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Hampstead
Scientific Society

Report of the Council
and Proceedings



With a List of the Members.

October, 1899 to December, 1900.

PRICE THREEPENCE.

Published for the Society by
S. C. MAYLE, at 70, HIGH STREET,
HAMPSTEAD, N.W.

MDCCCXI.



Introductory.

IT is thought by the Council that a short account of the formation of the Society would not be out of place in this the First Report and Proceedings.

The Hampstead Scientific Society was originally founded as the Hampstead Astronomical and Scientific Society, in July, 1899. Early in the same year, Colonel Heberden, R.A., J.P., presented for the use of the public a reflecting telescope of 10½ inch mirror. A preliminary meeting was held by the invitation of Mr. E. C. Crump at the Bank House, to discuss the matter, and from among those present a Provisional Committee was formed—viz., Messrs. E. C. Crump, John Hayns, F. L. Jermyn, E. S. Payne, E. Swain, and P. E. Vizard, for the purpose of accepting the gift of the Telescope and carrying out the necessary arrangements.

Permission was obtained from the London County Council for the erection of the telescope house on the Bathing Pond enclosure on the East Heath. A public meeting was held at Stanfield House on 15th July, when Mr. Edward Bond, M.P., L.C.C., took the Chair, and a number of influential people were present. The Society

was then duly inaugurated, and the officers provisionally elected, the management and control of the telescope being vested in the Council of the Society. Upwards of sixty ladies and gentlemen signified their wish to be enrolled as original members. The primary objects of the Society are for the promotion of a popular interest in and practical study of astronomy, botany, geology, microscopy, photography, zoology, and other branches of science.

At one of the first meetings of the Council of the new Society, Mr. E. C. Crump, who had acted as hon. treasurer and secretary to the Provisional Committee, was desirous that a secretary should be appointed. Mr. Basil W. Martin was therefore asked to act as honorary secretary of the Society, while Mr. Crump retained the position of honorary treasurer.

At a recent meeting of the Council, it was considered advisable to alter the title to the Hampstead Scientific Society, embracing as it does at the present time three separate Sections—Astronomical, Photographic, and Natural History. This alteration was to be placed before the members at the annual meeting for their approval.

It is hoped that the Natural History Section, which has just been formed, will be well supported, and that the work which it essays to carry out will be energetically pushed forward by those who are able and willing to make the Section the success it should ultimately become.



List of Officers of the Hampstead Scientific Society.

1899-1900.

President.

EDWARD BOND, M.A., M.P., L.C.C.

Vice-Presidents.

WALTER BAILY, M.A., F.Z.S.*	E. BRODIE HOARE, M.A., M.P.
Sir WALTER BESANT, M.A., F.S.A.	G. DANFORD THOMAS, M.D.
EDMUND GWYNN, M.D.*	P. E. VIZARD.*
Sir HENRY HARBEN, J.P.	ARTHUR WILSON, B.A.

Council.

(The President, Vice-Presidents, Hon. Treasurer and Hon. Secretaries, *ex officio*)

C. O. BARTRUM, B.Sc.*	E. S. PAYNE.*
C. W. CUNNINGTON, M.R.C.S.	WALTER SCHRÖDER.
W. GARNETT, M.A., D.C.L.	C. SIMMONS, M.A.
JOHN HAYNS.	EDWARD SWAIN.
JAMES HEPBURN.	A. E. TEBB, M.D., B.S.
The Rev. H. LE PLA.	F. WOMACK, M.B., B.Sc.

Hon. Treasurer.*

E. COMPSON CRUMP,
L. & S.W. Bank, Ltd.
High Street, Hampstead.

Hon. Secretary.*

BASIL W. MARTIN, F.Z.S.
Elm House, Elm Row,
Hampstead.

PHOTOGRAPHIC SECTION:

Hon. Secretary *
F. LUBBOCK JERMYN.

ASTRONOMICAL SECTION:

Hon. Secretary *
H. W. WOODMAN.

Curator of Telescope.

H. O. DRAKE.

*Executive Committee,

List of Officers of the Hampstead Scientific Society

FOR THE YEAR 1901.

Elected at the Annual Meeting, 25th January, 1901.

President.

The Rt. Hon. Sir RICHARD TEMPLE, Bart., P.C., G.C.S.I., D.C.L., F.R.S.

Vice-Presidents.

WALTER BAILY, M.A., F.Z.S.*	E. BRODIE HOARE, M.A., M.P.
Sir WALTER BESANT, M.A., F.S.A.	FRANK PODMORE, M.A.
EDWARD BOND, M.A., M.P., L.C.C.	G. DANFORD THOMAS, M.D.
EDMUND GWYNN, M.D.*	P. E. VIZARD.*
Sir HENRY HARBEN, J.P.	ARTHUR WILSON, B.A.

Council.

(The President, Vice-Presidents, Hon Treasurer and Hon. Secretaries, *ex officio*.)

C. O. BARTRUM, B.Sc.*	HENRY RAYNER, M.D.
C. W. CUNNINGTON, M.R.C.S.	WALTER SCHRÖDER.
W. GARNETT, M.A., D.C.L.	A. W. STOKES, F.C.S., F.I.C.
JOHN HAYNS.	EDWARD SWAIN.
JAMES HEPBURN.	A. E. TEBB, M.D., B.S., D.P.H.
E. S. PAYNE.*	F. WOMACK, M.B., B.Sc.

Hon. Treasurer*

E. COMPSON CRUMP,
L. & S. W. Bank, Ltd.
High Street, Hampstead.

Hon. Secretary *

BASIL W. MARTIN, F.Z.S.
Elm House, Elm Row,
Hampstead.

ASTRONOMICAL SECTION:

Hon. Secretary *

ALEC RABONE,
Elm Lodge, Elm Row,
Hampstead.

PHOTOGRAPHIC SECTION.

Hon. Secretary *

PHILIP JOSHUA,
45, Belsize Avenue,
Hampstead.

NATURAL HISTORY SECTION.

Hon. Secretaries *

J. W. WILLIAMS, M.R.C.S., F.L.S.
128, Mansfield Road,
Gospel Oak.

AND

BASIL W. MARTIN, F.Z.S., M.B.O.U.

* *Executive Committee.*



Report of the Council.

1899—1900.

THE Council beg to report that the number of members of the Society now stands at 192, consisting of 143 gentlemen and 49 ladies. The Council consider this very satisfactory, the Society having only begun work in October, 1899.

The accounts of the Society have been duly audited for the fifteen months ending 31st December, 1900. The amount in donations towards the initial expenses and the setting-up of the telescope practically covered the same. A number of members have generously contributed considerably more than the minimum subscription of five shillings without which the Society could not have carried out all that it has during the past fifteen months.

The Council have to record with the deepest regret the loss sustained by the deaths of Mr. D. E. Chandler and Mr. F. C. Mathieson, both of whom rendered valuable service to the Society.

The attendance at the ordinary and other meetings has been good. Abstracts of the papers read and of the proceedings at the meetings will be found accompanying this report.

The Society has been affiliated to the South-Eastern Union of Scientific Societies, the Hon. Secretary, Mr. Basil W. Martin, being chosen as delegate to the Congress held at Brighton in June, 1900. The number of affiliated societies of the union is now 33.

Mr. H. W. Woodman, Hon. Secretary of the Astronomical Section, having been obliged to resign owing to pressure of business, Mr. Alec Rabone has been appointed to fill the vacancy. The telescope has been visited by a number of members and others during the past session. Mr. P. E. Vizard gave a special lecture on the "November Meteors" on the 10th of November, 1899, illustrated by lantern slides.

Three courses of lectures on Astronomy have also been given by Mr. Vizard (*vide* p. 16).

The Council wish to record their indebtedness to Mr. Vizard for undertaking the above.

Mr. Alec Rabone, as Hon. Secretary of the Astronomical Section, has undertaken the duties of Curator of the Telescope, in place of Mr. H. O. Drake, who has resigned.

In April, 1900, the Council authorised the formation of a Photographic Section. Mr. F. Lubbock Jermyn, the first Hon. Secretary of the Section, has been obliged to resign, as he has left Hampstead, and Mr. Philip Joshua has undertaken the duties in his stead. The Section has held five indoor meetings, when papers have been read and demonstrations given on photographic subjects. Two outdoor meetings have also been held.

A Natural History Section has been formed for the primary object of working up the local fauna and flora. It is hoped that members who are willing and able to do

so will identify themselves with the Section, and help to make it a success.

It is proposed that meetings of the Section should be held from time to time for the discussion of zoological and kindred subjects, and not necessarily confined to local interests.

The Council, in conjunction with the Photographic Section, have acquired a projecting lantern and screen, for use at the meetings of the Society and of the Photographic Section.

In accordance with Rule 16, the Council beg to recommend that Colonel Heberden, R.A., J.P., the donor of the Telescope, and Mr. F. Lubbock Jermyn, who did good service on the Provisional Committee and in assisting the formation of the Photographic Section, be elected honorary members of the Society.



STATEMENT OF ACCOUNTS.

From 1st October, 1899, to 31st December, 1900.

RECEIPTS.

	£	s. d.
Special Donations towards Initial Expenses, Telescope, etc., as per List on next page ...	43	10 6
Subscriptions to 31st December, 1900 ...	39	12 6
Astronomical Section— Sale of Tickets for Lectures ...	£1	4 6
Donation for Special Expenses from Mr. P. E. Vizard ...	2	14 10
		3 19 4

PAYMENTS.

	£	s. d.
Observatory and Telescope :—Moving, Re-erecting, Repairs, Foundations, etc. ...	29	6 0
Platform, Cover, etc., for Telescope ...	4	11 6
Printing and Stationery— Syllabus, Rules, General and Special Notices, etc. ...	13	0 10
Rent of Lecture Rooms ...	8	9 6
Advertisements ...	9	14 0
Photographic Section— Sundry Expenses ...	6	1 3
Hire of Lantern, etc. ...	1	18 8
Astronomical Section— Special Expenses (repaid by Mr. P. E. Vizard) ...	2	14 10
Sundry Expenses per Hon. Secretary— Postage, Notices, and General ...	£7	5 11
Stationery ...	1	11 2
Sundries ...	2	4 2
		11 1 3
Balance in hand ...	£86	17 10
Ditto, Subscriptions, 1901 ...	£0	4 6
		9 8 0
Subscriptions for 1901 paid in advance ...	£96	10 4

E. COMPSON CRUMP, *Hon. Treasurer.*
14th January, 1901.

Examined and found correct,
F. LUBBOCK JERMYN, }
G. DANFORD THOMAS, M.D. } *Auditors.*

Special Donations to Observatory Fund, etc

Abbott, Rev. Dr. E. A.	1	1	0
Baily, Walter	1	11	6
Barratt, T. J.	1	1	0
Bartrum, C. O.	0	10	6
Blyth, E. K.	1	1	0
Bond, Edward, M.P.	1	1	0
Chandler, D. E. (the late)	1	1	0
Clarke, Henry, J.P., L.C.C.	2	2	0
Crump, E. C.	1	1	0
Figgis, S.	0	10	0
Gwynn, Edmund, M. D.	1	11	0
Harben, Sir Henry	3	3	0
Hepburn, James	1	1	0
Hoare, E. Brodie, M.P.	1	0	0
Hough, E.	0	10	6
Jealous, Mrs.	0	10	0
King, C. B.	0	10	6
King, Mrs. M. L.	1	0	0
Kinns, Rev. Dr.	0	5	0
Le Pla, Rev. Henry	0	10	6
Malcolm, W. F.	1	1	0
Mathieson, F. C. (the late)	3	3	0
Millar, H. E.	0	10	0
Payne, E. S.	1	11	6
Rickett, W. R., J.P.	3	3	0
Schröder, Walter	0	10	6
Stedall, Henry	2	2	0
Swain, Edward	0	10	6
Thomas, G. Danford, M.D.	2	2	0
Thornely, W.	2	0	0
Vizard, P. E.	1	1	0
Wells, Josiah	2	2	0
Wightman, C.	1	1	0
Wilson, Arthur	1	1	0
Womack, Fredk.	0	10	6

£43 10 6

Abstract of Proceedings.

1899—1900.

ORDINARY MEETINGS.

On the 1st December, 1899, the Rev. J. Kirkman, M.A., read a paper entitled "Remarks on Fungi," illustrated by specimens and diagrams. After dealing with the terminology of the subject, the earliest forms in the vegetable world—viz., lichens and fungi—were described. Various species found on the Heath and elsewhere in Hampstead were fully enumerated.

The Hon. Secretary exhibited a specimen of the Starling (*Sturnus vulgaris*) cinnamon variety, and a living specimen of an albino sparrow caught in Pond Street, Hampstead, and lent by Mr. Whiting for exhibition.

On the 12th January, 1900, owing to the sudden illness of Mr. E. R. Budden, F.C.S., F.I.C., etc., who was to have read a paper on "Odd Fish," Mr. E. C. Crump kindly read a paper entitled "The Science of Character."

The Hon. Secretary, on behalf of Mr. Whiting, exhibited a case of Lepidoptera illustrating protective mimicry among butterflies and moths, and also a specimen of the Kittiwake Gull (*Larus tridactylus*) caught alive near the Hampstead ponds. The Hon. Secretary also exhibited a number of objects under the microscope.

On the 2nd February, 1900, Mr. C. O. Bartrum, B.Sc., read a paper on "The Mechanics of the Bicycle

and of Bicycle Riding," illustrated by diagrams. The paper dealt with historical types of bicycles, the principle of the tension spoke wheel, tangent spoke, the friction of bearings and chain, air resistance, hollow tubes, etc. Pace-making, gearing, long and short cranks, were also touched upon.

A specimen of the Red-billed Chough (*Pyrrhocorax graculus*), shot near Hendon; a Common Teal, male, in winter plumage, from East Finchley; and a Dabchick from the Welsh Harp, were exhibited by the Hon. Secretary on behalf of Mr. Whiting.

On the 2nd March, 1900, Mr. E. C. Crump read a paper entitled "Nature's Forces," illustrated by experiments. The incompressibility of water, gravitation, centrifugal force, inertia, density of air, etc., were dealt with. The Hon. Secretary exhibited and made remarks upon a specimen of the Common Bittern (*Botaurus stellaris*), shot near the Welsh Harp on 8th December, 1899.

On the 6th April, 1900, Mr. Frederick Womack, M.B., B.Sc., gave a lecture on "Wireless Telegraphy: Its History and Development," illustrated by experiments and lantern slides. Sir W. H. Preece's tentative experiments and method of sending signals without overhead or submarine connecting wires, were first described. The so-called "ether-waves" were explained. Photographs of Ampère, Faraday, Henry, Clerk Maxwell, Lodge, Righi, Preece, Marconi, and others were shown, and the work that each had done in connection with wireless telegraphy was detailed. The lecturer described how ether waves had been measured, reflected and refracted, and how the oscillations were set up. By means of a Branley "coherer," a bell at the opposite

end of the room was rung, and a number of other experiments were given. Dr. Womack also gave demonstrations with a Rontgen Ray apparatus.

On behalf of Mr. Whiting, the Hon. Secretary exhibited and made remarks upon a specimen of the Common or Silver Eel, caught in No. 1 Pond, Hampstead Heath. The specimen measured 4 ft. 5 in., and weighed over 5 lbs. in the flesh.

On the 4th May, 1900, Dr. A. E. Tebb, M.D., B.S., D.P.H., read a paper on "Hypnotism." The paper dealt with the history of hypnotism, the methods of hypnotising subjects, the phenomenal characteristics of the hypnotic state, and the uses and limits of hypnotism. Many instances were given of its value from a medical point of view.

On the 2nd November, 1900, Mr. A. W. Stokes, F.C.S., F.I.C., gave a lecture on "Milk and Milk Products," illustrated by experiments. The lecturer stated that there were only two necessities to human life—air and milk. The large proportion of water contained by milk was shown by experiments. The uses to which casein has been placed in the way of special foods, such as "Protene," were explained. Milk sugar and its uses by homœopaths was alluded to. Mineral salts, methods of analysing milk, adulteration, preservatives and colouring matters, were fully dealt with. The relative value and constituents of beer and milk were compared, and various preparations for infants and invalids, such as peptonised and sterilised milk, were explained. As Public Analyst for Hampstead, Mr. Stokes stated that there was almost an entire absence of milk adulteration in Hampstead. Various specimens and preparations

were lent for exhibition by the Dairy Supply Company, the "Protene" Company, and Messrs. Welford & Sons. An interesting series of experiments illustrated the lecture.

On the 7th December, 1900, Mr. Frank Podmore, M.A., late Hon. Secretary of the Society for Psychical Research, read a paper on "The Sub-conscious Mind." The lecturer stated that the primitive metaphysical notion of consciousness as a simple homogeneous unity had been upset by the results of modern investigation. Consciousness is not simple; it is made up of heterogeneous elements of varying degrees of intensity, and it can only be called a unity if we exclude essential facts from our survey. He then gave an analysis of a typical state of consciousness, showing that the focal area would be occupied by the subject matter of the present lecture, social relationships, etc.; the penumbra would include the routine matters of life. The lecturer then proceeded to give illustrations of the operation of consciousness in abnormal conditions, giving instances of the resolution of problems and composing of poetry in dreams, the "inspired" speaking and writing of spirit mediums, the power of calculation and imagination, the enhanced muscular and sensory capacities exhibited in the trance. The view generally adopted by physiologists of the phenomena, a view in which the lecturer concurred, was that they illustrated the workings of a primitive state of consciousness; indeed, we could sometimes trace in such states reminiscences of early life and recovery of faculties disused from childhood. The rival hypothesis saw in these abnormal states the revelation of a wider and more exalted mental capacity; but the main foundations for the view—the phenomena of telepathy and clairvoyance—were at present insufficiently demonstrated.

Field Meetings.

On the 5th May, 1900, the first Summer Meeting was held at Kew Gardens, in connection with the Selborne Society. Professor Boulger, F.L.S., F.G.S., kindly conducted the party and gave demonstrations.

On Thursday, 7th June, 1900, by Lord Mansfield's kind permission, a ramble in Kenwood took place. Mr. J. E. Whiting and the Hon. Secretary conducted the party.

On the 28th July, 1900, a party of members and friends, numbering 31, visited the Rothschild Museum of Zoology at Tring, by kind permission of the Hon. Walter Rothschild, M.P. Dr. Hartert, director of the museum, kindly gave information and answered questions. Tea was provided at the Rose and Crown Hotel, Dr. Gwynn, a Vice-President, presiding. Afterwards the party drove to Aldbury and walked up into Ashridge Park, finally driving to Berkhamstead Station.

Owing to the Essex Field Club's Museum at Chingford being under rearrangement, and the exhibits in a transitional state, the meeting which was to have been held there in September did not take place.

Astronomical Section.

A course of five elementary lectures on Astronomy was given by Mr. P. E. Vizard, beginning on Monday, November 20th, 1899.

The subjects dealt with being—

Our position in the Universe ; the Difference between Planets and Fixed Stars ; the Members of our own Family—Mercury, Venus, Mars, the Asteroids, Jupiter, Saturn, Uranus, Neptune ; the Earth and her Movements—Real and Apparent Movements ; Daily Motion ; Day and Night ; Solar and Sidereal Day ; Annual Motion ; Signs of the Zodiac ; Obliquity of Ecliptic ; The Seasons ; the Celestial Sphere ; Face of the Sky and its Changes ; Appearance of the Sky at the Poles, at the Equator, etc.

A second course of five lectures was given by Mr. P. E. Vizard, beginning on Tuesday, 6th February, 1900, the subject being “The Moon, our Satellite and nearest Neighbour,” and included—

The Moon's Phases ; her Movements ; The Harvest Moon ; The Moon in relation to the Month and Week ; in relation to Eclipses, Solar and Lunar ; in relation to the Tides ; to the law of Gravitation ; Theories as to the Moon's Origin and Destiny, etc.

A third course of six lectures was given by Mr. P. E. Vizard, beginning on Monday, 12th November, 1900, the subject being “The New Astronomy ; or, The Spectroscope and its Marvellous Revelations,” and included—

Spectrum Analysis ; Movements of Stars ; Nebulæ and Star Clusters ; “Dark” Stars ; Variable and Double Stars ; Colours of Stars ; The Milky Way ; Celestial Photography ; Stellar Evolution and Dissolution, etc.

All the above lectures were well attended and much appreciated by the members. Each course was illustrated by models and diagrams, etc.

Photographic Section.

The following were the proceedings at the ordinary meetings of the Section during the past year.

1900.

April 27—Lecture: "Hints to Beginners." Rev. F. C. LAMBERT, M.A.

May 25—Developing and Printing Competition and Paper, "The History of Photography," Mr. F. L. JERMYN.

June 29—Ramble with the Camera (Out-door Meeting). Hampstead Heath.

July 28 (Saturday)—Excursion to Tring and Ashridge.

Oct. 26—Demonstration: "Ozotype" (The New Printing Process).
Mr. T. MANLY.

Nov. 30—Lantern Night: "Rambles in the British Isles."

Mr. LAWRENCE AMBROSE.

Dec. 28—Lecture: "Photographic Dodges."

Several meetings of an informal kind have also been held at the Hon. Secretary's house, by kind invitation.

Rules.

As amended and approved at the Annual Meeting, 25th January, 1901.

1. The Society shall be called the "HAMPSTEAD SCIENTIFIC SOCIETY," and shall have for its objects the promotion of the study of, and encouragement of a popular interest in, Astronomy, Natural History, Photography, and other branches of Science.

2. The Society shall consist of ordinary members, ladies and gentlemen, who shall pay a minimum Annual Subscription of Five Shillings, and of Honorary Members. All Subscriptions shall be due on the 1st January in each year.

3. The Officers of the Society shall consist of a President, Vice-Presidents, Honorary Secretary and Honorary Treasurer, and a Council of Members not exceeding fifteen, including the Honorary Secretaries of Sections.

4. The President, Officers, and Council shall be elected annually.

5. The business of the Society shall be conducted by the Officers and Council in general Committee, five to form a quorum. The Council may appoint an Executive Committee for the purpose of transacting and arranging details in connection with the general work of the Society. The Executive Committee to consist of not less than seven, of whom the Honorary Treasurer, Honorary Secretary, and Sectional Honorary Secretaries shall be ex officio members. The Council of the Society shall meet not less than twice in each year.

6. The Council shall prepare, and cause to be read at the Annual Meeting of Members, a Report on the affairs of the Society for the preceding year.

7. Two auditors shall be elected at the Annual Meeting, who shall audit the Treasurer's Accounts, and the Treasurer shall produce a Balance Sheet and Statement of Account at the Annual Meeting.

8. Candidates for membership shall be proposed by an existing member and seconded by one or more members. The election of members may take place at any ordinary meeting of the Society. The voting to be by show of hands, or by ballot, and when a majority of members present are in favour of the candidate he or she shall be duly elected.

9. No new member shall be entitled to any of the privileges of the Society until the Subscription for the current year shall have been paid.

10. Each member shall have the right of being present, and to vote, at all general meetings of the Society, and to propose candidates for membership. Each member shall also have the privilege of introducing two visitors to the ordinary and field meetings of the Society.

11. No member shall have the right of voting or be entitled to any of the advantages of the Society if his, or her, subscriptions shall be twelve months in arrears. If any member's subscription shall be in arrears for two years the Council shall have the power, in their discretion, to remove his or her name from the list of members.

12. The Annual General Meeting shall be held in January for the election, or re-election, of Officers for the year ensuing, to receive the Reports, and to transact any other business.

13. The Ordinary Meetings of the Society shall be held on the first Friday in the months of November, December, January, February, March, April, and May, or at such other date, and at such place, as may be determined by the Council.

14. At the written request to the Secretary of not less than ten members a Special Meeting may be summoned, and no other business may be transacted but that which was stated on the notice convening the meeting. Ten days notice in writing shall be given by the Secretary to each member of the Society; such notice to contain a copy of the requisition.

15. The telescope, and any instruments, books, slides, etc., in the possession of the Society shall be made available for members' use under such regulations as the Council may direct.

16. The Council shall have the power to recommend to the members any gentleman or lady, not a member of the Society, who may have contributed scientific papers, or otherwise benefited the Society, to be elected an Honorary Member; such election to be by show of hands.

17. Separate Sections of the Society may be formed, at the discretion of the Council, for the purpose of carrying on work in particular branches of Science. The Honorary Secretary of each Section shall be an ex officio member of the Council and Executive Committee.

18. No alteration or addition to these Rules shall be made except at the Annual General Meeting, or at a meeting specially convened for the purpose. Notice of any such proposed alteration shall be given to the Secretary at least fourteen days before the Annual Meeting.

List of Members.

1899—1900.

Members are particularly requested to notify any change of address to the Hon. Secretary of the Society, Elm House, Elm Row, Hampstead, N.W.

HONORARY MEMBERS :

Heberden, Colonel Henry, R.A., J.P. ... 28, Buckland Crescent, Hampstead, N.W.
Jermyn, F. Lubbock L. and S.W. Bank, Ltd., Bournemouth

ORDINARY MEMBERS :

Abbott, Rev. E. A., D.D. Wellside, Well Walk.
Adams, W. Coode, M.B.... ... 1, Eton Avenue
Ambrose, Lawrence Westover, West Heath
Anderson, Douglas 7, Pond Street
Angus, John "Yarra," Worsley Road
Avenell, George 56, Mansfield Road

BAILY, WALTER, M.A., F.Z.S. 4, Rosslyn Hill
(Vice-President)

Baker, C. W. 141, Haverstock Hill
Baker, F. W. 18, Maitland Park Villas
Bakewell, H. J. 60, South Hill Park
Bakewell, Miss M. 24, Nassington Road
Ball, Edward 4, Kemplay Road
Barratt, T. J. Bellmoor, Hampstead Heath
BARTRUM, C. O., B.Sc. (Council) ... 17, Denning Road
Bartrum, J. E. 17, Denning Road
Baynes, E. S. 50, South Hill Park
Baynes, Miss Mount View, 84, Fitzjohn's Avenue
Beach, Mrs. C. 11, Park Hill Road
BESANT, Sir WALTER, M.A., F.S.A. ... Frognal End, Frognal Gardens
(Vice-President)

Blakeman, H. S.... ... 37, Savernake Road
Blakeman, Mrs. 37, Savernake Road
Blyth, E. K. 6, Rosslyn Hill
BOND, EDWARD, M.A., M.P., L.C.C. ... Elm Bank, Windsor Terrace
(President, 1899—1900)

Borrelly, M. 2, Nassington Road
Boulting, William, L.R.C.P. Guyon House, 98, Heath Street
Bridger, Miss N.... 66, South Hill Park
Bryant, Mrs. Sophie 12, Gayton Crescent
Burnaby, Rev. S. B., M.A., F.R.A.S. ... Great Missenden, Bucks

Chandler, P. W. 5, Rosslyn Gardens
Chinnock, Miss 4, Worsley Road
Clarke, Henry, J.P. Cannon Hall
Clarke, Mrs. 56, Antrim Street
Clothier, Miss 26, Ellerdale Road
Colles, W. M., Junr. 16, Birchington Road, West Hampstead
CRUMP, E. COMPSON (Hon. Treasurer) ... 28, High Street
CUNNINGTON, C. W., D.P.H., M.R.C.S. 86, West End Lane
(Council)

Currie, Miss L. K. 14, Rona Road, Gospel Oak
Curwen, H. B. Windmill Hill

D'Ambrumenil, B.	...	...	...	6, Gainsborough Gardens
Day, J.R., M.D.	...	...	...	31, Netherhall Gardens
Deedes, Ven. Archdeacon Brook, M.A.	...	...	...	The Vicarage, Hampstead
Delf, Miss F. G.	...	...	...	90, Fitzjohns Avenue
Denton, J. J.	...	...	...	71, Ravenstone Road, Hendon, N.W.
Dolman, George	...	...	...	82, High Street
Drake, H. O.	...	...	...	35, Heath Street
Drysdale, Mrs.	...	...	...	Wick Hall, Radley, Berks.
Dudman, J., Junr.	...	...	...	56, Rosslyn Hill
Edgeworth, Professor F. J., M.A.	...	...	...	5, Mount Vernon
Faraday, Harold	...	...	...	15, Cannon Place
Faraday, R.	...	...	...	15, Cannon Place
Farmer, A. J.	...	...	...	26, Nassington Road
Farnell, Miss	...	...	...	Bayford House, Windsor Terrace
Fawcett, Miss	...	...	...	27, Thurlow Road
Field, Russell	...	...	...	Polpier, Mevagissey, Cornwall
Fielder, Mrs.	...	...	...	West Hill Lodge, Upper Frognal
Figgis, Samuel	...	...	...	Montagu Grove
Flook, Walter	...	...	...	Heathlea, Willow Road
Fox, A. Elliott	...	...	...	1, Eton Villas, South Hampstead
Fox, J. P. B.	...	...	...	Benlomond House, Downshire Hill
Fulleylove, Christopher	...	...	...	21, Church Row
GARNETT, WILLIAM, M.A., D.C.L.	...	...	...	50, Downshire Hill
(Council)				
Glanville, Miss	...	...	...	5, Belsize Park Gardens
Godden, William	...	...	...	38, Burrard Road, West Hampstead
Gould, Miss	...	...	...	61, Rosslyn Hill
Green, G. F.	...	...	...	41, Heathurst Road
Green, Miss J.	...	...	...	31, Tanza Road
Gundry, Joseph	...	...	...	158, Adelaide Road
GWYNN, EDMUND, M.D. (Vice-President)	...	...	...	Ash Down House, Rosslyn Hill
Hailes, C. M.	...	...	...	15, Heathurst Road
Hailston, Harold	...	...	...	91, Adelaide Road
Hallowes, S. M.	...	...	...	Heath Fern Lodge, Heathside
HARBEN, Sir HENRY, J.P., (Vice-President)	...	...	...	Seaford Lodge, Fellows Road
Harraden, Miss Gertrude	...	...	...	5, Cannon Place
Hastie, Peter	...	...	...	24, Park Hill Road
HAYNS, JOHN, F.Inst.J. (Council)	...	...	...	Campbell Cottage, 20, John Street
HEPBURN, JAMES (Council)	...	...	...	Hampstead Lodge, Marlborough Hill, N.W.
HOARE, E. BRODIE, M.A., M.P.	...	...	...	Limpsfield, Surrey
(Vice-President)				
Hoch, Benjamin	...	...	...	South Villa, Vale of Health
Hoch, Mrs. G.	...	...	...	South Villa, Vale of Health
Horton, Rev. R. F., M.A., D.D.	...	...	...	Chesils, Christchurch Road
Hough, E.	...	...	...	8, Eldon Road
Hounsham, Miss	...	...	...	Heathside, East Heath
Hunter, J. W.	...	...	...	41, Lancaster Road, South Hampstead
Jacoby, Martin, F.E.S.	...	...	...	7, Henstall Road, West Hampstead
James, Leonard	...	...	...	8, Lyndhurst Road
Jealous, Mrs.	...	...	...	33, Pond Street
Jessop, Edward, M.R.C.S., L.R.C.P.	...	...	...	81, Fitzjohns Avenue
Johnston, Mrs.	...	...	...	72, Fitzjohns Avenue
Jones, E. Vaughan	...	...	...	9, Well Walk
Jones, H. Sydney	...	...	...	39, Heathurst Road

Jones, V. Vaughan	...	...	...	9, Well Walk
JOSHUA, PHILIP (Photographic Secretary)				45, Belsize Avenue
Kapteyn, Albert	...	...	...	The Oaks, Arkwright Road
Kearne, Miss	...	...	...	1, Lyndhurst Gardens
Kearne, S. R.	...	...	...	1, Lyndhurst Gardens
Kellow, F. C.	...	...	...	80, Haverstock Hill
King, Henry	...	...	...	Leverton House, Pond Street
King, Mrs. M. L.	...	...	...	5, Willoughby Road
Kinns, Rev. Samuel, Ph.D., F.R.A.S.	...	...	...	182, Haverstock Hill
Kirkman, Rev. Joshua, M.A.	...	...	...	St. Stephen's Vicarage
Le Pla, Rev. Henry	...	...	...	28, South Hill Park
Lister, Miss	...	...	...	Upper Heath
Lloyd, H. G.	...	...	...	7, Gayton Crescent
Lown, H. F.	...	...	...	38, Netherhall Gardens
Lowson, Miss	...	...	...	26, Gondar Gardens, West Hampstead
Malcolm, W. F.	...	...	...	Birman House, Fitzjohns Avenue
Marshall, Miss O.	...	...	...	Burgh House, Well Walk
MARTIN, BASIL W., F.Z.S., M.B.O.U.				Elm House, Elm Row
(Hon. Secretary)				
Martin, Miss F.	...	...	...	3, Foley Avenue
Mayle, Sydney C.	...	...	...	70, High Street
Mellor, F. A.	...	...	...	62, Parliament Hill
Millar, H. E.	...	...	...	Heathdown, East Heath Road
Money, C. J.	...	...	...	3a, Perrins Court
Moore, Miss M. E.	...	...	...	5, Gayton Crescent
Mullins, E. G.	...	...	...	Ivy Mount, Arkwright Road
Neville, E. G.	...	...	...	50, Constantine Road
Nunn, S. T.	...	...	...	Mt. Ephraim, Minster Road, Brondesbury
Nunn, T. W.	...	...	...	Mt. Ephraim, Minster Road, Brondesbury
Oliver, J. B., F.E.S.	...	...	...	Elmleigh, Elm Row
Olliver, William	...	...	...	"Rothbury," Worsley Road
Olliver, Mrs.	...	...	...	"Rothbury," Worsley Road
Park, Mrs.	...	...	...	19, Primrose Hill Road
Pawling, Mrs. Sydney	...	...	...	55, Frogna1
PAYNE, E. S. (Council)	...	...	...	45, Rosslyn Hill
Peacock, W. Folds	...	...	...	31, Parliament Hill
Pearsall, H. D., M.Inst.C.E.	...	...	...	21, Parliament Hill
Perrins, Ronald	...	...	...	1, Kemplay Road
Phillips, E. B.	...	...	...	12, Circus Road, St. John's Wood
Pidcock, G.D., M.A., M.D., M.R.C.P.	...	...	...	74, Fitzjohns Avenue
Player, J. H.	...	...	...	16, Prince Arthur Road
Playne, Miss A. M.	...	...	...	27, Church Row
PODMORE, FRANK, M.A. (Vice-President)				32, Well Walk
Potter, H. G.	...	...	...	4, Gayton Crescent
Pridham, Miss	...	...	...	5, Squires Mount
Pridham, Miss A. J.	...	...	...	5, Squires Mount
Pridham, Cecil F.	...	...	...	2, The Wilderness
RABONE, ALEC (Astronomical Secretary)				Elm Lodge, Elm Row
Raisin, H. W.	...	...	...	41, Heathurst Road
Raisin, Mrs.	...	...	...	41, Heathurst Road
Raisin, W. F.	...	...	...	41, Heathurst Road
RAYNER, HENRY, M.D. (Council)				Upper Terrace House
Rickett, W. R., J.P.	...	...	...	Sunnyfield, West Heath

Riddle, Miss	...	...	...	61, Rosslyn Hill
Ridley, Miss J.	...	...	...	31, Daleham Gardens
Ryan, Miss E. M.	...	...	...	33, Stanley Gardens, Belsize Park
Rye, H.	...	...	...	3, Hampstead Mansions
Samson, John	...	...	...	42, Park Hill Road
Sargent, John	...	...	...	23, South Hill Park Gardens
Schooling, Mrs.	...	...	...	9, Rona Road, Gospel Oak
SCHRÖDER, WALTER (Council)	...	...	...	Telegraph Hill, West Heath
Seymour, Edward	...	...	...	4, Rothwell Road
Shepherd, A.	...	...	...	20, Lawn Road, Haverstock Hill
Simmons, C., M.A.	...	...	...	The School, Holly Hill
Smith, R. H.	...	...	...	20, Downside Crescent
Stedall, Henry	...	...	...	The Firs
Stevenson, Miss	...	...	...	26, Dartmouth Park Road
Stevenson, Miss	...	...	...	2, Prince Arthur Road
STOKES, A. W., F.C.S., F.I.C. (Council)	...	...	...	60, Parkhill Road
Strand, A. C., M.R.C.S., L.R.C.P.	...	...	...	34, Baker Street, W.
Strange, Miss	...	...	...	2, Belsize Avenue
Strange, R. Gordon, M.B., B.S.	...	...	...	2, Belsize Avenue
SWAIN, EDWARD (Council)	...	...	...	39, Nassington Road
Taylor, E. C., M.S., M.D., F.R.C.S.	...	...	...	Eland House, Rosslyn Hill
TEBB, A. E., M.D., B.S., D.P.H. (Council)	...	...	...	226, Finchley Road
Tebb, Mrs. A. E.	...	...	...	226, Finchley Road
TEMPLE, Rt. Hon. Sir RICHARD, Bart.	...	...	...	Heath Brow
P.C., G.C.S.I., C.I.E., D.C.L., F.R.S., (President 1901—2)	...	...	...
THOMAS, G. DANFORD, M.D.	...	...	...	Foley House
(Vice-President)	...	...	...
Thompson, A. H., M.A., M.B., B.C.	...	...	...	26, Ellerdale Road
M.R.C.S.	...	...	...
Thornely, Miss	...	...	...	High Close, Holford Road
Thornely, W.	...	...	...	High Close, Holford Road
Throver, Alfred	...	...	...	1, Chalcot Gardens
Tupman, Charles	...	...	...	20, Cotleigh Road, West Hampstead
VIZARD, P. E. (Vice-President)	...	...	...	3, Pilgrim's Lane
Vizard, W. G.	...	...	...	22, Downshire Hill
Wainwright, Shirley	...	...	...	Elm Lodge, Elm Row
Watkins, C. A.	...	...	...	77, Fitzjohns Avenue
Watson, H. V.	...	...	...	24, Willoughby Road
Wells, Josiah	...	...	...	1, Arkwright Road
Wesley, James H.	...	...	...	81, Fairbridge Road, Upper Holloway
Whiting, J. E.	...	...	...	41, Heath Street
Whittingham, C. J.	...	...	...	4, Kemplay Road
Wightman, C.	...	...	...	Conduit Lodge, Fitzjohns Avenue
Wilkins, Miss	...	...	...	85, Fitzjohns Avenue
WILLIAMS, J. W., M.R.C.S., L.R.C.P.	...	...	...	128, Mansfield Road, Gospel Oak
F.L.S. (Natural History Secretary)	...	...	...
WILSON, ARTHUR, B.A. (Vice-President)	...	...	...	"Wyldes," North End
WOMACK, FREDK., M.B., B.Sc. (Council)	...	...	...	2, Greencroft Gardens
Woodman, H. W.	...	...	...	31, Carlingford Road
Woodward, Frank	...	...	...	10, Church Row
Wright, E.B.	...	...	...	13a, Gardner Road
Wyld, W. A.	...	...	...	15, The Park, Ealing, W.
Yeld, Miss M.	...	...	...	21, Park Hill Road

Meetings of the Society.

JANUARY TO MAY, 1901.

The following papers will be read :—

- 4th January.—Notes on Some Odd Fish (illustrated).
E. R. BUDDEN, F.C.S., F.I.C., F.L.S., F.Z.S.
- 1st February.—A Glimpse at the Work of Lord Kelvin.
WILLIAM GARNETT, M.A., D.C.L.
- 1st March.—The Amœba and its Allies : a Study in the
Life Histories of Simple Organisms (illustrated).
J. W. WILLIAMS, M.R.C.S., L.R.C.P., F.L.S.
- 12th April.—The Form of the Earth and how it is being
brought about (illustrated).
C. O. BARTRUM, B.Sc.
- 3rd May.—The Science of Language ; with Special
Reference to English Philology.
JOHN SAMSON.
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The Meetings of the Society are held on the First Friday in each month from November to May, at the Hampstead Library, Prince Arthur Road, the Chair being taken at 8.30 p.m. precisely. Meetings of the Sections are also held at the Library.

BASIL W. MARTIN,
Hon. Secretary,
Elm House, Elm Row, Hampstead.

THE PRIORY PRESS, 20, St. John Square, E.C.

Wheldon.

25 NOV. 1916





Hampstead
Scientific Society

Report of the Council
and Proceedings



With a List of the Members.

For the Year 1901.

PRICE THREEPENCE.

Published for the Society by
S. C. MAYLE, at 70, HIGH STREET,
HAMPSTEAD, N.W.

MDCCCII.

List of Officers of the Hampstead Scientific Society.

FOR THE YEAR 1902.

Elected at the Annual Meeting, 31st January, 1902.

President.

The Right Hon. Sir RICHARD TEMPLE, Bart., G.C.S.I., D.C.L., F.R.S.

Vice-Presidents.

WALTER BAILY, M.A., F.Z.S.*	G. DANFORD THOMAS, M.D.
EDWARD BOND, M.A., M.P.	Prof. SILVANUS P. THOMPSON, D.Sc., F.R.S.
Sir HENRY HARBEN, J.P.	P. E. VIZARD.*
E. BRODIE HOARE, M.A.	Sir SAMUEL WILKS, Bart., M.D., LL.D., F.R.S.
Prof. W. M. FLINDERS PETRIE, D.C.L., LL.D., Ph.D.	ARTHUR WILSON, B.A.
FRANK PODMORE, M.A.	

Council.

(The President, Vice-Presidents, Hon. Treasurer and Hon. Secretaries, *ex officio*).

C. O. BARTRUM, B.Sc.*	HENRY RAYNER, M.D.
C. W. CUNNINGTON, M.R.C.S.	WALTER SCHRÖDER.
W. GARNETT, M.A., D.C.L.	A. W. STOKES, F.C.S., F.I.C.
JOHN HAYNS, F.J.I.	EDWARD SWAIN.
JAMES HEPBURN.	A. E. TEBB, M.D., B.S., D.P.H.
E. S. PAYNE.*	F. WOMACK, M.B., B.Sc.

Hon. Treasurer.*

E. COMPSON CRUMP,
L. & S.W. Bank, Ltd.
High Street, Hampstead.

Hon. Secretary.*

BASIL W. MARTIN, F.Z.S.
Elm House, Elm Row,
Hampstead.

ASTRONOMICAL SECTION:

Hon. Secretary *

ALEC RABONE,
Elm Lodge, Elm Row,
Hampstead.

PHOTOGRAPHIC SECTION:

Hon. Secretary *

J. P. BUSHE-FOX.
Ben Lomond House,
Downshire Hill, Hampstead.

NATURAL HISTORY SECTION.

Hon. Secretaries *

J. W. WILLIAMS, M.R.C.S., F.L.S.
128, Mansfield Road. N.W.

AND

BASIL W. MARTIN, F.Z.S., M.B.O.U.

*Executive Committee.



Report of the Council.

FOR THE YEAR 1901.

Read at the Annual Meeting, 31st January, 1902.

The Council begs to report that 59 new members have been elected during the past year, and that, allowing for resignations and removals, the number of members now stands at 231, consisting of 137 gentlemen and 64 ladies; a total increase of 39 members since the last report.

The Council has to record, with the deepest regret, the loss to the Society of one of its first Vice-Presidents, Sir Walter Besant, who died on the 9th June, 1901. The vacancy thus created was filled on November 1st, by the election of Professor Silvanus P. Thompson, D.Sc., F.R.S., as a Vice-President.*

The accounts of the Society have been duly audited for the twelve months ending 31st December, 1901. A Statement of Receipts and Expenditure appears on page 6.

It is hoped that those members who are able will contribute more than the minimum of five shillings, as the work carried on by the Society and the Sections entails considerable expenditure. The Treasurer gratefully reports that among the subscriptions of various amounts there were: 15 at £1 1s., 2 at £1, 7 at 10/6, 16 at 10/-, and 6 at 7/6; but for which the Society would

* On the eve of the Annual Meeting the Council heard with the deepest regret of the death of Dr. Edmund Gwynn, a Vice-President, who had been closely connected with the work of the Society since its formation.

not have paid its way. Dr. J. W. Williams has generously borne the expenses of printing and posting for the Natural History Section, amounting to about £2.

The attendance at the General and Sectional Meetings has been good.

The usual number of monthly meetings has been held and papers and lectures of general scientific interest have been given. Abstracts of the papers read and the proceedings at the meetings will be found accompanying this Report.

Four Out-door Meetings have taken place during the year (see page 15).

Dr. J. W. Williams attended the Congress of the South Eastern Union of Scientific Societies at Haslemere in June last as the delegate of the Society.

The attendance at the Congress was good and the proceedings were of great interest. The number of societies affiliated to the Union is 36.

Six meetings of the Astronomical Section have been held, and a course of Four Lectures on "Light" was given by Mr. P. E. Vizard in November (page 16). The Telescope has been visited by a number of members and others during the past season, and demonstrations have been given.

Four Meetings of the recently formed Natural History Section have been held, an account of which appears on page 17.

The Rev. F. A. Walker, D.D., F.L.S., has presented to the Society a collection of various orders of Insects, which fills a twelve drawer cabinet kindly given by Mr. Walter Baily.

It is hoped that the material for the publication of "The Fauna and Flora of Hampstead and its Neigh-

bourhood," will be sufficiently advanced for the first part to appear in the autumn of 1902. The General Editors are Mr. Basil W. Martin, F.Z.S., and Dr. J. W. Williams, F.L.S., with the assistance of Messrs. Hugh Findon, Montagu F. Hopson, F.E.S., C. S. Nicholson, F.L.S., the Rev. F. A. Walker, D.D., F.L.S., and Mr. James E. Whiting.

The Photographic Section has been affiliated to the Royal Photographic Society, and the advantages to be received are very great. The Section has held eleven Indoor Meetings and two Outdoor Meetings (see page 20). Mr. Philip Joshua having resigned the Secretaryship of the Section, Mr. J. P. Bushe-Fox has been appointed in his stead. The thanks of the Council are due to Mr. Joshua for the excellent work he has done during his term of office.

Members of the Society are asked to give their utmost possible support to the Hampstead Borough Council's scheme for a Public Museum and Art Gallery. It is impossible to lay too much emphasis upon the fact that a Museum (Natural History) would be an important adjunct to the scientific welfare of Hampstead. There is also urgent need for a suitable lecture-room for experimental lectures, with seats rising one above another, so that the audience may easily see the experiments; and a lecture table furnished with water, gas, and electricity, to enable the experiments to be properly performed.

STATEMENT OF ACCOUNTS.

For the year ending 31st December, 1901.

	RECEIPTS.		PAYMENTS.	
	£	s. d.		£
				s. d.
Balance from 1900	0	4	11	19
Subscriptions to 31st December, 1901,	59	8	9	6
paid in 1900, brought forward...	60	3	6	0
Paid in 1901	59	11	6	0
	£59	16	£2	11
			13	7
			6	6
			£73	3
			6	6
Subscriptions for 1902 paid in advance	13	7	15	19
			5	5
			£73	3
			6	6

Printing and Stationery—				
General and Sectional Notices, &c.	...	...	...	...
Report and Proceedings for 1900; Prospectus, &c.	...	...	...	...
Rent for Lecture Rooms—	...	...	...	...
General	£3	7	6	6
Astronomical Section	1	14	6	6
Natural History	0	16	0	0
Photographic	3	11	0	0
Advertisements	9	9	0	0
Conversazione Expenses	0	17	0	0
Photographic Section—	...	...	...	...
Annual Exhibition	3	17	9	9
Royal Photographic Society—	...	...	...	...
Affiliation Fee	1	1	0	0
Expenses in connection with Cabinet of Insects	1	8	0	0
Lime-light Apparatus for Lantern, &c.	2	0	0	0
Hon. Treasurer—	...	...	...	...
Postage and Cheque Book	0	11	8	8
Sundry Expenses per Hon. Secretary—	...	...	...	...
Postage, Notices and General	£9	19	9	9
Stationery	1	7	2	2
Addressing Notices	1	7	0	0
Sundries	2	11	9	9
	15	5	15	5
			£67	4
			1	1
Balance in hand	£2	11	15	19
Ditto Subscriptions, 1902	13	7	5	5
	£73	3	6	6

E. COMPTON CRUMP, *Hon. Treasurer.*

18th January, 1902.

Examined and found correct,

E. S. PAYNE,
WALTER SCHRÖDER. } *Auditors.*

Abstract of Proceedings.

1901.

GENERAL MEETINGS.

Friday, 4th January. Mr. Edward Bond, M.P., President, 1899—1900, in the Chair.

Mr. E. R. Budden, F.C.S., F.I.C., F.Z.S., read a paper entitled "Notes on some Odd Fish," (illustrated by diagrams).

The paper dealt chiefly with those curious fish which are known as *Dipnoi* or "Lung-breathers." They were shown to be virtually a sort of connecting link between fishes and amphibians and to lead up in the scale of creation towards Reptiles. Whereas the Frog is in its tadpole condition practically a fish, so far as regards its breathing arrangements, the *Dipnoi* maintain during their whole existence the main characteristics, as regards the purification of blood, of both fish and higher types of life. The various species of *Dipnoi* were referred to; namely, the *Lepidosiren* of South America; the mud-fish, *Protopterus*, of West Africa, and the Barramunda or *Ceratodus* of Australia. The curious habit of over-land progression of the latter was alluded to and reference made to the first living example in this country of the "walking-fish," now in the Zoological Society's Gardens. The structural peculiarities of the Lung Fishes were described and compared.

On Friday, 25th January, 1901, the Annual General Meeting was held under the presidency of Mr. Edward Bond, M.P.

Before the commencement of the business of the

evening the President said they were assembled under the shadow of a great grief which had come upon, not only the people of the British Empire, but upon thousands of men and women in other countries. He thought they must take that opportunity of paying a tribute of respect to the memory and the virtues of their beloved Queen. She had occupied a place in the world and in the hearts of her people unparalleled in history. She was indeed a Queen and a womanly woman, endowed with that touch of human nature which made the whole world kin.

The Report of the Council was read and adopted. The Rt. Hon. Sir Richard Temple, Bart., G.C.S.I., F.R.S., was elected President of the Society for 1902, and the Officers and Council were also elected.

Professor Silvanus P. Thompson, D.Sc., F.R.S., gave an address entitled "Lodestone Lore." He exhibited and explained the uses and properties of natural lodestones, and described the processes by which the present mariners' compasses were evolved from experiments made with lodestones. He also exhibited a number of old, rare and valuable books and manuscripts on the subject. An exhibition of microscopes and Natural History Specimens was on view after the Meeting.

Friday, the 1st February, 1901. The Rt. Hon. Sir Richard Temple, Bart., F.R.S., President, in the Chair. Dr. William Garnett, M.A., D.C.L., read a paper entitled "A Glimpse at the Work of Lord Kelvin." The lecturer mentioned the main incidents in the life of Lord Kelvin, whom he described as the foremost man of science in the world. Reference was made to his early researches which led to the general acceptance of the principles of conservation and dissipation of energy and the establishment of the history of thermo-

dynamics ; to his supreme services to submarine telegraphy by his investigations of the conditions of signalling by long cables ; and to his invention of the galvanometer and siphon recorder. Allusion was made to the revolution Lord Kelvin effected in the design of the ship's compass ; his sounding apparatus, in its application both to ocean soundings and to coasting work ; to the apparatus for electric measurement, which was to be found in nearly every important electric lighting station ; and to the changes he had effected in the study of physics, and the application of mathematics to the solution of physical problems.

Before the meeting dispersed the President spoke briefly of the naval pageant from Osborne to Portsmouth, an accompaniment of the removal of our beloved Queen Victoria on her last voyage. As a mark of respect the audience remained standing during the President's speech.

Friday, 1st March, 1901. The Rt. Hon. Sir Richard Temple, Bart., F.R.S., President, in the Chair. Dr. J. W. Williams, F.L.S., gave a lecture entitled, "The Amœba and its Allies ; a Study in the Life Histories of simple organisms."

The lecturer first dwelt on the nature of protoplasm, describing it as a flux of chemical materials, and not merely a mixture of chemical compounds, and in giving Huxley's definition of it as "the physical basis of Life," said that this definition did not lead us far, because we do not know what life is. After referring to the amœba's place in nature, by means of a genealogical tree, and showing that it is one of the simplest of living organisms, the lecturer went on to say that the amœba measured at most the one-hundredth part of an inch in diameter and was found at the bottom of the Hampstead Ponds and

elsewhere. Reference was made to the name *Proteus animalcule*, given to this animal by Rosenhof its discoverer, in 1755, because it continually changed its shape. The structure of the amœba was then alluded to, and the division of the body into ectosarc and endosarc described, the functions of the contractile vacuole and nucleus being specially referred to. The manner in which amœba moves was then described, namely by means of flowings-out of its protoplasm, termed pseudopodia. The methods of feeding, digestion and reproduction were fully explained and the manner of its respiration described. The reasons why amœba was to be considered an animal and not a plant were fully discussed. The similarity between the white corpuscles in our own blood to amœbæ was shown, and the various functions they perform were enumerated.

Reference was then made to the way in which the young frog loses its tail, and the laying down of the deer's antlers was fully explained by means of diagrams.

The peculiar life history of *Proto-myxa aurantiaca*, an orange coloured organism discovered by Professor Hæckel, was described, and reference made to several other organisms of a kindred nature.

The lecture was illustrated by excellent diagrams.

Friday, 12th April, 1901. Mr. E. S. Payne, Member of Council, in the Chair.

Mr. C. O. Bartrum, B.Sc., read a paper entitled, "The Form of the Earth, and how it is being brought about," illustrated by diagrammatic lantern slides, specially made for the lecture by himself.

The lecturer said that taking a survey of the solar system, there is seen to be an order and symmetry in the motions and positions of the Sun and his attendant

planets, which cannot be the result of chance and which demand an explanation. Kant and Laplace propounded the nebular hypothesis, according to which the solar system originated as a vast globular mass of hot rotating gas, from which as it cooled and contracted, rings were separated at its equator. The rings afterwards condensed into planets. The present condition and appearance of Jupiter may be taken as representing a stage through which our Earth passed ages ago. As the earth condensed in cooling, her rate of rotation would have increased according to the principle of the "conservation of the moment of momentum." Prof. G. H. Darwin's calculations of the earth's rotation were alluded to, and his theory of the tidal evolution of the earth-moon system explained. The earth, it was pointed out, was solid, as is shown by certain phenomena of the tides; by the velocity of propagation of earthquake vibrations; and, lately, by a study of latitude variations. There is reason to think, nevertheless, that she has adjusted her figure as her rotation has slowed.

The objects of the science of Geodesy and the term "geoid" were explained. The work of the ordnance survey under Colonel Clarke and the dimensions of the earth as given by him were alluded to. The "Clarke's Spheroid" was said to have a polar diameter of 7,900 miles and an equatorial diameter of 7,927 miles. It was pointed out that, according to Professor G. H. Darwin, the future of the earth-moon system will be that the day and month will become equal. The slowing of all motions by tidal and other friction and the equalisation of all temperatures are in accordance with the inexorable law of "dissipation of energy." The end of all things will be a state of absolute rest at a uniform temperature,

Friday, 3rd May, 1901. Mr. P. E. Vizard, a Vice-President, in the Chair.

Mrs. Samson read a paper prepared by her husband, Mr. John Samson, entitled "The Science of Language; with special reference to English Philology."

Mr. Samson, although present, was unable to deliver the lecture himself owing to a severe cold.

The paper began by referring to the interesting nature of the subject and to the fact that very few take the trouble to study the origin, development and science of Language, though everybody uses it. There is scarcely any more fascinating pursuit than that of tracing words to their origins, investigating their real significance and correct application, comparing them with those of other languages and observing what relationship exists between them. Words are to the philogenist what fossils are to a geologist, and their interpretation reveals a world of meaning concealed from the unlearned. Reference was made to the pleasures of travel being extended when the names of the places visited can be made to tell their stories. The various speculations of philosophers with regard to the origin of language and how certain sounds come to represent certain things and ideas were then discussed. The principal families of languages were then described and allusion made to the origin of the Aryan race, whose speech was the mother of nearly all the languages spoken in Europe, as well as many in Asia. The lecturer then spoke of another method of classifying languages: the morphological, that is, the various methods by which they have been elaborated from the simple roots. The divisions under this head were explained, viz. :—the isolating, agglutinative, polysynthetic, the inflectional, and the analytical classes of language. Allusion was made to the laws which have been found to pervade the growth, alter-

ation and decay of languages. The remainder of the lecture was occupied with a special study of the English Language. The origin, history and development of the Teutonic language was sketched, and reference made to the influence on our tongue of the Romans, Saxons, Normans and other races. History and Topography could be studied from Place-names, examples being given to illustrate this. Some curious instances of word derivations were given.

On Friday, 1st November, a very successful *Conversazione* was held at the rooms of the Hampstead Library. The Rt. Hon. Sir Richard Temple, Bart., F.R.S., delivered a Presidential Address to inaugurate the Session 1901—1902. He reviewed the work of the Society since its formation and touched upon the work of the new Session. The President urged the importance of the proposed Public Art Gallery and Museum as being likely to take the form of a Natural History Museum, and drew attention to the fast vanishing Fauna and Flora of Hampstead.

There was a good display of microscopes; a Röntgen Ray apparatus, kindly lent by Dr. Womack; exhibits by Members of the Photographic Section; natural history specimens, including a number of insects and botanical specimens; and Chinese curios by Mr. George Dolman; etc., etc.

Friday, 6th December, 1901. The Rt. Hon. Sir Richard Temple, Bart., F.R.S., President, in the Chair.

Dr. A. Hugh Thompson, M.A., M.D., read a paper entitled "The Human Eye," illustrated by diagrams and by the microscope. The lecturer remarked that the power of sight was dependent, not on the eye alone, but also on the brain, for if certain parts of the brain were injured,

partial or total blindness might result, though the eyes themselves might remain intact. The special function of the eye was twofold: first, to bring the rays of light from external objects to a focus on the retina, so that an image is formed there as on the photographic plate of a camera; second, to transfer the rays of light so focussed into nervous impulses, which are conveyed to the brain by means of the optic nerve. He then went on to explain the formation of images by means of the cornea, the crystalline lens and the aqueous and vitreous humours. The fact that these images are inverted, puzzles some people, who cannot understand how it is that we do not see everything upside down. This difficulty vanished when we realised that it is in the brain rather than in the eye that the power of vision resides. The functions of the iris were then described. Besides its importance from the æsthetic point of view, it was useful for increasing the accuracy with which near objects are focussed, and it protected the retina from too much light. The way in which the eye could be adapted at one time for near and at another for distant vision was then explained, the parts of the eye concerned being the crystalline lens with its suspensory ligament and the ciliary muscle. In youth the crystalline lens resembled a jelly enclosed in a bag, so that its shape could be readily altered by changes in pressure. But all through life it was becoming less like a jelly and more like a piece of glass, so that in middle life most people were obliged to have recourse to spectacles for near vision. Dr. Thompson next described the functions of the choroid and retina. The choroid coat being red, and the first non-transparent structure that was met with in looking through the pupil, the pupil itself would look red if sufficient light were thrown into it. The reason why, ordinarily, the pupil looked black was that the observer,

by means of his own head, generally cut off much of the illumination, so that to overcome this and to see into the back of the eye, a special instrument was necessary. The retina was the part of the eye where nervous impulses were generated, but exactly how this came about was not yet known. Its complicated structure was accurately known, but the meaning and use of the various layers were not yet understood. In the layer of rods and cones certain definite effects of light could be noted, and these had been described, but they did not serve to explain how the nervous impulses were generated. Lastly, the central portion of the retina known as the "yellow spot" was referred to as the region of most distinct vision, and the reason of this was explained to be that it was so much more richly supplied with nerve fibres than any other part of the retina.

Outdoor Meetings.

On Friday, 21st June, 1901, a ramble in Ken Wood took place by Lord Mansfield's kind permission. The party, which numbered about forty, was conducted by Mr. James E. Whiting and by the Hon. Secretary.

On Friday, 19th July, a meeting took place in the Zoological Society's Gardens, Regent's Park. Owing to the unavoidable absence of Mr. Bartlett, the superintendent, the party was conducted by Mr. Thomson, the assistant superintendent, and by the Hon. Secretary.

On Saturday, 14th September, a ramble in the neighbourhood of Northwood was conducted by Mr. James E. Whiting. The route taken was by way of

Northwood Common to Moor Park and Batchworth Heath.

On Saturday, 5th October, a visit was paid to the Museum of the Royal College of Surgeons, Lincolns Inn Fields. Prof. Charles Stewart, LL.D., F.R.S., the Conservator of the Museum, kindly conducted the party and pointed out and explained all the more salient features of the splendid collections. The Members are very much indebted to Prof. Stewart for the trouble he took, and for the most interesting and lucid lecture he gave, which lasted nearly two hours.

Astronomical Section.

A series of "Class Meetings," for the discussion of Astronomical matters, was held during the early part of the year. The meetings were presided over by Mr. P. E. Vizard, and the text book chosen was Lockyer's "Elementary Astronomy." Various subjects were discussed, such as Time and its measurements, Universal Gravitation, etc. Six meetings were held and a considerable amount of interest was shown by the members who attended.

A number of visits have been paid to the Society's Telescope during the year, the attendance register showing a total of 71. Owing to the inclement weather, several of the demonstrations arranged for could not take place, but a series of weekly visits was made during June and July. It is hoped that further regular meetings will be held during 1902.

A Course of Four Elementary Lectures on Light was given by Mr. P. E. Vizard, beginning on Monday, November 4th, the subjects dealt with being :—

Old Views ; Wave Theory of Light ; Light as the Messenger from the Stars ; Velocity of Light, measured by movements of Jupiter's Satellites ; Refraction of Light ; the Rainbow ; Mirage ; Refraction and Aberration of Light as regards the apparent position of Heavenly Bodies ; Reflection of Light ; Mirrors ; Albedo of Planets, &c. ; Colour ; the Spectrum ; Primary and Complementary Colours ; Colours of the Sky ; Colour-Blindness. The Telescope, its History and Construction ; Lenses ; the Human Eye ; Inversion of Images on the Retina ; Long and Short Sight ; Celestial Photography.

The Lectures, which were well attended, were illustrated by Diagrams and Experiments by Mr. Max Gysi. The last Lecture was illustrated by Lantern Slides.

Natural History Section.

Friday, 8th March, 1901. Mr. P. E. Vizard in the Chair. Exhibits of Cretaceous and Eocene fossils from the Isle of Wight were made by Mrs. Park. Mr. James E. Whiting showed and made some remarks upon a Blackheaded Gull (*Larus ridibundus*, Linn.) and a Kittiwake (*Rissa tridactyla*, Linn.). The former had been found frozen to the ice on one of the Highgate Ponds some few days previously. Mr. Martin Jacoby exhibited a female Sparrow Hawk (*Accipiter nisus*, Linn.), and made some remarks upon this bird.

Friday, 22nd March, 1901. Mr. George Avenell in the Chair. Mr. Martin Jacoby, F.E.S., gave a lecture on "The Insect World," and illustrated it with numerous exhibits from his own collection. He

gave an interesting account of the principal orders of insects and described the life-histories and structure of many of them.

Mr. James E. Whiting exhibited a female Pied Flycatcher (*Muscicapa atricapilla*, Linn), which had been caught on Mr. Tooley's farm, North End, and which is a rare bird in the Hampstead district.

Friday, 10th May, 1901. Mr. Basil W. Martin, F.Z.S., in the Chair. Dr. J. W. Williams, F.L.S., read a paper entitled "Animal Communities and their meaning." Communal life as illustrated by Bees, Ants, Termites, Wasps, etc., was fully dealt with.

Mr. Basil W. Martin, F.Z.S., M.B.O.U., read a short "Note on the Great Bustard" (*Otis tarda*, Linn.), in which he described that bird and the efforts that were being made to re-introduce it into East Anglia. On behalf of Mr. E. A. Adams, Mr. Martin exhibited and made remarks upon a collection of Lepidoptera from the London Parks. Nineteen species were enumerated and reference was made to the efforts of the London County Council to establish certain butterflies in the London Parks and other open spaces. Dr. Williams, on behalf of Mr. J. E. Whiting, exhibited a very fine specimen of the Badger (*Meles taxus*, Boddœrt). Mr. Martin exhibited a Willow Warbler (*Phylloscopus trochilus*, Linn.) from Hampstead.

Mr. Martin then made some remarks upon the remarkable new mammal, the Okapi, discovered by Sir Harry Johnston, K.C.B., in the Semliki Forests, Uganda Protectorate, and pointed out that until the specimens that were on the way to the British Museum arrived, no definite conclusion could be come to as to its affinities.

Friday, 13th December, 1901. Mr. Walter Baily, M.A., F.Z.S., in the Chair. Mr. A. W. Stokes, F.C.S., F.I.C., gave a lecture on "Parasites" (illustrated microscopically and otherwise). Mr. Stokes dealt mainly with external parasites and described the life-histories of several. He also described some internal parasites such as the Tape-worm, Trichina, Liver Fluke, etc.

Mr. Basil W. Martin, F.Z.S., M.B.O.U., exhibited, and made remarks upon, a skull of the Great Skua (*Megalestria catarrhactes*, Linn.) from Foula, Shetland Isles. Mr. H. B. Curwen related some of his experiences in Foula, in connection with the Great Skua.

Mr. Martin exhibited, on behalf of Mr. J. E. Whiting, a specimen of the Common Kingfisher (*Alcedo ispida*, Linn), obtained near the Ponds on Hampstead Heath, on 31st October, 1901.

Dr. J. W. Williams, F.L.S., F.R.M.S., exhibited, and made remarks upon, a *Phasmid* (species incog.) from Port Broughton, South Australia. Dr. Williams gave a short account of the *Mantidæ* and *Phasmidæ* (the Praying and Stick Insects).

Photographic Section.

(Affiliated to the Royal Photographic Society).

COMMITTEE FOR 1902 :

H. B. Curwen, P. Joshua, E. G. Neville, J. P. Bushe-Fox (Hon. Sec.)

The following were the proceedings at the meetings of this section during the past year :—

1901.

- Feb. 8.—Demonstration on Enlarging on Bromide Paper. Mr. J. P. BUSHE-FOX.
- Feb. 22.—Lecture on Elementary Photography. Mr. P. JOSHUA.
- Mar. 29.—Lecture : "A Tour Along the Roman Wall" (illustrated by Lantern Slides). Mr. R. H. FORSTER.
- May 24.—Lecture : "The Hand Camera." Mr. E. G. NEVILLE.
- June 28.—Out-door Meeting on Hampstead Heath.
- July 26.—Demonstration on Platinotype Printing, &c. The Platinotype Company afforded every assistance in the way of providing Prints, Chemicals, &c.
- Sept. 20.—Lecture : "Hints on Developing." Mr. P. Joshua.
- Oct. 25.—"Lantern Slide Making." Mr. P. JOSHUA.
- Nov. 13.—Lecture : "What can be done with a Hand Camera." Illustrated by Mr. C. P. GOERZ's Lantern Slides.
- Nov. 29.—Annual Exhibition. The Prize kindly given by Mr. R. H. Forster was awarded to Mr. P. Joshua by the votes of the members present.
- Dec. 11.—Lecture : "Practical Landscape Photography," illustrated by Mr. G. T. HARRIS's Lantern Slides.
- Dec. 20.—Lecture : "Hints to Beginners." Mr. P. JOSHUA.

There is now a circulating portfolio in connection with the section. At a recent meeting a resolution was adopted to the effect that the more experienced photographers of the Section should undertake to give practical instruction to the beginners on exposure and development.

Hampstead Scientific Society.

Rules.

As amended and approved at the Annual Meeting, 25th January, 1901.

1. The Society shall be called the "HAMPSTEAD SCIENTIFIC SOCIETY," and shall have for its objects the promotion of the study of, and encouragement of a popular interest in, Astronomy, Natural History, Photography, and other branches of Science.

2. The Society shall consist of ordinary members, ladies and gentlemen, who shall pay a minimum Annual Subscription of Five Shillings, and of Honorary Members. All Subscriptions shall be due on the 1st January in each year.

3. The Officers of the Society shall consist of a President, Vice-Presidents, Honorary Secretary and Honorary Treasurer, and a Council of Members not exceeding fifteen, including the Honorary Secretaries of Sections.

4. The President, Officers, and Council shall be elected annually.

5. The business of the Society shall be conducted by the Officers and Council in general Committee, five to form a quorum. The Council may appoint an Executive Committee for the purpose of transacting and arranging details in connection with the general work of the Society. The Executive Committee to consist of not less than seven, of whom the Honorary Treasurer, Honorary Secretary, and Sectional Honorary Secretaries shall be *ex officio* members. The Council of the Society shall meet not less than twice in each year.

6. The Council shall prepare, and cause to be read at the Annual Meeting of Members, a Report on the affairs of the Society for the preceding year.

7. Two auditors shall be elected at the Annual Meeting, who shall audit the Treasurer's Accounts, and the Treasurer shall produce a Balance Sheet and Statement of Account at the Annual Meeting.

8. Candidates for membership shall be proposed by an existing member and seconded by one or more members. The election of members may take place at any ordinary meeting of the Society. The voting to be by show of hands, or by ballot, and when a majority of members present are in favour of the candidate he or she shall be duly elected.

9. No new member shall be entitled to any of the privileges of the Society until the Subscription for the current year shall have been paid.

10. Each member shall have the right of being present, and to vote, at all general meetings of the Society, and to propose candidates for membership. Each member shall also have the privilege of introducing two visitors to the ordinary and field meetings of the Society.

11. No member shall have the right of voting or be entitled to any of the advantages of the Society if his, or her, subscriptions shall be twelve months in arrears. If any member's subscription shall be in arrears for two years the Council shall have the power, in its discretion, to remove his or her name from the list of members.

12. The Annual General Meeting shall be held in January for the election, or re-election, of Officers for the year ensuing, to receive the Reports, and to transact any other business.

13. The Ordinary Meetings of the Society shall be held on the first Friday in the months of November, December, January, February, March, April, and May, or at such other date, and at such place, as may be determined by the Council.

14. At the written request to the Secretary of not less than ten members a Special Meeting may be summoned, and no other business may be transacted but that which was stated on the notice convening the meeting. Ten days notice in writing shall be given by the Secretary to each member of the Society; such notice to contain a copy of the requisition.

15. The telescope, and any instruments, books, slides, &c., in the possession of the Society shall be made available for members' use under such regulations as the Council may direct.

16. The Council shall have the power to recommend to the members any gentleman or lady, not a member of the Society, who may have contributed scientific papers, or otherwise benefited the Society, to be elected an Honorary Member; such election to be by show of hands.

17. Separate Sections of the Society may be formed, at the discretion of the Council, for the purpose of carrying on work in particular branches of Science. The Honorary Secretary of each Section shall be an ex officio member of the Council and Executive Committee.

18. No alteration or addition to these Rules shall be made except at the Annual General Meeting, or at a meeting specially convened for the purpose. Notice of any such proposed alteration shall be given to the Secretary at least fourteen days before the Annual Meeting.

List of Members.

Corrected to 7th February, 1902.

Members are particularly requested to notify any change of address to the Hon. Secretary of the Society, Elm House, Elm Row, Hampstead, N.W.

HONORARY MEMBERS :

Heberden, Colonel Henry, R.A., J.P.	...	...	28, Buckland Crescent, Hampstead, N.W.
Jermyn, F. Lubbock	...	...	L. and S.W. Bank, Ltd., Bournemouth

ORDINARY MEMBERS :

Abbott, Rev. E. A., D.D.	...	...	Well Side, Well Walk
Adams, W. Coode, M.B.	...	...	1, Eton Avenue
Alcock, S. P.	...	...	5, Rudall Crescent
Ambrose, Lawrence	...	...	Westover, West Heath
Anderson, Douglas	...	...	7, Southend Road
Anderson, J. W., M.D.	...	...	Fawley House, Fawley Road
Ashworth, Percy H.	...	...	30, Heathurst Road
Aston, Lawrence	...	...	155, King Henry's Road
Avenell, George	...	...	56, Mansfield Road
Bailey, E. E. Eglinton	...	...	49, Downshire Hill
Bailey, Mrs. E. Eglinton	...	...	49, Downshire Hill
Baily, Miss	...	...	4, Rosslyn Hill
BAILY, WALTER, M.A., F.Z.S.	...	...	4, Rosslyn Hill
(Vice-President)			
Baker, F. H.	...	...	141, Haverstock Hill
Bakewell, H. J.	...	...	60, South Hill Park
Bakewell, Miss M.	...	...	24, Nassington Road
Barratt, T. J.	...	...	"Bellmoor," Hampstead Heath
Bartlett, R. D.	...	...	45, Adelaide Road
BARTRUM, C.O., B.Sc.	...	...	17, Denning Road
(Member of Council)			
Bartrum, Miss M. W.	...	...	Mitford House, Heath Street
Beach, Mrs. C.	...	...	11, Park Hill Road
Blyth, E. K.	...	...	6, Rosslyn Hill
Blyth, Miss E. T.	...	...	6, Rosslyn Hill
BOND, EDWARD, M.A., M.P.	...	...	Elm Bank, Windsor Terrace
(Vice-President)			
Borrelly, M.	...	...	2, Nassington Road
Boulting, William, L.R.C.P.	...	...	Guyon House, 98, Heath Street
Brand, Charles J.	...	...	27, Downside Crescent
Brand, Mrs. A. E.	...	...	27, Downside Crescent
Bridger, Miss N.	...	...	66, South Hill Park
Browne, Mrs.	...	...	Clifton Lodge, East Heath Road
Bryant, Mrs. Sophie, D.Sc.	...	...	12, Gayton Crescent
Bull, J. B.	...	...	Elmleigh, Elm Row
Butcher, Arthur	...	...	66, Rosslyn Hill
BUSHE-FOX, J. P. (Photographic Secretary)	...	...	Ben Lomond House, Downshire Hill
Challen, Frank	...	...	20, West Hill, Highgate
Chandler, P. W.	...	...	5, Rosslyn Gardens
Channing, F. C., F.Z.S.	...	...	62, Fellows Road
Champneys, Mrs.	...	...	Hall Oak, Frogual

Chegwidden, Ernest	...	...	...	45, Adelaide Road
Chinnock, Miss	...	...	...	4, Worsley Road
Clarke, Henry, J.P.	...	...	...	Cannon Hall
Clarke, Miss	...	...	...	56 Antrim Street
Clothier, Miss	...	...	...	26, Ellerdale Road
Coates, Joseph	...	...	...	13, Willoughby Road
Colles, W. M., Junr.	...	...	...	16, Birchington Road, West Hampstead
Cropper, J. C.	...	...	...	19, Arkwright Road
CRUMP, E. COMPSON (Hon. Treasurer)	...	...	...	28, High Street
Cuff, Miss	...	...	...	34, Lambolle Road
CUNNINGTON, C. W., M.R.C.S., D.P.H.	...	...	...	86, West End Lane
(Member of Council)				
Currie, Miss L. K.	...	...	...	14, Rona Road, Gospel Oak
Curwen, H. B.	...	...	...	Enfield House, Windmill Hill
D'Ambrumenil, B.	...	...	...	6, Gainsborough Gardens
Deedes, Rev. Brook, M.A.	...	...	...	The Vicarage, Hampstead
Delf, Miss F. G.	...	...	...	90, Fitzjohns Avenue
Denton, J. J.	...	...	...	1, Upton Villas, Wilberforce Road, West Hendon
Dolman, George	...	...	...	82, High Street
Drake, H. O.	...	...	...	35, Heath Street
Drysdale, Mrs.	...	...	...	Wick Hall, Radley, Berks.
Dudman, J., Junr.	...	...	...	56, Rosslyn Hill
Dunbar, J.	...	...	...	28, Constantine Road
Edgeworth, Professor F. Y., M.A., D.C.L.	...	...	...	5, Mount Vernon
Faraday, Harold	...	...	...	15, Cannon Place
Faraday, Paul	...	...	...	15, Cannon Place
Faraday, R.	...	...	...	15, Cannon Place
Farmer, A. J.	...	...	...	26, Nassington Road
Fawcett, Miss	...	...	...	27, Thurlow Road
Field, Russell	...	...	...	Polpier, Mevagissey, Cornwall
Fielder, Mrs.	...	...	...	West Hill Lodge, Upper Froggnal
Figgis, Samuel	...	...	...	Montague Grove, Froggnal
Findon, Hugh	...	...	...	58, Carleton Road, Tufnell Park, N.
Flight, W. C.	...	...	...	"Silvermere," Finchley Lane, Hendon
Flook, Walter	...	...	...	Heathlea, Willow Road
Forster, R. H.	...	...	...	36, Victoria Street, S.W.
Fox, A. Elliott	...	...	...	1, Eton Villas, South Hampstead
Frodsham, G. W.	...	...	...	11, Kingdon Road, West Hampstead
Fulleylove, Christopher	...	...	...	21, Church Row
GARNETT, WILLIAM, M.A., D.C.L.	...	...	...	50, Downshire Hill
(Member of Council)				
Gillman, A. R., F.Z.S.	...	...	...	5, Fellows Road
Glanville, Miss	...	...	...	5, Belsize Park Gardens
Godden, William	...	...	...	38, Burrard Road, West Hampstead
Goodchild, Herbert, M.B.O.U.	...	...	...	119, Gloucester Road, Regent's Park
Graham, H. Howgrave	...	...	...	12, Willow Road
Gundry, Joseph	...	...	...	158, Adelaide Road
Gysi, Max	...	...	...	3, Pilgrims Lane
Hailston, Harold	...	...	...	91, Adelaide Road
Hallowes, S. M.	...	...	...	Heath Fern Lodge, Heathside
Hannam, Miss Florence	...	...	...	6, Belsize Terrace

HARBEN, Sir HENRY, J.P. (Vice-President)	Seaford Lodge, Fellows Road
Harraden, Miss Gertrude	5, Cannon Place
Harvey, S. Smith	1, Marlborough Mansions, Cannon Hill
Hastie, Peter	24, Park Hill Road
HAYNS, JOHN, F. Inst. J.	Campbell Cottage, 20, John Street
(Member of Council)	
HEPBURN, JAMES (Member of Council) ...	Hampstead Lodge, Marlborough Hill, N.W.
HOARE, F. BRODIE, M.A.,	Limpsfield, Surrey
(Vice-President)	
Hoch, Benjamin	South Villa, Vale of Health
Hoch, Mrs. G.	South Villa, Vale of Health
Hopkins, A. E.,	35, Antrim Mansions
Hopson, Montagu F., F.E.S.	Grove House, 16, Rosslyn Hill
Hough, E.	8, Eldon Road
Hunter, J. W.	41, Lancaster Road, South Hampstead
Inglis, C. H.	15, Downside Crescent
Jacoby, Martin, F.E.S.	7, Hemstal Road, West Hampstead
James, Leonard, M.A.	8, Lyndhurst Road
James, Mrs.	8, Lyndhurst Road
Jealous, Mrs.	33, Pond Street
Jessop, Edward, M.R.C.S., L.R.C.P. ...	81, Fitzjohns Avenue
Jevons, Miss	Wedderburn Cottage, Wedderburn Road
Jevons, Miss H. W.	19, Chesterford Gardens
Johnston, Mrs. Charles	72, Fitzjohns Avenue
Jones, E. Vaughan	9, Well Walk
Jones, H. Sydney	39, Heathurst Road
Jones, V. Vaughan	9, Well Walk
Joshua, Philip	45, Belsize Avenue
Kearne, Miss	1, Lyndhurst Gardens
Kearne, S. R.	1, Lyndhurst Gardens
Kellow, F. C.	80, Haverstock Hill
Kinder, Miss, M.A.	44, Willow Road
King, Henry	Leverton House, Pond Street
King, Mrs. M. L.	5, Willoughby Road
Kinns, Rev. Samuel, Ph.D., F.R.A.S. ...	182, Haverstock Hill
Kirkman, Rev. Joshua, M.A.	St. Stephen's Vicarage, Thurlow Road
Lister, Miss	Upper Heath
Lown, H. F.	38, Netherhall Gardens
Malcolm, W. F.	Birnan House, Fitzjohns Avenue
March, Miss M.	74, Park Hill Road
Marks, K. J., F.R.M.S.	9, Randolph Gardens, N.W.
MARTIN, BASIL W., F.Z.S., M.B.O.U. ...	Elm House, Elm Row
(Hon. Secretary of the Society)	
Martin, Miss F.	3, Foley Avenue
Mayle, Sydney C.	70, High Street
Melliss, H.	30, Denning Road
Mellor, F. A.	62, Parliament Hill
Meredith, Mrs.	17, Buckingham Mansions, West End Lane, N.W.
Millar, Henry E.	Heathdown, East Heath Road
Milvain, Thomas, K.C. M.P.	17, Rutland Gate, S.W.
Money, C. J.	8a, Heath Street
Moore, Miss M. E.	5, Gayton Crescent
Moore, Mrs. Wm.	16, Denning Road

Moreno, Dr. Francisco, P., C.M.Z.S. (Director La Plata Museum)	...	Rathcote, Pattison Road
Mullins, E. G	... ..	Ivy Mount, Arkwright Road
Neville, E. G.	... ..	50, Constantine Road
Nicholson, C S., F.I..S.	... ..	22, Crouch Hall Road, Crouch End, N.
Nicholson, Miss M. E.	... ..	8, Hampstead Hill Mansions
Nunn, S. T.	... ..	Mt. Ephraim, Minster Road, Brondesbury
Nunn, T. W.	... ..	Mt. Ephraim, Minster Road, Brondesbury
Olliver, William	... ..	25, Worsley Road
Olliver, Mrs.	... ..	25, Worsley Road
Orr, Miss M. S.	... ..	30, Heathurst Road
Park, B. C. P.	... ..	19, Primrose Hill Road
Park, D. F., F.Z.S.	... ..	24, Belsize Crescent
Park, Mrs.	... ..	19, Primrose Hill Road
Pawling, Mrs. Sydney	... ..	55, Frognal ...
PAYNE, E. S. (Member of Council)	... ..	45, Rosslyn Hill
Peacock, W. Folds	... ..	31, Parliament Hill
Pearsall, H. D., M. Inst. C.E.	... ..	21, Parliament Hill
Pearse, D. C.	... ..	14, Willow Road
Perrins, Ronald	... ..	1, Kemplay Road
PETRIE, PROF. W. M. FLINDERS, D.C.L., LL.D., Ph.D. (Vice-President).	... ..	8. Well Road
Phillips, E. B.	... ..	12, Circus Road, St. John's Wood
Pidcock, G. D., M.A., M.D., M.R.C.P.	... ..	74, Fitzjohns Avenue
Player, J. H.	... ..	16, Prince Arthur Road
Playne, Miss A. M.	... ..	27, Church Row
PODMORE, FRANK, M.A. (Vice-President)	... ..	6, Holly Place
Prance, R. H.	... ..	29, Netherhall Gardens
Price, W.	... ..	39, Courthope Road
Pridham, Miss	... ..	5, Squires Mount
Pridham, Miss A. J.	... ..	5, Squires Mount
Pridham, Cecil F.	... ..	2, The Wilderness
RABONE, ALEC (Astronomical Secretary)	... ..	Elm Lodge, Elm Row
Raisin, H. W.	... ..	41, Heathurst Road
Raisin, Mrs.	... ..	41, Heathurst Road
Raisin, W. F.	... ..	41, Heathurst Road
Rangel, Miss	... ..	22, Downshire Hill
RAYNER, HENRY, M.D. (Member of Council)	... ..	Upper Terrace House
Rickett, W.R., J.P.	... ..	Sunnyfield, West Heath
Ridley, Miss J.	... ..	31, Daleham Gardens
Rodgers, H. J.	... ..	Elm Lodge, Elm Row
Ross, Miss Louisa	... ..	53, Agamemnon Road
Ryan, Miss E. M.	... ..	33, Stanley Gardens, Belsize Park
Rye, H.	... ..	9, Wentworth Mansions, John Street
Schooling, Mrs.	... ..	9, Rona Road, Gospel Oak
SCHRÖDER, WALTER (Member of Council)	... ..	Telegraph Hill, West Heath
Scott, Victor	... ..	Bank House, Willesden Green
Seymour, Edward	... ..	4, Rothwell Road
Simmons, C., M.A.	... ..	The School, Holly Hill
Stevenson, Miss	... ..	2, Prince Arthur Road
STOKES, A. W., F.C.S., F.I.C. (Member of Council)	... ..	60, Park Hill Road
Stokes, Mrs.	... ..	60, Park Hill Road

Strand, A. C., M.R.C.S., L.R.C.P.	...	34, Baker Street, W.
Strange, Miss	...	2, Belsize Avenue
Strange, R. Gordon, M.B., B.S.	...	2, Belsize Avenue
SWAIN, EDWARD (Member of Council)	...	5, Tanza Road
Swann, H. Kirke	...	42, Dalmeny Road, Tufnell Park, N.
Taylor, E. C., M.S., M.D., F.R.C.S.	...	Eland House, Rosslyn Hill
TEBB, A.E., M.D., B.S., D.P.H.	...	226, Finchley Road
(Member of Council)		
Tebb, Mrs. A. E.	...	226, Finchley Road
TEMPLE, The Rt. Hon. Sir RICHARD, Bart., G.C.S.I., C.I.E., D.C.L. (Oxon.) LL.D., (Cantab) F.R.S. (President)		Heath Brow, Hampstead Heath
THOMAS, G. DANFORD, M.D., F.Z.S.	...	20, Brunswick Square, W.C.
(Vice-President)		
Thompson, A. Hugh, M.A., M.D.	...	26, Ellerdale Road
Thompson, Mrs.	...	26, Ellerdale Road
THOMPSON, Professor SILVANUS P., D.Sc., F.R.S. (Vice-President)		Morland, Chislett Road, W. Hampstead
Thornely, Miss	...	High Close, Holford Road
Thornely, W.	...	High Close, Holford Road
Thrower, Alfred	...	1, Chalcot Gardens
Tupman, Charles	...	20, Cotleigh Road, West Hampstead
Venning, S. D.	...	172, Broadhurst Gardens
Viner, Miss F. A.	...	15 Thurlow Road
VIZARD, P. E. (Vice-President)	...	3, Pilgrim's Lane
Vizard, W. G.	...	22, Downshire Hill
Wainwright, Shirley	...	Elm Lodge, Elm Row
Walker, Rev. F. A., D.D., F.L.S., F.E.S.		Dun Mallard, Shoot-up-Hill, N.W.
Wallis, Ernest	...	Lested Lodge, Well Walk
Wallis, Mrs.	...	Lested Lodge, Well Walk
Watkins, C. A.	...	77, Fitzjohns Avenue
Wells, Josiah	...	1, Arkwright Road
Wesley, James H.	...	81, Fairbridge Road, Upper Holloway
Whiting, James E.	...	41, Heath Street
Whittingham, C. J.	...	4, Kemplay Road
Wightman, Charles	...	Conduit Lodge, Fitzjohns Avenue
Wilkins, Miss	...	1, Ellerdale Road
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(Vice-President)		
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Woodward, Frank	...	10, Church Row
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Yeld, Miss M.	...	21, Park Hill Road

Meetings of the Society.

JANUARY TO MAY, 1902.

The following Papers will be read at the General Meetings :—

- 3rd January.—Entomology of Iceland (illustrated with specimens). The Rev. F. A. Walker, D.D., F.L.S., F.E.S.
- 7th February.—The Zero of Temperature. Mr. Walter Baily, M.A.
- 7th March.—Insects at Home and Abroad (with exhibits). Mr. Martin Jacoby, F.E.S.
- 4th April.—The Nature of Scientific Methods. Dr. Wm. Boulting.
- 2nd May.—Bacteria and their Allies (illustrated by lantern slides). Dr. G. D. Pidcock, M.A., M.D., M.R.C.P.

The General Meetings of the Society are held on the first Friday in each month from November to May. The Natural History Section meets on the second Friday in the month, and the Photographic Section on the second Wednesday and fourth Friday. All these Meetings are held at the Hampstead Library, Prince Arthur Road, at 8.30 p.m.

Full particulars as to the Sections can be obtained from the respective Hon. Secretaries, and further particulars as to the general work of the Society, membership, etc., can be obtained from the undersigned.

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Hon. Secretary of the Society,
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