

Stated Meeting, March 20.

Present, twenty-seven members.

Mr. DU PONCEAU, President, in the Chair.

The following donations were received:—

FOR THE LIBRARY.

- The Present State of Nova Scotia, with a Brief Account of Canada, and the British Islands on the Coast of North America. 2d edition. 8vo. Edinburg, 1787.—*From Mr. Vaughan.*
- Reports of the Committee of the House of Assembly, on that part of the Speech of His Excellency the Governor in Chief, which relates to the Settlement of the Crown Lands, with the Minutes of Evidence taken before the Committee. 2 vols. 8vo. Quebec, 1821.—*From the same.*
- The History of Hindostan; translated from the Persian: the second edition; revised, altered, corrected, and greatly enlarged. By Alexander Dow, Esq. 2 vols. 4to. London, 1770.—*From the same.*
- The History of Hindostan, from the Death of Akbar to the Complete Settlement of the Empire under Aurungzebe. To which are prefixed, 1. A Dissertation on the Origin and Nature of Despotism in Hindostan. 2. An Inquiry into the State of Bengal; with a Plan for restoring that Kingdom to its former Prosperity and Splendour. By Alexander Dow, Esq. Lieut. Col. in the Company's Service. 4to. London, 1772.—*From the same.*
- Motifs des Guerres et des Traités de Paix de la France, pendant les Règnes de Louis XIV., Louis XV., et Louis XVI., depuis la Paix de Westphalie, en 1648, jusqu'à celle de Versailles, en 1783. Par le Cheve. Anquetil, &c. 12mo. Paris, An 6 de la République.—*From the same.*
- Zoonomia, or the Laws of Organic Life. By Erasmus Darwin, M.D., F.R.S. 2 vols. 8vo. Dublin, 1800.—*From the same.*
- Syllabus of a Course of Lectures on Natural and Experimental Philosophy. By Thomas Young, M.D., F.R.S. Professor of Natural Philosophy in the Royal Institution of Great Britain. 8vo. London, 1802.—*From the same.*

- Journal Historique de la Révolution de la partie Française de Saint-Domingue, commencé le 10 Août 1808, avec des Notes Statistiques sur cette partie. Par Gilbert Guillermin, Chef d'Escadron attaché à l'État-major de l'Armée de Saint-Domingue. 8vo. Philadelphia, 1810.—*From the same.*
- Guida da Milano a Ginevra pel Sempione; con 30 Vedute ed una Carta Geografica. 8vo. Milano, 1822.—*From the same.*
- Dissertation Second: exhibiting a General View of the Progress of Mathematical and Physical Science, since the revival of Letters in Europe. By John Playfair, Late Professor of Natural Philosophy in the University of Edinburgh, &c. (From the Supplement to the Encyclopædia Britannica.) 8vo. 2 vols.—*From the same.*
- Dissertation Third: exhibiting a General View of the Progress of Chemical Philosophy, from the Early Ages to the End of the Eighteenth Century. By William Thomas Brande, Secretary of the Royal Society of London, &c. (From the Supplement to the Encyclopædia Britannica.) 8vo.—*From the same.*
- Original Papers, relating to the Expedition to Panama. 8vo. London, 1744.—*From the same.*
- Le Conservateur de la Vue, suivi du Manuel de l'Ingénieur-opticien, 4ème édit. par l'Ingénieur Chevallier (le Chev.) Membre de la Société Royale Académique des Sciences de Paris, &c. 8vo. Paris, 1820.—*From the same.*
- Abrégé d'un Cours Complet de Lexicologie a l'Usage des Élèves de la Quatrième Classe de l'École Polymathique: par P. R. F. Butet (de la Sarthe) Directeur de cette École, &c. 8vo. Paris, An. IX. 1801.—*From the same.*
- Essai sur la Théorie des Proportions Chimiques et sur l'Influence Chimique de l'Électricité: par J. J. Berzelius, Membre de l'Académie des Sciences de Stockholm. Traduit du Suédois sous les yeux de l'Auteur, et publié par lui-même. 8vo. Paris, 1819.—*From the same.*
- Dictionnaire Raisonné de Botanique, contenant les Termes Techniques, Anciens et Modernes, considérés sous le Rapport de la Botanique, de l'Agriculture, de la Médecine, des Arts, des Eaux et Forêts, &c., par Sébastien Gérardin (de Mirecourt), Ex Professeur a l'École Centrale du Département des Vosges, &c. Publié, Revu et Augmenté de plus de Trois Mille Articles, par M.

- N. A. Desvaux, Professeur de Botanique, &c. Nouvelle édition. 8vo. Paris, 1822.—*From the same.*
- The Works of John Locke, Esq. Three vols. folio. Second edition. London, 1722.—*From Mr. Du Ponceau.*
- A New Atlas of the Mundane System; or of Geography and Cosmography; describing the Heavens and the Earth, the Distances, Motions, and Magnitudes of the Celestial Bodies: the various Empires, Kingdoms, States, and Republics throughout the Known World: with the Particular Description of the Latest Discoveries. The whole elegantly engraved on Sixty-four Copperplates; with a General Introduction to Geography and Cosmography, in which the Elements of these Sciences are compendiously deduced from Original Principles, and traced from their Invention to the latest Improvements. The fourth edition, with Additions, Corrections, and very great Improvements. By the late Mr. Samuel Dunn, Mathematician and Member of the American Philosophical Society, at Philadelphia, &c. Folio. London, 1796.—*From the same.*
- A' Kávé, Thé és Csokolade Történeti, Természethistóriai Dieteticiái és Orvosi Tekintetben. F. Almási Balogh pál által. 12mo. Pesten, 1831.—*From the Author.*
- De Evolutione et Vitâ Encephali. Auctore Paulo Balogh de F. Almás. 8vo. Pestini, 1823.—*From the same.*
- Philosophiai Pályamunkák. Kiadja A' Magyar Tudós Társaság. 8vo. Budán, 1835.—*From the same.*
- Report by the Board of Directors of the Transactions, Affairs and Accounts of the New Orleans and Nashville Rail Road Company, from its Organization to the present Time. New Orleans, February 28, 1840.—*From Mr. Merrick.*
- Manuel Général pour les Arbitrages de Changes, et pour beaucoup d'autres Calculs Nécessaires chez les Négocians, par Nombres fixes ou par Logarithmes, &c. Suivi de Logarithmes depuis 1 jusqu'à 10400, &c. Par Félix Reishammer. 8vo. Paris, An. VIII. (1800)—*From Mr. J. P. Engles.*
- Message from the President of the United States, transmitting a Report from the Secretary of State upon the subject of the Law for taking the Sixth Census. December 31, 1839.—*From Dr. Patterson.*
- Letter from the Secretary of the Treasury, transmitting a Report of F. R. Hassler, upon the subject of the Coast Survey, and the Pro-

gress of Preparing Standard Weights and Measures. December 30, 1839.—*From the same.*

A Bill to Provide for the Disposal and Management of the Fund bequeathed by James Smithson to the United States, for the Establishment of an Institution for the Increase and Diffusion of Knowledge among Men. Reported to Congress by Mr. Adams.—*From the same.*

FOR THE CABINET.

A Specimen of Native Platinum, from Russia, weighing one ounce and twenty grains.—*From Col. Melnikoff, of the Russian Service.*

The Committee, consisting of Professor Henry, Dr. Patterson, and Mr. Walker, to whom was referred a paper entitled, "Observations of the Magnetic Intensity at twenty-one Stations in Europe. By A. D. Bache, LL.D. President of the Girard College for Orphans, &c.," reported in favour of the publication of the paper in the Society's Transactions. The Report was adopted, and the publication ordered accordingly.

The stations at which the observations, recorded in this memoir, were made, were twenty-one in number: three in Great Britain, and the others on the continent of Europe. They include Edinburgh, Dublin, London, Brussels, Berlin, Paris, Vienna, the Flégière, Brientz, the Faulhorn, Geneva, Chamberi, Chamouni, Lyons, Milan, Venice, Trieste, Florence, Turin, Rome, and Naples. The author remarks, that the magnetic dip and intensity are so well known at some of these places, that he produces his results for them, in order that, by comparison with those of other observers, the value of his determinations for other places may be judged of. The observations were of the horizontal intensity and dip, except in the comparison of the intensities at London and Paris, where, in addition, the statical method devised by Prof. Lloyd was used. At three of the stations the dip was not observed. The horizontal intensities were generally compared by oscillating two different needles in a rarefied medium, according to the method described by the author in a former paper (Am. Philos. Society's Transactions, Vol. V). At London and Paris, two additional needles were employed. The dip was observed in the usual way, with an instrument by Robinson, by whom also the needles for Prof. Lloyd's method were made. The corrections required for temperature in the horizontal needles had been previously obtain-

ed. The correction, for loss of magnetism by the needles, was ascertained from observations at Philadelphia, London, and Paris, and curves traced representing the loss, from which the specific correction, to be applied at any epoch, was readily obtained. The curve for one of the needles, showed a tendency towards a permanent state, and for the other was nearly a straight line. Irregular changes took place in neither needle. The author's experience with these needles, induces him to give a preference to the method of placing the needles in pairs, over that which he has hitherto employed, of keeping each needle separate from the other. A suggestion also results in the use of the dipping needle, of the necessity of ascertaining that the needles have, in the reversal of the poles, been charged nearly, or quite, to saturation. The author takes occasion to correct his statement in regard to the inefficacy of heating needles in boiling water in producing an approach to a permanent magnetic state. The observations at each station, with the corrections employed, are given in tables; and the number observed for the dip, or calculated for the horizontal or total intensities, are compared with the results of other observers.

The Memoir concludes with the following Abstract of the numerical results.

No.	P.aces.	Latitude.	Long. from Paris.	Date.	Horizontal Intensity.	Dip.		Total Intensity.
						° /	Paris=1	
1	Edinburgh	55 57 N.	5 32 W.	Feb. 3, 1837	0.841	— —*	Paris=1	—
2	Dublin	53 23 "	8 41 "	Nov. 20, 1836	0.879	— —*	Paris=1	—
3	London	51 31 "	2 26 "	June 16, 1837	0.939†	69 16.0	Paris=1	1.021
4	Brussels	50 51 "	2 02 E.	July 25, 1838	0.969	— —*	Paris=1	—
5	Berlin	52 32 "	11 02 "	Dec. 16, 1837	0.979	68 08.5	Paris=1	1.014
6	Paris	48 50 "	0 00 "	Aug. 17, 1837	1.000	67 20.8	Paris=1	1.000
7	Vienna	48 13 "	14 02 "	March 23, 1838	1.090	64 49.7	Paris=1	0.989
8	The Flégière	—	—	Aug. 26, 1837	1.099	64 35.8	Paris=1	0.987
9	Brientz	—	—	Sept. 22, "	1.078	65 06.7	Paris=1	0.987
10	The Faulhorn	—	—	Sept. 20, "	1.082	65 01.7	Paris=1	0.987
11	Geneva	46 12 "	3 49 "	Aug. 25, "	1.086	64 49.8	Paris=1	0.984
12	Chamberi	—	—	June 21, 1838	1.089	64 35.0	Paris=1	0.979
13	Chamouni	—	—	Aug. 26, 1837	1.088	64 38.2	Paris=1	0.979
14	Lyons	45 46 "	2 29 "	June 25, 1838	1.078	64 49.0	Paris=1	0.978
15	Milan	45 28 "	6 51 "	June 10, "	1.111	63 54.7	Paris=1	0.972
16	Venice	45 26 "	10 10 "	April 11, "	1.129	63 21.9	Paris=1	0.971
17	Trieste	45 35 "	11 27 "	April 4, "	1.128	63 20.5	Paris=1	0.970
18	Florence	43 47 "	8 55 "	May 28, "	1.170	62 05.5	Paris=1	0.965
19	Turin	45 04 "	5 20 "	June 17, "	1.094	63 52.2	Paris=1	0.959
20	Rome	41 54 "	10 10 "	May 18, "	1.225	60 14.0	Paris=1	0.952
21	Naples	40 52 "	11 57 "	May 7, "	1.249	59 05.1	Paris=1	0.938

* Dip not observed.

† Mean of results in June, July and Aug. 1837, and in July and Aug. 1838.

The Committee, consisting of Mr. Nicklin, Prof. Bache, and Dr. Hays, to whom was referred a Paper entitled "On the *Patella Amæna* of Say, by Isaac Lea," reported in favour of publication, which was ordered accordingly.

In this Paper Mr. Lea gives a Synonymy, showing that the *Patella Amæna* of Say was first described by Müller, under the specific name of *Testudinalis*: Zool. Dan. p. 237; and Mr. Couthouy, having lately given an elaborate description of the animal, in the Boston Journal of Natural Science, showing that it belongs to the new genus *Patelloida*, recently established by Quoy and Gaimard; Mr. Lea argues that it should henceforth be called *Patelloida Testudinalis*.

A Communication was read, entitled, "On the Storm which was experienced throughout the United States, about the 20th of December, 1836; by Elias Loomis, Professor of Mathematics and Natural Philosophy in Western Reserve College," which was referred to a Committee.

Dr. Hare read a Communication, entitled, "1. The Well-known Features of the Climate of the Atlantic States. 2. On Certain Facts and Inferences respecting the Origin and the Effects of the Trade Winds, and the Westerly Breezes which they must induce, or into which they must be deflected. 3. Of Certain Facts or Laws of Electrical Reaction, which have been ascertained experimentally, and which render it irrational not to consider Electricity as the Principal Instrument of Nature in the Production of Storms."

The Paper was referred to a Committee.

Mr. Peale exhibited specimens of Medals, obtained by the process of Professor Jacobi. He stated, that Mr. Eckfeldt, of the Mint, had found the specific gravity of the copper, thus procured, to be as high as that of rolled copper; that is, 8.95.

Mr. Peale also exhibited a diaphragm of parchment, which had been used in the battery employed in the process; and upon which metallic copper had been precipitated. He farther exhibited specimens of Metallic Silver, reduced, by a similar process, from the chloride of silver: but remarked, that it was not likely to lead to any useful analogous result, owing to the silver being deposited in a granular state.

Mr. Sears C. Walker read an extract from a letter, of Prof. S. Alexander, of Princeton, giving a Description, with Drawings, of two Appearances of Lateral and Vertical Mirage, noticed by him.

The thermometer, in both instances, was nearly at 0° Fahrenheit. The first was of the rising of the sun, seen in the winter of 1834-5, across the valley of Stony Brook, through which the Delaware and Raritan Canal passes. The distorted and ragged shape of the sun resembled a sketch, made by Mr. Head, of the moon's appearance several minutes before setting, Jan. 7th, 1825, at Port Bowen, in Captain Parry's third voyage. The other phenomenon was observed by Prof. Alexander, at sea, off Cape May, Dec. 15th, 1834. The preceding night had been severely cold, and the surface of the ocean was covered with a thin cloud, denominated by the Greenlanders, "Port Smoke." In the afternoon, as the sun approached the horizon, a brilliant and distinct image of himself arose to meet him. After the apparent contact of the two discs, the two centres approached and passed each other, leaving visible, however, only the lower segment of the image, and the upper segment of the sun's disc, which double segment became more and more narrow, till it vanished; thus presenting the phenomenon of sunset, at about 15' above the horizon.

A similar appearance is described in Parry's second voyage, at Winter Island, Dec. 20th, 1821, when an inverted image of the moon appeared just after she had risen.

Dr. Bache reported the decease of John Frederick Blumenbach, on the 22d of January, 1840; and of Joseph Parrish, M. D., on the 18th of March, 1840—members of the Society.

Dr. Duglison, Reporter, stated that No. 10, of the Bulletin was ready for distribution.