

in our possession, and will admit of more accurate reduction than has yet been effected; while a more complete computation of the perturbations with the improved values for the masses of the disturbing planets must tend to diminish the uncertainty that at present exists with regard to the possible error of Bessel's determination of the date of next passage through perihelion. If this should fall about 1887, February 9, as he computed, we might expect that the comet would be detected in September previous in the constellation Monoceros; its intensity of light would gradually increase until its nearest approach to the earth (0.5) at the end of the year, when it might be a conspicuous naked eye object in Ursa Major, within 20° N.P.D., and possibly it would be observable till the following May. Subjoined are figures which will enable any reader who is interested in the matter to trace the comet's course more precisely, upon the above supposition as to perihelion passage.

	R.A.	N.P.D.	Distance from Earth.
1886, Oct. 2 ...	97°0	83°6	1°90
„ Nov. 1 ...	106°8	78°2	1°25
„ Dec. 1 ...	117°7	61°0	0°72
„ „ 21 ...	131°1	33°3	0°52
„ „ 31 ...	151°9	17°3	0°51
1887, Jan. 10 ...	216°8	10°5	0°55
„ „ 30 ...	272°3	23°2	0°69
„ March 1 ...	278°8	34°2	0°88
„ April 10 ...	265°4	41°4	0°95
„ May 10 ...	245°5	53°0	1°01

MINOR PLANET, No. 160.—A telegram to the Astronomer Royal, through the Smithsonian Institution, notifies the discovery of another small planet on February 25, in R.A. 10h. 16m. N.P.D. 75° 28'; eleventh magnitude.

THE BINARY STAR ω LEONIS.—Dr. Doberck, of Col. Cooper's Observatory, Markree Castle, Sligo, publishes in *Ast. Nach.*, No. 2,078, provisional elements of this interesting star, viz., peri-astron passage, 1842.77; node, 151° 34'; node to peri-astron on the orbit, 122° 54'; inclination, 65° 22'; eccentricity, 0.5028; period of revolution, 107.62 years.

SCIENCE AND ART IN IRELAND

IN our number for February 17, we reprinted from the *Times* an article on the proposed action of the Government in connection with the Scientific Institutions in Dublin. That article contained the substance of Lord Sandon's letter which was forwarded both to his Grace the President of the Royal Dublin Society and to the President of the Royal Irish Academy. This letter was laid before the Irish Academy at their meeting of the 14th Feb., and was by them referred to the Council of the Academy. This latter body having in several meetings fully considered the whole subject, submitted to the Academy on Monday evening, the 28th Feb., the following Resolutions:—

“1. That the Royal Irish Academy is desirous of co-operating with Her Majesty's Government in the measures necessary for the establishment of a National Science and Art Museum in Dublin, provided that the independence and usefulness of the Academy be not injuriously affected by such measures.

“2. That, while we consent to the transfer of our Museum to the Government, we think that its arrangement, as well as the purchase of additions, should be done through the Academy.

“3. That, in thus assenting to the transfer of its Museum to the Government, the Academy also thinks that adequate provision should be made for the continued acquisition of Irish Antiquities, which may hereafter be discovered or offered for sale; and that the collection of the Academy, together with such other Irish antiquities as shall be added to it, should be for ever kept apart from Miscellaneous Art collections in the possession of the Government, and be permanently maintained as a Mu-

seum of our National Antiquities, no portion of its contents being ever removed from the City of Dublin.

“4. That, considering the position which the Academy has long held, and will continue to hold, as the first Scientific, Literary, and Antiquarian Society of the country, the proportional representation proposed to be given to it on the Board of Visitors (sect. 12 of Lord Sandon's letter), is altogether inadequate; and the Academy further think that no paid official of the Science and Art Department should be eligible to act as a representative on the Board.

“5. That, as the Academy is making a substantial concession in respect to its Museum, there should be provided in the yearly estimates, as laid before Parliament, instead of the several sums now annually voted, a sum of 2,000*l.*, to enable the Academy to discharge more completely its functions as a Scientific, Literary, and Antiquarian body, by making grants in aid of original research, by publishing the results of such research, by maintaining a library specially adapted to assist learned investigation, and by editing and printing ancient Irish Texts.

“6. That the Academy should be accountable, as at present, to her Majesty's Treasury, through the Irish Government, for the sum to be thus voted by Parliament, and should not be subject, in the conduct of its affairs, or the expenditure of its grants, to any control on the part of the Science and Art Department, or any of its officers.”

After some discussion the Academy adjourned to the 6th of March, when it is probable that the resolutions of the Council may be adopted by the Academy, and a deputation appointed to confer with her Majesty's Government on the subject.

The Council of the Royal Dublin Society have also, we understand, drawn up a report with resolutions, to be submitted to a special meeting of the Society which is to be held to-morrow.

We hope in our next number to be able to report the resolutions come to by both bodies, and in the meanwhile refrain from making any comments on the subject.

THE LOAN EXHIBITION OF SCIENTIFIC APPARATUS

A MEETING of the General Committee for this approaching Exhibition was held on Thursday last at the Science Schools, South Kensington Museum. The chair was taken by the Lord-President of the Council, the Duke of Richmond and Gordon, the Vice-President, Lord Sandon, M.P., sitting at his side. Many well-known representatives of science were present.

The Lord-President spoke as follows:—

“It gives me very great pleasure to meet you at the expiration of some twelve months since we first assembled to set in motion a plan for holding a scientific exhibition, and I am happy to be able to congratulate you upon the success which has attended your efforts. The exhibition promises to be the most brilliant one of the kind that has ever taken place in this country. Indeed, I doubt very much whether there has ever been any exhibition in England at all approaching in importance or merit the one which is to be held within the next few months; and I cannot refrain from tendering the thanks of her Majesty's Government to those gentlemen who by their exertions in bringing about this exhibition have contributed so much to the success which we hope will follow. We appreciate the efforts of those gentlemen the more because we know that, engaged as they are in various scientific pursuits, the time which they have devoted to this matter must have caused them considerable inconvenience, and only their love of science could have induced them to render the services which they have done for the carrying out of the object. It is also gratifying to find that this exhibition has met with such a large amount of favour in all parts of the Continent, and more especially

in Germany, where the Crown Princess seems to have evinced in this case her great interest in the country from which she came, and I believe it is mainly owing to her exertions and those of the Royal Family in that country that so far as Germany is concerned we are to be so ably assisted. It may not be uninteresting to the meeting that I should describe in a very few words what has been done in the present state of matters with regard to the exhibition. At meetings of the various sub-committees (appointed at the General Committee meeting in June last) during the months of February and November, reports were made of the results of visits to foreign countries by officers of the department. The sub-committees made various suggestions to the department as to objects to be procured. These have been acted upon, and many most interesting objects obtained. The committee also advised that gentlemen should be employed to visit various towns and leading manufacturers. This has been carried out with the best results by Prof. Shelley, Mr. Akroyd, Dr. Martin, Prof. Morris, Mr. Judd, and Mr. Norman Lockyer. The Foreign Secretary having through her Majesty's Ministers abroad urged the importance of co-operation on the part of foreign Governments, our appeal has been most cordially responded to. The Governments of Belgium, France, Germany, Holland, Italy, and Switzerland, have appointed committees to act in union with the general committee; and the Government of the United States has placed itself in communication with the various institutions and Government departments. Russia intends to contribute an interesting collection from the Pædagogical Museum; and the Russian Academy have formed a committee under Prof. Struve. The Austrian Minister of Instruction has taken the matter in hand for that country, and one of his officers, Mr. Fidler, is in correspondence with the Science and Art Department. I mention this to show you the intense interest that foreign countries have taken in the matter, and that to their assistance and co-operation we feel very much indebted. The appeals made to Government departments, scientific institutions, and men of science at home have been very well received. The Admiralty contributes a complete scientific outfit of a surveying ship, dredging apparatus, &c. The Post Office contributes as complete a historical collection of telegraphic apparatus as exists; much, however, unfortunately, has been broken up for want of a physical museum in which to deposit it. They also propose to communicate Greenwich time, and fire a time gun, to illustrate their method of communicating time throughout the country. The Trinity House, Ordnance Survey, Royal Observatory, and Geological Survey have also promised to contribute. From the War Office and India Office no replies have been received, but we understand they are taking steps to contribute several objects of interest, especially from the Royal Arsenal at Woolwich. The Royal Society contributes a most important collection, including some of Newton's apparatus. The Royal Institution contributes historical apparatus used by Faraday and others, and some of Dr. Tyndall's instruments. The Astronomical Society contributes Baily's apparatus for the Cavendish experiments, and Sir W. Herschel's telescope. The Geographical Society contributes maps and instruments. The Microscopical Society has promised to organise a collection of microscopes, which Mr. Sorby has especially in charge; the Horological Institute a collection of clock escapements, &c., and the Royal College of Surgeons has promised an interesting collection. King's College has promised to contribute the collection of the late Sir C. Wheatstone. At Owens College, Manchester, Professors Roscoe, Stewart, Schorlemmer, and Reynolds have promised to contribute valuable apparatus, as have also Professors Tait and Crum Brown at Edinburgh, and Sir W. Thomson at Glasgow. Trinity College, Dublin, has also promised to contribute. Contributions have been promised by

the following noblemen and gentlemen, viz. :—Dr. Joule, Prof. Andrews, Mr. Gore, Lord Rosse, Mr. De la Rue, Lord Cork, Dr. Frankland, Prof. Guthrie, Mr. Norman Lockyer, Dr. Ball, Prof. O'Reilly, Prof. Barrett, and Prof. Stokes. Among instrument makers who will contribute specimens of their apparatus may be mentioned Messrs. Elliott, Apps, Browning, Adie, Grubb, Cooke, and Tinsley. The following map makers will contribute :—Messrs. Stanford, Murby, and Keith Johnston. Numerous collections for teaching have been promised. Among these may be mentioned an exceedingly interesting collection prepared by Prof. Guthrie. All this apparatus is made out of simple materials by the students themselves. A committee, consisting of Dr. Stone, Dr. Pole, Mr. W. Chappell, and Mr. Baillie-Hamilton, are forming a most interesting collection illustrative of the scientific principles on which the construction of musical instruments is based. Mr. Markham is forming a collection of Arctic maps, Mr. F. Galton a collection of exploratory apparatus, Mr. Scott a collection of meteorological apparatus, and Dr. Mann a collection of instruments connected with atmospheric electricity. Various local committees have been formed to forward the objects of the Exhibition. Amongst them may be mentioned one at Leeds for Yorkshire, arising from the exertions of Prof. Thorpe. Among other interesting objects from Germany, we may look for some of Tycho Brahe's instruments, and the original air-pump of Otto von Guericke. From France we have as yet no very definite information, but we expect a very interesting collection, as the French Commission, consisting of members of the Academy of Sciences, have devoted considerable attention to the Exhibition, and the Conservatoire des Arts et Métiers have promised some of their finest things. From Italy it is hoped that some of the instruments used by Galileo, Torricelli, Volta, and Galvani may be obtained. In consequence of want of room in the South Kensington Museum, it is intended to hold the Exhibition in the western galleries of the buildings lately used for the Annual International Exhibitions, her Majesty's Commissioners having most obligingly placed them at our disposal for the purpose. I cannot overrate the advantages we have derived from the services of Mr. Norman Lockyer, who has been transferred temporarily to this department. Professors Guthrie and Goodeve have also assisted us most remarkably, and various learned societies have been invited to organise conferences and conversations." His Grace concluded [by suggesting the desirableness of forming one or two sub-committees for the purpose of making the necessary arrangements for the reading of papers, conferences, and receptions, and expressing his confidence that a cordial welcome will be accorded to distinguished scientific visitors from other countries.

Dr. Hooker moved "that a sub-committee be formed, consisting of the presidents and one vice-president of each of the learned societies, to consider the reading of papers, conferences, and demonstrations; and, secondly, the arrangements for the receptions." Mr. Warren De la Rue seconded the motion, which was carried.

PROF. FLOWER'S HUNTERIAN LECTURES ON THE RELATION OF EXTINCT TO EXISTING MAMMALIA¹

III.

ORDER *Proboscidea*.—This name has been appropriated to a well-marked group of animals, presenting some very anomalous characters, allied in many respects to the Ungulata, but belonging neither to the

¹ Abstract of a course of lectures delivered at the Royal College of Surgeons "On the Relation of Extinct to Existing Mammalia, with Special Reference to the Derivative Hypothesis," in conclusion of the course of 1873. (See Reports in NATURE for that year.) Continued from p. 308.