means of short courses of lectures, to supplement university extension teaching by a brief period of residence and study in Oxford, and to afford opportunities for conference between teachers and others interested in education on the best means of developing university extension and other educational work. The meeting will be divided into two parts. The arrangements for the first part, which will last ten days, will be similar to those which were successful last year. The second part of the meeting will consist of a supplementary period of three weeks' quiet study. The first part of the meeting will begin with an inaugural address by Professor Stuart, M.P., on Tuesday, July 30, and will end on Friday evening, Aug. 9. During the ten days there will be delivered on each morning, at 10.15, and at noon, short courses of lectures on history, literature, science, art, and political economy, and a number of evening lectures of a more general character. Among those who have already promised their assistance are Professor Max Müller, Professor S. R. Gardiner, Sir Robert Ball, Mrs. Fawcett, Rev. W. Hudson Shaw, Messrs. Arthur Sidgwick, R. G. Moulton, R. W. Macan, H. J. Mackinder, E. B. Poulton, D. S. M'Coll, F. Madan, etc. The second part of the meeting will begin on Saturday morning, Aug. 10, and end on Friday evening, Aug. 30. It is proposed that this period should be devoted to quiet study. Lectures will be delivered each morning at 9.45 and 11.45, and a class will be held after each lecture. The courses will be longer than those of Part I., and will deal in greater detail with the subjects then introduced.

— The strife between "Classics" and "Moderns" has assumed great proportions in Holland. Professor Naher of the University of Amsterdam has made the proposal that Greek should be removed from the curriculum of the gymnasia, and should only be compulsory for those who wish to study philology. It is to be noted that Herr Naher is a professor of classical philology. At present, every Dutch student, to obtain a certificate of maturity, must show proficiency in German, French, and English, as well as in Greek and Latin.

— The Michigan Legislature has just appropriated for the Michigan Mining School, $104,000 for the furnishing and maintenance of the school during the years 1889 and 1890.

— The annual report of the Ohio Meteorological Bureau for 1888 shows that at the close of 1887, forty-seven observers were reporting to the bureau. Five of the number were officers of the United States Signal Service, and six were reporters of rainfall only. The number of stations now reporting is fifty-two. The work of the observers is entirely voluntary and without pay. It has been performed continuously and faithfully, as the tabulated results show. The distribution of weather telegrams, through the kindly interest of Gen. A. W. Greely, chief signal-officer at Washington, D.C., has been continued through the year. Of the thirty-six stations to which the telegrams were sent at the beginning of the year, seventeen were discontinued during the year, mainly because of the failure of display-men to properly display the predictions and report to the bureau. Seventeen new stations were added during the year. These telegrams are furnished at government expense, the only conditions imposed being that the places receiving them should provide proper flags and arrange for their prompt display on receipt of the telegrams, and to report monthly on printed forms supplied for the purpose. The board of directors acknowledge their indebtedness to Gen. Greely for the encouragement and material aid which he has given in the prosecution of the work of the bureau. Without it, it would have been impossible to perform the work which has been done the past year with the funds set apart by the State for the purpose. In addition to the reports of current weather observations, a number of interesting and important special reports have been published in the monthly numbers through the year.

— Dr. George Owen Rees, F.R.S., died at Mayfield, Watford, Herts, on May 27. Dr. Rees took his degree of M.D. at Glasgow in 1837, and became a fellow of the Royal Society in 1843.

— We learn from *Nature* that the foundation-stone of the Framjee Dinshaw Petit Laboratory of Scientific Research, in Bombay, was laid on April 8 by Lord Reay. Mr. Petit, the son of the donor, explained that it had appeared to his father desirable, in the interests of medical education, that a laboratory for scientific research in biological and physical sciences should be established. He had long cherished the wish to have the properties of Indian drugs investigated, and made known to medical students. The laboratory will be connected with the Grant Medical College.

— Every one who takes the slightest interest in natural history will be sorry to learn that the kangaroo is in danger of being extinguished. Its skin is so valuable, says *Nature*, that large numbers of young kangaroos are killed; and high authorities are of opinion, that, unless the process is stopped, Australians will soon have seen the last specimen of this interesting animal. Mr. R. G. Salomon, one of the largest tanners in the United States, whither kangaroo-skin is chiefly sent, urges that a fine should be imposed for the killing of any kangaroo whose skin weighs less than ten-twelfths of a pound; and from a note on the subject in the *Zoölogist*, by Mr. A. F. Robin of Adelaide, we are glad to see that a serious attempt is being made to secure the enforcement of this restriction throughout Australia and Tasmania, and the proclamation of a close season between Jan. 1 and May 1. We must hope that the Australian legislatures will understand the necessity of taking speedy action in this matter. It would be scandalous if, in deference to the wishes of a few greedy traders, they were to allow Australia to lose the most famous and most interesting of its characteristic fauna.

— A report was issued on Oct. 16, 1888, from the province of Santa Catherina, Brazil, on the newly introduced ramie-plant. The reporter, who is director of a colony called Grao Para, says that 1,000,000 plants are growing there of the sort called *Urtica utilis*, which is best qualified to resist cold, and able to survive frosts in the ground, without being pulled up and stored. It is not being propagated by seeds, but by transplanting its very numerous suckers, and putting them into the ground horizontally, so that they grow from each knot. They grow best in sandy soil, as in stiff wet soil the roots rot, but they must be strictly protected from wind. They are planted in August and September, and cropped as soon as they are six feet high, and are dark brown at the base. The colony, says the *Textile Recorder*, has a Delantsheer machine moved by water-power, which cost £120 on the spot. At the Concours International de la Ramie, on the Quay d'Orsay, this machine was stated to cost £40. This machine gives satisfactory but not very good results. The colony got the first prize, a gold medal, at Antwerp, for its ramie-fibres, and a manufacturer in the United States offered, without success, to supply machinery gratuitously to the colony in return for a monopoly of its produce of ramie. Commander Joaquim Caetano Pinto introduced the plant from Europe, and on Jan. 5, 1889, he signed a contract with the minister of agriculture by which he engages to import to the colony, at the public expense, two hundred more families of immigrants. The government also undertakes to help him by a donation of £3,000 for the first hundred families, and as soon as they have arrived, but not sooner, to begin making a road to the nearest railway-station on

the D. Thereza Christina line. It may be added that Brazil is peculiarly suitable for ramie, as here its uncontrollable tendency to spread would not give the considerable inconvenience which it does in older countries.

— The news comes from Madras that that portion of the world is ravaged both by famine and cholera. The province of Ganjam is where the epidemic has reached its greatest intensity. The official figures put the deaths at one thousand per week from cholera.

— During a discussion over the educational budget in the Belgium Senate recently, a member attracted attention to the constant increase in the number of students at the universities, — an increase which showed, in his opinion, that the examinations were too easy, and which threatened to overload the liberal professions.

— Since the end of the third week in May the water of the Seine has been distributed in two *arrondissements* of Paris. Usually this only happens during the hottest weather, towards the end of June or the early part of July. This year it will probably be necessary by that time to furnish the Seine water to a large part of Paris. The water is not considered especially healthful, and will attract the attention of visitors to the exposition by its yellow color.

— Sir John Bennett Lawes, the eminent agricultural scientist, of Rothamstead, has, it is stated, just completed arrangements for bequeathing to the cause of agricultural science the sum of £100,000, together with fifty acres of land and the laboratory and museum at Rothamstead. In the latter are stored more than 45,000 bottles of experimentally grown produce, of animal products and of soils. The income of the fund will be handed over to a committee of nine persons, including the owner of Rothamstead for the time being.

— Professor Dr. Foster, director of the University Ophthalmic Clinique at Breslau, has recently drawn the attention of parents and pedagogues to what he believes is often the cause of short-sightedness in the young; namely, that they are allowed to wear collars which are too tight for them. In three hundred cases that had come under his notice the patients were suffering from a chronic complaint brought on by a disturbance in the regular and normal flow of blood, caused by the wearing of collars which were not large enough.

— India, it would seem, is practically uneducated. The total number of scholars in schools and colleges of all sorts is only three and a quarter millions, or 1¼ per cent of the entire population. These are mainly confined to the cities and towns; and out of 250,000,000 in all India, less than 11,000,000 can read and write. A census of the illiterates in the various countries of the world, recently published in the *Statistische Monatsschrift*, places the three Slavic states of Roumania, Servia, and Russia at the head of the list, with about 80 per cent of the population unable to read and write. Of the Latin-speaking races, Spain heads the list with 63 per cent, followed by Italy with 48 per cent, France and Belgium having about 15 per cent. The illiterates in Hungary number 43 per cent, in Austria 39, and in Ireland 21. In England we find 13 per cent, Holland 10 per cent, United States (white population) 8 per cent, and Scotland 7 per cent, unable to read and write. When we come to the purely Teutonic states, we find a marked reduction in the percentage of illiterates. The highest is in Switzerland, 2.5; in the whole German Empire it is 1 per cent; in Sweden, Denmark, Bavaria, Baden, and Würtemberg, there is practically no one who cannot read and write.

— The problem of separating the mica in the tin ores by a simple and effective process is claimed to have been solved by Professor Carpenter of Dakota. If this should be true, says *The Engineering and Mining Journal*, and the deposits in the Black Hills prove any thing like as extensive as they have been represented, it ought to aid the establishment of a vast tin-plate industry to compete with the foreign producers.

— The success of the petroleum borings in Galicia would lead us to expect, according to *The Engineering and Mining Journal*, that the Austro-Hungarian Empire will be totally independent of a foreign supply of oil. Formerly there was a tendency to speak slightingly of Galician oil-deposits, owing to the fact that a large proportion of the wells were dug by hand. Of late years the American method of drilling has been introduced, and many Galicians have become accomplished drillers. In the Lodyna district, wells of a profitable character have been bored. Galician wells have not the copiousness of Russian; but a readier market exists for the oil, and the demand for Lodyna petroleum is such that it is sold at a high rate long in advance of appearing on the surface. The oil-belt of Lodyna is five miles long, and intersected by a railway, thereby enabling the oil to be sent to the refineries at a trifling expense. A few years ago all the refineries in Galicia did not produce 1,000,000 gallons of refined oil, but now their production exceeds 6,000,000 gallons. The Austrian Government takes great interest in the development of the petroleum industry, and has adopted a protective policy which has already succeeded in establishing the Galician oil-trade on a firm basis. In consequence of this and of such successes as the recent borings at Lodyna, where wells have been struck giving a profit of 500 or 600 per cent, the financial and commercial world in Austria has been deeply moved, and petroleum has caused much excitement.

— *Forest and Garden* states that important rose-shows in England this summer will be held as follows: July 2, Boston, Sutton; July 10 and 11, Brighton, Ealing; July 17, Bedford; July 26 and 27, Wilmslow.

— James K. Reeve, in *The Chautauquan* for July, makes some very practical suggestions regarding perfume flower-farming. He says, "The Hon. Norman J. Coleman, late commissioner of agriculture of the United States, in a recent personal letter to the writer of this paper, stated that in his opinion there is in this country, undoubtedly, a vast and undeveloped field suitable for the culture of perfume-yielding plants and flowers, notably on the borders of the Gulf of Mexico, and expressed the belief that the commercial floriculture of this region may yet rival the production of the Mediterranean coast, and become not only the great flower-garden of America, but of the world. A leading perfumer of New York tells me that experiments in perfume flower-culture have been made in most of our Southern States, and that domestic pomades have been frequently offered to dealers, but not of a quality sufficiently good to warrant their use. They attribute this to ignorance of the conditions necessary to the proper production of the pomades, and not to any lacking element in our floriculture. As a home industry in which the surplus labor of a household could be profitably employed, there is nothing which seems at once so practicable and pleasing as this. When flowers are introduced into our gardens as a commercial factor, the gardens will receive more of the time and attention of that portion of our households who most need the out-door life, the strength and color, the health and happiness, that may be found in them.

— The site for the zoölogical garden in Washington has been selected. It comprises about one hundred and fifty acres to the north-west of the city, about two miles from the White House, along the banks of Rock Creek, and is said to be in every way well adapted for its purpose. Before next winter the necessary arrangements will probably be so far advanced that the animals now housed in the grounds of the Smithsonian Institution can be removed to their new quarters.

— Professor Patrick of the Iowa Agricultural College, says *Garden and Forest*, undertook last winter to make a chemical study of apple-twigs to ascertain whether he could detect differences of composition between the young growth of such varieties as are hardy and those which are not hardy in that region. At the same time and for the same purpose a microscopic examination was made of apple-twigs by Dr. Halsted. It would be a great advantage if hardy and tender varieties could be distinguished from each other by a chemical analysis or an examination of their cell-structure. Professor Budd, indeed, has expressed the opinion that there was an apparent difference in the structure and composition of the trees which proved hardy in Iowa and those which were tender. The results of Professor Patrick's analysis "lend, perhaps, some slight encouragement" to this idea. Professor Halsted found "no parallelism between microscopic structural differences and ability to withstand the influences of a trying climate."