

## NOTES

WE are informed that it is probable that Dr. Sharpey, Prof. Huxley, and Sir John Lubbock will be among the members of the Royal Commission to inquire into the present state of Science in this country.

THE Society of Arts has resolved to hold a morning conference on the same subject, which will probably take place on Friday week. The council of the Society has requested Lieut.-Colonel A. Strange to open the discussion with a paper, the title of which will be "On the inquiry by a Royal Commission into the relations of the State to Science." We understand that the Society intends to invite the attendance at the conference of Her Majesty's present and late Ministers, of all members of the Legislature known to be interested in analogous questions, of the councils of all scientific societies, and of learned bodies generally.

IT is surely a sign of the times that we should be able to lay before our readers a scientific lecture delivered on a Sunday before a great audience, composed chiefly of the middle classes. The history—the all too short history—of English Sunday lectures is very curious and, withal, instructive. Some years ago the movement was commenced by lectures in St. Martin's Hall, which lectures, thanks to the activity displayed by "The Lord's Day Observance Society," were brought to a close somewhat suddenly. They were afterwards revived (such is the perfection of our English law) with impunity, by the simple process of enrolling the lecturers and their friends as a religious body! But many of those who had taken an active part in the origination of the lectures declined to shelter themselves under what they conceived to be an unworthy, as well as an unnecessary, subterfuge; and, believing that the law was really on their side, determined to take the earliest opportunity of obtaining experimental proof of the justice of their views. So we have had two movements—one, embodied in the Sunday Lecture Society, a lecture *par et simple* being delivered each Sunday afternoon, and another, emphatically the working men's movement, in which the exact programme which was at first threatened with prosecution is reproduced. Both these movements have been in operation, and have been the means of doing much good, for some time past; and no attempt has been made to interfere with that "Free Sunday" which is of a good deal more importance to the working men of this country than even a "Free Breakfast-table." Surely one of those quiet victories by which each step in the march of real progress has been made good in English history, has been won.

A NEW mathematical journal, edited under the direction of MM. Chasles, Bertrand, Serret, Delaunay, Puiseux, Darboux, &c., is about to appear, under the name of *Bulletin des Sciences Mathématiques et Astronomiques*. Twelve parts will be issued yearly.

WE have received from Mr. Murray a pamphlet on Compulsory Education, by the Hon. Dudley Campbell, which is clear enough in treatment, and sound enough in argument to do great good at the present time, when the Government bill is before the country. It is very hard for a man of scientific training to bear with the shifts and compromises with which politicians are too often apt to cover their own shortcomings and lukewarmness, but in the matter of compulsory education there is less halting than usual. Mr. Campbell well points out that people are vaccinated and otherwise dealt with compulsorily for the public weal, and he asks why should this system stop just at the point where our lamentable backwardness points in the clearest way for the necessity of Government action. The country not only asks for compulsory education, but we are convinced in time that the system of local boards will be swept away. In connection with this subject we would call special attention to the fearful state to which the voluntary system has reduced education in Birmingham,

Leeds, Liverpool and Manchester, as recorded in the reports of Messrs. Fitch and Fearon just presented to Parliament.

THE fund raised in this country for the benefit of the family of that great naturalist, the late Professor Sars, now amounts to 265*l.* 6*s.* 10*d.* Among the contributions from the provinces may be especially noticed those of Newcastle and Glasgow, showing the favour with which science is regarded in those places. Devonshire and Wales have hitherto given no sign, although it might have been expected that the last meeting of the British Association at Exeter would have left some impress of its visit. The French and Belgian subscriptions amount to 6283 fr. or 251*l.* 6*s.* 10*d.*

THE Lectures of the present year at the Royal College of Physicians will be delivered at the College, Pall Mall East, at five o'clock on each of the following Wednesdays and Fridays:—Goulstonian Lectures, by Dr. Maudsley, March 18. "On the relations between body and mind, and between mental and nervous disorders." Croonian Lectures, by Dr. Sibson, March 23, 25, 30, "On aneurisms of the aorta." Lumleian Lectures, by Dr. J. R. Bennett, April 1, 6, 8, "On the natural history and diagnosis of intra-thoracic cancer."

NOTICES of motion have been given by Mr. Strutt for a return relative to the expenditure of the Meteorological Committee, voted in Class 4 of the Civil Service Estimates, 1869-70; by Mr. Grant Duff for a copy of report on measures adopted for sanitary improvements in India; by Mr. Macfie for a select committee to consider and report on the law relating to letters patent for inventions; by Mr. Mundella of an amendment to Mr. Macfie's motion.

A NATURAL HISTORY SOCIETY has just been formed at Winchester College. The subjects it embraces at present are botany, ethnology, and geology, these being the most easy of access under the existing circumstances. One of the main objects of this society is the formation of a museum, which, it is hoped, will tend to keep up an interest in scientific subjects among the members of the school. The meetings have been largely attended, and there is every reason to expect that the society will prove a lasting benefit to the college.

WE must congratulate the Leamington Philosophical Society and its energetic president, Dr. O'Callaghan, upon the successful way in which they are doing the good work of fostering science in Warwickshire by means of lectures, and upon the fact that they can prevail upon such busy men as Mr. E. J. Reed and Sir Bartle Frere—to mention two of their recent lecturers—to help them. Mr. Reed's lecture on "Our Ironclad Navy" was given last week, and we hope to place some parts of it before our readers.

THE prospectus of the forthcoming course of instruction at the Working Men's College is a most gratifying one. Besides classes in Art, History and Law, Languages and Mathematics, we have the following in physical science:—The Use of the Microscope, Mr. J. Slade; Astronomy, Mr. R. B. Litchfield, B.A.; Muscular Anatomy of the Human Body, Mr. J. Beswick Perrin. Besides these classes, there are free general lectures at 8.30 on Saturdays, among which we note four on Crystals, by Prof. N. S. Maskelyne, of the British Museum. All should feel grateful to those connected with this institution who, without fee or reward, devote their small spare time to the arduous work of teaching.

WE regret to hear that Dr. Kirk, the indefatigable friend and former companion of Livingstone finds his efforts to send supplies to the latter paralysed by the presence of cholera on the East Coast of such severity that 10,000 have died in Zanzibar in the course of six weeks. He adds that "the scourge rages up and down the coast. At Quiloa, by the last accounts, there were 200 deaths a day among the slaves; when offered at one dollar a head they found no purchasers, so very worthless had slave property become from the disease. It is also going inland, which

is strange, as it came to us from the interior, first showing on the coast at Pangani; now it goes in from Bogamoyo, and has reached Ugogo. Caravans on the route are stopped by death, ivory is left abandoned, and a party is being sent off to bring one large lot down, all the porters being dead in Ugogo. The expedition with valuable goods and a gang of men I sent off to assist Livingstone has been caught by it, and is at a standstill. Many of those I had engaged and paid considerable advances to are dead. There will be much loss this season, and Dr. Livingstone will come in for a share of it."

THE Working Men's Club and Institute Union have, with permission of the authorities, arranged for a series of visits to the national museums on Saturday afternoons, for the members of workmen's clubs. The important feature connected with these visits is, that in each case the party will be under the guidance of some gentleman specially qualified to afford instruction in some particular branch of science and art. A party of fifty workmen were thus enabled to pay a visit to the Egyptian Department of the British Museum on Saturday, under the guidance of Mr. Samuel Sharpe. We are informed that the "Club Union" will be very glad to have similar valuable services rendered by other gentlemen for visits to the national collections.

A LETTER has been received at Alexandria from Sir Samuel Baker, dated Khartoum, February 7, wherein he reports that 32 boats were collected together to convey him and his party to Gondokoro. With the last shipment of troops the total expeditionary force amounts to 700, including a battery of artillery. Mr. Higginbotham is reported to be within four days' march of Khartoum, having crossed the Nubian Desert. He has under his charge the steel steamers for the lake Albert Nyanza. Mr. Higginbotham has command of the rear expedition, and will follow Sir Samuel Baker immediately. All the members of the expedition are in good health and spirits.

THE *Pall Mall Gazette* states that the Arctic explorer, Mr. C. F. Hall, has, in a lecture given at Washington, developed his plans for a third voyage.

THE establishment of the first sewage farm in India has taken place in the vicinity of Madras. It is an experiment, but the results as given in the official report are most hopeful, both as regards the drainage of Indian towns and the profit likely to accrue from the operation. The site is an old swamp four feet only above the sea level; the soil is a stiff clay, mixed with much salt and a little sand—one of the worst possible soils for the purpose. The surface was levelled and protected from floods, and the sewage from Peambore barracks and a small portion of the adjacent village, after being raised 22 feet, is conducted in an open earthenware conduit, and floated over the surface of the ground. The total area is 37 acres, but about 2 acres only have been put under cultivation. The sewage is as thick as pea-soup, and sometimes more diluted. Its smell is overpowering close to the channel, but as it flows over the ground "it loses its offensiveness very soon." Various crops have been tried on the sewage area. Guinea grass succeeds so well that its yield is at the rate of 88 tons of fresh grass, or 29 tons of hay per acre. The value is 58*l.* per acre. It is stated that grass will take any quantity of sewage, but that other useful crops, chiefly native vegetables, also succeed. Different plants require different treatment. Some of the best crops are native greens, which grow most luxuriantly and take a large quantity of sewage. The report states that the results to health have been satisfactory, and that one great source of disease has been removed. The application of the sewage of two other districts of the city was nearly completed at the date of the report.

CANDIDATES for the first chair of Algebra at the Paris Faculty of Sciences are requested to send in certificates.

MESSRS. MOXON AND Co. are preparing for publication a Dictionary of Science, edited by Mr. G. Farrer Rodwell. It will

be uniform with Haydn's "Dictionary of Dates" and "Dictionary of Biography," and will comprise acoustics, astronomy, chemistry, dynamics, electricity, heat, hydrodynamics, hydrostatics, light, magnetism, meteorology, pneumatics, and statics. These subjects will be treated of by Mr. J. T. Bottomley, Lecturer on Natural Science in King's College School; Mr. William Crookes, Mr. Frederick Guthrie, Professor of Natural Philosophy in the Royal School of Mines; Mr. R. A. Proctor, Mr. Richard Wormell; and the Editor.

THE Paris Zoological Acclimatisation Society celebrated their seventeenth anniversary last week in the Hôtel de Ville. Dr. Hooker was unanimously elected an honorary fellow, and the following prizes were awarded:—The gold medal offered to the society by the Minister of Agriculture and Commerce to M. Carbonnier, for the introduction of Chinese fish; another gold medal to M. Vekemans, the director of the Zoological Gardens at Antwerp; grand gold medal to M. Alfred Grandidier for his travels in Africa and America; a prize of 500*fr.* for the theoretical researches of M. Verreaux on acclimatisation subjects; a similar prize for works of pure zoology to the late Professor Sars for his publication on the littoral fauna of Norway and the development of sea-fish; a prize of 100*fr.* was also awarded to M. E. Gayot for his essay on *Leporides*.

THE Liverpool Naturalists' Field Club held a soirée at the Royal Institution on the 11th instant, the Mayor and about two hundred members and friends attending. The principal objects exhibited, interesting in a natural history point of view, were a very large collection of British plants beautifully mounted by Mr. Gibson, sen., a member of the club; an interesting case of spiders found in the neighbourhood, preserved in spirits in flat glass bottles, and very effectively displayed by Mr. H. Higgins, son of the president; a selection of valuable shells lately presented to the Free Museum by Mr. Samuel Smith; young salmon; case illustrating anatomical structure of the elephant, &c.; the largest known Nudibranch and the largest known Foraminifer, both taken alive by Dr. Collingwood in the China seas—from the Free Museum; a case of sections of Brazilian creepers, showing curious abnormal structure, specific names unknown—by Mr. Robert Holland. Members of the Microscopical Society illustrated various subjects. A spectroscope and micro-spectroscope were worked by the secretary, Mr. Stearn; and the evening concluded with some chemical experiments bearing on Prof. Tyndall's "Dust and Disease" article in *Fraser*, by Mr. Davis, F.C.S.; the exhibition of Geissler tubes, a number of insects, &c.

AT a recent meeting, the Natural History Society of Montreal presented its medal to Sir William Logan, the distinguished geologist. The following resolution was passed:—"That this Society, in presenting its medal to Sir W. E. Logan, LL.D.; F.R.S., although it cannot add appreciably to the many honours which he has received, desires to place on record, not merely on its own behalf, but on that of all the students of Natural Science in Canada, its high estimation of the value of his services in creating as well as directing the Geological Survey of this country, in promoting the development of its mineral resources, in stimulating and aiding the efforts of scientific institutions, and in extending throughout the world the name of Canadian science. We desire also to express our high appreciation of Sir William's admirable qualities, and our hope that he may be spared for many years to Canada and to science, and that the relief from official cares may give him the opportunity to pursue to completion the researches in scientific geology in which he is now engaged."

WE are glad to see that meetings are being held in support of Mr. W. S. Allen's motion in the House of Commons to open museums on week-day evenings. We know of no argument against the experiment, and we believe the experiment would be an entirely successful one.