PROCEEDINGS

OF THE

CAMBRIDGE PHILOSOPHICAL

SOCIETY.

VOL. VII.

THE FOUNDATION AND EARLY YEARS OF THE SOCIETY:

An Address delivered by

JOHN WILLIS CLARK, M.A. Trin. Coll. *President*,

on resigning office, 27 *October*, 1890.

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JOHN WILLIS CLARK, M.A. Trin. Coll. *President,*

ON RESIGNING OFFICE,

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WHEN the President of a Society lays down his office, it is usual that he should take a more or less extended view of the past history of the body with which he has been connected, thank his officers, and anticipate a brilliant future from the efforts of his successor. I have no wish to depart from these excellent precedents. I am using no empty phrase when I say that I felt it a distinguished, and not wholly deserved, honour to be chosen to succeed my dear friend Mr Coutts Trotter—one who by his intellectual attainments, by the breadth of his sympathies, and by his unwearied efforts to develop the scientific side of University training, was so distinctly marked out as the proper person to preside over a Philosophical Society. I, on the contrary, though the office which I have held for so many years in connection with the New Museums may have enabled me to be a promoter of

science in others, have few claims to be called a man of science myself; and had I not been ably supported by the officers of the Society, the high reputation which we have so long maintained might have been somewhat tarnished by the appearance of a name so humble as mine in the list of Presidents. The Secretaries, however, have taken good care to provide our meetings with papers excellent in matter and varied in character; and the Treasurer has been most energetic and successful in improving our financial position.

The Society has now been in existence for rather more than seventy years; and I may say, without fear of contradiction, that though our position is different from what it was in days which many persons can remember, we still hold our own in public estimation—still exercise a powerful influence in the University. The time has not yet come for the history of the Society to be written; but it has occurred to me that it might be interesting to place on record a few notes respecting its origin, and the early years of its corporate life.

In the Easter Vacation of 1819 Professor Sedgwick—who had been elected to the Woodwardian Chair in the May of the previous year—was taking a tour in the Isle of Wight, and collecting materials for his first course of lectures, which he delivered in the ensuing Easter Term. He was accompanied by Mr Henslow of St John's College, and as the two friends walked and talked they deplored the want of some place in Cambridge to which those interested in science might resort, with the certainty of meeting persons of similar or kindred tastes, and where they might learn what was being done abroad. Their "first idea," we are told, "was to establish a Corresponding Society, for the purpose of introducing subjects of natural history to the Cambridge students"; and on their return to the University they wrote "to their respective friends for their encouragement and support[1]." Easter had fallen late that year (11 April), and therefore the Easter Term would be short. Sedgwick, moreover, was fully occupied with his lectures. The idea too, was novel, and in those days novelty, especially when it took the form of a combination for the prosecution of something foreign to the normal course of study in the place, was sure to encounter disapprobation, if not active opposition. Delay, therefore, was unavoidable; and it need excite no surprise that the Michaelmas Term was far advanced before the following notice was circulated, at the suggestion, it is said, of Dr E. D. Clarke, Professor of Mineralogy, who entered into the scheme with characteristic enthusiasm, and was always spoken of by Sedgwick as the founder of the Society.

[1] *Memoirs of the Rev. John Stevens Henslow*, by the Rev. L. Jenyns. 8vo. Camb. 1862, p. 17.

CAMBRIDGE, *Oct.* 30, 1819.

The resident Members of the University, who have taken their first degree, are hereby invited to assemble at the Lecture-Room, under the Public Library, at twelve o'clock, on TUESDAY, Nov. 2, for the purpose of instituting a Society, as a point of concourse, for scientific communications.

Hon. Geo. Neville[1].
Bishop of Bristol[2].
Dean of Carlisle[3].
Dr Kaye[4].
Dr Davy[5].
Dr Webb[6].
Dr E. Clarke[7].
Dr Haviland[8].
Dr Ingle[9].
*Prof. Monk[10].
Prof. Cumming[11].
Prof. Sedgwick.
Prof. Lee[12].
R. Woodhouse[13].
Rev. T. Kerrich[14].
Rev. A. Carrighan. [Joh.]
— T. Jephson. [Joh.]
*Rev. J. Holmes. [Pet.]
* — W. Mandell. [Qu.]
* — J. Hustler[15].
* — J. Brown. [Trin.]
— G. Macfarlan. [Trin.]
*W. Hustler[16].
*Rev. J. Lamb[17].
— T. Hughes[18].
* — J. Evans. [Cla.]
* — G. Peacock[19].
— F. Fallows[20].
— J. Whittaker[21].
* — R. Crawley. [Magd.]

[1] Master of Magdalene 1813—53; Dean of Windsor 1845—53.
[2] Will. Lort Mansel, D.D., Master of Trinity 1788—1820; Bp. of Bristol 1808—20.
[3] Isaac Milner, D.D., President of Queens' 1788—1820; Dean of Carlisle 1793—1820.
[4] John Kaye, D.D., Master of Christ's 1814—30; Bp. of Bristol 1820—27; of Lincoln 1827—53.
[5] Martin Davy, M.D., Master of Gonville and Caius 1803—39.
[6] Will. Webb, D.D., Master of Clare 1815—56.
[7] Edw. Dan. Clarke, LL.D., Professor of Mineralogy 1808—22.
[8] Joh. Haviland, M.D., Regius Professor of Medicine 1817—51.
[9] Tho. Ingle, M.D. Pet.
[10] Ja. Hen. Monk, B.D. Trin., Regius Professor of Greek 1808—23; Bp. of Gloucester 1830—56.
[11] Ja. Cumming, M.A. Trin., Professor of Chemistry 1815—61.
[12] Sam. Lee, M.A. Queens', Professor of Arabic 1819—31.
[13] Rob. Woodhouse, M.A. Cai., Lucasian Professor 1820—22; Plumian Professor 1822—28.
[14] Tho. Kerrich, M.A. Magd., Principal Librarian 1797—1828.
[15] Ja. Devereux Hustler, B.D. Trin.
[16] Will. Hustler, M.A. Jes., Registrary 1816—32.
[17] Master of Corpus Christi 1822—50.
[18] Tho. Smart Hughes, B.D. Emm., Christian Advocate, 1822.
[19] Geo. Peacock, M.A. Trin., Lowndean Professor 1836—58, Dean of Ely 1839—58.
[20] Fearon Fallows, M.A. Joh., Director of the Observatory at the Cape of Good Hope 1820—31.
[21] Joh. Will. Whittaker, M.A. Joh.

Rev. H. Robinson[22]. J. Henslow[24].
*W. Whewell[23].

It is interesting to remark that the thirty-three persons who signed the above notice differed widely in their pursuits and opinions, and were drawn from eleven Colleges. Among them are six Heads, six Professors, (of Mineralogy, Geology, Chemistry, Medicine, Greek and Arabic), and eleven tutors, or assistant-tutors[25]. It is clear, therefore, that from the first there was nothing sectarian about the Society; it represented no clique; its supporters were not distinguished by any singularity of dress, demeanour, or speech; they merely recognised the need of extending the studies of the University in a scientific direction.

No detailed report of the proceedings at this preliminary meeting was drawn up, but on the next day a brief memorandum was circulated in the University. It ran as follows:

CAMBRIDGE, *Nov.* 3, 1819.

At a Meeting of the Members of this University, which took place on Tuesday, November 2, in the Lecture-Room under the Public Library, in consequence of a requisition to that effect, signed by a number of distinguished Individuals of the different Colleges, the following Resolutions were carried unanimously:

1.—That Dr Haviland be called to the chair.

Proposed by Dr Clarke, and seconded by Mr Kerrich.

2.—That a Society be instituted as a point of concourse for scientific communication.

Proposed by Prof. Sedgwick, and seconded by Mr Robinson.

3.—That a Committee be appointed, consisting of the following gentlemen, who shall report to all Members of the University desirous of belonging to the said Society, such regulations as shall appear to them to be proper for the proposed institution:

Dr Kaye.	Prof. Sedgwick.
Dr Clarke.	Mr Bridge.
Dr Haviland.	Mr Jephson.
Prof. Farish.	Mr Fallows.
Prof. Cumming.	

Proposed by Prof. Monk, and seconded by Mr Hughes.

[22] Hastings Robinson, M.A. Joh.

[23] Professor of Mineralogy 1828—32; of Moral Philosophy 1838—55; Master of Trinity 1841—66.

[24] Joh. Stevens Henslow, M.A. Joh., Professor of Mineralogy 1822—28; of Botany 1825—61. Mr Henslow did not formally resign the Professorship of Mineralogy on obtaining that of Botany until the mode of election had been settled by Sir J. Richardson's award. *Memoirs of Henslow*, ut supra, p. 29.

[25] To the names of these an asterisk has been prefixed in the above list.

4.—That the thanks of the Meeting be given to Dr Haviland, for his able conduct in the chair.

Proposed by Prof. Farish, and seconded by Mr Hughes.

N.B. It is requested that all those gentlemen who are desirous of adding their names to the Society previously to the next Meeting, will signify their intention to the Members of the Committee.

The Committee to whom this important duty was entrusted must have set about their work without delay, for in less than a week the following "Regulations" had been drawn up. The paper containing them is endorsed: "Report of the Committee appointed to form the regulations of a Society to be instituted in this University for Philosophical Communication; to be read at the first meeting of the Society, on Monday, November 15, at one o'clock, in the Lecture Room under the Public Library."

CAMBRIDGE, *November* 8, 1819.

At a Meeting of the Committee appointed to form the regulations of a Society, to be instituted in this University, for Philosophical Communication, it was resolved:

1. That the Society bear the name of The Cambridge Philosophical Society.

2. That this Society be instituted for the purpose of promoting Scientific Enquiries, and of facilitating the communication of facts connected with the advancement of Philosophy.

3. That this Society consist of a Patron, a President, a Vice-President, a Treasurer, two Secretaries, Ordinary and Honorary Members.

4. That a Council be appointed, consisting of the above-mentioned Officers, and five Ordinary Members; three of whom constitute a Quorum: and that no person under the standing of M.A. be of the Council.

5. That the Officers of the Society, with the exception of the Patron, be annually elected by Ballot.

6. That Ordinary Members be chosen from the Graduates of this University by ballot; their Election being determined by a majority of two thirds of the Electors present.

7. That any person desirous of becoming a Member, be proposed by three Ordinary Members; and his name hung up in the Society's room, until the third meeting after the proposition has been made.

8. That Honorary Members be proposed by six Ordinary Members, and balloted for accordingly.

9. That the Meetings of the Society be held on a Monday, once in every fortnight during full term. The President to take the chair at seven o'clock, p.m. and to quit it at nine.

10. That the business of each meeting be conducted in the following order:

    1. The minutes of the preceding meeting read and approved.
    2. Notices of new motions presented.
    3. Members proposed.
    4. Members balloted for.
    5. Motions on the minutes brought forward and determined.
    6. Miscellaneous business.
    7. Communications read and presents acknowledged.

11. That all communications be sent to one of the Secretaries.

12. That nothing be published by the Society which has not been previously approved by the Council.

13. That all questions involving a difference of opinion, be determined by a majority of Members at the next meeting.

14. That if the numbers of the votes be equal, the Chairman have a casting vote.

15. That the annual election of the Officers take place, and the accounts of the Treasurer be passed, at the last meeting of the Society for the year, in the Easter Term.

16. That a Special General Meeting may at any time be called by the Secretary, in consequence either of instructions received from the President, or of a requisition signed by three Ordinary Members. The object must be stated to the Secretary, who shall give to each Member an intimation thereof, stating, three days previously, the time and place of meeting.

17. That the annual Subscription for each member be One Guinea, to be paid in advance, or in lieu of it, a payment of Ten Guineas.

18. That all persons becoming Members, after the first meeting in 1820, pay an admission fee of Two Guineas.

19. That Members be at liberty to introduce each a Visitor; besides whom, the President, for the time being, may admit any person, with the limitation specified in the succeeding Resolution.

20. That no resident Member of the University be allowed to attend more than two meetings of the Society without becoming a Member.

At the meeting which took place on the 15th November, these draft Regulations were adopted, with some slight changes and additions, which are not without interest:

In Rule 4 the number of ordinary members of the Council was increased to seven. To Rule 5, after the words "*by ballot*," was added: "but that the President and Vice-President shall not be eligible for more than two years successively; and that the three Senior Ordinary Members of the Council be changed every year." To Rule 7 was added: "But that all Noblemen, Heads of Houses, Doctors, and Professors, be ballotted for when they are proposed." Rule 18 was omitted; and a new Rule 20 was drawn up: "That the Chancellor of the University be requested to accept the office of Patron."

The Regulations, as altered, having been adopted by the meeting, the Council of the Society for the ensuing year was elected:

PRESIDENT.

The Rev. W. Farish, B.D. Magd. Coll., Jacksonian Professor.

VICE-PRESIDENT.

John Haviland, M.D. St John's Coll., Regius Professor of Physic.

SECRETARIES.

The Rev. A. Sedgwick, M.A. Trin. Coll., Woodwardian Professor.
The Rev. S. Lee, M.A. Queens' Coll., Professor of Arabic.

TREASURER.

The Rev. B. Bridge, B.D., Fellow of Pet. Coll.

ORDINARY MEMBERS OF THE COUNCIL.

The Rev. E. D. Clarke, LL.D. Jes. Coll., Professor of Mineralogy.
—— J. Catton, B.D. Fellow of St John's College.
—— T. Turton, B.D. Fellow of Catharine Hall.
—— T. Kerrich, M.A. Magd. Coll., Principal Librarian.
R. Woodhouse, M.A. Fellow of Caius College.
The Rev. J. Cumming, M.A. Trin. Coll., Professor of Chemistry.
R. Gwatkin, M.A. Fellow of St John's College.

We have seen that the meeting at which the above Regulations were adopted is called "the first meeting of the Society." The Minute Book of the Society, however, takes a different view, and places the birthday of the Society a few weeks later. We there read:

"Minutes of the first meeting of the Cambridge Philosophical Society held in the Museum of the Botanic Garden, Monday, December 13, 1819, Professor Farish in the chair."

At this meeting Professor Farish delivered an address, as also did Dr E. D. Clarke. His biographer says:

"Of this scheme [of founding a Philosophical Society at Cambridge] whose direct object was the promotion of science, and its natural tendency to raise the credit of the University, Dr Clarke was of course one of the earliest and one of the most zealous promoters; and as it was thought advisable, that some address should be provided explanatory of the design and objects of the Institution, he was requested by a sort of temporary council to draw it up. Accordingly he undertook the task, and his address having been read at the first meeting, was afterwards printed by order of the Society, and circulated with the first volume of their Transactions; although for some reason it was not connected with the volume. Nor did his anxiety for the support and honour of the Society rest here; he wrote letters to almost all the literary men of his acquaintance, to request their co-operation and support; combated with great spirit in several instances, the opposition that was made to it from others; and during the short remainder of his life, contributed three papers, which were printed in the first volume of their Transactions[1]."

Dr Clarke's address is brief, and is chiefly occupied with pointing out the advantage of having a society to gather together scientific observations which, if scattered through journals, might escape notice altogether. It concludes with the following practical suggestions:

"Having thus set before the Society the main design and objects of its Institution, the Council beg to call the attention of this Meeting to considerations of a subordinate nature. It will be necessary to provide some place in which the future Meetings may be held, and where a repository may be found for the preservation not only of the archives and records of the Society, but also of such documents, books, and specimens of *Natural History*, as may hereafter be presented or purchased. The utmost economy will at present be requisite in the management of the Society's funds; and therefore if the consent of the University could be obtained it would be highly desirable that the expenses of printing the Society's Transactions should be defrayed by the University. His Royal Highness the Chancellor[2] has accepted of the Office of Patron, and his Letter, containing the expression of his approbation, will be read by one of the Secretaries. The present Vice-Chancellor[3]; our High Steward[4]; both our Representatives in Parliament[5]; and many other distinguished Members of the University, who are not resident, have also contributed towards the undertaking; and there is therefore every reason to hope that the Graduates of this University, who associated for the Institution of the CAMBRIDGE

[1] *The Life and Remains of the Rev. E. D. Clarke, LL.D.* By W. Otter. 4to. Lond. 1824, p. 650.

[2] H. R. H. the Duke of Gloucester.

[3] Mr Serjeant Frere, Master of Downing College. [4] Lord Hardwicke.

[5] Viscount Palmerston, M.A. St. John's Coll., and J. H. Smyth, M.A. Trin. Coll.

PHILOSOPHICAL SOCIETY, by their assiduity and diligence in its support, and by their conspicuous zeal for the honour and well-being of the University, will prove to other times that their *Lives*, and their *Studies*, have not been in vain."

At this meeting the designation of the Society was altered. The third Minute runs:

"That the words 'and Natural History' be added to the second regulation, which will then stand as follows, viz. 'That this Society be instituted for the purpose of promoting scientific enquiries and of facilitating the communication of facts connected with the advancement of Philosophy and Natural History.'"

The change is slight, but not unimportant, for it determined, for many years, the direction of the Society's labours. Before long, thanks to the enthusiasm and industry of Professor Henslow and Mr Leonard Jenyns, it commenced the formation of a Museum, long the only Zoological Museum in Cambridge; and the legitimate parent of those collections which I may venture to describe as among the most valued possessions of the University.

The Society was now fairly launched; the Syndics of the University Press undertook to publish the *Transactions* free of charge; the number of members increased so rapidly that before the end of 1820 it had reached 171; the finances were in so flourishing a condition that £300 was invested in the funds[1]; and opposition gradually died away. "Among the senior members of the University," wrote Sedgwick to Herschel, 26 February, 1820, "some laugh at us; others shrug up their shoulders and think our whole proceedings subversive of good discipline; a much larger number look on us, as they do on every other external object, with philosophic indifference; and a small number are among our warm friends[2]."

It was further agreed at the first meeting of the Society: "that the High Steward of the University, and the Vice-Chancellor for the time being be Vice-Patrons of the Society"; and at the second meeting: "that the members of the Cambridge Philosophical Society be designated by the name Fellows of the Cambridge Philosophical Society." Early in the following year Dr Clarke proposed: "that the Society be hereafter styled The Cambridge Philosophical and Literary Society." This proposal was not adopted, as I have always thought, most unfortunately. The name would have cemented a connexion between science and literature from which both would have reaped considerable advantage. As time went on the *Transactions* of the Society would probably have had a literary division, as is not uncommon on the continent; and the first object

[1] *Minutes of the Society*, 21 February, 1820.
[2] *Life of Rev. A. Sedgwick*, Vol. I. p. 209.

of the Society's formation—the gathering together of observations and researches that would otherwise be scattered and lost, would have been promoted.

For a few months the Society met in the lecture-room of the building on the east side of what was then the Botanic Garden, built in 1784 for the use of the Professor of Botany and the Jacksonian Professor, and now used by the Professor of Pathology. The selection of Professor Farish as the first President doubtless determined this place of meeting. It was, however, obvious, as Dr Clarke had pointed out, that the Society must have a home of its own as soon as possible. In April, 1820[1], arrangements were made for securing the use of a house in Sidney Street, opposite to Jesus Lane. The Society entered into occupation without delay, and at once commenced the formation of a Museum and a Library; for among the *Minutes* of the first meeting "held in the new rooms," 1 May, 1820, we find:

"The thanks of the Society voted to Mr Henslow for his liberal donation of a valuable collection in some departments of Natural History; and cabinets ordered to be procured for the reception of the specimens."

And at the next meeting (15 May):

"The thanks of the Society voted to Dr Clarke, Dr Haviland, and Mr Bridge for books presented by them to the Society."

Again, 13 November, 1820:

"The thanks of the Society voted to Mr Henslow for a valuable collection of British Insects and Shells systematically arranged in the new cabinet."

The enthusiasm of those days of youth and hope is amusingly illustrated by a notice of motion handed in by Dr Clarke: "that communications announcing discoveries take the precedence of all others." This was agreed to, in a slightly different form, 13 November, 1820.

The Society was barely two years old when a project was started for giving it a social as well as a scientific side, by establishing a reading-room, amply stocked with newspapers, reviews, and magazines, both English and foreign, as well as with scientific journals. A meeting to carry out this scheme was held 22 May, 1821; and so warmly was it taken up that before the end of the year it was agreed that: "the establishment and funds of the Reading-room shall be considered as under the control of the Society." A committee consisting of the Treasurer (Mr Bridge),

[1] *Minutes of the Society*, 17 April, 1820.

Mr Carrighan (Joh.), Mr Griffith (Emm.), Mr Peacock (Trin.), Mr Crawley (Magd.), Mr Whewell (Trin.), Mr Henslow (Joh.), was appointed to draw up the following regulations for the management of it, which the Society adopted, 25 March, 1822.

Rules and Regulations of the Reading Room.

1. Any Fellow of the Society elected before the 1st of January, 1822, may become a member of the Reading-room by writing his name in the book for that purpose and paying the subscription of the current year.
2. Every Fellow of the Society elected after the 1st January, 1822, is a member of the Reading-room during residence.
3. Every Fellow of the Society after becoming a member of the Reading-room continues so during residence.
4. Every member of the Reading-room shall pay an annual subscription of one guinea to the Society, the subscription to be due on the 1st January for the current year, or he may become a member for life by paying ten guineas for the use of the Reading-room in any one year.
5. The following publications shall be taken in[1].
6. Every alteration proposed in the list of publications taken in, shall be signed by at least three members of the Reading-room, read at a meeting of the Society, and suspended in the Room for a fortnight during full Term, for any member to signify his assent or dissent. If the majority in its favour amount to one-third of the signatures and the Council determine that the funds will permit, the alteration shall take place.
7. No Newspaper shall be taken out of the room, and no periodical publication shall be removed, before a succeeding number has appeared.
8. Any member, upon taking out a book, shall give to the servant of the house, a paper, with the title of the book, signed and dated by himself.
9. Any member violating this rule shall pay a fine of 10*s*.
10. Every publication taken out to be returned in a fortnight under a penalty of 2*s*. 6*d*.
11. Any member having lost or damaged a book or paper shall replace it by a fresh copy of the same.

[1] A space of nearly a full page is left in the Minute Book for the list of publications, but it has never been written in.

12. The Reading-room shall be open every day from 8 o'clock in the morning to 10 at night.

13. Strangers may be introduced by a member, but no person resident in Cambridge can be introduced to the room.

14. Non-resident Fellows of the Society when visiting Cambridge shall be entitled to the use of the Reading-room.

15. A Steward[1] shall be appointed at the Annual Meeting of the Society and considered as a member of the Council.

16. The office of the Steward shall be: to procure and take care of the books, to see that the papers are filed, and the room properly prepared for the reception of the members: to collect the bills and to sign them before they are paid by the Treasurer.

It should be remembered that in those days Combination Rooms were ill-supplied with newspapers, and the few that were taken in were generally in the hands of the Senior Fellows. Moreover, in some colleges at least, the juniors were not allowed to use the Combination Room at all, except on Feast Days. The opportunity therefore, of having access at all times to a well-stocked reading-room was eagerly embraced, and formed, with many persons, one of the principal inducements to join the Philosophical Society.

At the beginning of 1832 it became known that the Society would be deprived of the occupation of their house at Midsummer, 1833; nor could another, equally suitable, be either hired or purchased. Under these circumstances it was decided (7 April, 1832), mainly through the influence of Mr Peacock, to apply to St John's College for the lease of a site at the corner of All Saints' Passage, on which the Society might erect "a house of their own, built expressly to suit the objects of the institution." As a preliminary to what the Minutes rightly call "this considerable undertaking," it was decided to obtain a Charter of Incorporation. The Fellows of the Society were evidently warmly in favour of these proposals. A sum of three hundred pounds was subscribed in less than a month to defray the cost of the Charter; and at a special general meeting held 5 May, 1832, the Council was directed (1) to prepare a petition for a charter; (2) to apply to St John's College for a building-lease; (3) "to apply to Mr Humfrey[2] for working-plans, and complete estimates for the New House for the Society, the

[1] The Rev. W. Whewell was Steward of the Reading-room from 1822 to 1826, when he was succeeded by the Rev. Joh. Lodge, University Librarian. He held the office till 1832, when it was discontinued, and a third Secretary was appointed, with the understanding that he should have charge of the Reading-room.

[2] A local builder, who obtained the confidence of the University at this period. He erected the buildings for Human Anatomy. *Architectural History*, Willis and Clark, Vol. III. p. 156.

same to be submitted hereafter to a general meeting of the Society for its approval." Lastly, it was resolved: "that the money requisite for building the Society's house be raised among the members of the Society by shares of £50 each, bearing interest at the rate of four per cent. per annum." So eager was the Society to begin, that it was decided not to wait for the Charter; the plans were approved somewhat hastily, and at a special meeting held 16 May, 1832, the architect was directed to invite tenders.

Early in the Michaelmas Term of 1832 the Charter arrived. Professor Sedgwick happened to be President, and, in order to avoid additional expense in fees[1], it had been agreed that his name alone should appear upon the document. It therefore begins: "Whereas Adam Sedgwick, Clerk, Master of Arts [etc], has by his petition humbly represented unto Us, That he, together with others of our loyal subjects, Graduates of the said University, did in the year One thousand, eight hundred, and nineteen, form themselves into a Society," and so forth. No man had a better right to occupy so prominent a position; and it will be readily understood what pleasure he himself derived from seeing it there. He was never tired of telling the story of the Charter, when, as he put it, "I was the Society."

A special meeting was summoned, 6 November, 1832, to accept the Charter. Sedgwick read it, together with an abstract of it—and it is almost needless to record that it was accepted unanimously. The Council was then directed to prepare a body of Bye Laws—the code by which, with only a few slight alterations, we are still governed.

It was on the occasion of the reception of the Charter that the first of those dinners was held which have now become an annual institution. It seems to me that Sedgwick and the Council of that year wished that November 6, 1832, should be kept as the birthday of the Society—to commemorate the fact that on that day it had assumed a corporate existence. I need not remind you that such a decision involves a sacrifice of twelve years of the Society's life; but, on the other hand, it commemorates an important event in its history– for I believe I am right in saying that it was the first Society out of London to which a Royal Charter was conceded.

The new house was ready for the occupation of the Society in the autumn of 1833. The situation was convenient, and it was itself spacious and well-arranged, with a large meeting-room, museum, and reading-room. The change inaugurated an era of prosperity which lasted for several years. The meetings were well-attended—indeed the Monday evenings on which the Society met were held, by common consent, to be pre-occupied, and no rival attractions were allowed to interfere with them;—The

[1] The fees amounted to £271. *Minutes*, 6 November, 1832.

museum grew apace, under the fostering care of Professor Henslow and his friends; and the reading-room became more popular than ever—a sort of club in fact—where many members of the University passed several hours of each day, reading and writing or conversing with their friends.

I will next quote an excellent account of the Society's Museum, contributed by Mr Leonard Jenyns, in 1838, to *The Cambridge Portfolio.*

The Cambridge Philosophical Society has been employed from the period of its first establishment in 1819, in gradually forming a Museum of Natural History. With a view to this end, it has from time to time effected several purchases, as well as received the contributions of various donors. The Museum however is not large; partly owing to the limited funds which can be appropriated to its support, and partly to the necessarily restricted space allotted for its reception in the Society's house. It is principally, though not exclusively, devoted to the illustration of the British Fauna. The foundation of the Museum may be attributed to Professor Henslow, who presented to the Society at its first institution his entire collection of British Insects and Shells, arranged respectively in two cabinets. Several smaller donations quickly followed, leading the Society to take an increased interest in this part of its establishment. In 1828, a spirited subscription was commenced amongst its members to assist in purchasing a most valuable collection of British Birds, for obtaining which an opportunity then offered itself. This collection had belonged formerly to Mr John Morgan of London. It was extremely rich, especially in the rarer species. Many additions however have been since made to it; and the whole forms now a range of thirty large cases, which are placed round the principal room in the Museum. The birds are beautifully preserved; and the cases of sufficient size to admit, in many instances, of containing entire families. One of the cases contains British Quadrupeds. In 1829, the Society purchased a small collection of British Insects which was incorporated with that previously presented by Professor Henslow. This collection, which consisted of about 2000 species, was valuable from the specimens having been arranged and named by Mr Stephens, the celebrated Entomologist of London. Various additions in the same department have been since made from time to time by different contributors. In 1833, the Society purchased Mr Stephen's entire collection of British Shells, contained in two cabinets and comprising a most extensive series of species as well as of individuals of each. The Museum has been further enriched, in the department of the British Fauna, by a collection of Birds' Eggs, presented in part by Mr Yarrell and in part by Mr Leadbeater;—also by a collection of Fish, obtained principally on the southern shores of the island by Professor Henslow and the Rev. L. Jenyns;—and by a small collection of marine *Invertebrata*, obtained at Weymouth by the former of the two gentlemen last mentioned.

The foreign department of the Museum is not extensive, consisting for the most part of single specimens which have been presented at different times by different individuals. It contains, however, a small collection of reptiles presented by Mr Thomas Bell. It is also rich in Ichthyological specimens; having been presented some years back with a collection of fish made at Madeira by the Rev. R. T. Lowe; subsequently, with another collection made in China by the Rev. G. Vachell; and yet more recently, with the entire collection of Fish brought home from South America and some other portions of the globe by C. Darwin, Esq., of Christ's College, and accompanying Naturalist in the late voyage of the Beagle, under the command of Captain Fitzroy. The whole of the fish above alluded to, as well as those belonging to the British collection, are preserved in spirits. They amount to several hundred species; and many of those comprised in the Darwin collection are entirely new. Altogether, they constitute a highly valuable as well as interesting portion of the Society's Museum.

Independently of the collections above enumerated, the Philosophical Society has made it an object to establish a separate collection of the principal animals found in Cambridgeshire. This is a step of the utility of which there can be no doubt. Local collections of this nature tend to illustrate the Faunas of particular districts; and local Faunas offer the best materials for completing our knowledge of the Zoology of the whole kingdom. They also throw light upon the geographical distribution of animals. In proportion to the number of places in which such collections are established, they assist in determining the extreme range of the different species, as well as the districts to which they are ordinarily confined. In this department, however, the Birds of Cambridgeshire and a few of its Mammalia are alone as yet fitted up for public inspection; but considerable collections have been made in the other classes, which are destined one day to take their place in the Museum also.

The Museum of the Society, and that part of it in particular which has been just alluded to, has been probably instrumental in exciting much interest in the University in the science of Zoology, and diffusing amongst its members a taste for such pursuits. Nor is the surrounding neighbourhood at all unfavourable for the researches of the naturalist. On the contrary, Cambridgeshire may be considered as rich in animal productions. From combining within itself a considerable variety of soil and situation, it adapts itself to the habits of very different species. The fens in particular are inhabited by many rare aquatic birds and insects; and some of these, previous to the introduction of the present system of drainage, were in considerable abundance. It may perhaps be interesting to mention, that the entire number of vertebrate animals found in Cambridgeshire amount to 281. Of these 38 belong to the class Mammalia; 204 to that of Birds; 9 to that of Reptiles; and 32 to that of Fish. The invertebrate animals require further investigation; but they probably exceed 9,000, of which the greater portion belong to the division of Annulosa.

The Society has a small collection of minerals and fossils; but there

being other Museums in the University devoted to these departments, they have received less of its attention than the Zoological part of the Museum above noticed. There are also a few antiquities, some of which were obtained in the county.

The Society's house had been built, to a great extent, with borrowed money, as I have related, and it had cost a far larger sum than had been anticipated. It was possible to pay the interest on the loans, but the Society found itself unable to establish a sinking-fund for the repayment of the capital. Moreover, the number of Fellows gradually decreased. At one time it was usual for nearly every Fellow of a College to become a Fellow of the Philosophical Society; but, when the novelty of the existence of such a body in Cambridge had worn off, and when the reading-room had several rivals, not to mention the reduction of the price of newspapers, which enabled them to be taken in at home—there seemed to be no special reason for joining a Society where the papers read were chiefly mathematical, and which offered no other attractions not to be found elsewhere. The officers of the Society did their best in these adverse days; and some of those who had lent money cancelled their bonds—as for instance Professor Peacock, Professor Sedgwick, Professor Adams, and Professor Babington; but the financial difficulty could not be overcome. Finally, in 1865, the Museum was offered to, and accepted by, the University[1]; the house was sold; and the Society found a home at the New Museums[2].

In this brief review I have of necessity omitted much that I should have been glad to record, had I not determined to write a sketch and not a history. I cannot, however, conclude without drawing attention to our publications. No one, I think, can look through the volumes of *Transactions* and *Proceedings* without admitting that the papers therein printed or abstracted will hold their own in originality and value against those of almost any society. The *Proceedings*, as you are aware, do not begin before 1843. I have therefore appended to this paper brief notices of the communications made before that date, as recorded in the Minute Book. These will, I feel sure, be found interesting. They show what some of the best men in the place were working at; and they testify to the genuine interest taken by them in the Society. Whatever they did, they hastened to communicate it, though, to our great loss, they too often neglected to prepare their work for our *Transactions*. I have also prepared a list of the Presidents, Secretaries, and Treasurers, from the beginning to the present time.

[1] Grace, 24 May, 1865. [2] Grace, 8 June, 1865.

Date of Election.	
29 Oct. 1866.	Ch. Cardale Babington, M.A. Joh., *Professor of Botany.*
	Geo. Downing Liveing, M.A. Joh., *Professor of Chemistry.*
	Rev. T. G. Bonney, M.A. Joh.
31 Oct. 1870.	Rev. T. G. Bonney, M.A. Joh.
	Joh. Willis Clark, M.A. Trin.
	Rev. Coutts Trotter, M.A. Trin.
27 Oct. 1873.	Joh. Willis Clark, M.A. Trin.
	Rev. Coutts Trotter, M.A. Trin.
	Rev. Joh. Batteridge Pearson, B.D. Emm.
28 Oct. 1878.	Joh. Willis Clark, M.A. Trin.
	Rev. Coutts Trotter, M.A. Trin.
	Ja. Whitbread Lee Glaisher, M.A. Trin.
30 Nov. 1882.	Joh. Willis Clark, M.A. Trin.
	Rev. Coutts Trotter, M.A. Trin.
	Will. Mitchinson Hicks, M.A. Joh.
29 Oct. 1883.	Rev. Coutts Trotter, M.A. Trin.
	Ri. Tetley Glazebrook, M.A. Trin.
	Sydney Howard Vines, M.A. Chr.
26 Oct. 1886.	Ri. Tetley Glazebrook, M.A. Trin.
	Sydney Howard Vines, M.A. Chr.
	Jos. Larmor, M.A. Joh.
31 Oct. 1887.	Sydney Howard Vines, M.A. Chr.
	Jos. Larmor, M.A. Joh.
	Matth. Moncrieff Pattison-Muir, M.A. Gonv. and Cai.
29 Oct. 1888.	Jos. Larmor, M.A. Joh.
	Matth. Moncrieff Pattison-Muir, M.A. Gonv. and Cai.
	Sidney Fre. Harmer, M.A. King's.
28 Oct. 1889.	Jos. Larmor, M.A. Joh.
	Sidney Fre. Harmer, M.A. King's.
	Andr. Russell Forsyth, M.A. Trin.

TREASURERS.

15 Nov. 1819.	Rev. Bewick Bridge, B.D. Pet.
17 May, 1825.	Fre. Thackeray, M.D. Emm.
6 Nov. 1834.	Rev. Geo. Peacock, M.A. Trin.
6 Nov. 1839.	Geo. Edw. Paget, M.D. Gonv. and Cai.
7 Nov. 1853.	Rev. Tho. Hedley, M.A. Trin.
26 Oct. 1857.	Rev. Will. Magan Campion, M.A. Qu.
23 Oct. 1876.	Ja. Whitbread Lee Glaisher, M.A. Trin.
28 Oct. 1878.	Rev. Joh. Batteridge Pearson, D.D. Emm.
29 Oct. 1883.	Joh. Willis Clark, M.A. Trin.
31 Oct. 1887.	Ri. Tetley Glazebrook, M.A. Trin.

COMMUNICATIONS MADE TO THE SOCIETY.

February 20, 1820[1].

By Professor Farish (President): On Isometrical Perspective.
By Prof. E. D. Clarke: On the discovery of Cadmium in some of the English ores of zinc; with some directions respecting the mode of operating.
By Captain Fairfax (presented by Mr Okes): On Soundings at Sea.

March 6, 1820.

By Joh. Hailstone, M.A. (Trin.): On the probable origin of a fossil body found on the coast of Scarborough.
By Professor Farish (President): On Isometrical Perspective (concluded). *Trans.* I. 1—19.
By Joh. Fre. Will. Herschel, M.A. (Joh.): On functional equations. *Trans.* I. 77—87.
By Mr Okes: On some fossil remains of the Beaver, found near Chatteris. *Trans.* I. 175—177.

March 20, 1820.

By Professor Sedgwick: On the Geology of Cornwall, etc.
By Mr Thompson (Joh.): A translation from Gemmellaro's account of the last great eruption of Etna, in 1819. (Presented by Dr E. D. Clarke.)

April 17, 1820.

A letter from the Rev. J. Davis to the Rev. Dr Wood, detailing certain optical phenomena observed at Hilkhampton in Cornwall on Wednesday, April 5th, 1820, was read to the Society.
By Joh. Fre. Will. Herschel, M.A. (Joh.): On the rotation impressed by plates of rock crystal on the planes of polarization of the rays of light as connected with certain peculiarities in its crystallization. *Trans.* I. 43—52.
By Will. Whewell, M.A. (Trin.): On the position of the apsides of orbits of great eccentricity. *Trans.* I. 179—191.

May 1, 1820.

By Professor Farish (President): On the mode of conducting Polar navigation.
By Joh. Fre. Will. Herschel, M.A. (Joh.): On certain remarkable instances of deviation from Newton's scale in the tints developed by crystals with an axis of double refraction on exposure to polarized light. *Trans.* I. 21—41.
By Ch. Babbage, M.A. (Trin): On the Calculus of Functions. *Trans.* I. 63—76.

May 15, 1820.

By Mr Emmett: Researches into the mathematical principles of chemical philosophy.
By Prof. E. D. Clarke: On the chemical constituents of the purple precipitate of Cassius. *Trans.* I. 53—61.
By Professor Sedgwick: On the physical structure of Cornwall, etc. (continued from 23 March). *Trans.* I. 89—146.

[1] The Minute Book says: "Monday, February 21, 1820"; but in 1820 February 21 fell on a Tuesday.

By Sam. Hunter Christie, M.A. (Trin.): On the laws according to which masses of iron influence magnetic needles. *Trans.* I. 147—173.

A letter from the Rev. J. Davis to the Rev. Dr Wood, containing some further details respecting certain optical phenomena mentioned in the Minutes of the Society's Meeting on the 17th of April.

November 13, 1820.

By Prof. E. D. Clarke: On a method of giving to common Paris Plaster casts the appearance of polished Rosso Antico.

By Professor Lee: On certain astronomical tables by Mohammed al Farsi, a MS. copy of which exists in the University Library. *Trans.* I. 249—265.

November 27, 1820.

By Prof. E. D. Clarke: On the discovery of native natron in Devonshire. *Trans.* I. 193—201.

By the same: Notice respecting the sarcophagus brought from Egypt by Mr Belzoni.

By Will. Cecil, M.A. (Magd.): On the application of hydrogen gas to produce a moving force in machinery, with the description of an engine where the moving force is produced on that principle. *Trans.* I. 217—239.

December 11, 1820.

A communication from Dr Wavell (Hon. Member), with some observations by Dr E. D. Clarke on the decomposition of a quartzose rock, and on the formation of natron.

By Professor Haviland, Vice-President: On some unusual appearances presented by the stomach of a man who died of a fever. *Trans.* I. 287—290.

By Professor Lee: A demonstration of the properties of parallel lines, by Nasir el Din, translated from the Arabic.

March 5, 1821.

"Communications from Professor Leslie and Dr Wavell read by Dr E. D. Clarke."

By Fra. Lunn, B.A. (Joh.): On the analysis of a native phosphate of copper. *Trans.* I. 203—207.

By Prof. E. D. Clarke: On the crystallization of water. *Trans.* I. 209—215.

March 19, 1821.

A communication (read by Professor Sedgwick) from Mr Ross respecting some minerals found at Buralston.

By Prof. E. D. Clarke: On Arragonite.

April 2, 1821.

By Joh. Leslie, Professor of Mathematics in the University of Edinburgh (Hon. Member): On the effect of hydrogen gas on the propagation of sound. (Read by Professor Lee.) *Trans.* I. 267.

By Professor Cumming: Exhibition of experiments and communication read on the effects of the galvanic fluid on the magnetic needle. *Trans.* I. 269—279.

By Professor Sedgwick: On the geology of the Lizard district.

May 7, 1821.

By Joh. Fre. Will. Herschel, M.A. (Joh.): On the refraction of Apophyllite. *Trans.* I. 241—247.

By Professor Sedgwick: On the geology of the Lizard (concluded). *Trans.* I. 291—330.

May 21, 1821.

By Professor Cumming: On the connexion between galvanism and magnetism. *Trans.* I. 281—286.

By Will. Cecil, M.A. (Magd.): On the application of regulators to machinery.

November 12, 1821.

The following communication from Dr Brewster was read by Prof. E. D. Clarke:

"I have examined with great care a specimen of Leelite, and I find it to be an irregularly crystallized body, like Hornstone, Flint, and having a sort of quaquaversus structure, or one in which the axes of the elementary particles are in every possible direction, instead of being parallel, as they must be in all regular crystals. The alumina which Leelite contains gives it quite a different action upon light from any of the analogous siliceous substances; and I have thus obtained an unerring optical character by which Leelite may be distinguished from them with the greatest facility.

In examining the different kinds of topazes, I have found that the colourless topazes, and the blue topazes of Aberdeenshire, differ not merely from the yellow Brazil topazes, but also from one another."

Signed, D. BREWSTER.

By Mr Okes: On a peculiar case of an enlargement of the ureters in a boy of eleven years of age. *Trans.* I. 351—358.

November 26, 1821.

By Fre. Thackeray, M.D. (Emm.): On a remarkable instance of organic remains found on the turnpike road between Streatham and Wilburton in the Isle of Ely. *Trans.* I. 459.

By Will. Mandell, B.D. (Qu.): On an improvement in the common mode of procuring potassium. *Trans.* I. 343—345.

By Will. Whewell, M.A. (Trin.): On the crystallization of fluor spar. *Trans.* I. 331—342.

By Joh. Stevens Henslow, M.A. (Joh.): On the geology of the Isle of Anglesea.

December 10, 1821.

By Professor Cumming: On a remarkable human calculus in the possession of the Society of Trinity College. *Trans.* I. 347—349.

By Joh. Stevens Henslow, M.A. (Joh.): On the geology of the Isle of Anglesea (continued).

By Ch. Babbage, M.A. (Pet.): On the use of signs in mathematical reasoning. (Read by Mr Peacock.) *Trans.* II. 325—377.

February 25, 1822.

By Joh. Hailstone, M.A., late Fellow of Trin. Coll., and Woodwardian Professor: Some observations on the weather, accompanied by an extraordinary depression of the barometer, during the month of December, 1821. (Read by the Secretary.) *Trans.* I. 453—458.

By Joh. Stevens Henslow, M.A. (Joh.): On the geology of the Isle of Anglesea (concluded). *Trans.* I. 359—452.

March 11, 1822.

The President proposed that, in consequence of the death of the Vice-President of the Society, Prof. E. D. Clarke, the meeting should be adjourned without proceeding to the regular business of the evening. This proposition was agreed to unanimously, and the Society adjourned immediately.

March 25, 1822.

By Will. Mandell, B.D. (Qu.): A description of a new self-regulating lamp.

By Mr H. B. Leeson: A description of a safety apparatus to the hydrostatic blowpipe of Tofts, by which it may be converted into an oxyhydrogen blowpipe without danger to the operator. (Read by Mr Peacock.) A model of the safety apparatus, and of the blowpipe, was exhibited to the Society and explained by Mr Leeson.

By Geo. Biddell Airy, student of Trinity College: On the alteration of the focal length of a telescope by a variation of the velocity of light and of the observations to which the change may give rise. (Read by Mr Peacock.)

April 22, 1822.

By David Brewster, LL.D., Honorary Member of this Society: On the difference of optical structure between the Brazilian topazes and those of Scotland and New Holland. *Trans.* II. 1—9.

May 6, 1822.

By Will. Whewell, M.A. (Trin.): On the rotation of bodies. *Trans.* II. 11—20.

By Dav. Brewster (Hon. Member): On the distribution of the colouring matter, and on certain peculiarities in the structure and optical properties of the Brazilian topaz. *Trans.* II. 1—9.

May 21, 1822.

By Professor Sedgwick: On the basaltic dykes in the county of Durham, and the great basaltic formation in Teesdale. *Trans.* II. 21—44.

November 11, 1822.

By Will. Whewell, M.A. (Trin.): On the oscillations of a chain suspended vertically, and on the oscillations of a weight drawn up uniformly by a string.

By Fra. Gybbon Spilsbury: On a peculiar relation existing between gravity and the production of magnetism in galvanic combinations. (Read by Mr Henslow.) *Trans.* II. 77—83.

November 25, 1822.

By Geo. Biddell Airy, Scholar of Trin. Coll.: On the construction of achromatic reflecting telescopes with silvered lenses in the place of metallic mirrors. Read by Mr Peacock. *Trans.* II. 105—118.

December 9, 1822.

By Will. Cecil, M.A. (Magd.): On an apparatus for grinding telescopic mirrors and object-lenses. *Trans.* II. 85—103.

February 17, 1823.

No papers recorded.

March 3, 1823.

No papers recorded.

March 17, 1823.

No papers recorded.

April 14, 1823.

By Will. Whewell, M.A. (Trin.): On the different methods which have been proposed to grind lenses and mirrors by machinery to a parabolic form.

By Joshua King, M.A. (Qu.): A new demonstration of the parallelogram of forces. *Trans.* II. 45—46.

By Geo. Peacock, M.A. (Trin.): On the analytical discoveries of Newton and his contemporaries.

April 28, 1823.

By Professor Cumming: On the development of electro-magnetism by heat. *Trans.* II. 47—76.

May 12, 1823.

By Geo. Peacock, M.A. (Trin.): On the irregular indications of the thermometer.

November 10, 1823.

By Professor Cumming: On rotation produced by electro-magnetism as developed by heat.

A letter was read by Mr Peacock from Will. Joh. Bankes, M.P., on the subject of the manuscript on papyrus of the lost book of the Iliad, recently discovered by one of his agents in the island of Elephantina in Upper Egypt, accompanied by a facsimile made by Mr Salt of the ten first lines of the manuscript.

By Geo. Biddell Airy, B.A. (Trin.): Explanation of an instrument exhibited to the Society, for the purpose of proving by experiment the constancy of the ratio of the sines of incidence and refraction in liquids. (Read by Mr Peacock.)

By Joh. Murray, F.S.A.: Some remarks on the temperature of the egg, as connected with its physiology. (Read by Mr Peacock.)

By the same: Experiments and observations on the temperature developed in voltaic action, and its unequal distribution. (Read by Mr Peacock.)

November 24, 1823.

By Will. Whewell, M.A. (Trin.): On the expressions for the cosine of the angle between two lines and two planes when referred to oblique co-ordinates. *Trans.* II. 197—202.

By Olinthus Gregory, LL.D.: An account of some experiments made in order to ascertain the velocity with which sound is transmitted in the atmosphere. (Read by Mr Peacock.) *Trans.* II. 119—137.

December 8, 1823.

By Professor Cumming: Exhibition of Dobereiser's experiments of the contortion of platina wire by a stream of hydrogen gas.

By Will. Cecil, M.A. (Magd.): Exhibition of a model of an improved ear-trumpet.

By Geo. Peacock, M.A. (Trin.): On the analytical discoveries of Sir I. Newton. (Concluded.) Mr Peacock read three unedited letters of Newton to Dr Keill on the subject of the controversy on the discovery of the method of fluxions.

March 1, 1824.

By Mr Okes: Notice of a magnificent collection of fossil bones, found near Barnwell, of the Elephant, Rhinoceros, Buffalo, Deer, Horse.

By Will. Mandell, M.A. (Qu.): A letter of Sir Isaac Newton to Mr Acland of Geneva was read. The following is a copy of the letter.

Vir celeberrime,

Gratias tibi debeo quam maximas quod schema experimenti quo lux in colores primitivos et immutabiles separatur, emendasti, et longe elegantius reddidisti quam prius. Sed et me plurimum obligasti quod schema in Caminâ æneâ incisum et inter imprimendum obtritum refici curasti, ut impressio libri elegantior redderetur. Gratias igitur reddo tibi quam amplissimos. Quod inventa mea de natura lucis et colorum viris summis Domino Cardinali Polignac et Domino Abbati Bignon non displiceant, valdè gaudeo. Utinam hæc vestratibus non minus placerent, quam elegantissimæ vestræ et perfectissimæ delineatæ picturæ nostratibus placuerunt. Ut Deus te liberet a doloribus capitis et salvum conservet ardentissime precatur

Servus tuus humillimus et obsequentissimus

Dabam Londini 22 Oct. 1722. ISAACUS NEWTON.

Celeberrimo viro Dⁿᵒ. Acland.

By Professor Sedgwick: On the geology of Teesdale.

March 15, 1824.

By Will. Mandell, M.A. (Qu.): Description of a self-regulating lamp.

By Geo. Biddell Airy, B.A. (Trin.): On the figure of the planet Saturn. *Trans.* II. 203—216.

By Professor Sedgwick: On the geology of Teesdale (continued).

March 29, 1824.

By Will. Mandell, M.A. (Qu.): On a means of protecting locks from the insertion of skeleton keys.

By G. Harvey, F.R.S.E., M.G.S.V.: On the fogs of the Polar seas.

By Professor Sedgwick: On the geology of Teesdale (concluded). *Trans.* II. 139—195.

May 3, 1824.

By Cha. Babbage, M.A. (Pet.): On the determination of the general terms of a new class of infinite series. (Read by Mr Peacock.) *Trans.* II. 217—225.

By Geo. Biddell Airy, B.A. (Trin.): On the construction of a new achromatic telescope.

May 17, 1824.

By Joh. Hogg, B.A. (Pet.): On two petrifying springs in the neighbourhood of Norton in the County of Durham. (Read by Professor Henslow.)

By Geo. Biddell Airy, B.A. (Trin.): On the principle and construction of the achromatic eyepieces of telescopes, and on the achromatism of microscopes. *Trans.* II. 227—252.

May 24, 1824.

By Professor Haviland, *President*: On the cases of secondary smallpox, and of smallpox after vaccination, which have occurred in Cambridge during the last year.

By Professor Farish: On a method of obviating the inconveniences arising from the expansion and contraction of the iron in iron bridges.

November 15, 1824.

By Professor Cumming: On the use of gold leaf in the detection of galvanism.

By Will. Whewell, M.A. (Trin.): On the principles of dynamics.

November 29, 1824.

By Professor Cumming: On the history of electro-magnetism.

December 13, 1824.

By Professor Farish: On the construction of the cogs of wheels.

Professor Farish likewise exhibited to the Society the action of wheels in the form of involutes of circles upon each other as an illustration of the subject of his paper.

February 21, 1825.

By Professor Cumming: On the conversion of iron into plumbago by the action of sea-water. *Trans.* II. 441—443.

By Geo. Biddell Airy, B.A. (Trin.): On a peculiar defect of his eyes producing distortion of images, and on the means of correcting it. *Trans.* II. 267—271.

By Professor Sedgwick: On the essential distinction between alluvial and diluvial deposits. *Annals of Philosophy*, X. 1825, pp. 18—37.

March 7, 1825.

By Will. Whewell, M.A. (Trin.): On a general method of converting rectilineal figures into others which are equivalent, such as squares, etc.

By Professor Sedgwick: On alluvial and diluvial deposits (continued).

March 21, 1825.

By Jos. Power, M.A. (Cla.): A general demonstration of the principle of virtual velocities. *Trans.* II. 273—276.

April 18, 1825.

By Professor Farish: On the construction of the cogs of wheels (concluded).

May 2, 1825.

By Geo. Biddell Airy, B.A. (Trin.): On the generation of curves by the rolling of one curve upon another, and on the formation of the curves of the teeth of wheels which may work in each other with perfect uniformity of action. *Trans.* II. 277—286.

By Professor Sedgwick: A portion of a paper on the geology of the Yorkshire coast, a section of which was exhibited to the Society.

By Will. Whewell, M.A. (Trin.): Exhibition of drawings of the appearances presented by the spokes of wheels in motion when seen through parallel bars, and which consist of a series of quadratures.

May 16, 1825.

By Ja. Alderson, B.A. (Pemb.): An account, with measurements, of an enormous whale cast upon the coast of Holderness. (Read by Professor Cumming.) *Trans.* II. 253—266.

By Professor Sedgwick: On the geology of the Yorkshire coast (concluded).

By Will. Whewell, M.A. (Trin.): On the classification of crystalline forms, particularly with reference to the systems of Weiss of Berlin and Mohs of Freyberg.

November 14, 1825.

By Ri. Wellesley Rothman, B.A. (Trin.): On the discrepancies between the magnetic intensities at different places on the earth's surface, as determined by observation, and by a formula partly empirical and partly theoretical of Horsteen and Barlow. *Trans.* II. 445.

By Geo. Biddell Airy, B.A. (Trin.): On the connection of impact and pressure, and the explanation of their effects on the same principles.

By Leonard Jenyns, M.A. (Joh.): On the ornithology of Cambridgeshire (read by Professor Henslow).

November 28, 1825.

By Leonard Jenyns, M.A. (Joh.): On the ornithology of Cambridgeshire (concluded). *Trans.* II. 287—324.

December 12, 1825.

By Ch. Babbage, M.A. (Pet.): On the principles of mathematical notation (read by Mr Peacock).

February 13, 1826.

By Will. Whewell, M.A. (Trin.): On the notation of crystallography. *Trans.* II. 427—439.

By Professor Farish: Explanation of a method of correcting the errors from the near position of a meridian mark.

February 27, 1826.

By Will. Woodall, M.A. (Pemb.): On a method of finding the meridian line.

By Professor Farish: Supplement to a paper read at the last meeting.

By Geo. Peacock, M.A. (Trin.): On Greek arithmetical notation.

March 13, 1826.

By Will. Hen. Wayne, M.A. (Pet.): On beds containing fossil bones intermixed with clay and gravel. A letter read, with observations, by Professor Sedgwick.

By Geo. Peacock, M.A. (Trin.): On Greek arithmetic (concluded).

April 10, 1826.

By Geo. Peacock, M.A. (Trin.): On the origin of Arabic Numerals, and the date of their introduction into Europe.

April 24, 1826.

By Will. Whewell, M.A. (Trin.): On a new method of Perspective; particularly for objects comprehending a large vertical and a small horizontal space.

By Geo. Peacock, M.A. (Trin.): On the origin of Arabic Numerals, etc. (concluded).

May 8, 1826.

By Geo. Biddell Airy, M.A. (Trin.): Observations on the Mécanique Celeste of Laplace, Book III., with some remarks on the objections of Mr Ivory. *Trans.* II. 379—390.

By Professor Sedgwick: On the Geology of the Isle of Wight.

November 13, 1826.

By Professor Sedgwick: Exhibition of a pair of large fossil horns, of some species of the genus *Bos*, found near Walton in Essex.

By Will. Whewell, M.A. (Trin.): On the classification of crystalline combinations, and the canons of derivation by which their laws may be investigated. *Trans.* II. 391—425.

November 27, 1826.

By Geo. Biddell Airy, M.A. (Trin.): On the motion of a pendulum disturbed by any small force, and on the application of this method to the theory of escapements. *Trans.* III. 105—128.

December 11, 1826.

By Geo. Peacock, M.A. (Trin.): On the numerals of the South American languages.

After the meeting Professor Airy gave an account of the construction and application of the steam-engine in the mines of Cornwall.

February 26, 1827.

By Professor Airy: On the mathematical theory of the Rainbow.

After the meeting Professor Henslow gave an account of the structure of the capsules of mosses, illustrated by coloured drawings.

March 12, 1827.

By Geo. Peacock, M.A. (Trin.): On the discoveries recently made on the subject of the Egyptian Hieroglyphics.

March 26, 1827.

By Professor Henslow: On the specific identity of the Cowslip, Oxlip, and Primrose.

By Will. Whewell, M.A. (Trin.): Note on the perspective projection of objects on a horizontal plane.

After the meeting Professor Cumming gave an account of the different forms of the Galvanometer, and of the discoveries recently made in Electrodynamics.

April 30, 1827.

By Will. Sutcliffe, M.A. (Trin.): On the application of mathematics to Political Economy, and the effects of a partial Tithe.

By Will. Whewell, M.A. (Trin.): On the Perspective of Panoramas.

After the meeting Professor Sedgwick exhibited a large pair of horns of [some species of the genus *Bos*] found near Walton in Essex; and an *Ichthyosaurus*, found at Lyme; on which he offered some observations.

May 14, 1827.

By Will. Sutcliffe, M.A. (Trin.): On the application of mathematics to Political Economy, etc. (concluded).

By Professor Airy: On the defects of the eye-pieces of telescopes.

After the meeting Professor Sedgwick gave an account of the peculiarities of the Coal Strata in the neighbourhood of Whitehaven: and George Noakes (æt. 7), a boy remarkable for his powers of calculation, was examined by several members of the Society.

May 21, 1827.

By R. M. Fawcett: On the use of Iodine in cases of Paralysis.

By Professor Airy: On the observation of eye-glasses depending upon their spherical figure, and on the periscopic Panorama. *Trans.* III. 1—63.

After the meeting Mr Peacock gave an account of the discoveries recently made in Hieroglyphics.

November 12, 1827.

By Tho. Jarrett, B.A. (Cath.): On Algebraical Notation. *Trans.* III. 65—103.

By Will. Whewell, M.A. (Trin.): On the History and Principles of Chemical Nomenclature and Notation, with suggestions of some alterations in the Notation hitherto in use.

By Will. Mandell, B.D. (Qu.): Exhibition of a piece of breccia, supposed to be a fragment of a Roman quern or hand-mill, found on the Hills Road.

November 26, 1827.

Professor Sedgwick read a letter from Mr Ri. Tho. Lowe, concerning certain petrifactions, apparently of vegetable origin, which are found in the Island of Madeira.

By Professor Henslow: An account of the application of the chloraret of lime to the purpose of disinfecting and neutralizing putrid and noxious substances.

December 10, 1827.

Dr Fre. Thackeray presented a sword of the sword-fish, and read some observations on the bones of the head, and especially those which seem to belong to its olfactory system.

By Leonard Jenyns, M.A. (Joh.): On the monstrous prolongations of teeth, etc., which have been observed in different animals, particularly the teeth of a rabbit and the bill of a rook which exist in the Collection of the Society; and on the circumstances by which such deformities have been observed to be accompanied.

February 17, 1828.

By Alex. Ch. Louis D'Arblay, M.A. (Chr.): Remarks on a pamphlet by Messrs Swinburne and Tylecot of St John's College, concerning the proofs of the Binomial Theorem, and especially that of Euler.

After the meeting Mr Peacock gave an account of the representations occurring in Egyptian monuments of the deities of that country, and of the funeral rituals.

March 3, 1828.

By Alex. Thomson (Joh.): On a mode of obtaining exact measures of the cranium.

By Will. Whewell, M.A. (Trin.): On the different systems of mineralogical classification.

After the meeting Professor Sedgwick gave an account of the geological structure of Scotland, as collected from the observations made by himself and Mr Murchison during the preceding summer.

March 17, 1828.

By Tho. Jarrett, M.A. (Cath.): On the development of Polynomials.
By Will. Whewell, M.A. (Trin.): On the different systems of mineralogical classification (concluded).
After the meeting Hen. Coddington, M.A. (Trin.) gave an account of the experiments on vibrations and nodal lines of Chladni, Savart, on the construction of organ-pipes, etc.

April 21, 1828.

By Will. Whewell, M.A. (Trin.): On mineralogical nomenclature.
By Temple Chevallier, M.A. (Pem.): On certain properties of numbers.
By Rob. Willis, B.A. (Cai.): On the pressure of the air between two discs when affected by a stream of air passing through a tube perforating one of the discs. *Trans.* III. 129—140.
After the meeting Mr Willis exhibited various experiments illustrative of the laws of pressure described in his memoir.

May 5, 1828.

By Tho. Jarrett, M.A. (Cath.): On the arithmetic of lines.
By Professor Whewell: On mineralogical classification (concluded).
After the meeting Professor Haviland gave an account of the nature and use of the stethoscope.

May 19, 1828.

By Thos. Jarrett, M.A. (Cath.): On two theorems useful in the integration of certain functions.
By Joh. Will. Lubbock, M.A. (Trin.): On the calculation of Annuities, and some theorems in the doctrine of chances. *Trans.* III. 141—154.

November 10, 1828.

By Ja. Challis, M.A. (Trin.): On the Law of Distances applied to the Satellites.
After the meeting Professor Whewell gave a lecture on the granite veins of Cornwall.

November 24, 1828.

By Professor Airy: On the Longitude of Cambridge. *Trans.* III. 155—170.
By Rob. Willis, M.A., Gonv. and Cai. Coll.: On the vowel sounds.
After the meeting Mr Willis exhibited experiments illustrative of his doctrines.

December 8, 1828.

By Joh. Warren, M.A. (Jes.): On the doctrine of impossible quantities, and their geometrical representation, and on the proof that every equation of n dimensions has n roots.
By Fre. Thackeray, M.D. (Emm.): On the case of Ann Carter, a young woman at Stapleford, said to be a trance.
By Ja. Challis, M.A. (Trin.): On the Law of Distances, etc. (concluded). *Trans.* III. 171—183.
After the meeting Mr Leonard Jenyns gave an account, illustrated by drawings, of the comparative anatomy of Birds and Mammals, and of several particulars respecting the former Class.

March 2, 1829.

By Pierce Morton, B.A. (Trin.): On the focus of a conic section. *Trans.* III. 185—190.

By Professor Whewell: On the application of mathematical reasoning to certain theories of Political Economy.

After the meeting Professor Whewell gave an account of various contrivances employed in dipping needles, and of some suggested improvements.

March 16, 1829.

By Professor Whewell: On the application of mathematical reasoning, etc. (concluded). *Trans.* III. 191—230.

By Rob. Willis, M.A. (Gonv. & Cai.): On the theory of the sounds of pipes as relating to their vowel quality (concluded from 24 Nov. 1828). *Trans.* III. 231—268.

After the meeting Mr Willis exhibited experiments illustrative of the influence of the length of the pipe on the vibrations of the reed, and of the different ways in which the vowel sounds may be produced.

March 30, 1829.

By Ja. Challis, M.A. (Trin.): Abstract of a memoir on the vibrations of elastic fluids. *Trans.* III. 269—320.

By Joh. Will. Lubbock, M.A. (Trin.): On the tables of the chances of life, and on the value of annuities. *Trans.* III. 321—341.

After the meeting Professor Henslow gave an account of the organization and classification of ferns, illustrated by drawings.

May 4, 1829.

By Professor Whewell: On the mineralogical systems proposed by Nordenskiold, Bernsdorff, Kefersheim, and Naumann.

After the meeting Mr Leonard Jenyns gave an account of the construction, properties, and mode of growth, of feathers.

May 18, 1829.

By Will. Hallows Miller, M.A. (Joh.): On caustics formed by successive reflexions at a spherical surface.

By Rob. Willis, M.A. (Gonv. & Cai.): On the mechanism of the human voice. *Trans.* IV. 323—352.

After the meeting Mr Willis exhibited various experiments and models, and explained the action of the organs of voice.

November 16, 1829.

By Professor Airy: On a correction of the length of a pendulum consisting of a wire and ball. *Trans.* III. 355—360.

By Professor Whewell: On the causes and characters of Pointed Architecture.

After the meeting Professor Whewell described the kinds of vaulting employed in German churches, with their history; illustrating his account with models.

November 30, 1829.

By Ri. Wellesley Rothman, M.A. (Trin.): On an observation of a solstice at Alexandria recorded by Strabo. *Trans.* III. 361—363.

By Professor Whewell: On Pointed Architecture (concluded).

By Will. Hallows Miller, M.A. (Joh.): On the forms and angles of certain crystals. *Trans.* III. 365—367.

After the meeting Professor Sedgwick gave an account of the geology and structure of the Alps, illustrated by a section from the plains of Bavaria to those of Trieste.

December 14, 1829.

By Professor Airy: On the mathematical conditions of continued motion. *Trans.* III. 369—372.

By Ch. Pleydell Neale Wilton, M.A. (Joh.): On the geology of the shore of the Severn in the Parish of Awre in Gloucestershire.

After the meeting Mr Leonard Jenyns gave an account of the circumstances connected with the migration of Birds.

February 22, 1830.

By Ja. Challis, M.A. (Trin.): On the integration of the equations of motion of fluids; and on the application of this to the solution of various problems. *Trans.* III. 383—416.

By Leonard Jenyns, M.A. (Joh.): On the Natter-Jack of Pennant, with a list of Reptiles found in Cambridgeshire. *Trans.* III. 373—381.

After the meeting Professor Henslow explained the discoveries of M. Dutrochet on Endosmose and Exosmose.

March 8, 1830.

By Ch. Pleydell Neale Wilton, M.A. (Joh.): Account of a visit to Mount Wingen, the burning mountain of Australia.

By Hen. Coddington, M.A. (Trin.): On the construction of a microscope invented by him, which he exhibited to the Society.

After the meeting Professor Airy gave an account, illustrated by models, of the instruments which have been used to measure altitudes: viz. the Zenith Sector, the Quadrant, the Refracting Circle, the large Declination Circles of Troughton, and the Circles of Reichenbach.

March 22, 1830.

By Will. Hallows Miller, M.A. (Joh.): On the measurement of the angles of certain crystals which occur in the slags of furnaces. *Trans.* III. 417—420.

By Hen. Coddington, M.A. (Trin.): On the advantages of a microscope of a new construction. *Trans.* III. 421—428.

By Hugh Ker Cantrien, B.A. (Trin.): On the Calculus of Variations.

Mr Willis gave an account, illustrated by models and drawings, of the construction and muscles of the tongue, palate, and pharynx, and of the mode in which these operate in the production of vowel and modulated sounds.

April 26, 1830.

By Leon. Jenyns, M.A. (Joh.): On the late severe winter.

By Hen. Coddington, M.A. (Trin.): On his new-invented microscope.

By Professor Whewell: On the proof of the first law of motion.

After the meeting Professor Whewell gave an account of Göthe's objections to the Newtonian theory of Optics, and of the doctrine proposed by that author.

May 10, 1830.

By Tho. Chevallier, M.D.: On the anatomy and physiology of the ear.

After the meeting Professor Cumming explained the construction and use of the areometer of Professor Leslie, and its resemblance to the stereometer of Captain Say; and the construction of an instrument for measuring the whole quantity of sunshine which operates during any given time.

May 24, 1830.

By Professor Airy: On the peculiar form of the rings produced by a ray circularly polarized, and on the calculation of the intensity of light belonging to this and other cases.

By Will. Webster Fisher (Down.): On the appendages to organs as provisionary to the modifications of the functions.

By Rob. Murphy, B.A. (Gonv. and Cai.): On the general properties of definite integrals, and on the equation of Riccati. *Trans.* III. 429—443.

By Hen. Coddington, M.A. (Trin.): A further explanation of his microscope.

After the meeting Mr Willis exhibited and explained an instrument for making orthographical projections of objects.

November 15, 1830.

By Aug. De Morgan, B.A. (Trin.), Professor of Mathematics in London University: On the Equation of Curves of the second degree. *Trans.* IV. 71—78.

By Will. Okes, M.A. (Gonv. and Cai.): On the Wourali poison used by the Maconshi Indians; a blow-pipe, quiver, and arrows were exhibited.

By Professor Cumming: A communication from Mr Edwards on a substance resembling cannel coal, found in digging a canal near Norwich.

By Ri. Tho. Lowe, B.A. (Chr.): On the Natural History of Madeira.

After the meeting Professor Whewell gave an account of a method of constructing cross vaults without boarded centering, revived and described by M. de Lassaulx of Coblentz.

November 29, 1830.

By Ri. Tho. Lowe, B.A. (Chr.): On the Natural History of Madeira (concluded). *Trans.* IV. 1—70.

By Professor Whewell: Rules for the selection and employment of symbols of mathematical quantity.

After the meeting Mr Leonard Jenyns gave an account, illustrated by drawings, of the quinary system of Natural History proposed by Mr M'Leay.

December 13, 1830.

By Professor Whewell: Rules for the selection, etc. (concluded).

By Professor Henslow: On the mode of reproduction of the *Chara*.

After the meeting Professor Henslow made some observations on tall ferns, exhibiting a specimen of a stalk.

A machine was exhibited invented by Professor Airy for the purpose of exhibiting the mode of propagation of undulations along a line of particles.

February 21, 1831.

By Professor Airy: On the nature of the two rays formed by the double refraction of quartz. *Trans.* IV. 79—123.

After the meeting Professor Airy exhibited a machine for illustrating the nature of the undulations supposed in circular polarization; an instrument for exhibiting the rings, spirals, etc. produced by double refraction; and an instrument for exhibiting the same phenomena by means of the light produced by the combustion of lime in oxygen.

March 7, 1831.

By Rob. Murphy, B.A. (Gonv. and Cai.): On the general solution of equations. *Trans.* IV. 125—153.

After the meeting Mr Willis exhibited a series of experiments on the transverse and longitudinal vibrations of strings, membranes, and solids, illustrative of the researches of M. Savart.

March 21, 1831.

By Will. Hallows Miller, M.A. (Joh.): On the elimination of the time from the differential equations of the motion of a point, whether affected by a resisting medium, or by any disturbing forces.

By the same: On measurements of the angles of certain artificial crystals.

After the meeting Mr Willis exhibited and explained a machine constructed for the purpose of illustrating the motion of the particles of any medium in which undulations are propagated.

April 18, 1831.

By Professor Whewell: On the mathematical exposition of some of the leading doctrines of Mr Ricardo's *Principles of Political Economy and Taxation.*

By Professor Airy: Notice of an apparatus constructed under his direction by Mr Dollond, and of the phenomena of elliptically polarized light exhibited by means of the apparatus. *Trans.* IV. 199—208.

After the meeting Professor Henslow exhibited a series of appearances produced by two wheels revolving one behind the other.

May 9, 1831.

By Ch. Pritchard, B.A. (Joh.): A method of simplifying the demonstration of the two principal theorems respecting the figure of the earth considered as heterogeneous.

By Professor Whewell: On the mathematical exposition, etc. (concluded). *Trans.* IV. 155—198.

After the meeting Mr Willis exhibited apparatus illustrating the nature of sound, and the vibrations which produce it, especially an instrument which he calls a Lyophone.

May 16, 1831.

By Ja. Francis Stephens: Description of *Chiasognathus grantii*, a new Lucanideous insect forming the type of an undescribed genus, together with some brief remarks upon its structure and affinities. *Trans.* IV. 209—216.

By Professor Clark: On a monster of the kind called semidouble. *Trans.* IV. 219—255.

After the meeting Mr Willis exhibited Mr Trevelyan's experiment on the rocking of a bar of hot brass placed upon a plate of cold lead.

Mr Leonard Jenyns gave an account of the application of the quinary system of Mr M'Leay to the classification of Birds.

November 14, 1831.

By Professor Airy: On some new circumstances in the phenomena of Newton's rings. *Trans.* IV. 279—288.

By Professor Henslow: On a hybrid plant between *Digitalis purpurea* and *D. lutea.*

After the meeting Professor Sedgwick gave an account, illustrated by sections, of the geological structure of Caernarvonshire.

November 28, 1831.

By Leonard Jenyns, M.A. (Joh.): A monograph of the British species of bivalve mollusca belonging to the genera *Cyclas* and *Pisidium.* *Trans.* IV. 289—312.

By Sam. Earnshaw, B.A. (Joh.): On the integration of the general linear differential equation of the *n*th order, and the general equation of differences with constant coefficients.

After the meeting Professor Whewell gave an account of the theories of evaporation, the use of Daniel's hygrometer, and the formation of clouds.

December 12, 1831.

By Professor Cumming: Exhibition of a calculus found in the intestines of a horse, with remarks.

By Professor Henslow: On a hybrid *Digitalis* (concluded). *Trans.* IV. 257—278.

After the meeting Mr C. Jenyns gave an account, illustrated by drawings, of the rules of the perspective of shadows, and explained the use of the centrolinead.

March 5, 1832.

By Professor Airy: On a new analyser of light polarized in a peculiar manner. *Trans.* IV. 313—322.

By Rob. Murphy, B.A. (Gonv. and Cai.): On an inverse calculus of definite integrals. (*Trans.* IV. 353—408.)

After the meeting Professor Airy exhibited an apparatus illustrative of some of the phenomena referred to in his paper.

Professor Henslow gave a lecture, illustrated by specimens and drawings, on the age of trees.

March 19, 1832.

By Professor Airy: On the phenomena of Newton's rings when formed between two transparent substances of different refractive powers. *Trans.* IV. 409—424.

By Will. Brett, M.A. (Corp.): On the phenomena of double stars.

After the meeting Mr Whewell gave an account, illustrated by diagrams, of the forms and course of the cotidal lines according to the causes which influence them, and according to the observations made in different places.

April 2, 1832.

By J[ohn] P[rentice] Henslow: On the habits of two hybrid pheasants presented by him to the Society.

By B. Bushell: On the anatomy of the same birds.

By Will. Brett, M.A. (Corp.): On the theory of stars of variable brightness.

May 7, 1832.

By Sir Joh. Fre. Will. Herschel, M.A. (Joh.): Description of a machine for solving equations. *Trans.* IV. 425—440.

By Will. Holt Yates, M.B. (Joh.): Account of the magnetic mountain of Sipylus near Magnesia.

After the meeting Professor Sedgwick gave an account, illustrated by maps and sections, of the Physical Geography and History of the Fens of Cambridgeshire.

May 21, 1832.

By Sir Joh. Fre. Will. Herschel, M.A. (Joh.): Description of a machine, etc. (concluded).

By Rob. Willis, M.A. (Gonv. and Cai.): On the ventricles of the larynx.

By Professor Henslow: On a monstrosity of *Reseda*. *Trans.* V. 95—100.

After the meeting Mr Willis gave a lecture, illustrated by experiments, on various phenomena of sound.

June 4, 1832.

By Joh. Hogg, M.A. (Pet.): On the classical plants of Sicily.

By Professor Henslow: Exhibition of a drawing representing the construction of *Reseda*, in illustration of his former paper.

By Professor Clark: Exhibition of a semi-double fœtus of a pig, with explanation.

By Professor Cumming: On Mr Faraday's recent discoveries in magneto-electricity, with illustrative experiments.

November 12, 1832.

By Geo. Green: Mathematical investigations concerning the laws of the equilibrium of fluids analogous to the electric fluid; with other similar researches. *Trans.* v. 1—63.

By Aug. De Morgan, B.A. (Trin.): On the general equation of surfaces of the second degree. *Trans.* v. 77—94.

After the meeting Professor Henslow gave an account, illustrated by various drawings and diagrams, of various observations of Geology and Natural History made by him during a residence at Weymouth during a portion of the summer.

November 26, 1832.

By Rob. Murphy, M.A. (Gonv. and Cai.): On an elimination between an indefinite number of unknown quantities. *Trans.* v. 65—75.

By Will. Whewell, M.A. (Trin.): On the architecture of Normandy.

After the meeting Mr Ch. Brooke (Joh.) gave an account of the history and recent improvements in Lithotripsy, illustrated by the exhibition of the instruments used, and by several drawings.

December 10, 1832.

By Will. Whewell, M.A. (Trin.): On the architecture of Normandy (continued).

After the meeting Mr Sims gave an account of the various methods of engine-dividing, and of original dividing practised with regard to graduated instruments; and explained particularly the method of original dividing invented by Mr Troughton, and recently applied by Mr Sims to the division of the mural circle of the Observatory. This explanation was illustrated by models and apparatus.

February 25, 1833.

By Will. Whewell, M.A. (Trin.): On the architecture of Normandy (continued)

After the meeting Professor Airy gave an account, illustrated by models and diagrams, of his researches concerning the mass of Jupiter by means of observations of the Fourth Satellite.

March 11, 1833.

By the Marchese Spineto: An examination of the grounds of Sir Isaac Newton's system of chronology.

After the meeting Professor Sedgwick gave an account, illustrated by representations of sections, of the Geology of North Wales.

March 25, 1833.

By Jos. Power, M.A. (Trin. Hall): On the effect of wind on the barometer.

By Professor Clark: On an unusual situation of the origin of the internal mammary artery, with a drawing and explanation.

After the meeting Professor Henslow gave an account, illustrated by diagrams, of a method of classifying and designating colours, particularly with reference to their use in natural-historical descriptions.

April 22, 1833.

By Professor Miller: On lines produced in the spectrum by the vapour of Bromine, Iodine, and Euchlorine. *Phil. Mag.* 1833, i. 381.

By Will. Whewell, M.A. (Trin.): On the architecture of Normandy (concluded).

After the meeting Mr Whewell explained some of the difficulties which had attended his researches concerning co-tidal lines.

May 6, 1833.

By Mr Millsom: A description of the anatomy of a hybrid animal—a lion-tiger (communicated by Dr Haviland).

By Geo. Green: A memoir on the exterior and interior attractions of ellipsoids (communicated by Sir Edw. Tho. French Bromhead, Bart., M.A. Gonv. and Cai.). *Trans.* v. 395—429.

By the Marchese Spineto: On an insect which appears in the Egyptian Hieroglyphics.

By Professor Airy: On diffraction. *Trans.* v. 101—111.

May 20, 1833.

By Will. Hopkins, M.A. (Pet.): On the position of the nodes of the vibration of the air in tubes. *Trans.* v. 231—270.

Mr Hopkins also exhibited experiments illustrating the interference of the vibrations of the air.

November 11, 1833.

By Rob. Murphy, M.A. (Gonv. and Cai.): A second memoir on the inverse method of definite integrals. *Trans.* v. 113—148.

By Professor Airy: An account of various observations made on the Aurora Borealis of September 17 and October 12. *Phil. Mag.* 1833, ii. 461.

November 25, 1833.

By Professor Henslow: Observations on a beetle found in a block of mahogany presented to the Society.

By Ri. Tho. Lowe, M.A. (Chr.): Description of a molluscous animal of the genus *Umbrella*, with a drawing and remarks.

By Will. Hopkins, M.A. (Pet.): On the geology of Derbyshire, illustrated by maps and sections. *Phil. Mag.* 1834, i. 66.

December 9, 1833.

By Hen. Moseley, B.A. (Joh.), Professor of Natural Philosophy in King's Coll. Lond.: On the general conditions of the equilibrium of a system of variable form; and on the theory of equilibrium, fall, and settlement, of the arch. *Trans.* v. 293—313.

By Professor Farish: On the appearance of a meteor, or falling star, of great splendour, observed by him at a quarter before seven o'clock, on September 26 (he being near Magdalene College).

By Professor Sedgwick: On the geology of Charnwood Forest, illustrated by maps and sections. *Phil. Mag.* 1834, i. 68.

February 17, 1834.

By Fra. Lunn, M.A. (Joh.): On a specimen of *Proteus anguinus*, presented by him to the Society.

By Professor Miller: Some optical observations on lines in the vapour of Iodine, Bromine, and Perchloride of Chrome. *Phil. Mag.* 1834, i. 312.

By Will. Whewell, M.A. (Trin.): On the nature of the truth of the Laws of Motion. *Trans.* v. 149—172.

March 3, 1834.

By Ja. Challis, M.A. (Trin.): On the motion of fluids. *Trans.* v. 173—203.
By Temple Chevallier, B.D. (Cath. H.): On the polarisation of the light of the atmosphere. *Phil. Mag.* 1834, i. 312.
By Professor Miller: Notice of experiments on the Perchloride of Chrome.

March 17, 1834.

By Jos. Power, M.A. (Trin. Hall): On the theory of Exosmose and Endosmose. *Trans.* v. 205—229.
By Professor Henslow: On Braun's speculations concerning the arrangement of the scales on fir-cones, with additional remarks.
By Professor Airy: On the polarisation of light by the sky, and by rough bodies. *Phil. Mag.* 1834, i. 313.

April 14, 1834.

By Professor Airy: On the latitude of the Cambridge Observatory, as determined by means of the mural circle. *Trans.* v. 271—281.
By Will. Whewell, M.A. (Trin.): On Sir J. Herschel's hypothesis concerning the absorption of light by coloured media. *Phil. Mag.* 1834, i. 463.

April 28, 1834.

By Professor Miller: On the axes of crystals. *Phil. Mag.* 1834, i. 463.
By Sam. Earnshaw, B.A. (Joh.): On the laws of motion. Ibid.
After the meeting Mr Willis explained a machine of his construction for jointing together the bones of skeletons.

May 12, 1834.

By Aug. De Morgan, B.A. (Trin.): An attempt to shew that the principles of the Differential Calculus may be established without assuming the forms of any expansion (in a letter to Mr Peacock).
After the meeting Professor Miller exhibited and explained an instrument for taking the specific gravities of bodies.
[By Rob. Willis, M.A. (Gonv. and Cai.): Exhibition and explanation of an instrument constructed by himself, which he proposes to call an Orthograph.
By Will. Webster Fisher, M.B. (Down.): On the origin of Tubercular diseases.]

November 10, 1834.

By Ri. Tho. Lowe, M.A. (Chr.): Descriptions of six new or rare species of fish from Madeira, with drawings. *Trans.* VI. 195—201.
By Will. Whewell, M.A. (Trin.): Observations of the tides made from June 7 to June 22, 1834, at the coastguard stations; with some observations on the mode of discussing them.

November 24, 1834.

By Professor Airy: On the rings produced by viewing the image of a star through an object-glass of circular aperture. *Trans.* v. 283—291.
By the same: On the longitude of the Cambridge Observatory, as compared with the result of the Trigonometrical Survey.
By Ri. Stevenson, B.A. (Trin.): On the establishment of propositions by the infinitesimal method combined with the doctrine of projections.
By Professor Sedgwick: On the geology of Cambridge. *Phil. Mag.* 1835, i. 74.

December 8, 1834.

By Professor Miller: On the position of the optical axes of crystals. *Trans.* v. 431—438.

By Professor Henslow: On the Green Sand at Haslingfield, Barton, etc.

By the same: On the age of trees, as determined by their size.

By Professor Airy: On the echo from the open end of a tall chimney.

[By Professor Cumming: A statement of Melloni's discoveries on the transmission of heat by radiation.]

March 2, 1835.

By Rob. Murphy, M.A. (Gonv. and Cai.): On the inverse method of Definite Integrals. *Trans.* v. 315—393.

By Ri. Stevenson, B.A. (Trin.): On the solution of some problems connected with the theory of straight lines and planes by a new symmetrical method of coordinates.

By Will. Hopkins, M.A. (Pet.): On Physical Geology. *Trans.* vi. 1—84.

March 16, 1835.

By Will. Webster Fisher, M.B. (Down.): On the nature, structure, and changes, of tubercles, illustrated by coloured drawings. *Phil. Mag.* 1835, i. 395.

After the meeting Mr Willis gave an account, illustrated by drawings and models, of the progress of Gothic Architecture, and especially of the formation of tracery. Ibid.

March 30, 1835.

By Aug. de Morgan, B.A. (Trin.): On the theorem of M. Abel relative to the algebraical expression of the roots of equations which are connected by the law of periodic functions.

By Will. Whewell, M.A. (Trin.): Exhibition and explanation of an Anemometer of a new construction; with a statement of the use which might be made of observations made by means of it.

May 4, 1835.

By Professor Airy: An account of results recently obtained at the Observatory with respect to: (1) the obliquity of the ecliptic; (2) the mass of Jupiter; (3) Jupiter's time of rotation.

By Will. Whewell, M.A. (Trin.): On the results of the Tidal Observations of the Coast Guard of June, 1834; and on those intended to be made in June, 1835.

May 18, 1835.

By Archib. Smith (Trin.): A communication containing the eliminations by which the equation of the wave surface in Fresnel's theory of undulations is determined in a manner more simple than in previous investigations of other authors on the same subject (read by Professor Airy). *Trans.* vi. 85—89.

By Will. Whewell, M.A. (Trin.): An extract of a letter from Professor Schumacher, stating that Messrs Beer and Mödler had found the time of Jupiter's rotation to be $9^h\ 55^m\ 26^s,5$; and that M. Bessul had made a long series of observations which give the mass of Jupiter nearly identical with those of Professor Airy.

By Will. Webster Fisher, M.B. (Down.): On tubercles (continued).

June 1, 1835.

By Rob. Willis, M.A. (Gonv. and Cai.): An account, illustrated by models, of the progress of decorative construction in vaults. *Phil. Mag.* 1835, i. 71.

November 16, 1835.

By Rob. Murphy, M.A. (Gonv. and Cai.): On the resolution of equations of finite differences. *Trans.* VI, 91—106.

Extracts of letters written by Sir J. F. W. Herschel, M.A. (Joh.) from the Cape of Good Hope, on meteorological observations made by him there.

Extracts of letters from Ch. Rob. Darwin, B.A. (Chr.) containing accounts of the geology of certain parts of the Andes and S. America.

November 30, 1835.

By Will. Wallace, F.R.S., Prof. of Mathematics, Edinburgh (Hon. Member): On a geodetical problem. *Trans.* VI. 107—140.

By Professor Airy: On a supposed analysis of the spectrum by Sir D. Brewster.

December 14, 1835.

By Ri. Potter (Qu.): On the explanation of the phenomena of the rainbow by the doctrine of interferences. *Trans.* VI. 141—152.

By Ch. Rob. Darwin, B.A. (Chr.): On viviparous lizards, and on red snow.

February 21, 1836.

By Phil. Kelland, B.A. (Qu.): On the dispersion of Light on the Undulatory Theory. *Trans.* VI. 153—184.

By Will. Whewell, M.A. (Trin.): On the Tides. *Phil. Mag.* 1836, i. 430.

March 7, 1836.

By Will. Whewell, M.A. (Trin.): On the recent discoveries of Professor Forbes and others respecting the polarisation of heat. *Phil. Mag.* 1836, i. 430.

After the meeting Mr Willis gave a lecture on the composition and resolution of the entablature in Egyptian and Grecian architecture. Ibid.

March 21, 1836.

By Sam. Earnshaw, M.A. (Joh.): On the solution of the equation of continuants of fluids in motion. *Trans.* VI. 203—233.

By Professor Miller: On the position of the axes of optical elasticity of certain crystals. *Trans.* VII. 209—215.

By Tho. Webster, M.A. (Trin.): On the connection of the periodical [motions] of the barometer with the changes of temperature; and on the relation of the accidental changes with the occasional changes.

April 18, 1836.

By Professor Sedgwick: An account of the system of formations inferior to the Carboniferous Series, as illustrated by his own researches in Wales, and those of Mr Murchison in the same country.

May 2, 1836.

By Geo. Biddell Airy, M.A. (Trin.), Astronomer Royal: On the intensity of light in the neighbourhood of the caustic. *Trans.* VI. 379—402.

By Will. Hopkins, M.A. (Pet.): On the agreement between his theoretical views of the elevatory geological forces, and the phenomena of faults, as observed by him in the strata of Derbyshire.

May 16, 1836.

By Aug. De Morgan, B.A. (Trin.): Sketch of a method of introducing discontinuous constants into the arithmetical expressions for infinite series. (In a letter to Mr Peacock.) *Trans.* VI. 185—193.

By Phil. Kelland, B.A. (Qu.): On the constitution of the atmosphere and the connexion of light and heat. *Trans.* VI. 235—288.
By Will. Hopkins, M.A. (Pet.): Observations on the temperature of mines, and the doctrine of central heat.
By Geo. Biddell Airy, M.A. (Trin.): Observations of temperature during the great Solar Eclipse of 15 May.

November 14, 1836.

No papers recorded.

November 28, 1836.

By Joh. Thompson Exley (Joh.): On the leading features of a new system of Physics.
By Professor Henslow: On various kinds of pebbles and agates, with conjectures respecting the origin of the bands of colour with which they are marked.

December 12, 1836.

By Sam. Earnshaw, M.A. (Joh.): On the appearance of light received on a screen after passing through an equilateral triangle placed behind the object-glass of a telescope. *Trans.* VI. 431—442.
By Ja. Jos. Sylvester (Joh.): On elimination, and the use of indeterminate constants.
By Will. Hopkins, M.A. (Pet.): On the formation of veins in Derbyshire.

February 13, 1837.

By Professor Challis: On the temperature of the higher regions of the atmosphere. *Trans.* VI. 443—455.
By Steph. Pet. Rigaud, Savilian Professor of Astronomy, Oxford: On the relative proportions of Land and Water. *Trans.* VI. 289—300.
By Phil. Kelland, B.A. (Qu.): On the transmission of light through crystallised media. *Trans.* VI. 323—352.

February 27, 1837.

By Joh. Warren, M.A. (Jes.): On the algebraical sign of the perpendicular from a given point upon a given line.
By Ch. Rob. Darwin, B.A. (Chr.): An account of fused sand-tubes found near the Rio Plata—which were exhibited, along with several other specimens of rocks.
By Will. Webster Fisher, M.B. (Down.): On a case of *Spina bifida*. *Phil. Mag.* 1837, i. 316.

March 13, 1837.

By Phil. Kelland, B.A. (Qu.): Supplement to his paper read 13 February.
By Sam. Earnshaw, M.A. (Joh.): On the laws of fluid motion.
By Hen. Joh. Hales Bond, M.D. (Corp.): A medical-statistical Report of Addenbrooke's Hospital for 1836. *Trans.* VI. 361—377.
By Will. Whewell, M.A. (Trin.): An account of the recent results of his researches respecting the Tides.

April 17, 1837.

By Leonard Jenyns, M.A. (Joh.): On the temperature of the month of March last past. *Phil. Mag.* 1837, i. 485.
By Rob. Willis, M.A. (Gonv. and Cai.): Exhibition and explanation of a Tabuloscriptive Engine. Ibid.

May 1, 1837.

By Art. Aug. Moore (Trin.): Solution of a difficulty in the analysis of Lagrange noticed by Sir W. Hamilton (read by Mr Peacock). *Trans.* VI. 317—322.

By Will. Whewell, M.A. (Trin.): On the results of his Anemometer for the first three months of 1837. *Trans.* VI. 301—315.

By Phil. Kelland, B.A. (Qu.): On the elasticity of the aether in crystals. *Trans.* VI. 353—360.

May 15, 1837.

By Geo. Green (Gonv. and Cai.): On the propagation of an undulation in heavy fluids in a canal of small depth and width. *Trans.* VI. 457—462.

By Will. Hopkins, M.A. (Pet.): On the refrigeration of the earth, and on the doctrine of internal fluidity of the earth.

By Hen. Moseley, M.A. (Joh.): On the theory of the equilibrium of bodies in contact. *Trans.* VI. 463—491.

[By Will. Webster Fisher, M.B. (Down.): On *Spina bifida*. *Phil. Mag.* 1837, i. 486.]

November 13, 1837.

By Car. Jeffreys, M.A. (Joh.): Exhibition and explanation of the Respirator invented by his brother.

By Professor Sedgwick: On the geology of Charnwood Forest and the neighbouring coalfields.

November 27, 1837.

By Geo. Green (Gonv. and Cai.): On the vibration of air. *Trans.* VI. 403—413.

By Will. Hopkins, M.A. (Pet.): On certain elementary principles of geological theory; and on Professor Babbage's speculations.

December 11, 1837.

By Geo. Green (Gonv. and Cai.): On the reflexion and refraction of light in non-crystallised media. *Trans.* VII. 1—24.

By Ri. Wellesley Rothman, M.A. (Trin.): On the observation of Halley's comet in 1836. *Trans.* VI. 493—506.

By Will. Hopkins, M.A. (Pet.): On Precession and Nutation, assuming the interior fluidity of the earth.

February 26, 1838.

By Dav. Tho. Ansted, B.A. (Jes.): On a new genus of fossil shells. *Trans.* VI. 415—422.

By Aug. De Morgan, B.A. (Trin.): On a question in the theory of probabilities. *Trans.* VI. 423—430.

By Dan. Cresswell, D.D. (Trin.): On the squaring of the circle.

March 12, 1838.

By Phil. Kelland, M.A. (Qu.): On molecular attraction. *Trans.* VII. 25—59.

By Professor Henslow: On plants brought by Mr Darwin from Keeling Island.

March 26, 1838.

By Geo. Biddell Airy, M.A. (Trin.): On the intensity of light in the neighbourhood of a caustic. *Trans.* VI. 379—402.

By Professor Challis: On the proper motions of the stars.

April 30, 1838.

By Ri. Potter, B.A. (Qu.): On a new correction in the construction of the double achromatic object-glass. *Trans.* VI. 553—564.
By Will. Hen. Trentham, M.A. (Joh.): On the expansion of a polynomial.
By Hen. Joh. Hayles Bond, M.D. (Corp.): Statistical report on Addenbrooke's Hospital for 1837. *Trans.* VI. 565—575.
By Pet. Bellinger Brodie, B.A. (Trin.): On the occurrence of recent land and fresh-water shells with bones of some extinct animals in the gravel near Cambridge; communicated by Professor Sedgwick. *Trans.* VIII. 138—140.

May 14, 1838.

By Joh. Tozer, B.A. (Gonv. and Cai.): On the application of mathematics to calculate the effects of the use of machinery on the wealth of a community. *Trans.* VI. 507—522.
By Duncan Farquharson Gregory, B.A. (Trin.): On the real nature of symbolical algebra.
By Professor Miller: On measures of spurious rainbows.

May 28, 1838.

By Professor Miller: An account of experiments illustrating the unequal expansion of crystals by heat.
By Ri. Tho. Lowe, M.A. (Chr.). On the Botany of Madeira[1]. *Trans.* VI. 523—551.

November 12, 1838.

By Professor Whewell: On certain rude kinds of architecture.

November 26, 1838.

By Duncan Farquharson Gregory, B.A. (Trin.): On the logarithms of negative quantities.
By Professor Henslow: On the formation of mineral veins, illustrated by a specimen.

December 10, 1838.

By Hamnett Holditch, M.A. (Gonv. and Cai.): On rolling curves (communicated by Professor Willis). *Trans.* VII. 61—86.
By Ri. Wellesley Rothman, M.A. (Trin.): On the climate of Italy.
By Ri. Tho. Lowe, M.A. (Chr.): An additional note on the Flora of Madeira.
By Professor Henslow: On the structure of wasps' nests, illustrated by specimens.

February 18, 1839.

By Ri. Wellesley Rothman, M.A. (Trin.): On the climate of Italy (concluded).
By Ri. Potter, B.A. (Qu.): On the determination of the value of (λ), the length of an undulation of light.
By Geo. Green, B.A. (Gonv. and Cai.): Appendix to a former paper on waves, read 15 May, 1837. *Trans.* VII. 87—9 .

March 4, 1839.

By Will. Hopkins, M.A. (Pet.): On the geology of England and France in the neighbourhood of the Channel.

[1] This paper is not mentioned in the *Minutes*. The date assigned to it is derived from the *Transactions*.

March 18, 1839.

By Sam. Earnshaw, M.A. (Joh.): On the equilibrium of a system of particles. *Trans.* VII. 97—112.

By Geo. Biddell Airy, M.A. (Trin.): On the diurnal changes of the variation of the magnetic needle.

April 22, 1839.

By Duncan Farquharson Gregory, B.A. (Trin.): On photogenic drawings.

By Professor Sedgwick: On the geology of Cornwall and Devon.

May 6, 1839.

By Professor Miller: On the calculation of halos, according to Fraunhofer's theory.

By Geo. Green: Note on reflection and refraction. *Trans.* VII. 113—120.

By Duncan Farquharson Gregory, B.A. (Trin.): On chemical classification.

May 20, 1839.

By Geo. Green, B.A. (Gonv. and Cai.): On the motion of light through crystallised media. *Trans.* VII. 121—140.

By Dav. Tho. Ansted, B.A. (Jes.): On the tertiary formations of Switzerland. *Trans.* VII. 141—152.

By Professor Whewell: An account of observations made with his Anemometer since May, 1837.

November 11, 1839.

By Professor Whewell: On a new theory of the Tides. *Phil. Mag.* 1839, ii. 476.

November 25, 1839.

By Professor Sedgwick: On the geology of northern Germany, east and west of the Rhine.

December 9, 1839.

By Aug. De Morgan, B.A. (Trin.): On the foundations of Algebra. *Trans.* VII. 173—187.

By Dav. Tho. Ansted, B.A. (Jes.): On the geology of the Transition Rocks in the north-east of Bavaria and the Principality of Reuss.

By Will. Webster Fisher, M.B. (Down.): On the malformation of certain parts of the nervous system.

March 2, 1840.

By Geo. Biddell Airy, M.A. (Trin.): On a new construction of the Going Fusee, applied in the Northumberland telescope. *Trans.* VII. 217—277.

By Ch. Pritchard, M.A. (Joh.): On the achromatism of the telescope.

March 16, 1840.

By Aug. De Morgan, B.A. (Trin.): On the foundation of algebra.

By Joh. Tozer, M.A. (Gonv. and Cai.): On some doctrines of Political Economy. *Trans.* VII. 189—196.

March 30, 1840.

By Phil. Kelland, M.A. (Qu.): On the quantity of light intercepted by a grating placed before a lens. *Trans.* VII. 153—171.

May 4, 1840.

By Phil. Kelland, M.A. (Qu.): On the Law of molecular attraction.

May 18, 1840.

By Dav. Tho. Ansted, M.A. (Jes.): On the Green Sandstone formation of Blackdown, Devon.

By Professor Miller: On the structure of the Heliotropes of Gauss, Steinheil, and Schumacher.

June 1, 1840.

By Will. Hopkins, M.A. (Pet.): On certain geological phenomena of elevation, and their connection with the formation of volcanoes. *Phil. Mag.* 1840, ii. 154.

November 16, 1840.

By Roderick Impey Murchison: On the geology of Russia.

By Geo. Biddell Airy, M.A. (Trin.): On an optical fact, and its explanation on the undulatory theory.

November 30, 1840.

By Professor Henslow: On the diseases of wheat.

December 14, 1840.

By Aug. De Morgan, B.A. (Trin.): On the composition of forces.

By Professor Whewell: On the equilibrium of oblique arches.

February 22, 1841.

By Professor Whewell: Additional remarks on oblique arches.

By the same: Is all matter heavy? *Trans.* VII. 197—207.

March 8, 1841.

By Joh. Tozer, M.A. (Gonv. and Cai.): On some mathematical formulæ for determining the permanent effects of emigration and immigration on numbers. *Phil. Mag.* 1841, i. 318.

March 22, 1841.

By Professor Miller: On supernumerary rainbows. *Trans.* VII. 277—286.

April 26, 1841.

By Professor Challis: On the resistance of air to a pendulum with a spherical bob. *Trans.* VII. 333—353.

May 10, 1841.

By Professor Willis: On the arrangement of the joints of crustaceous animals.

By the same: On the original nomenclature of Gothic mouldings.

May 24, 1841.

By Professor Challis: On a new kind of interference of light.

November 15, 1841.

By Professor Sedgwick: An account of the comparative classification of the older strata in the British Isles.

November 29, 1841.

By Aug. De Morgan, M.A. (Trin.): On the foundation of algebra. *Trans.* VII. 287—300.

By Jos. Power, M.A. (Trin. Hall): On the late accident on the Brighton railway. *Trans.* VII. 301—317.

By Joh. Fre. Stanford, B.A. (Chr.): On a newly invented locomotive.

December 13, 1841.

By Will. Hopkins, M.A. (Pet.): On the forms of the isothermal surfaces within the earth; and on the thickness of the earth's solid crust, supposing the central portion to be fluid.

By Aug. De Morgan, B.A. (Trin.): On the foundation of algebra (continued).

February 14, 1842.

By Rob. Leslie Ellis, M.A. (Trin.): On the foundations of the doctrine of chances. *Trans.* VIII. 1—6.

February 28, 1842.

By Rob. Leslie Ellis, M.A. (Trin.): On the doctrine of chances (concluded). *Trans.* VIII. 1—6.

March 14, 1842.

By Mr Taplin: On the solution of a cubic equation.

By Professor Whewell (Master of Trinity College): Are cause and effect simultaneous or successive? *Trans.* VII. 319—331.

April 11, 1842.

By Professor Challis: On the differential equations of fluid motion. *Trans.* VII. 371—396.

By Professor Owen: On the fossil remains of a new genus of Saurians called *Rhynchosaurus*, discovered in the New Red Sandstone of Warwickshire. *Trans.* VII. 355—369.

April 25, 1842.

By Matth. O'Brien, M.A. (Gonv. and Cai.): On the propagation of luminous waves in the interior of transparent bodies. *Trans.* VII. 397—437.

By Geo. Gabriel Stokes, B.A. (Pemb.): On the steady motion of incompressible fluids. *Trans.* VII. 439—453.

May 9, 1842.

By Professor Kelland: On the motion of glaciers.

By the same: On the laws of fluid motion.

By Jos. Power, M.A. (Trin. Hall): On fluid motion. *Trans.* VII. 455—464.

By Professor Miller: An account of the *Dioptrische Untersuchungen* of Gauss.

November 14, 1842.

By Professor Fisher: On the development of the spinal ganglia in animals, and on the malformation of various portions of the nervous system in Man. *Phil. Mag.* 1842, ii. 485.

November 28, 1842.

By Matth. O'Brien, M.A. (Gonv. and Cai.): On the intensity of reflected and refracted light, the absorption of light, and the stability of the luminous æther. *Trans.* VIII. 7—26.

December 12, 1842.

By Will. Hopkins, M.A. (Pet.): On the glaciers of the Bernese Alps.

February 20, 1843.

By Art. Cayley, B.A. (Trin.): On some properties of determinants. *Trans.* VIII. 75—88.

By Matth. O'Brien, M.A. (Gonv. and Cai.): On the absorption of light by transparent media. *Trans.* VIII. 27—30.

March 6, 1843.

By Professor Challis: On a new general equation in Hydro-dynamics. *Trans.* VIII. 31—43.

By Geo. Kemp, M.B. (Pet.): On the nature of the biliary secretion: to shew that the bile is essentially composed of an electro-negative body, in chemical combination with one or more inorganic bases. *Trans.* VIII. 44—49.

March 20, 1843.

By Professor Sedgwick: On Professor Owen's memoir on the skeleton of the *Mylodon*; and on the structure and habits of certain extinct genera of gigantic Sloths.

May 1, 1843.

By Professor Challis: On the comet of 1843.

By Will. Williamson, M.A. (Cla.): Two letters on the same subject.

By Will. Hopkins, M.A. (Pet.): On the motion of glaciers. *Trans.* VIII. 50—74.

May 15, 1843.

By Hamnett Holditch, M.A. (Gonv. and Cai.): On small finite oscillations. *Trans.* VIII. 89—104.

By Professor Willis: On the vaults of the Middle Ages.

May 29, 1843.

By Geo. Kemp, M.B. (Pet.): On the relation between organic and organized bodies; with some remarks on the theory of organic combinations as proposed by Laurent.

By Geo. Gabriel Stokes, B.A. (Pemb.): On some cases of fluid motion. *Trans.* VIII 105—137.

October 30, 1843.

By Will. Hopkins, M.A. (Pet.): An account of the large reflecting telescope which the Earl of Rosse is now constructing; with an account of the manner in which its 6 feet speculum has been prepared.

November 13, 1843.

By Professor Sedgwick: An account of the structure and relations of the slate rocks of North Wales.

Between 1831 and 1843 the Proceedings of the Society were reported—somewhat irregularly—in the *Philosophical Magazine*. The notices, as a general rule, are extremely brief; but I have thought it worth while to add references to those papers that are not printed in the Society's *Transactions*

whenever the abstracts give details. Moreover, this Journal preserves the titles, and brief abstracts, of four papers not noticed in the *Minutes* of the Society. These I have included between square brackets. They belong to the meetings held May 12, December 8, 1834; May 15, 1837.

P. S. Since writing the above sketch, I have discovered that a somewhat similar scheme for the establishment of a Philosophical Society had been projected in 1782. "The death of some persons interested in the plan, and several accidents, occasioned the scheme to be postponed till February 18th, 1784," when Professor Milner, Mr Farish, and some others "associated themselves under certain laws and regulations." They were presently joined by several of the most distinguished men in the University, among whom occurs the illustrious name of Porson, and a volume of "Tracts, Philosophical and Literary, by a society of gentlemen of the University of Cambridge" was projected, but never published, though two of the contributions were printed. "This little society of learned men, not being adequately supported, was dissolved about the close of the year 1786[1]." One promoter at least of this noble, though unsuccessful, attempt, Mr Farish, Jacksonian Professor from 1813 to 1837, became a member of the Philosophical Society.

[1] This information is derived from: *Memoirs of John Martyn, F.R.S., and of Thomas Martyn, B.D., F.R.S., F.L.S., Professors of Botany in the University of Cambridge.* By G. C. Gorham. 8vo. Lond. and Camb. 1830, p. 165.

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