

gills, which, though for the most part differing in structure from the gills of the Polychæta, must be branchial in function. The most remarkable instance hitherto known is *Alma nilotica*, lately redescribed by Levisen (*Vidensk. Meddel. naturh. For. Kjöbenhavn*, 1889) under the name of *Digitibranchus niloticus*. The posterior segments of this Annelid possess four to five branchial processes on each side of the dorsal middle line of the body. It cannot yet be regarded as an absolute certainty that this species belongs to the Oligochæta at all; but in any case processes of the body-wall, containing each a capillary loop, and therefore probably branchial in function, have been recently described by Prof. A. G. Bourne (*Quart. Journ. Micr. Sci.*, vol. xxxi.) in a new genus of Nais—*Chatobranchus*. These processes, though doubtless branchial in function, are rather suggestive of the parapodia of marine Annelids, since they inclose, partially or entirely, the dorsal setæ. I have lately had the opportunity of examining this Annelid, through the kindness of Mr. Sowerby. The "Victoria regia tank" at the Botanical Society's Gardens, which produced the celebrated "Fresh-water Medusa" and other remarkable forms, furnished me with *Chatobranchus*, and with a new and interesting form of branchiate Oligochæte, which I propose to call *Branchiura Sowerbii*.

In its general aspect this worm recalls a *Tubifex*; the setæ, in their shape, and in their arrangement, resemble those of *Tubifex*. But here the resemblance ends. The last sixty segments or so of the body (there are from 130-170 segments altogether) are provided with a paired series of long tentacle-like processes—a pair to each segment—lying the middle ventral and dorsal lines; towards the middle of the series these processes exceed in length the diameter of the body; anteriorly and posteriorly they diminish, and finally become mere wart-like protuberances. The processes in question are supplied with blood from the main vascular trunks. They are in continual movement, each branchia moving quite independently by means of the contraction of simple muscular fibres. The writhing movements, as well as the structure of these organs, is much like that of the tentacles and cirri of certain Polychæta. Apart from the individual contractions of these branchiæ, the tail end of the worm perpetually jerks from side to side, particularly when the creature is in any way disturbed. I do not know whether the worm usually rests in the mud with the tail protruding and waving about, like many other aquatic Oligochæta; but it is probable, from the limitation of the branchiæ to the tail end, that it does. I found three specimens, which were slowly crawling about.

FRANK E. BEDDARD.

#### THE ANNIVERSARY OF THE ROYAL SOCIETY.

MONDAY being St. Andrew's Day, the anniversary meeting of the Royal Society was held in their apartments in Burlington House. The report of the auditors of the Treasurer's accounts having been read, and the Secretary having read the list of those Fellows who have been elected and those who have died since the last anniversary, the President, Sir William Thomson, delivered the anniversary address. After an account of the scientific work of those Fellows who had died within the year, the President proceeded:—

"The Royal Society, since the last anniversary meeting, has been, as always, active both in the proceedings of its ordinary meetings, which have been full of scientific interest, and in the conduct of the important affairs committed to its Council. During the past year nineteen memoirs have been published in the Philosophical Transactions, containing a total of 1020 pages and 60 plates. Of the Proceedings, six numbers have been issued, containing 893 pages. Of the large

number of papers which have been published in the Proceedings two-thirds are on the physics and dynamics of dead matter and one-third on biological subjects.

"As stated by Sir George Stokes in his Presidential Address at the last anniversary meeting, a revision of the whole body of the Statutes of the Royal Society had been entered upon, a Committee had recently reported to the Council, and its report had been left to the new Council then entering on office to take such action in the matter as might be judged proper. The Council now concluding its term of office has accordingly given much time to the subject, and has completed the work of re-enacting the Statutes with such amendments as have seemed desirable. The only questions upon which there was effective difference of opinion were those connected with the election of Fellows, which were referred to by Sir George Stokes as having elicited considerable difference of opinion in the reporting Committee. The Council, after much anxious consideration, resolved to make no change of the existing Statutes in this respect.

"There have been no changes during the past session in the constitution of the staff employed in the Offices and Library; but in the Catalogue Department, two lady assistants and two copyists have been engaged to work under the superintendence of Miss Chambers, who succeeded in July of last year to the post rendered vacant by the death of the late Mr. Holt, and who continues to give every satisfaction in the discharge of her duties.

"In January of the present year a communication was received from our Fellow, Prof. G. S. Brady, intimating that his brother, the late Mr. Henry Bowman Brady, whose decease I have already mentioned, had bequeathed to the Society all his books and papers relating to the Protozoa, with the recommendation that they should be kept together as a distinct collection. In case this recommendation should be adopted, a further bequest of £300 was made, the interest or principal or both to be applied, at the discretion of the Council, to the purchase of works on the same or kindred subjects, to be added to the collection. The Council have accepted both these bequests, and a case marked with an engraved plate has been set aside in the Library for the accommodation of the Brady collection.

"His Excellency Robert Halliday Gunning, M.D., LL.D., F.R.S.E., who in 1887 founded certain scholarships and prizes for the promotion of original scientific work and proficiency in scientific education in connection with the Royal Society of Edinburgh, the University of Edinburgh, and other institutions in that city, called the Victoria Jubilee Prizes, desires to institute foundations of a similar kind in London. He has accordingly given to the Royal Society a sum of £1000, to be ultimately invested in such manner as the President and Council, in their absolute and uncontrolled discretion, may think fit, and to be held in trust always for the purpose of forming a fund the annual income of which shall be applied triennially towards the promotion of physical science and biology in such manner as to the President and Council of the Royal Society may appear most desirable. The President and Council, for the time being, are given full power to make such rules and regulations as they think fit with regard to the application of the income of the fund, which shall always be kept distinct from and not in any way immixed with the general funds of the Royal Society.

"A very important resolution for the advancement of natural knowledge has been adopted during the past year by the Royal Commissioners of the Exhibition of 1851, in the institution of the Exhibition Science Scholarships, to which, after the first year, an expenditure to the extent of £5000 a year is to be devoted. Sixteen appointments have already been made to scholarships of £150, to be held for two years, with possible renewal for a third year. The Commissioners require of each candidate for an appointment satisfactory evidence of proficiency in a three years' course of University or high class College study, and of capacity for experimental work. To the tenure of each scholarship the duty is assigned of advancing science by experimental work in physics, mechanics, chemistry, or any application of science tending to benefit our national industries.

"A Committee of the British Association, appointed for the purpose of reporting on the best means of comparing and reducing observations on terrestrial magnetism, has strongly recommended the re-establishment of a magnetic Observatory at the Cape of Good Hope. A conference on the subject was held between the Committee and Dr. Gill, the Astronomer-Royal of the Cape of Good Hope, last June, during his recent visit to

England, which has resulted in an application to the Admiralty to carry this recommendation into practical effect in connection with the astronomical Observatory of the Cape of Good Hope (belonging to the Admiralty). This application is at present under the consideration of the Admiralty.

"A fundamental investigation in astronomy, of great importance in respect to the primary observational work of astronomical Observatories, and of exceeding interest in connection with tidal, meteorological, and geological observations and speculations, has been definitively entered upon during the past year, and has already given substantial results of a most promising character. The International Geodetic Union, at its last meeting in the autumn of 1890, on the motion of Prof. Foerster, of Berlin, resolved to send an astronomical expedition to Honolulu, which is within  $9^\circ$  of the opposite meridian to Berlin ( $171^\circ$  west from Berlin), for the purpose of making a twelve months' series of observations on latitude corresponding to twelve months' analogous observations to be made in the Royal Observatory, Berlin. Accordingly, Dr. Marcuse went from Berlin, and, along with Mr. Preston, sent by the Coast and Geodetic Survey Department of the United States, began making latitude observations in Honolulu about the beginning of June. In a letter from Prof. Foerster, received a few weeks ago, he tells me that he has already received from Honolulu a first instalment of several hundred determinations of latitude, made during a first three months of the proposed year of observations; and that, in comparing these results with the corresponding results of the Berlin Observatory, he finds beyond doubt that in these three months the latitude increased in Berlin by one-third of a second, and decreased in Honolulu by almost exactly the same amount. Thus, we have decisive demonstration that motion, relatively to the earth, of the earth's instantaneous axis of rotation is the cause of variations of latitude which had been observed in Berlin, Greenwich, and other great Observatories, and which could not be wholly attributed to errors of observation. This, Prof. Foerster remarks, gives observational proof of a dynamical conclusion contained in my Presidential Address to Section A of the British Association at Glasgow, in 1876, to the effect that irregular movements of the earth's axis to the extent of half a second may be produced by the temporary changes of sea-level due to meteorological causes.

"It is proposed that four permanent stations for regular and continued observations of latitude, at places of approximately equal latitude, and on meridians approximately  $90^\circ$  apart, should be established under the auspices of the International Geodetic Union. The reason for this is that a change in the instantaneous axis of rotation in the direction perpendicular to the meridian of any one place would not alter its latitude, but would alter the latitude of a place  $90^\circ$  from it in longitude by an amount equal to the angular change of the position of the axis. Thus two stations in meridians differing by  $90^\circ$  would theoretically suffice, by observations of latitude, to determine the changes in the position of the instantaneous axis; but differential results, such as those already obtained between Berlin and Honolulu, differing by approximately  $180^\circ$  in longitude, are necessary for eliminating errors of observation sufficiently to give satisfactory and useful results. It is to be hoped that England, and all other great nations in which science is cultivated, will co-operate with the International Geodetic Union in this important work."

The celebration of the hundredth anniversary of the birth of Faraday, recorded in our columns at the time, was next referred to.

"A matter of great importance in respect to the health of the community was submitted to the Royal Society by the London County Council, in a letter of date May 1, 1891, asking for information and suggesting investigation regarding the vitality of microscopic pathogenic organisms in large bodies of water, such as rivers which are sources of water-supply and which are exposed to contamination. After some correspondence, it was agreed, between the County Council and the Council of the Royal Society, to enter upon an investigation, the expense of which was to be defrayed partly by the London County Council and partly by the Royal Society out of the Government Grant for Scientific Research. When we consider how much of disease and death is due to contaminated water, we must feel that it is scarcely possible to over-estimate the vital importance of the proposed investigation. Let us hope that the alliance between the London

County Council and the Royal Society, for this great work, may be successful in bringing out practically useful results.

*Prof. Stanislao Cannizzaro (Copley Medal).*

"Stanislao Cannizzaro, Senator of Italy, and Professor of Chemistry in the University of Rome, has rendered invaluable service to the philosophy of modern chemical science. The work of Avogadro, in 1811, and afterwards that of Ampère, had already thrown much light on the relative weights of the molecules of elementary bodies, and on the proportion in which those weights enter into chemical combination. But it is to Cannizzaro that we owe the completion of what they had left unfinished. He pointed out the all-important difference, hitherto overlooked, between molecular and atomic weights, and showed (1) how the atomic weights of the elements contained in a volatile compound can be deduced from the molecular weights of such compounds; (2) how the atomic weights of the elements the vapour-densities of whose compounds were unknown can be ascertained by help of their specific heats. By these investigations the series of atomic weights of the elements, the most important of all chemical constants, and the relation which these weights bear to the molecular weights of the elements, have been placed on the firm basis on which they have ever since rested. It is to Cannizzaro that science is indebted for this fundamental discovery, and it is this which it is proposed to recognize by the award of the Copley Medal.

*Prof. Charles Lapworth, F.R.S. (Royal Medal).*

"Prof. Lapworth is the author of some of the most original and suggestive papers which have appeared in the geological literature of this country for the last twenty years. Special reference may be made to his researches on graptolites, and to his patient investigation by these means of the exceedingly complicated structure of the Silurian uplands of the south of Scotland. He has been able not only to supply the key which has given the solution of the stratigraphical difficulties of that region, but also to furnish theoretical geology with an array of new facts from which to philosophize as to the mechanism of mountain-making. Of not less importance are his detailed studies of the structure of the North-west Highlands, and his demonstration of the true order of stratigraphical sequence in that region of complex disturbance. As a stratigraphist he has attained the highest rank, and he has likewise made himself a chief palæontological authority on the structure and distribution of the Graptolitidæ. For some years past he has been engaged in a laborious study of the Silurian and Cambrian rocks of the middle of England, the detailed publication of which is awaited with much interest by geologists.

*Prof. Rücker, F.R.S. (Royal Medal).*

"In conjunction with Prof. Reinold, Prof. Rücker carried out an important series of researches (extending over ten years) on the electric resistance and other physical properties of liquid films, in the course of which the fact was established that the black part of a soap film in equilibrium has a uniform or nearly uniform thickness of 11 or 12 micromillimetres, and that there is an abrupt augmentation across its border to a thickness of about 30 or 40 micromillimetres in passing to the coloured portions. This, considered in connection with the well-known sudden opening out of the little black areas in an ordinary soap-bubble, proves a minimum of surface-tension for some thickness between 10 and 50 micromillimetres, which in the ordinary soap-bubble, unmodified by Reinold and Rücker's electric current, is temporarily balanced in virtue of the abrupt change of thickness, a proposition of fundamental importance in the molecular theory, implying the existence of molecular heterogeneity.

"In theoretical calculations connected with the compounding of dynamos and motors to produce constant potential difference, constant current, or constant speed, electricians did not see their way to obtain results of a sufficiently simple character to be of use in practice, if they employed a function of the current which fairly represented the magnetism. They were, therefore, compelled to assume in such calculations that the magnetism was a linear function of the current, although it was well known that this was very far from being true when the current was large. Prof. Rücker, however, developed a simple method of attacking such problems, and showed how the magnetic saturation of the iron might be taken into account, and a comprehensive solution of the general problem of compounding dynamos and motors obtained in a workable form. Prof. Rücker's paper containing

his investigation, and which will be found in the Proceedings of the Physical Society, is a most valuable contribution to the theory of direct-current dynamos and motors.

"Prof. Rücker has, with the co-operation of Prof. Thorpe, completed a magnetic survey of the British Isles (1884-89), which, independently of its great value in investigations of the distribution of the earth's magnetism, and the changes to which it is subject, is specially remarkable for the exhaustive discussion of the observations in reference to regions of local magnetic disturbance, and their relation to the geological constitution of the earth's crust in the neighbourhood. Prof. Rücker has followed up this discussion by a paper on 'The Relation between the Magnetic Permeability of Rocks and Regional Magnetic Disturbances,' read before the Royal Society. The high estimate that has been formed of the value of this magnetic survey is perhaps most easily appreciated from the very large sums that the Government Grant Committee have recommended should be contributed to aid in the completion of this work of international importance.

*Prof. Victor Meyer (Davy Medal).*

"Prof. Victor Meyer, formerly the successor of Wöhler at Göttingen, and who now occupies the chair of Bunsen at Heidelberg, is eminent as an original worker and discoverer in almost every branch of chemical science. His methods of determining the vapour-densities of substances have been of the greatest service to chemists, not only as convenient and generally applicable modes of ascertaining atomic and molecular weights, but also as serving to throw light on the molecular constitution of elements and compounds under varying conditions of temperature and pressure. A striking example of the value of these methods is seen in their application by their author to the study of the molecular dissociation of the element iodine—one of the most masterly investigations of recent years, and which is universally recognized as of the very highest significance and importance. Not less noteworthy are Victor Meyer's services to organic chemistry. His work on the nitroso-bodies, and his brilliant discovery of thiophene, the initial member of a class of substances hitherto unknown, his subsequent synthetical formation of it, and the remarkable series of researches on its derivatives, in part carried out with the aid of his pupils, stamp him as an investigator of exceptional power and distinction."

The Society next proceeded to elect the Officers and Council for the ensuing year. The following is a list of those elected:—President: Sir William Thomson. Treasurer: John Evans. Secretaries: Prof. Michael Foster, The Lord Rayleigh. Foreign Secretary: Sir Archibald Geikie. Other Members of the Council: Captain William de Wiveleslie Abney, William Thomas Blanford, Prof. Alexander Crum Brown, Prof. George Carey Foster, James Whitbread Lee Glaisher, Frederick Ducane Godman, John Hopkinson, Prof. George Downing Liveing, Prof. Joseph Norman Lockyer, Prof. Arthur Milnes Marshall, Philip Henry Pye-Smith, William Chandler Roberts-Austen, Prof. Edward Albert Schäfer, Sir George Gabriel Stokes, Bart., Prof. Sydney Howard Vines, General James Thomas Walker.

In the evening the Fellows and their friends dined together at the Whitehall Rooms, Hôtel Métropole. The company numbered over 230. The chair was occupied by the President.

After the loyal toasts, Dr. John Evans proposed "Her Majesty's Ministers and the Members of the Legislature," a toast to which Sir J. Fergusson responded.

In response to "The Royal Society," proposed by Mr. Forwood, M.P. (who referred to the fact that Sir William Thomson's discoveries "had rendered it possible to steer vessels on our fog-bound coast with an accuracy never before attained to"), the President said that the Royal Society had always been distinguished for the promotion of investigations leading to such results as Mr. Forwood had named. In illustrating this, he spoke of the history of the construction of the sextant and the development of the dynamical theory of the trade winds. A curious interest attached to some of the earlier Transactions of the Society, such as a paper which attributed the trade

winds to the breathing of a certain plant, which turned to the sun and blew its breath after it. The earlier pages of the Transactions were full of chronometers and of the work leading up to the invention which gained the reward of £10,000. Excellent work was done with the grant of £4000 administered by this and allied Societies; and he believed its future achievements would at least equal those of the past. The next fifty years would probably produce, in the science of dead matter, and in the science of living matter too, discoveries compared with which those of the last 300 years would ultimately appear to be small indeed.

The President proposed the health of "The Medalists," and spoke in eulogistic terms of the services in respect of which the medals had been awarded.

The Italian Ambassador briefly responded in the name of Prof. Stanislo Cannizzaro.

Prof. Rücker, in responding for the other medallists, said:—

Islanders as we were, the Royal Society prided itself on the fact that some of its medals could be awarded to distinguished scientific workers outside these islands. This year no less than four foreign Fellowships and two medals testified to our respect and esteem for colleagues abroad. We respected them for many things—for the thoroughness with which they grasped all that the scientific movement meant and involved; for the foresight and courage with which—beginning at the beginning—they had provided for their students laboratories and workshops such as no English lad could enter at home. We respected them for the sound educational methods which had led them to use these appliances, so as to point the student to the research laboratory rather than to the examination room as the goal of his ambition. We respected them because these methods have produced their natural results, and year by year a crop of new scientific facts was reaped not only from the laboratories of their Colleges, but from the workshops of their manufacturers. We respected and esteemed most of all the men who had thus led or who were thus leading their countrymen aright—veterans, such as Cannizzaro, who, amid the turmoil in which the foundations of modern Italy were laid, found time to lay the foundations of chemistry anew; investigators, such as Victor Meyer, who, when Bunsen retired from the laboratory where so many English chemists learnt or perfected their art, was judged by all to be a worthy successor to Bunsen himself. While fully admitting that we had something to learn from the work and methods of our foreign colleagues, we might claim that our progress had lately quickened where at one time we notoriously lagged behind. In the multiplication of centres of scientific work, Scotland was formerly the only part of these islands which compared with Germany. This was no longer so. Every large town in England and Wales and the chief towns of Ireland had now University Colleges. Their scale was modest indeed when compared with what a paternal Government was providing for Strasburg, or a democracy for Zürich; but they were full of intellectual energy and of scientific work. Hardly a month passed without the publication of papers on researches conducted in the laboratories of some of them. Almost every year they were represented in the list of Fellows newly elected into the Society. Out of the last eight recipients of the Royal Medals, five had, either as learners or as teachers, or, in turn, in both capacities, spent many years within the walls of one or other of our provincial Colleges. But he must not be understood as claiming for English science only that it was making good confessed educational deficiencies. There were sciences which, either in their origin or their development, were peculiarly our own. One of these was geology. Crowded up between our four seas was an epitome of the past history of the world such as he believed no other country possessed in an equally small area. Thus geologists were a natural product of our soil. But there was one particular in which he thought the President, more than most, would appreciate Prof. Lapworth's audacity and success. Though a Southerner, he had made a foray into Scotland, and had returned laden with spoil. It was true that he, too, had crossed the border, and he deeply regretted that he must confess that his track was marked by disturbances; but speaking for Prof. Lapworth and on his behalf—though without consulting him—he must admit that his offences were venial and that he was most to blame. He turned the most fundamental institution

of Scotland—its geological strata—upside down. There were only two ways of meeting an invader or an innovator such as this—with steel or with gold. They must confute him with the pen or reward him with a medal. The Council had chosen the better part of valour, and he was sure the Society did not question their discretion. With regard to himself, there was one remark that he must make. In some of the principal researches in which he had been engaged he had worked with colleagues. While, therefore, thanking the Society for the honour they had been pleased to confer upon him, he was, perhaps, not wrong in thinking that Dr. Thorpe and Prof. Reinold, who had received many marks of appreciation from the Royal, the Physical, and the Chemical Societies, were receiving further, though less direct, recognition from the Royal Society to-day. Apart from all minor questions, the distinguishing characteristic of this meeting was the bringing together of men who were working at different branches of science. These gatherings, and those which in the summer take place during the meetings of the British Association, were, he thought, good for all of them. They checked that scientific particularism which in the cultivation of a subject of study ignored the culture of the student. They reminded them that they were all co-operating to one common end—the promotion of natural knowledge. The very speech that he was making bore testimony to this fact, for were it otherwise the President would not have called upon an Englishman to reply for our absent foreign medallists, or a physicist to return thanks for honours bestowed on experts in geology and chemistry. It was only because he himself believed that there was between scientific men a similarity of aim and object, and a community of ideas, which underlay all superficial differences, that he ventured to undertake the task of expressing the thanks in which, he was sure, one and all of the medallists most heartily joined.

Prof. Dyer proposed "The Visitors," associating with the toast the name of the Greek Minister. He said:—

The association appeared to him a peculiarly happy one. The other day he came across a striking statement of Sir Henry Maine's—"Except the blind forces of Nature, nothing moves in this world which is not Greek in its origin." The former influence they could in this Society give some account of. But the latter he regarded with a certain scientific scepticism. Yet he was not disposed to dispute its validity. We still commenced our often arduous mathematical studies with Greek geometry, and he could not gainsay those who thought that the influence of the counsels of Plato, and of the precepts of Aristotle, was unexhausted. In art Greece remained unsurpassed and unsurpassable. Some might say that if scientific men had their way they would extinguish Greek studies. This was far from the truth. In this Society they rejoiced in those exact studies which recreated the literature and life of the past.

The Greek Minister, in replying, said:—

He had always been of opinion that those who were intrusted with the duty of representing their respective Governments in this country, need confine their watchfulness and activity neither to political nor to social circles alone. They had before them a wide and unrivalled field in which to study the benefits accruing to a whole community—to the Government itself—from the efforts of private individuals, when guided by public zeal and devotion to science; and he thought no more striking example of such benefits could be instanced than the results of the labours of this, the most ancient and most illustrious of learned Societies. It might be said to have been born with the first dawn of scientific research in England; it had remained its stronghold in times of political trouble and change; it numbered in its long muster roll all those names which had bequeathed an undying fame to British science; it had worked out and solved, for the benefit of the State, scientific questions which were elsewhere delegated to official departments alone; its catalogue of scientific papers was a monument of the world-wide grasp of its subjects. That the achievements of this Society should have been continuous and ever increasing in importance for close upon 250 years was characteristic of British public zeal and tenacity of purpose. But what was especially instructive was the ardour with which such work was prosecuted, not only by those whose pursuit was science, but by those especially who, like the illustrious statesman at the head of Her Majesty's Government, being independ-

ent by fortune and already great by birth and political achievements, yet contributed powerfully to the advancement of science. It was at symposia such as this that the philosophers of ancient Greece laid down those great truths of science which had found amongst this Society such ardent apostles and such illustrious expounders. The guests on whose behalf he responded, and he himself, expressed sincere acknowledgments for the honour they had done them that night.

The company then separated.

#### NOTES.

A MEETING of the honorary council of advice in connection with the Crystal Palace Electrical Exhibition, which is to be opened on January 1 next, was held last week at the Mansion House. The Lord Mayor presided. Mr. Gardner, the secretary of the Crystal Palace Company, read the report of the directors, in which they referred to the Electrical Exhibition at the Palace in 1881, and to the enormous strides which had since been made in the industry. The Exhibition of 1881 was recognized as the pioneer of electrical engineering in this country, and it was confidently believed that the Exhibition of 1892 would be remembered in history "as showing that the infant Electra has grown to years of maturity, and is capable of further aiding science, commerce, and the world at large." The space available had been over-applied for, and every section of the industry would be well represented. Invitations would be issued to public bodies throughout the United Kingdom to visit the Exhibition, where the various systems of electric lighting would be on view, and in this direction alone very great saving of expense to the authorities would be effected, and other advantages must, the directors believed, also accrue. On the motion of Mr. W. H. Preece, the following gentlemen were appointed to act as a committee of experts in connection with the exhibits: Profs. W. Grylls Adams, W. E. Ayrton, W. Crookes, D. E. Hughes, A. B. W. Kennedy, J. Perry, and Silvanus Thompson, Major P. Cardew, Sir J. N. Douglass, Mr. W. B. Esson, Mr. Gisbert Kapp, and Mr. Preece.

ON Friday last a portrait of Sir William Thomson, by Mr. Herkomer, was presented to the University of Glasgow. A number of friends subscribed for it, to signalize Sir William's election to the office of President of the Royal Society. The presentation was made by Mr. Balfour, the Lord Rector of the University, who spoke eloquently of Sir William Thomson's great career as a man of science and an inventor. A replica of the portrait was presented to Lady Thomson.

THE Egyptian Government has asked the Caisse de la Dette for £50,000 from the general reserve fund on behalf of the Antiquities Department. The Cairo correspondent of the *Times* says that before granting so large a sum the Caisse will probably require the appointment of a Commission to study the purposes for which it is to be used. It is hoped that searching investigation will be made into the management of the department generally.

It is expected that Australia will be well represented at the Chicago Exposition. Exhibits connected with education, minerals, forestry, and especially wool are to be sent. About fifty wool growers and wool brokers met lately at Sydney, and decided to despatch a very extensive collective exhibit of wools.

WE have to note a change in the form of the publications issued by the Meteorological Department of India. From January 1 last, the Annual Reports on the Meteorology of India, which have hitherto been issued about fourteen months after the termination of the year to which they referred, have been replaced by a Monthly Weather Review, the first four parts