







198.

24 NOV 1904



NINTH ANNUAL REPORT

OF

THE NEW CROSS

Microscopical & Natural History

SOCIETY,

TOGETHER WITH THE

LIST OF MEMBERS,

RULES,

ABSTRACT OF PROCEEDINGS,

PRESIDENT'S ADDRESS, &c.

NOVEMBER, 1881.

LONDON :
MERRITT AND HATCHER, PRINTERS,
"THE KENTISH MERCURY" OFFICE, GREENWICH,
AND POULTRY, E.C.

pl. 198.

NINTH ANNUAL REPORT

OF

THE NEW CROSS

Microscopical & Natural History ^K

SOCIETY,

TOGETHER WITH THE



LIST OF MEMBERS,

RULES,

ABSTRACT OF PROCEEDINGS,

PRESIDENT'S ADDRESS, &c.

NOVEMBER, 1881.

LONDON :
MERRITT AND HATCHER, PRINTERS,
"THE KENTISH MERCURY" OFFICE, GREENWICH, S.E.,
AND FOULTRY, E.C.

B. M. N. H
General 2

Extract from Original Prospectus.

“THIS Society was established in accordance with a resolution
“passed at a Public Meeting, held on the 6th of November,
“1872, at the Commercial Rooms, Upper Lewisham Road ; the
“objects which it is intended to fulfil being :—

“FIRST.—To enable Microscopists, Students of Natural History, and others,
“residing in the neighbourhood of New Cross, Lewisham, and
“Deptford, to meet and interchange communications and speci-
“mens at stated intervals ; to exhibit objects of interest to Mem-
“bers and Visitors ; to promote the acquisition of skill in the use of
“the microscope, and an acquaintance with the manifold beauties
“of nature, which—invisible by unaided vision—are so mar-
“vellously revealed by our modern instruments ; for the formation
“of cabinets illustrating Geology, Entomology, and Mineralogy ;
“also a Cabinet and Herbarium for the use of Botanical Members.

“SECOND.—By Lectures and Papers, to afford instruction to the Members
“in the above subjects, and to develop a taste for the study of the
“same.

“THIRD.—By occasional Excursions into the Country round, to investigate
“the natural productions of the district and to procure fresh
“material for observation.”

OFFICERS AND COUNCIL.

Elected 10th November, 1881.

President.

JOHN HOLGATE.

Vice-Presidents.

MARTIN BURGESS.

W. G. RANGER, M.R.C.S.

F. T. TAYLER, M.D.

Council.

G. G. DANIEL.

W. DAWSON.

J. W. FOX.

FRANK HARRISSON.

J. RAMAGE.

H. W. ROBERTS, M.R.C.S.

J. H. STANLEY.

W. J. SPRATLING, B. Sc.,
F.G.S.

REV. R. GARDNER SMITH, F.L.S.

Hon. Curators.

G. P. BERRY.

| FRANK HARRISSON.

Hon. Librarian.

J. RAMAGE.

Hon. Secretary and Treasurer.

HENRY T. J. HART, 96, Albert Road, Peckham, S.E.

Field Excursion Committee.

G. P. BERRY.

FRANK HARRISSON.

F. J. GREGORY.

| T. J. NOTTAGE.

GEO. J. WIGHTMAN.

PAST PRESIDENTS.

				Elected.
J. JENNER WEIR, F.L.S., F.Z.S.	...	...	...	November, 1872.
" "	...	...	...	" 1873.
" "	...	...	...	" 1874.
FRANCIS T. TAYLER, M.D.	...	...	...	" 1875.
" "	...	...	...	" 1876.
W. G. RANGER, M.R.C.S.	...	...	...	" 1877.
" "	...	...	...	" 1878.
MARTIN BURGESS	...	...	...	" 1879.
" "	...	...	...	" 1880.

REPORT, 1880-1.

Having now arrived at the end of the Society's year, your Council would place this the Ninth Annual Report in your hands, congratulating the Members on the continued advance of the Society in the objects set forth in the original prospectus.

They regret that owing to many Members having left the neighbourhood, there is a decrease in the numbers of the Society. At the corresponding period of last year we had 95 members whilst we now have 89.

The following papers have been read at the respective meetings :—
1879.

Dec. 9. W. T. SUFFOLK, F.R.M.S., " Illuminating Apparatus (of Microscopes)."

1880.

Jan. 13. J. JENNER WEIR, F.L.S., F.Z.S., on " Some Aspects of the Evolution of Life."

Feb. 10. W. J. SPRATLING, B.Sc., F.G.S., " Stones."

Apl. 14. Hon. Secretary, " Electric Lighting."

May 12. W. J. SPRATLING, B.Sc., F.G.S., " Geology of the South of England."

June 9. Short Papers.

Oct. 13. W. G. RANGER, M.R.C.S., " Demonstration of the Anatomy of a Mammal."

Owing to the indisposition of Mr. HENRY CROUCH, his paper on " The Microscope, its popular and general uses," to be read on the 8th September, was unavoidably postponed.

The Council would take this opportunity of thanking those who have thus so ably contributed to the interests of the Society.

On March the 8th "A Special Exhibition Meeting" was held, when many interesting objects and specimens were shown; but your Council regret that the attendance did not warrant a continuation of them, as originally intended.

The Gossips have been generally successful. The Curator has regularly attended and displayed living objects forwarded by Mr. THOMAS BOLTON, of Birmingham.

The Library has been reorganized on a new basis, whereby many valuable works have been presented to the Society, and others have been lent for periods of three, six, or twelve months.

The Museum is also going forward, several donations having been made.

On occasions when weather permitted the several Excursions have been satisfactorily attended, and many objects of interest collected.

The Society has been well represented at the Soirées as follows :—

1879.

Nov. 24. Croydon Microscopical and Natural History Club.

Dec. 3. Greenwich Microscopical and Natural History Society.

1880.

Feb. 15. Erith and Belvedere Natural History and Scientific Society.

Feb. 24. Hackney Microscopical Society.

NEW CROSS MICROSCOPICAL AND NATURAL HISTORY SOCIETY.

Balance Sheet for year ending 31st October, 1881.

Dr.	RECEIPTS.	£ s. d.	Cr.	EXPENDITURE.	£ s. d.
	To Balance brought forward	... .. 2 1 6		By amount repaid late Treasurer	... .. 9 3 2
	„ Subscriptions received 1879-80	... .. 1 1 0		do. do.	... .. 2 10 0
	Do. 1880-81	31 19 6		„ „ Special Exhibition Meeting	... .. 11 13 2
	„ Sale of „Special Exhibition” Tickets	33 0 6		„ „ Printing 1879-80	... .. 3 15 11
	„ Amount due Treasurer	1 19 0		Do. 1880-81	... .. 8 6 6
		5 12 7½		Thomas Bolton, living objects	... .. 7 1 6
				„ Insurance of Cabinet, &c. (Fire)	... .. 15 8 0
				„ Hallkeeper	... .. 1 1 0
				„ Postages	... .. 0 5 6
				„ Sundries	... .. 2 14 0
					... .. 4 8 10½
					... .. 3 7 2
					<u>£42 13 7½</u>

CABINET FUND.

To total subscriptions received	£ s. d.	... .. 10 4 6	By cost of Cabinet, Cases, &c.	£ s. d.	... .. 5 19 0
			„ Balance in hand	... ..	4 5 6
					<u>£10 4 6</u>
ASSETS.					
To subscriptions overdue 1878-9	£ s. d.	1 1 0	LIABILITIES.		
Do. 1879-80	4 4 0				
Do. 1880-1	16 17 0				
Audited and found correct	22 2 0		By amount due Treasurer (in account)	£ s. d.	5 12 7½
			„ Donation to St. Peter's Hall	... ..	5 0 0
			„ Printing to date	... ..	8 14 0
					<u>£19 6 7½</u>
					ARTHUR S. VINCE, <i>Treasurer.</i>
					G. G. DANIEL, <i>Auditors.</i>

HONORARY MEMBERS.

Date of Election.

- Oct. 14, 1880. Allan, Col. John H., Lewisham High Road, S.E.
- Nov. 14, 1878. Habershon, W.G., F.R.I.B.A., M.A.I., Habbergham Manor, Belvedere.
- Oct. 14, 1880. Stewart, Chas., M.R.C.S., F.L.S., (*Secretary Royal Microscopical Society*), 25, Albert Square, Clapham Road, S.W.
- Suffolk, W. T., F.R.M.S., St. Faith's Road, Lower Norwood.
- Nov. 10, 1881. Weir, J. Jenner (*Past President*), 6, Haddo Villas, Blackheath.

LIST OF MEMBERS.

WITH LATEST CORRECTIONS.

Date of Election.

- Oct. 14, 1880. Allan, Col. John H., Lewisham High Road, S.E.
(*Hon. Member.*)
- Oct. 14, 1880. Alexander, Robt., 100, Brockley Road, S.E.
- Jan. 12, 1882. Bannister, J., jun., 77, Tyrwhitt Road, St. John's, S.E.
- May 13, 1880. Bearne, Capt. W. J., 2A, Alpha Road, New Cross, S.E.
- Mar. 11, 1880. Berry, G. Percy, (*Curator*) 159, Brockley Road, S.E.
- Feb. 16, 1876. Bing, Henry, Stockbury, Breakspears Road,
Brockley, S.E.
- Jan. 8, 1880. Bowan, Alfred L., M.R.C.S., L.R.C.P., 5, Lewisham
Road, Greenwich.
- June 10, 1880. Bridges, Fredk., Derwent Villa, Wickham Road, S.E.
Founder. Burgess, Martin (*Vice-President*), Fairmount,
Breakspears Road, S.E.
- Mar. 15, 1876. Cooke, W., Rosemont, Breakspears Road, S.E.
- Nov. 8, 1877. Daniel, G. G., The Laurels, Wickham Road, S.E.
- April 8, 1880. Dawson, W., London and County Bank, Deptford.
- Dec. 8, 1881. Dawson, W. B., London and County Bank, Deptford.
- Feb. 16, 1876. Dickinson, F. J., jun., Deptford Bridge, S.E.
- May 10, 1877. Dowsett, G. H., Egerton Road, Blackheath Road, S.E.
- June 12, 1878. Fox, Frederick, 1, Sanfield Terrace, Lewisham Road.
- Dec. 12, 1878. Fox, J. W., 102, Tyrwhitt Road, St. John's, S.E.
- Mar. 14, 1878. Gates, Rev. G., B. Sc. Lond., Greenwich.
- Feb. 10, 1881. Gibb, T. J., 1, Dartmouth Villas, Lewisham Rd., S.E.
- Feb. 18, 1874. Gill, R., Greenbank, Central Hill, Upper Norwood.
- Oct. 14, 1880. Gregory, F. J., 13, Clifton Road, St. John's, S.E.

Date of Election.

- May 13, 1880. Gregory, W., 98, Brockley Road, S.E.
- Nov. 14, 1880. Habershon, W. G., F.R.I.B.A., M.A.I., Habersham Manor, Belvedere (*Hon. Member*).
- May 13, 1880. Harrison, Thos., Cranfield Lodge, Wickham Road, Brockley, S.E.
- Jan. 10, 1878. Harrisson, Frank (*Curator*), 61, Amersham Road, New Cross.
- Nov. 13, 1879. Hart, Henry, T. J. (*Hon. Sec. and Treasurer*), 96, Albert Road, Peckham, S.E.
- Oct. 14, 1880. Harvey, W. L., 137, Mare Street, Hackney, E.
- Dec. 14, 1876. Heath, William, St. Bartholomew's Hospital, E.C.
- May 13, 1880. Higham, W. B., Rampore House, Breakspears Road.
- Dec. 12, 1878. Hills, Benjamin, Belmont Hill, Lee, S.E.
- Nov. 6, 1872. Holgate, John (*President*), 65, Tyrwhitt Road, St. John's, S.E.
- Jan. 12, 1882. Lamb, Alfred E., Apsley House, St. John's Street, Old Dover Road, Blackheath.
- May 8, 1879. Liddiard, J., 432, New Cross Road, S.E.
- Jan. 19, 1876. Loxley, Edward, Manor Road, New Cross, S.E.
- Mar. 15, 1877. Manger, W. T., 9, Gracechurch Street, E.C.
- Nov. 6, 1872. Marchant, T. W., M.A., Lewisham High Road, S.E.
- Nov. 14, 1878. Millikin, John, St. Thomas's Street, S.E.
- Oct. 14, 1880. Nottage, F. J., Mawbyns, Breakspears Road, S.E.
- Feb. 14, 1878. Palmer, Edward, 7, Tressillian Crescent, St. John's, S.E.
- May 12, 1881. Philip, Arnold, 42, Tyrwhitt Road, St. John's, S.E.
- May 13, 1880. Porter, George, 2, Manor Road, New Cross.
- June 10, 1880. Purvis, Thos., 55, Tyrwhitt Road, St. John's, S.E.
- Mar. 11, 1880. Ramage, J. (*Librarian*), 209, Brockley Road.
- Aug. 20, 1873. Ranger, W. G., M. R. C. S. (*Vice-President*), Meadowcroft, Catford, S.E.
- Sept. 9, 1880. Reed, Robert, J., 29, Wilson Road, Camberwell.
- Dec. 12, 1878. Roberts, H. W., M.R.C.S., L.S.A., Ashdown, Lewisham High Road, S.E.

Date of Election.

- Nov. 14, 1878. Rowley, W., 56, Tressillian Road, St. John's, S.E.
- May 8, 1879. Smith, Arthur, Brookwood House, Wickham Road, S.E.
- Mar. 14, 1878. Smith, Rev. R. Gardner, F.L.S., All Saints' Vicarage, Wickham Road, S.E.
- April 8, 1880. Spratling, W. J., B.Sc. F.G.S., 72, Wickham Road, S.E.
- Nov. 6, 1872. Stanley, J. H., Napoleon Cottage, Rushey Green, Catford, S.E.
- Oct. 14, 1880. Stewart, Charles, M.R.C.S., F.L.S. (*Secretary Royal Microscopical Society*), 25, Albert Square, Clapham Road, S.W. (*Hon. Member*).
- Nov. 6, 1872. Stodart, Malcolm, 35, Tyrwhitt Road, St. John's, S.E.
Suffolk, W. T., F.R.M.S., St. Faith's Road, Lower Norwood (*Hon. Member*).
- Nov. 6, 1872. Swan, E. A., 153, Breakspears Road, Brockley, S.E.
- April 19, 1876. Tayler, C., M.D., Tremorvah, Lewisham High Road, S.E.
- Nov. 6, 1872. Tayler, F. T., M.D. (*Vice-President*), Claremont Villa, Lewisham High Road, S.E.
- April 11, 1878. Thackrah, Rev. Samuel, M.A., Cleopatra Grove, Lee, S.E.
- Nov. 6, 1872. Thomas, J. H., F.R.G.S., 105, Shardeloes Road, New Cross.
- Nov. 11, 1880. Thomas, T. J., Bryn Towy House, Lewisham High Road, S.E.
- Jan. 13, 1881. Urwick, W. T., Clapham Common, S.W.
- Nov. 8, 1877. Vince, A. S., 5, Beaufort Gardens, Lewisham High Road, S.E.
- Nov. 6, 1872. Weir, J. Jenner, F.L.S., F.Z.S., 6, Haddo Villas, Blackheath, S.E. (*Hon. Member*).
- Mar. 15, 1876. Wetherell, Rev. J. C., M.A., Northbrook House, Wickham Road, S.E.

Date of Election.

- Feb. 18, 1874. White, W. N., Blackheath Road.
Apl. 14, 1881. Wightman, Geo. J., 33, Tresco Road, Nunhead, S.E.
Apl. 8, 1880. Wiseman, J. C., London Hospital.
Mar. 11, 1880. Woods, C. Ray, 19, Offord Road, Barnsbury.
Mar. 18, 1880. Zdzenicki, Louis, 373, New Cross Road.

NOTICE.

Members are requested to give the Hon. Secretary early information of any change of Residence.

RULES.



I.

That the Meetings of the NEW CROSS MICROSCOPICAL AND NATURAL HISTORY SOCIETY shall be held on the evening of the Second Thursday in every month (except the months of July and August), and on the Fourth Thursday of every month for Gossip, at Eight o'clock precisely, at such place as the Council may see fit to appoint.

II.

That the business of the Society shall be conducted by a President, three Vice-Presidents, Treasurer, Honorary Secretary (*ex officio*), and Council of nine other Members, who shall be elected by ballot at each Annual General Meeting; four to form a quorum. Vacancies to be filled up by the Council.

III.

That in the absence of the President and Vice-Presidents, the Members present at an ordinary Meeting of the Society shall elect a Chairman for that evening.

IV.

That every Candidate for Membership shall be proposed by two Members (one of whom, at least, shall have personal knowledge of him), who shall sign a certificate in recommendation of him, according to Form appended. The certificates shall be read from the Chair, and the Candidate therein recommended balloted for at the following Meeting. Three black balls to exclude.

V.

That the Annual Subscription shall be Ten Shillings and Sixpence, payable in advance on the 1st of November, and no person shall be entitled to the privileges of the Society until his Subscriptions shall have been paid.

VI.

That the Accounts of the Society shall be audited by two Members (not being Members of the Council), who shall be appointed at the Ordinary Meeting in October.

VII.

That the Annual Meeting of the Society shall be held, in the place of the Ordinary Meeting, on the evening of the second Thursday in November, at Eight o'clock, when the election of officers for the year ensuing shall take place, and the Balance Sheet, duly signed by the Auditors, and the Report of the Council on the affairs of the Society, shall be read.

VIII.

That lists of the gentlemen nominated by the Council as Officers for the ensuing year, be sent to each Member of the Society one week before the Annual General Meeting.

IX.

That at the Ordinary Meetings the following business shall be transacted :—The minutes of the preceding Meeting shall be read and confirmed ; Donations to the Society since the last meeting announced ; Certificates for new Members read ; Ballot for new Members taken ; and Papers read and discussed—after which, the Meeting shall resolve itself into a *Conversazione*.

X.

That each Member may introduce a Visitor at any Ordinary Meeting. Both Members and Visitors shall enter their names in a book to be kept for that purpose.

XI.

That no Member shall have been considered to have withdrawn from the Society until he shall have paid his arrears, and given a written notice to the Secretary of his intention to resign. Any Member being more than one year in arrear in his Subscription shall be liable to have his name erased from the list of Members by the Council.

XII.

That should it be thought desirable to erase the name of any Member from the Society, the same shall be done by a resolution of the Council. But an appeal may be made at the next Ordinary Meeting, which shall have power to confirm or rescind such resolution.

XIII.

That on any question on which a vote is to be taken, any two Members of the Society may demand, in writing, that the vote shall be taken by ballot, which method shall be decided by a show of hands.

XIV.

Any gentleman distinguished as a naturalist, and who has rendered service to the Society, may be proposed by the Council as an Honorary Member, and elected by ballot in the usual manner. The number of such Honorary Members at no time shall exceed ten.

XV.

That any alteration in the Rules of the Society can be made only at the Annual Meeting or at a Special Meeting convened for the purpose, and that notice of any such alteration shall be given by the Secretary at least Seven Days previous to such Meeting, and that a Special Meeting can at any time be convened on a requisition to the Council signed by at least six Members.

LIBRARY AND MUSEUM RULES.

I.

That a Register of all Books or Literature belonging to the Society be kept by the Librarian, provision being made in it for the Signature of Members to whom books are lent, and for bespeaking an engaged work when it is returned.

II.

Application for the loan of Books to be made to the Librarian after the ordinary business of the Meeting, the Member to sign the Register for its receipt and the Librarian to countersign for its return.

III.

Each volume may be kept until the Meeting following that upon which it is issued. Any Member detaining it for a longer period will be subject to a fine of sixpence for each detention.

IV.

Any Member damaging or losing a Book belonging to the Library, will be expected either to replace the work, or pay such sum as the Council may think fit.

V.

That a similar Register of all other objects be kept by the Curators, and in like manner, and subject to the same conditions. Applications for Microscopical Specimens to be made to one of the Hon. Curators.

FORM OF CERTIFICATE FOR ELECTION OF MEMBERS.

THE

New Cross Microscopical & Natural History Society.

Mr. _____

of _____

being desirous of becoming a member of this Society, we beg to recommend him for election.

Proposed _____ (personal knowledge),

Seconded _____

Read _____ 188

The Ballot will take place _____ 188

MEETINGS OF THE NEW CROSS MICROSCOPICAL
AND NATURAL HISTORY SOCIETY

AT THE

ST. PETER'S HALL, CRANFIELD ROAD, BROCKLEY.

1881.	THURSDAY,	November	...	...	...	...	—	...	24*
	"	December	...	...	...	...	8	...	22*
1882.	"	January	...	...	...	...	12	...	26*
	"	February	...	...	...	...	9	...	23*
	"	March	...	...	...	...	9	...	23*
	"	April	...	...	...	...	13	...	27*
	"	May	...	...	...	...	11	...	25*
	"	June	...	...	...	...	8	...	22*
	"	July	...	...	...	...	—	...	27*
	"	August	...	...	...	...	—	...	24*
	"	September	...	...	...	...	14	...	28*
	"	October	...	...	...	...	12	...	26*
	"	November	...	...	...	...	9	...	—

THE ORDINARY MEETINGS are held on the *Second Thursday* in each month, except July and August. Business commences at Eight o'clock p.m.

The GOSSIP NIGHTS (marked thus *) are held on the *Fourth Thursday*, at Eight o'clock, for the examination of specimens, etc., and exchange of information.

THE ANNUAL GENERAL MEETING will be held on Thursday, November 9th, 1882, at Eight o'clock, for the Election of Officers, and other business.

ABSTRACT OF PROCEEDINGS.

1880.

NOVEMBER 11.—Eighth Annual Meeting. The Report of the Council and Balance Sheet were read and adopted, followed by the election of officers for the ensuing year; to those retiring a hearty vote of thanks was proposed, specializing Mr. F. Stewart. Mr. Martin Burgess, the President, then read his Address, glancing at the present and future of the Society, followed by some remarks upon Microscopical work in general.

NOVEMBER 24.—About twelve members represented the Society at the Annual Soirée of the Croydon Microscopical and Natural History Club.

NOVEMBER 25.—The Ninth Gossip. Several objects, including the Bolton tubes, Cyclops, some diatoms, and various forms of Polycystina, were shown. The meeting was well attended, and conversation took place as to what methods should be adopted to further the advance of the Society in the year now commenced.

DECEMBER 8.—Soirée of the Greenwich Microscopical and Natural History Society, at which many members attended and exhibited.

DECEMBER 9.—Some valuable donations to the Library were announced. W. T. Suffolk, F.R.M.S., gave a paper "On Illuminating Apparatus (of Microscopes)." This was principally confined to that above the stage, many forms of which were explained thoroughly by the aid of blackboard drawings. The Rev. R. Gardner Smith, F.L.S., proposed a vote of thanks, and offered some remarks upon his own experience; this was seconded by W. J. Spratling, B. Sc., F.G.S., advising all who were interested in the subject to work out their theories and make trial of them. Mr. G. S. Dixon showed Polycystina by a special system of illumination.

DECEMBER 23.—Monthly Gossip. An interesting meeting with several exhibits, including: *Philodina Roseolo* (Bolton tube), *Asillus Vulgaris*, Hairs of *Deutzia Scabra*, and Injected Small Intestine (human).

1881.

JANUARY 13.—J. Jenner Weir, F.L.S., F.Z.S., gave a Lecture upon "Certain Aspects of the Evolution of Life, in conjunction with Darwin's Theory of Natural Selection." Commencing with the details of the Embryo, he explained and illustrated the various stages of animal life and growth by diagrams and charts, some of which were of great interest, and very minutely worked out. After the thanks of the meeting had been given, the Rev. R. Gardner Smith, F.L.S., spoke further in support of the vote, and on the subject in general, drawing attention to the difference in weight of brain in Man, and in the Chimpanzee and Ourang-outang, as proving the non-identity of these species.

The President announced his intention of holding a class for the study and mounting of microscopic objects.

The Soirées of the Erith and Belvedere and the Hackney Societies for the 15th and 24th proximo respectively were announced.

JANUARY 17.—First Mounting Class; some good preliminary work was done.

These meetings were continued at stated intervals until the illness of Mr. Burgess obliged him to suspend them, and they were not again resumed.

JANUARY 27.—The usual Gossip, at which the Curator exhibited *Cecistes Pilula* and *Argulus Foliaceus* (Bolton tubes). Pollen of Cedar of Lebanon and "Oak Spangles" were shown as specimens of work by the Mounting Class.

FEBRUARY 4.—The Society was represented by the Hon. Secretary at a Deputation of Natural History Clubs, which waited on the Metropolitan Board of Works to obtain the assistance of that body in opposing the scheme of running a railway through Epping Forest, as put forward by the Great Eastern Railway Company.

FEBRUARY 10.—After the usual business the President brought forward a proposal by which a more efficient Library could be ensured, viz., by obtaining books on loan from the Members for various periods, say 3, 6 or 12 months; the Librarian to have full charge of the same for the time being.

As the Hackney Soirée fell upon the Gossip night, it was announced that this meeting would be omitted. W. J. Spratling, B. Sc., F.G.S., then gave a very interesting paper on "Stones," illustrated by drawings and many specimens, to an unusually large attendance. This was well received, and a hearty vote of thanks accorded. The Paper dealt more particularly with Granite, Sand, and Limestones—those in most common use.

FEBRUARY 15.—The Society was represented at the Soirée of the Erith and Belvedere Natural History and Scientific Society.

FEBRUARY 24.—The First Soirée of the Hackney Microscopical Society, at which the New Cross was well represented, was held in the New Morley Hall.

MARCH 8.—"Special Exhibition Meeting" at St. Peter's Hall. This was confined to the Society and their friends, though the Secretaries of the other Clubs, usually present at the Conversaciones, were invited. It was intended that this should be taken as a test, and if successful similar meetings should be held frequently. Unfortunately the attendance, though good, was not what was expected.

The Lecture Hall was under the able superintendence of Mr. W. Gregory, who exhibited various scientific apparatus for Mr. J. H. Steward, of the Strand.

The Large Hall was well filled with exhibits. On the walls were hung several Physiological Diagrams, kindly lent by W. J. Spratling, B. Sc., F.G.S.; also Photographic Views, extending round the room above the tables, by Mr. Burls per Mr. A. S. Vince.

Cases of Coleoptera, Lepidoptera, etc., were shown by Messrs. R. H. F. Rippon, F. J. Gregory, C. H. Goodman, and Geo. T. Collingwood, who also exhibited polished Madrapores from South Devon; Fossils and Meteorites by Mr. F. J. Geogory; and a working model of the English Lever Watch (on an enlarged scale) by Mr. G. E. Powell.

Mr. Geo. Dannatt, Secretary of the Greenwich Society, showed Platino-cyanide of Yttrium, and Acetate of Copper with and without Polarized Light.

A number of Microscopes were upon the tables, in which were many objects of interest, amongst which are the following:—

Salicine, Scales of Fern (Polar), Foot and Sucker of *Dytiscus*, etc., Martin Burgess; Egg of Salmon (showing circulation), *Lophopus*, etc., Frank Harrison; Sec. Human Finger and Hair, F. J. Gregory; Vegetable Sections, A. S. Vince; *Hippuris Vulgaris* (Marestail), G. T. Collingwood; Bud of Lily (trans. sec.), F. Bridges; Copper Formate, G. P. Berry; Human Kidney, C. Ray Woods; *Chamœdora Hartwegii*, etc., A. Bliss; Crystallized Silver and an Electric Spark, R. Alexander; Sponge Spicules, E. A. Swan; Mites in

Figs, Fred. Fox ; Fossil Wood (ob. sec.), Geo. S. Dixon ; Melicerta, and other Rotifers, Geo. J. Wightman ; Dog's Tongue, J. Ramage ; Carbonate of Copper, E. A. Lewes ; Sulphate of Copper (in Gelatine), etc., F. J. Nottage ; Wall Lichen, Hon. Sec. ; Foraminifera, Society's Instrument.

Mr. R. H. F. Rippon gave several Pianoforte Selections.

The Hall had been well decorated under the management of the Subcommittee, the red cloth upon the tables being kindly lent by Mr. Fred J. Dickinson, jun., and the floral decorations by Mr. J. E. Child, of Malpas Road Nurseries, to whom thanks are due for their assistance.

MARCH 24.—A very well attended Gossip, at which several interesting objects were exhibited, including : Stephanoceros, Periwinkle Spawn, some fine Geological Slides, and a collection of Birds' Eggs.

APRIL 14.—A paper, by the Hon. Secretary, on "Electric Lighting," giving some of its former history and explaining the differences in the "Siemens," "Brush," and "British" systems. Mr. A. S. Vince, in moving a vote of thanks, quoted his experience in Paris, and gave some interesting information as to the effect of this light on Colours. An electric spark was shown under the Microscope.

APRIL 28.—Another well attended Gossip night, when there were many exhibits of interest.

MAY 12.—W. J. Spratling, B. Sc., F.G.S., delivered a Lecture upon the "Geology of the South of England;" this being thoroughly illustrated by numerous diagrams and blackboard drawings afforded a most instructive evening. A cordial vote of thanks was proposed, and carried unanimously, by one of the largest meetings of the session.

MAY 21.—The first Excursion of the season, under the charge of the Curator, Mr. Frank Harrison. Several ponds were visited in the neighbourhood of Blackheath and Morden College, and many specimens collected.

MAY 26.—The late Excursion added considerable interest to this Gossip evening, Tadpoles were in good condition for showing circulation, as also were some young sticklebacks ; many other objects were shown.

JUNE 9.—Mr. Frank Harrison practically explained the best methods for the exhibition of Pond Life ; this was followed by a paper upon the habits and mode of life of Rose Bees, by the Hon. Secretary ; and one on "Ciliary Motion," by the President. These received the thanks of the meeting, after which several experiments were made in illumination.

JUNE 18.—Excursion to Epping Forest, in the Loughton district, under the direction of Mr. F. Stewart. In consequence of the threatening weather the numbers were small, but some interesting finds were made.

JUNE 23.—The monthly Gossip.

JULY 16.—This day was fixed for a local Field Day, but, owing to prevalence of rain, no Members met the President, who had undertaken the conduct of the Excursion. Two, however, who had arranged to meet later, found more than sufficient to repay their trouble.

JULY 28.—An interesting (though small) Gossip, at which several objects were shown.

AUGUST 20.—Meet at Croydon (East) Station ; thence through Shirley, across the hills to Addington Park, permission to pass through which had been applied for and granted by His Grace the Archbishop of Canterbury. Some botanical specimens were found and examined, and many varieties of Pond Life discovered in the lake. Mr. Geo. S. Dixon undertook the guidance of the party.

AUGUST 25.—At this Gossip some water from Addington was exhibited.

SEPTEMBER 8.—A letter was read from Mr. Henry Crouch, of Barbican, saying that he was not well enough to fulfil his engagement to give a Lecture on this evening. The Ordinary Business was gone through, followed by some conversation as to additions and improvements to the Society.

SEPTEMBER 17.—Excursion, under the guidance of the President, to Hayes and Keston Commons. Met with several members of the Queckett Microscopical Club, and, with them, did much good work in the collection of objects from this rich neighbourhood.

SEPTEMBER 22.—This Gossip well kept up the interest aroused at the Keston Excursion, and many specimens of life from those waters were shown. The evening was one of much general interest.

OCTOBER 13.—The 100th Ordinary Meeting. A donation to the Museum of a number of British Shells by W. G. Ranger, M.R.C.S., was announced; also the proceedings and transactions of the Croydon Society, 1878-81.

Dr. Ranger then proceeded to demonstrate the "Anatomy of a Mammal," choosing for his subject a young Rabbit, commencing with the abdomen and the various organs therein contained. After following the vertebral column and noticing the parts associated, the diaphragm was cut through, showing the heart, lungs, etc.; after dissecting and explaining the nerves, muscles, etc., in the neck and chest, the brain was gradually removed and the various sets of nerves pointed out and their functions named.

A hearty vote of thanks was accorded to the Vice-President for his trouble in preparing and giving so clear a demonstration. In the course of reply, the Lecturer made some drawings of the kidney, and also explained the growth of teeth in such animals.

The 12th Annual Soirée of the Croydon Microscopical Club was announced for the 23rd November.

OCTOBER 15th.—On this, the closing Field Day of the Session, the members met in the chalk pits of the Charlton Chalk and Ballast Company, admission to which had been allowed by the kindness of the Secretary of the Works: W. J. Spratling, B. Sc., F.G.S., having kindly consented to act as guide. After gaining a general idea of the pit strata and that of the surrounding land, the party proceeded to a closer acquaintance with the different beds, finding several echinus, sharks' teeth, and other fossil specimens in examining the workings.

OCTOBER 27th.—As is usual, the specimens collected on the excursion immediately proceeding, occupied some time and conversation at the Gossip, though in a different line to that generally followed, namely, Pond-life, but after the two geological papers, such little breaks might be made productive of good in preventing the Society working too much in one groove.

The Library has been reorganised and now contains, besides some valuable presentations, a number of useful books on loan for various periods; these are all under the care of the Hon. Librarian instead of heretofore. The Curators have also had some further contributions placed in their hands.

The Curator still exhibits the "Bolton tubes" at the Gossips, which have proved very satisfactory.

PRESIDENT'S ADDRESS.

GENTLEMEN,

When, at our Annual Meeting, I heard my name proposed as your future President, I can hardly tell whether surprise or consternation was the prevailing feeling in my mind. The objections I raised (and my *nolo episcopari* was perfectly genuine and unfeigned) did not proceed from any want of appreciation of the honour you afterwards conferred upon me by your decision, but by a grave doubt of my own fitness for the office ; and I cannot but feel that your choice was made more out of respect for my age than to any service I had rendered, or could be expected to render to your society. With that view of the case in my mind, it has occurred to me that I might be permitted to depart from the usual course, and, instead of a technical Address on the immediate objects of your society, to endeavour, on this my first attempt to put my thoughts on paper to address an audience, to place before you the great improvements in Science, and their application to the necessities and comforts of life, that my 70 years have allowed me to witness ; and, as I have seen in my boyhood the waterworks under Old London Bridge in action, and, a few years later, stood on the bed of the river, where one of the centre piers of the new one rests, I shall seem to the young men among us as taking them back almost to the dark ages—and dark enough in one sense they indeed were—when the feeble glimmer of a few oil lamps in the streets and shop windows could scarcely penetrate the obscurity of night. Gas was then only just struggling into existence ; and the Paterfamilias of the day wrote letters to the public press in deprecation of a scheme that was to bring fire and pestilence to his very door, and a caricature which I possess makes the expected explosion proceed, not from an

escape of gas into the apartment, but from the burner itself bursting into fragments like a shell, and scattering destruction around. Electricity, now destined, partially at least, to supersede it, was but a toy on the lecture table in the shape of a glass cylinder and a Leyden jar; and even when, years after, the law of induced magnetism and secondary currents was discovered, their only effect for a long time was to fill the shop windows of instrument makers with vermilion coloured revolving magnets; till, by slow degrees, the powerful dynamic machines came into use as means of light, and, perhaps, power.

The means of conveyance were only an occasional stage coach or the clumsy hackney, which seemed then sufficient for the want of the time; but what else than steam and the iron road could bring to the centre of industry and business the crowds that now throng the City in the day, to disappear at night—absorbed by the continually expanding area of the Metropolis? Nearly 50 years ago I saw the first model omnibus paraded between the Bank of England and the Royal Exchange for the inspection of its future customers. Stand now on the refuge between Princes Street and the Mansion House, and look around you!

It seems to me that it is in Chemical Science the greatest comparative advance has been made, because—as in Mathematics, Euclid is still an authority, and the laws of Mechanics must have been known to the builders of the Pyramids, and Astronomy to the Chaldeans—Real Chemistry is comparatively modern, though on the collapse of Alchemy some few facts remained, I might almost say stumbled upon, by the searchers after the Unattainable; and even in a Dictionary of Chemistry, translated from the French, which showed a marked progress, many pages are devoted to an article on “Phlogiston,” that convenient principle by which the chemists of that day accounted for everything they could not understand.

It is in the spirit of investigation which governs the researches of our day, that such a marked progress is manifested. We cannot imagine Davy, Faraday, Huxley or Tyndal, when they observed that iron, for instance, changed its formation by exposure to the air,

moisture, or fire, would take for granted it had parted with something, that is to say, its "Phlogiston" without at least testing it by experiment, when they would discover that it had gained rather than lost by the change.

This error as to the result of oxidization of metals is the more remarkable, as in the same work it is notified that in calcining chalk into lime, a loss of weight of about one-half was sustained by the process, which they properly accounted for, in parting with the water and gas—or, as they called it, fixed air—it contained.

But it may be that the vision of Alchemy was not such a baseless fabric after all, for as the chemist in the past believed in four elements—Earth, Air, Fire and Water—which were soon proved to be compounds, so the forty or fifty by which we have replaced them may in their turn meet with the same fate, and one now so-called element resolved would shake faith in all the rest, and the Unity of Matter may be the theory of the future. Be this as it may, what beneficial results could be expected from the realisation of the hopes of alchemists compared with what modern chemistry has done for the good of mankind. Our alchemists have compelled the Flora of the primæval world to live again in colour and perfume. In advanced medical knowledge, improved sanitary arrangements, and the detection of adulteration they have found the true "Elixer of life;" and as to the "Philosopher's Stone," what would the transmutation of lead into gold be in comparison to the conversion of iron into steel by the Bessemer process!

From what we have seen of the past, what may we not expect of the future, but that the men of our time may find worthy successors in those who are to come, and that the advancing tide of knowledge may still press forward till the limits of human research be reached, and Science say to hervotaries: "Thus far shall you go and no further," but not for ever, for we may well hope that the progressive intellect of man, so widely distinct from the mere instinct of the animal, shall not die with him, and that as the soul is immortal so shall be the mind, and that a future state be one of increased and increasing knowledge, with higher capacities and unlimited range of observation,

with the boundless Universe for its field, and the power of the Great Creator for its theme, of which the veiling of the Angels' faces by their wings may be but a type.

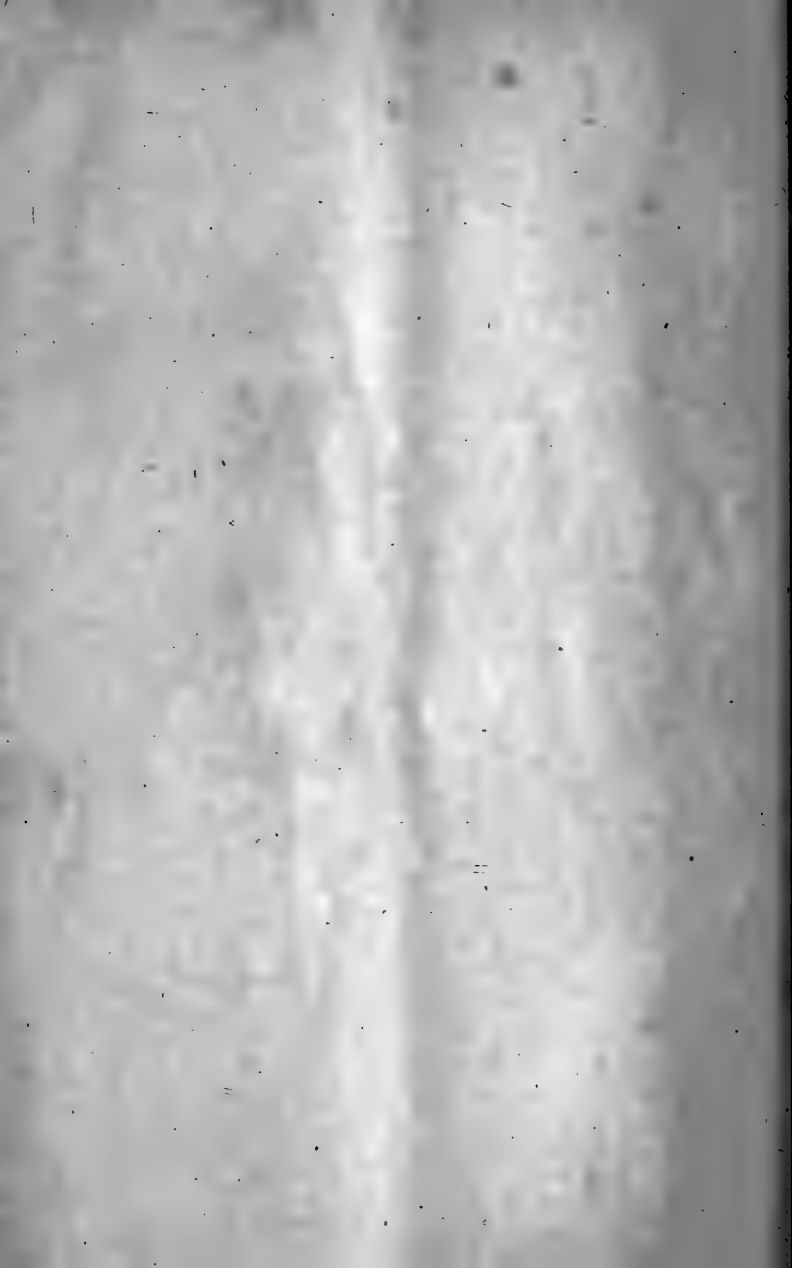
In conclusion, while on this subject, I would endeavour to recall to my memory and give you the substance of what I once read as a translation from a German work. God called up to Him a man saying : " Come thou hither and see the glory of My works ; " and to the Ministers who stood around His throne, He said : " Strip him from his robes of flesh, cleanse his vision, put new breath into his nostrils, only touch not with any change his human heart, that heart which fears and trembles." It was done, and with a mighty Angel for his guide, the man passed on through space, amidst worlds innumerable, through darkness and through light, until at last the man stopped and wept, saying : " Angel, I can go no further ; for the spirit of man acheth with this infinity. Is there no end to the Universe of God ? " And the Angel answered : " Neither is there any beginning."

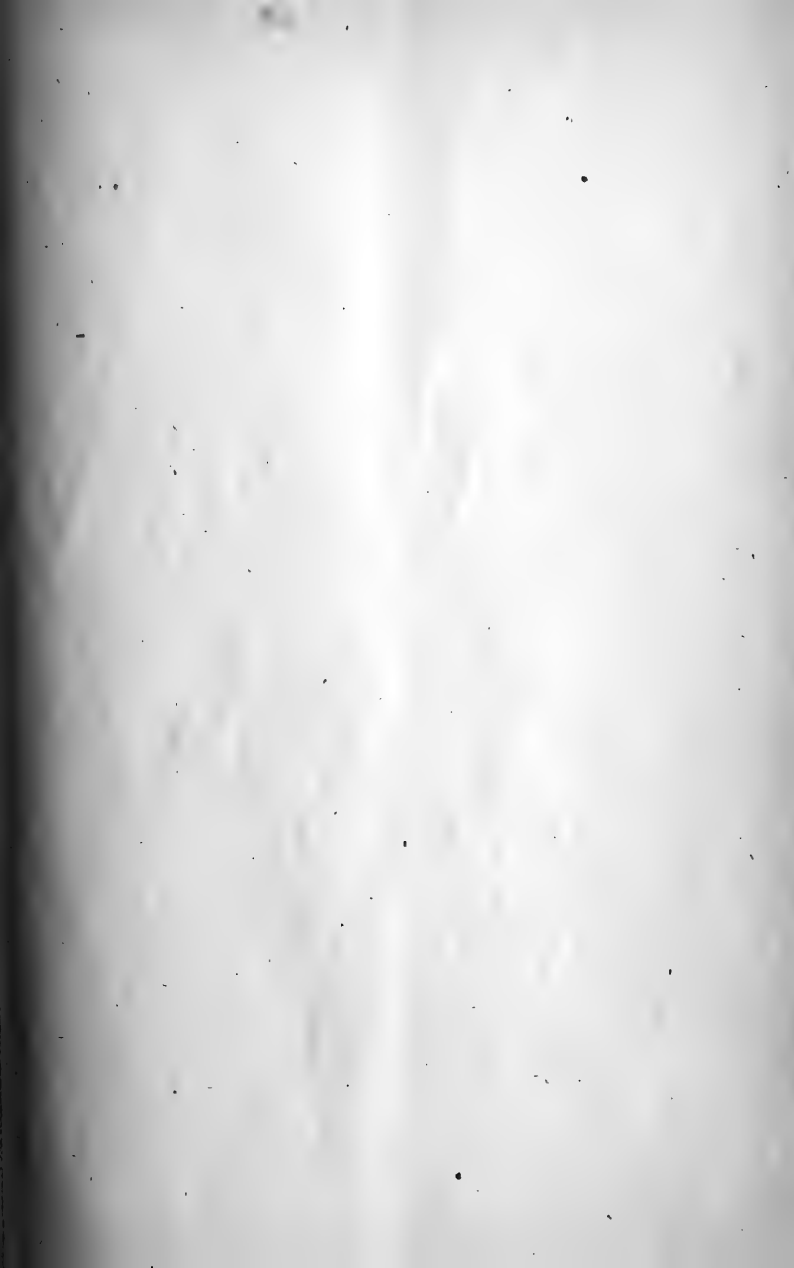


PRESENTED

14 NOV.1904







*Aug M & Nat Hist Club with
Secretary Compto.*

TWELFTH ANNUAL REPORT

OF THE

NEW CROSS



Microscopical and Natural History

→ † † SOCIETY, † † ←

TOGETHER WITH

THE † PRESIDENT'S † ADDRESS,

LIST OF MEMBERS,

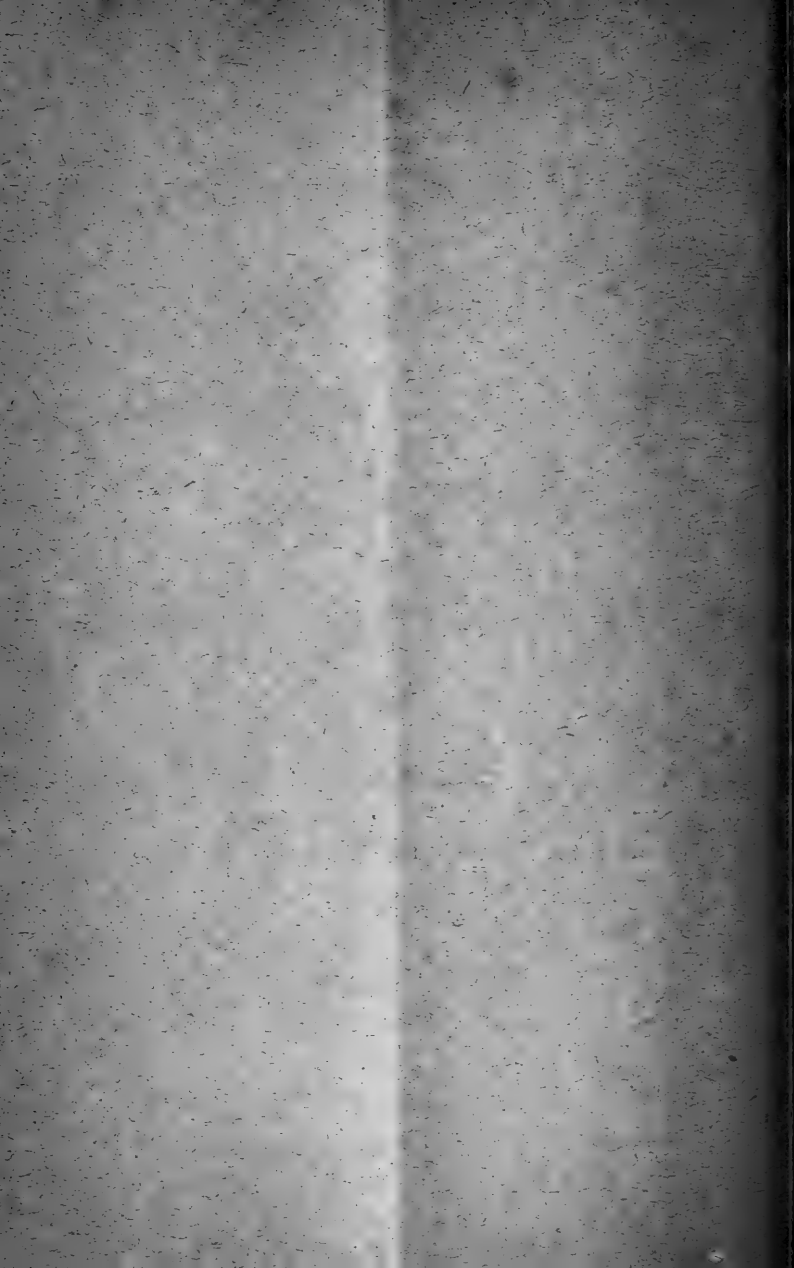
RULES,

ABSTRACT OF PROCEEDINGS, &c.

NOVEMBER, 1884.

LONDON:

PRINTED BY C. BROAD, CAMDEN PLACE, LEE GREEN, S.E.





TWELFTH ANNUAL REPORT

OF THE

NEW CROSS

Microscopical and Natural History

➤ ❄ ❄ SOCIETY, ❄ ❄ ➤



TOGETHER WITH

THE ❄ PRESIDENT'S ❄ ADDRESS,

LIST OF MEMBERS,

RULES,

ABSTRACT OF PROCEEDINGS, &c.

NOVEMBER, 1884.

LONDON :

PRINTED BY C. BROAD, CAMDEN PLACE, LEE GREEN, S.E.

Extract from original Prospectus.

“THIS Society was established in accordance with a resolution
“passed at a Public Meeting, held on the 6th of November, 1872,
“at the Commercial Rooms, Upper Lewisham Road ; the objects
“which it is intended to fulfil being—

“FIRST.—To enable Microscopists, Students of Natural History, and others,
“residing in the neighbourhood of New Cross, Lewisham, and
“Deptford, to meet and interchange communications and specimens
“at stated intervals ; to exhibit objects of interest to Members and
“Visitors ; to promote the acquisition of skill in the use of the
“Microscope, and an acquaintance with the manifold beauties of
“nature, which—invisible by unaided vision—are so marvellously
“revealed by our modern instruments ; for the formation of Cabinets
“illustrating Geology, Entomology, and Mineralogy ; also a Cabinet
“and Herbarium for the use of of Botanical Members.

“SECOND.—By Lectures and Papers, to afford instruction to the Members
“in the above subjects, and to develop a taste for the study of the
“same.

“THIRD.—By occasional Excursions into the Country around, to investigate
“the natural productions of the district and to procure fresh
“material for observation.”

OFFICERS AND COUNCIL,

ELECTED NOVEMBER, 1884.

President.

W. J. SPRATLING, B.Sc., F.G.S.

Vice-Presidents.

FRANK HARRISSON, JOHN HOLGATE,
W. G. RANGER, M.R.C.S.

Council.

L. M. BIDEN,	H. F. LANCASTER, M.D.
W. DAWSON,	J. RAMAGE,
J. W. FOX,	Rev. R. GARDINER SMITH,
H. T. J. HART,	F.L.S.
A. E. LAMB,	F. T. TAYLER, M.B., Lond.

Hon. Curators.

H. T. J. HART, G. P. BERRY.

Hon. Librarian.

J. RAMAGE.

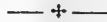
Hon. Secretary.

M. J. LINDSEY, Jun., Shirley House, Lee, S.E.

Field Excursion Committee.

G. P. BERRY,	H. T. J. HART,
L. M. BIDEN,	J. RAMAGE,
W. B. DAWSON,	W. J. SPRATLING, B.Sc.,
F. HARRISSON.	F.G.S.

PAST PRESIDENTS.



	Elected.
J. JENNER WEIR, F.L.S., F.Z.S. ...	November, 1872.
" " 	" 1873.
" " 	" 1874.
FRANCIS T. TAYLER, B.A., M.B., Lond.	" 1875.
" " 	" 1876.
W. G. RANGER, M.R.C.S.	" 1877.
" " 	" 1878.
MARTIN BURGESS	" 1879.
" " 	" 1880.
JOHN HOLGATE	" 1881.
FRANK HARRISON	" 1882.
" " 	" 1883.

REPORT, 1883—4.



Your Council has much pleasure in presenting to you this the Twelfth Annual Report of the Society, and congratulates you on a net increase of seven in the number of members, as well as on the financial state of the Society, and on better attendances generally, and suggests that if you would individually take advantage of your privilege of introducing a friend at all the Ordinary and Gossip Meetings, the interest in the proceedings would be much increased and others would be induced to join. The Council has prepared admission tickets for the purpose, and it at the same time records its assurance that the Gossips would be more practically useful if members trusted less to other labourers and refrained from coming to them empty-handed.

The number on the roll at the commencement of the year was 48. There have been added during the year 12 new members, while five have resigned, leaving the number at present on the books at 55.

A new and pleasant feature in the operations of the Society during the present year has been the admission of Ladies as Members, and we hope that during the coming year their number may be increased, as well as that of Associates. This privilege has not been appreciated as it deserves.

The Council regrets the loss of some of its most valuable members, but in Suburban Societies, this is unavoidable by reason of change of residence and other circumstances.

The papers brought before the Society have been full of interest and much appreciated by those who have attended the meetings. Your Council thinks there is cause for warm congratulation that each promise made last November of a paper during the year has been fulfilled with unqualified success, with one exception, when to the disappointment and loss of the Society and regret of the Lecturer, he (Dr. TAYLER) was not able to attend. The difficulty was however easily and ably overcome by our Hon. Secretary, at very short notice.

The papers given were as follows:—

- 1883.—December 20th, W. T. SUFFOLK, F.R.M.S., "Sea Anemones."
 1884.—January 17th, A. DEAN, M.Q.S., "Microscopical Illustrations."
 ,, February 21st, A. E. LAMB, "Home Gardening."
 ,, March 20th, H. F. LANCASTER, M.D., "The Nervous System."
 ,, April 17th, F. HARRISSON, "Chameleon and other Saurian Reptiles."
 ,, May 5th, W. J. SPRATLING, B.Sc., F.G.S., "Corals."
 ,, June 12th, J. JENNER WEIR, F.L.S., F.Z.S., "Insects and Insectivorous Birds."
 ,, September 18th, M. J. LINDSEY, Jun, "Food and its use."
 ,, October 16th, W. G. RANGER, M.R.C.S., "Leaf Insects."

The usual Gossip, on June 5th, was converted into an "extraordinary meeting, when C. RAY WOODS, Esq., then recently returned from the Eclipse Expedition to the Caroline Islands, gave before a full audience "A trip to the Mid-Pacific with a visit to the active volcano of Kilauea." The many beautiful photographs taken by himself were exhibited with the aid of a magic lantern, kindly lent and effectively manipulated by Mr. GREGORY, (one of our members).

On March 2nd, Mr. A. STEWART HARRISON exhibited and explained his life saving apparatus by "Turbidity of Sea Water," thus adding great interest to the Ordinary gossip night.

The Council takes this opportunity of acknowledging the valuable services rendered by the above gentlemen.

The Gossips have been interesting and instructive, and the attendances on the whole very satisfactory. During the present year the Council has been favoured with the addition of the late Honorary Secretary, Mr. HART, who has been at all times ready by his advice and experience to advance the interests of the Society.

The Library has been well used during the year, and some very valuable additions have been made to it; the Council feels that this important branch of the Society might be advantageously augmented by a purchase of books, and trusts that the funds may permit of such

expenditure. Any contributions by members, of books or objects bearing on subjects within the scope of the Society, will be welcomed.

The Field Excursions in the early Summer were very well attended, successful, and most enjoyable, but chiefly owing to the prolonged dry weather, the later ones were not so satisfactory.

The Council would here acknowledge the courtesy of the Editors of the South Eastern Herald, and other papers for their admirable reports of the Society from time to time.

The Society has been well represent at the Soirées given by kindred Societies.

1883.—November 21st, Croydon Microscopical and Natural History Society.

1884.—Highbury Microscopical and Natural History Society, and the Lambeth Field Club. Some of the members have also exhibited at many smaller gatherings, local and otherwise, and have thus brought the Society under notice. The question of a Soirée this year will soon be brought before your new Council.

Papers for the coming Session have been kindly promised by the President, Mr. WILLIAMS, Dr. C. W. BIDEN, J. H. SINCLAIR, A. W. BRACKETT, J. JENNER WEIR, W. T. SUFFOLK, Dr. TAYLER, and others.

The Council in conclusion ventures to express the hope that the engagements and meetings of the year now closing, have not been without benefit to every member, in stimulating them to fresh researches, suggesting new topics of thought, and thereby deepening their interest in Microscopical and Natural History Science.



* NEW CROSS MICROSCOPICAL AND NATURAL HISTORY SOCIETY.*
 Balance Sheet for Year ending 31st October, 1884.

Dr.	RECEIPTS.	£ s. d.	Cr.	EXPENDITURE.	£ s. d.
To Balance in hand from 1882-3	...	1 13 0	By Donations to St. Peter's Hall, in lieu of Rent	...	5 0 0
Subscriptions received 1880-1	...	0 10 6	" Hall Keeper	...	1 2 0
Do. 1881-2	...	0 10 6	" Micrographic Dictionary, per Contra	...	0 6 0
Do. 1882-3	...	4 14 6	" Scientific Year Book, Griffin & Co.	...	6 0 0
Do. 1883-4	...	25 4 0	" Printing, Merritt and Hatcher	...	0 0 3
Do. 1882-3 (associates)	...	0 3 6	" 3 Kentish Mercury	...	8 9 6
Do. 1883-4	do.	0 10 6	Do. C. Broad	...	1 15 6
"			" Postages	...	10 19 2
" Sale of Reports	...	31 13 6	" Balance in hand	...	...
" Micrographic Dictionary, (Donation) per Messrs.	...	0 6 0			
" Harrison and Sprating, &c.	...	...	
		£33 12 6			£33 12 6

To Balance in hand 1882-3	CABINET FUND.	£ s. d.	By Fire Insurance	LIABILITIES.	£ s. d.
...	...	1 19 7	" Balance in hand	...	0 5 0
		£1 19 7		...	1 14 7
		£1 19 7		...	£1 19 7

Balance in hand	ASSETS.	£ s. d.	Donation to Hall to 31st October, 1884	LIABILITIES.	£ s. d.
...	...	10 19 2	Printing to date	...	5 0 0
Subscriptions overdue, 1883-4	...	1 1 0		...	0 8 6
		£12 0 2		...	£5 8 6

Examined and found correct { G. P. BERRY } AUDITORS.
 { W. GREGORY }

PRESIDENT, F. HARRISSON.
 SECRETARY, M. J. LINDSEY, Jun.

→* PRESIDENT'S + ADDRESS.*←

GENTLEMEN,

There are, I have no doubt, many among our members who aspire to the position in which your kindness and over great appreciation of my endeavours have placed me, but their natural modesty, combined with their not unnatural shrinking from the arduous labour of compiling a presidential address, leads them to hide their light from the members, lest by any chance, the pains and penalties from which I see no escape, yet into which I have in my innocence been led, might be the result of their too great zeal in promoting the cause of science and of the interests of our Society.

I am quite sure there are many of our members who need simply a little drawing out, a little gentle pressure, which I hope our friend the late President will apply, to bring them at no far distant period into the front rank. It is my wish to encourage such, and if it is agreeable to the members generally, I will this evening offer a few remarks by way of President's address before calling on the lecturer of the evening, and hope that on future evenings I may have the pleasure of calling on some comparatively junior member who shall provide us with a somewhat more *piquante potage*, as preparatory to the full meal anticipated in print.

I think it must be considered to be one of the duties of the Council to discover members who will bring us these short papers, and I may perhaps tell them in your name that if they do not succeed in carrying out your wishes in this matter, the distribution of seats bill, which is now in the air, may perchance reach them at our next election, when the young blood—the souls already burning with the greatness that is to be, will step in and lead the way to greater success and greater influence.

It has been the custom of your past Presidents in their first address to survey, with one majestic swoop, the whole field of science and nature, to cull therefrom such dainty morsels, and lead you through such inviting pastures as their long and varied experience has shown them would be most tempting to your tastes. A far humbler rôle falls to me : it is to call your attention to ourselves, and perhaps to suggest a topic or two, the discussion of which may be of interest or of value.

And first, as to the name of our Society. We have lived and flourished under our present cumbrous appellation, which, however suitable it may have been when first we were born into the world, is now, in my humble opinion, rather antiquated, stiff and slightly misleading. We are hardly a *New Cross* Society, and though we are *Microscopical* and "*Naturally Historical*," yet we have of late gone outside the realms of "Natural History" pure and simple, and to our great advantage taken a somewhat wider range of subjects. As we all know, natural history itself is a somewhat indefinite and almost obsolete term, it is broken up into its several departments, and is a term seldom used among those who make any pretence to scientific knowledge.

I would suggest that the Council take into consideration the alteration of our name into, say, *The Wickham Park Scientific Society*, or some such name. For this we have a good precedent in the existence of the Wickham Park Musical Society. When our Society first came into existence this neighbourhood had not been built, let us, therefore, now lengthen our cords and strengthen our stakes, and spread our sheltering roof over as wide an area as may be possible. I think this name would be popular among our members and the outside public, and would be likely to forward our interests out of doors.

I would likewise suggest that the time has come when our apology for a library should be overhauled and revised, either as has already been suggested, by borrowed books, or by the purchase of, say, some thirty or forty books of general scientific interest. The rules for the Library, too, ought to be made a little less stringent, and the members ought to be allowed a longer time to read the books.

Thanks to the generosity of one of our members, Mr. Gregory, we have had a valuable addition to our cases of objects, but I would suggest that two or three sub-committees, of three or four members each, should be formed, whose duty it should be to collect a series of objects and mount them for the use of the Society, the Society paying, if necessary, the small expense attending such a procedure. I would suggest for instance a series showing the stages of development of the common house fly, the cockroach, &c., &c. Another sub-committee might be charged to collect the insects of a certain pond or district, or to find varieties of some fern or moss, and mount them for the Society. It would not be difficult to accomplish, and we have enough experienced heads among us to provide chairmen of these sub-committees and to do good work.

I have always admired the zeal and patience of a former President, who undertook a class for instruction in mounting. I would suggest that this class be re-commenced, and that one corner of the room on each gossip night should be held sacred to this purpose.

Then I think we might have a diagram sub-committee, whose duty it should be to prepare for the Society such common diagrams as are most likely to be useful to any lecturer, and who might sometimes be called upon to provide one or more special diagrams for a special lecture.

My head is full of schemes such as these, which require only a little organisation and energy to set going, and which, once started, would grow and thrive, and prove not only interesting to the members but of lasting benefit to the Society.



HONORARY MEMBERS.



Date of Election.

Nov. 14, 1878. Habershon, W. G., F.R.I.B.A., M.A.I., 38,
Bloomsbury Square, W.C.

Oct. 14, 1880. Stewart, Charles, M.R.C.S., F.L.S., (*Secretary
Royal Microscopical Society*) 25, Albert
Square, Clapham Road, S. W.

Suffolk, W. T., F.R.M.S., Stettin Lodge, Lower
Norwood.

Nov. 10, 1881. Weir, J. Jenner. F.L.S., F.Z.S., (*Past President*)
Chirbury, Copers Cope Road, Beckenham,
Kent.

LIST OF MEMBERS.

 WITH LATEST CORRECTIONS.

Date of Election.

- Mar. 11, 1880. Berry, G. Percy, (*Curator*) 159, Brockley Road, S.E.
 Feb. 15, 1883. Berry, F. W., (*associate*) 159, Brockley Road, S.E.
 Oct. 12, 1882. Biden, L. M., 11, St. Mary's Road, Peckham, S.E.
 Oct. 12, 1882. Biden, C. W., 11, St. Mary's Road, Peckham, S.E.
 Jan. 17, 1884. Brackett, A. W. 31, Woodsom Road, Highgate.
 June 10, 1880. Bridges, Fredk., Derwent Villa, Wickham Road, S.E.
 Sept. 18, 1884. Calvert, A. Miss, 1, Essex Villas, Eastdown Park,
 Lewisham.
 Oct. 18, 1883. Carlile, E., 43, Amersham Road, New Cross, S.E.
 April 8, 1880. Dawson, W., London and County Bank, Deptford
 Dec. 8, 1881. Dawson, W. B., Rockfield, Wickham Road, S.E.
 Feb. 15, 1883. Dawson, C. J. S., (*assoc.*) Rockfield, Wickham Rd, S.E.
 Dec. 12, 1878. Fox, J. W., 102, Trywhitt Road, St. John's, S.E.
 Feb. 15, 1883. Fox, J. J. (*associate*) 102, Tyrwhit Road, St. John's, S.E.
 May 13, 1880. Gregory, W., 98, Brockley Road, S.E.
 Nov. 14, 1880. Habershon, W. G., F.R.I.B.A., M.A.I., 38, Blooms-
 bury Square, W.C. (*Hon. Member*)
 Jan. 10, 1878. Harrisson, Frank, 61, Amersham Road, New Cross.
 Nov. 13, 1879. Hart, Henry, T. J., (*Curator*) 96, Albert Road,
 Peckham, S.E.
 Jan. 17, 1884. Hart, Mrs., 96 Albert Road, Peckham, S.E.
 Nov. 6, 1872. Holgate, John, (*Vice-President*) 65, Tyrwhitt Road,
 St. John's, S.E.
 Mar. 20, 1884. Hughes, Edwin, 62, Breakspear Road, Brockley.
 Nov. 20, 1884. Jenkins, A., 36, Amersham Vale, New Cross.
 Jan. 12, 1882. Lamb, Alfred, E., Apsley House, St. John's Street.
 Old Dover Road, Blackheath.
 Mar. 9, 1882. Lancaster, H. F., M. D., 275, Lewisham High Rd., S.E.
 Dec. 14, 1832. Lindsey, M. J. jun., (*Hon. Sec.*), Shirley House,
 Lee, S.E.

- Feb. 21, 1884. Lindsey, Miss, Shirley House, Lee, S.E.
- Nov. 6, 1872. Marchant, T. W., M.A., Lewisham High Road, S.E.
- Oct. 12, 1882. Marshall, W., 65, Amersham Road, New Cross, S.E.
- Oct. 18, 1883. Mitchell, A. J., 213, Lewisham High Road, S.E.
- May 15, 1884. Palmer, W. M., 48, Manor Road, Brockley, S.E.
- Oct. 16, 1884. Parker, E., Violet Villa, Brockley, S.E.
- April 17, 1884. Pewtress, E. 7, Glensdale Road, Brockley, S.E.
- April 17, 1884. Pewtress, E. Mrs. 7, Glensdale Road, Brockley, S.E.
- May 13, 1880. Porter, George, 2, Manor Road, New Cross.
- June 10, 1880. Purvis, Thos., 55, Tyrwhitt Road, St. John's, S.E.
- Mar. 11, 1880. Ramage, J., (*Librarian*), 209, Brockley Road.
- Aug. 20, 1873. Ranger, W. G., M.R.C.S., (*Vice-President*), Meadowcroft, Catford, S.E.
- Dec. 12, 1878. Roberts, H.W., M.R.C.S., L.S.A., Ashdown, Lewisham High Road, S.E.
- Nov. 20, 1884. Segrave, C. K., 13, Albert Road, St. John's, S.E.
- May 17, 1883. Sinclair, J. H., 90, Malpas Road, Brockley, S.E.
- Mar. 14, 1878. Smith, Rev. R. Gardner, F.L.S., All Saints' Vicarage, Wickham Road, S.E.
- April 8, 1880. Spratling, W. J., B.Sc., F.G.S., (*President*) 72, Wickham Road, S.E.
- Dec. 20, 1883. Spratling, Mrs. 72, Wickham Road, S.E.
- Nov. 6, 1872. Stanley, J. H., Napoleon Cottage, Rushey Green, Catford, S.E.
- Nov. 20, 1884. Stephenson, H. B., Westwood Lodge, St Mary's Cray.
- Oct. 14, 1880. Stewart, Charles, M.R.C.S., F.L.S., (*Secretary Royal Microscopical Society*), 25, Albert Square, Clapham Road, S.W., (*Hon Member*).
- Nov. 6, 1872. Stodart, Malcolm, 35, Tyrwhitt Road, St. John's, S.E.
- Oct. 14, 1880. Suffolk, W. T., F.R.M.S., Stettin Lodge, Lower Norwood, (*Hon member*).
- Nov. 6, 1872. Tayler, F. T., B.A., M.B., Lond. Claremont Villa, Lewisham High Road, S.E.
- Nov. 6, 1872. Thomas, J. H., F.R.G.S., 105, Shardeloes Road, New Cross.
- Nov. 8, 1877. Vince, A. S., 5, Beaufort Gardens, Lewisham High Road, S.E.
- Oct. 18, 1883. Watts, E. R. 63, Breakspear Road, Brockley, S.E.
- Dec. 18, 1884. Way, E. J., (*associate*) Malpas Road, Brockley.
- Nov. 6, 1872. Weir, J. Jenner, F.L.S., F.Z.S., Chirbury, Copers Cope Road, Beckenham, Kent, (*Hon. Member*).

- Mar. 15, 1876. Wetherell, Rev. J. C., M.A., Northbrook House,
Wickham Road, S.E.
- Feb. 18, 1874. White, W. N., Blackheath Road.
- Feb. 21, 1884. Wigg, L., 52, Breakspear Road, Brockley, S.E.
- April 14, 1881. Wightman, Geo. J., St. Mary's Hill, Stamford,
Lincolnshire.
- April 17, 1881. Wightman, Mrs. F. H. St. Mary's Hill, Stamford
Lincolnshire.
- Dec. 18, 1884. Yearley, F., 12, Albyn Road, St. John's, S.E.

NOTICE.

*Members are requested to give the Hon. Secretary early information of any
change of residence.*



THE NEW CROSS MICROSCOPICAL & NATURAL HISTORY SOCIETY.

MEETINGS HELD AT ST. PETER'S HALL,
BROCKLEY.

GOSSIP MEETINGS,—First Thursday in each month.

ORDINARY MEETINGS (except July & August), Third Thursday
in each month,
AT EIGHT O'CLOCK.

RULES.

I.

That the Ordinary and Gossip Meetings of the New Cross Microscopical and Natural History Society be held at such place and time as the Council may appoint.

II.

That every Candidate be proposed by two Members (one from personal knowledge), who must sign a certificate according to Form appended. The certificate to be read from the chair, and the candidate (therein recommended) balloted for at the following ordinary meeting. One black ball in five to exclude a candidate

III.

That the annual subscription for members be Ten shillings and sixpence, payable in advance on the 1st of November, and no person shall be entitled to the privileges of the Society until this subscription shall have been paid. Members being more than ten months in arrear shall be liable to have their names erased from the list of members by the Council.

IV.

That one payment of five guineas shall constitute life membership, and entitle any duly elected member, subject to the rules, to all the privileges of the Society.

V.

That any one distinguished as a naturalist, or who has rendered service to the Society, may be proposed by the Council as an honorary member and elected by ballot in the usual manner. The number of such honorary members shall at no time exceed ten.

VI.

That should it be thought desirable to exclude any member from the Society the same shall be done by a resolution of the Council, due notice of which shall be given to the member. An appeal may be made at the next Ordinary Meeting, which may confirm or rescind such resolution. No retiring or compensating claim can be allowed.

VII.

That the business of the Society be conducted by a Council, consisting of a President, three Vice-Presidents, a Secretary, to act also as Treasurer, and nine other members, four to form a quorum.

VIII.

That in the absence of the President and Vice-Presidents, the members present at any Meeting may elect a chairman for that evening.

IX.

That the accounts of the Society to October 31st, be audited by two members (not on the Council), to be appointed at the Ordinary Meeting in October, and that the usual summons for such meeting contain notice to that effect.

X.

That all officers retire annually, but be eligible for re-election. Elections to be by ballot papers at each Annual General Meeting. Intermediate vacancies to be filled up by the Council.

XI.

That a list of the members nominated by the Council as officers for the ensuing year be sent to each member of the Society one week before the Annual General Meeting.

XII.

That the Annual General Meeting be held after the Ordinary November Meeting, when the business shall be as follows:—1. To read and confirm the minutes of the last Annual General Meeting. 2. To receive the report of the Council. 3. To receive the balance sheet duly signed by the Auditors. 4. To elect officers for the ensuing year.

XIII.

That at the Ordinary Meetings the following business be transacted:—The minutes of the preceding Ordinary Meeting shall be read and confirmed; donations to the Society since the last meeting announced; certificates for new members read; ballot for new members taken; and papers read and discussed. After which, (time permitting) the meeting shall be resolved into a conversazione.

XIV.

That each member may introduce a visitor at any Ordinary or Gossip Meeting. Both members and visitors to enter their names in a book to be kept for that purpose.

XV.

That on any question arising on which a vote is to be taken, any two members of the Society may demand that the vote be taken by ballot.

XVI.

That alterations in the Rules of the Society can be made only at the General Meeting or at a Special Meeting convened for the purpose; that notice of any such alteration shall be given by the Secretary at least seven days previous to such meeting. A Special Meeting may at any time be convened on a requisition to the Council signed by at least six members.

XVII.

That candidates be admitted as associates, until they attain the age of nineteen, at an annual subscription of three shillings and sixpence, payable in advance on the 1st of November. After the above age, they may become members without further election, on notice of their intention of taking up their full privileges.



FORM OF CERTIFICATE FOR ELECTION OF
MEMBERS.

The New Cross Microscopical and Natural History
Society.

M

of

being desirous of becoming a *of the Society, we beg to*
recommend h *for election.*

Proposed *(from personal knowledge),*

Seconded

Read

The Ballot will take place

→* LIBRARY + & + MUSEUM + RULES.*←

I.

That a Register of all books or literature belonging to the Society be kept by the Librarian, provision being made in it for the signature of members to whom books are lent, and for bespeaking an engaged work when it is required.

II.

Application for the loan of books should be made to the Librarian after the ordinary business of the meeting, the borrowing member to sign the Register for its receipt, and the Librarian countersign for its return.

III.

Each volume may be kept one month. Any member detaining it for a longer period will be subjected to a fine of sixpence per meeting until returned.

IV.

Any member damaging or losing a book will be expected either to replace the work or pay such sum as the Council may determine.

V.

The Curators shall keep a similar Register of the contents of the Museum, which may be lent subject to same conditions.

ABSTRACT OF PROCEEDINGS.



1883.

NOVEMBER 15.—Eleventh Annual General Meeting. President F. Harrison, Esq., in the chair. Report of Council and Balance Sheet were read and adopted, and after a hearty vote of thanks to retiring Officers, the election of those for ensuing year was proceeded with. Special vote of thanks was given to the late Honorary Secretary, Mr. Hart, for his uniform desire to advance the interests of the Society and his valuable services during the past three years. Mr. Harrison, the President, then delivered his presidential address.

DECEMBER 6.—45th Gossip which was well attended.

DECEMBER 20.—120th Ordinary meeting. Mr. W. T. Suffolk, F.R.M.S., delivered a lecture on "Sea Anemones." After paying a high compliment to P. H. Gosse, Esq., F.R.S., he went on to describe their place in Nature, saying they belonged to sub-kingdom called Coelenterata, or hollow intested animal, of which the Hydra found in most ponds was a type, the sub-kingdom was again divided into Hydrozoa and Actinozoa, to the latter "Sea Anemones" belong. He then went on to fully describe, by illustration on black-board and diagrams, the structure, which consists of a stomach divided into sections throwing out tentacles which emitted a threadlike substance used by them in preying upon smaller organisms. Some Sea Anemones have the power of forming a stony secretion which is well known to us as coral. Corals from two British species were exhibited and much admired. Mr. Suffolk then gave some very useful advice as to keeping Anemones in aquaria, and also gave the best places where they could be found.

1884.

JANUARY 3.—46th Gossip, this proved of much interest.

JANUARY 7.—Soirée of Lambeth Field Club, at which several members exhibited.

JANUARY 17.—Mr. A. Dean, Honorary Secretary East London Natural History and Scientific Society, exhibited and explained his new method of "Microscopical Illustration on a Screen." He commenced by saying his remarks would be more practical than actually scientific. He then proceeded to show how by an arrangement of two objectives one above and the other below the stage, a much larger field could be obtained. Some moss was exhibited by this method and was much admired. Mr. Dean then went on to fully describe the manufacture of the instrument for throwing Microscopic objects on a screen, creating some amusement by the very clever way in which he used the commonest things and turned them to scientific uses. The instrument was then tested and a very clearly defined object was shown on the Screen. Mr. Dean then showed how this could be utilized for drawing purposes, and asked some gentleman to give him a slide to draw from. A slide of an ant was given and a sketch was made of it, thus showing by experiment the use of this instrument. Some photographs taken by Mr. Dean were then exhibited.

FEBRUARY 7.—47th Gossip, which was fairly well attended.

FEBRUARY 21.—122nd Ordinary Meeting. Mr. J. Jenner Weir gave some interesting information concerning the Eruption of a Volcano in the Straits of Sunda.

Mr. A. E. Lamb delivered his lecture on "Gardening." He said we were reminded by Biblical history of the antiquity of gardens, gardening, and gardeners. Citing Eden as an example, he then went on to describe the gardens of the East, as being walled around, well watered, well planted. Then, also, the Egyptians were zealous cultivators of the soil: in fact, their gardens were so productive that they were enabled to tide over a severe famine. The Persians were mentioned as being great gardeners, and the hanging gardens of Babylon were fully described. Mr. Lamb remarked that under the auspices of the late Prince Consort, the Royal Agricultural Society did a great deal for the agriculture of this country, the Prince, when at Osborne, often going round his farms early in the morning, just like an ordinary farmer. He was always very particular in the height and position of his trees, removing any that did not please him. Coming to the practical part of the lecture, Mr. Lamb spoke about the lawn, shewing that a well-sown grass lawn was much preferable to a turf one. Then with regard to the planting of rose trees, some very useful advice was given. Kitchen gardening was touched on, good drainage being insisted on by the lecturer. Pruning and grafting were subjects illustrated by cuttings exhibited by the lecturer.

MARCH 6.—A Special Meeting, when Capt. A. Stewart Harrison delivered a lecture on "The Causes of Turbidity in Sea Water," illustrated by experiments. The lecture, an account of which appeared in the South Eastern Herald, was much appreciated by those who were present.

MARCH 20.—123rd Ordinary Meeting. Dr. H. F. Lancaster delivered a lecture on "The Nervous System." After giving a clear definition of what nerves are, and nervous energy, he went on to describe the structure of the nervous tissue, including its microscopical anatomy, which prepared the way for the understanding of the evolution of a nervous system. This was taken first in its simplest form, and it was then shown how the multiplication and differentiation of the elements took place. He next described the spinal Cord and nerves, and its functions, especially dwelling on its reflex action, also the medulla oblongata with its numerous nerve centres which make its integrity absolutely necessary to life. The other parts of the brain with more obscure functions were alluded to, and then he passed on to the cerebrum or brain proper in which reside volition, perception, &c., as well as the higher psychical powers. The way in which impulses pass along nerves next had attention, shewing the distinction between those of motion and sensation, and of the latter, common and special sense.

Before concluding, Dr. Lancaster took a review of the mechanism of nervous action as a whole, shewing the extremely complex arrangements which take place in a rapid and harmonious manner upon even simple (as they appear to us) acts.

APRIL 3.—48th Usual Gossip which afforded great interest.

APRIL 17.—124th Ordinary Meeting. F. Harrison, the President, delivered his lecture on "The Chameleon and other Saurian Reptiles." Prefacing his remarks by a general definition of Reptilia, he then proceeded to describe the Chameleon, noticing among other peculiarities the unique character of its visual organs which allow it to see in two entirely different directions at once. The change of colour for which this reptile is famous, appears to be equivalent to a human blush. More abstemious than blue ribbonists it refuses to drink water. It is essentially a tree animal and in Spain is eaten by cats. Passing to the consideration of other reptiles the lecturer described Lepidosiren, Slow Worm, Blind Worm, Salamander. The animal which St. George vanquished may be

thought by some to be a fabulous creature, but the naturalist found it to be an interesting reptile, called "Draco Volans," a dread reptile to the insects it devours, as they would doubtless testify had they reasoning powers.

APRIL 21.—Soirée, Wesleyan Schools, Peckham.

APRIL 26.—Excursion to Kidbrooke, led by the President, and those who attended were well rewarded by numerous finds.

MAY 1.—49th Gossip, as usual.

MAY 2.—Soirée, Blackheath Choral Society,

MAY 6th.—Soirée, Nautilus Swimming Club.

MAY 15.—125th Ordinary Meeting. Mr. W. J. Spratling, B.Sc., F.G.S., delivered a lecture entitled "Corals." In introducing the subject he remarked that both in children's books and in the works of many of the poets the coral "insect" was frequently spoken of. That was a mistake that he hoped none of his audience would ever be found making. Insects were far more complex organisms and occupied a far higher position in creation than the coral animal. This creature belonged to the great family of the *coelenterata*, the members of which, while possessing merely a trace of a nervous system, had no head. The *coelenterata* were divided into two classes—the *hydrozoa* and the *actinozoa*. The lecturer then (with the help of the black-board) proceeded to give an elaborate description, shewing the advance in structure in the two classes, and the formation of septa—primary, secondary, tertiary, &c.; also the difference in the number of the septa in fossil, and in modern corals. Passing on to the *Zonitharia*, he remarked that they were divided into three classes—*sclerobasica*, *sclerodermata*, and *malacodermata*. The *sclerobasica* were true socialists since they were groups of polyps, who lived on a common base of which they were really a part. Some might sleep while others ate for the community at large, an arrangement which if it could be adopted by the human race might prove beneficial to the inhabitants of the East-end, though probably it would not be relished equally by all classes. The *sclerodermata* lived in the coral, and were part of it, being in that particular different from the former species. After describing various species of real and so-called corals, which were illustrated by diagrams and sketches on the board, the lecturer concluded his remarks with a comparison of two rival theories, which sought to explain the formation of coral reefs. For a long time it has been known that corals did not live at great depths, and they, therefore, could not begin deep down and build up a perpendicular wall. No one however, could understand the matter until after Darwin's celebrated voyage in the *Beagle*. As a result of the observations he then made he put forward the theory which had stood its ground almost to now. Darwin came to the conclusion that the coral reefs were gradually built up on the slopes of such of the submarine mountains as were near the surface but were sinking. Thus in time the fringing reef became a barrier reef and then an atoll. Darwin's theory did not, however, satisfactorily explain everything, and it was being slowly displaced by a more modern theory, supported by Huxley and others. This theory held that the shells and remains of the little creatures with which the tropical seas teemed fell to the bottom and gradually formed a sediment there, which in time made portions of the ocean sufficiently shallow for the coral animals to commence to build. Neither theory could be said to be definitely rejected or accepted, and the question remained a most interesting one.

MAY 28.—Presbyterian Bazaar, Brockley, at which several members attended and exhibited.

MAY 31.—Excursion to Grove Park with good attendance and numerous finds.

JUNE 5.—A special meeting was held when a lecture upon "A Trip to Mid-Pacific, with life on Coral Island and visit to the active Volcano, Kilauea," was delivered by Mr. Ray Woods, a member of the British Eclipse Expedition, which was despatched last year to Caroline Island, in the South Pacific.

The Lecturer said that the British Expedition to Caroline Islands consisted of another astronomer and himself. They started from Southampton on February 17th, 1883. To reach their destination they had to travel some 12,000 miles, the last 4,000 miles of which was performed on the American man-of-war which conveyed the American Eclipse Expedition. Going by way of Barbadoes and Jamaica they reached Panama, where they saw the works of the company who were constructing the Panama Canal. At this place they met a gentleman who was a member of the Smithsonian Institute at Washington, and had been sent out for the purpose of studying the various species of fish to be met with in that part of the continent. They were invited to join this gentleman on a fishing excursion, but declined in consequence of having no rods. He, however, urged them not to stay away on that account, as he did not use fishing-rods but dynamite. They, therefore, joined him in what turned out to be a veritable parody on the "gentle art." His method was to fasten on the end of a long stick a dynamite cartridge, having a lighted fuse attached, which was arranged to burn from 15 to 20 seconds. Immediately a promising fish was seen the cartridge was pushed in the water, and being exploded as near as possible to him, brought up the unfortunate fish and any others that were near; they were then "whipped" into the boat before they could come to. The last cartridge they used brought up about 150 fish of different sizes and varieties. It might be objected that this was not "sport" but "slaughter." It, however, had its element of danger, as only a few days before a companion of their American acquaintance, becoming excited in the pursuit of a large fish, held his cartridge too long and was blown to pieces himself. During their voyage in the Pacific they tasted many novel fruits, not the least noteworthy among them being the famous "bread fruit." This, however, the lecturer stated, he regarded as a "swindle." Uncooked it was most objectionable, being sour, with just sufficient of a black currant taste to make it sickly; cooked it was just eatable, and that was all. At one South American port at which they called they found oysters growing on trees. This extraordinary vegetation resulted from the boughs of the trees, which grew upon the shore trailing in the water, and so affording convenient anchorage for the adventurous molluscs. The expeditions had a most prosperous voyage, and so carefully had their course been calculated that they reached their destination on the very day they expected. They took up their quarters on the southern island of the group. This island it only took an hour to walk round and comprised an area of about one square mile of land. After describing the nature of the island and the incidents of their stay there, the lecturer concluded his lecture by describing a visit he paid to the volcano of Kilauea. The mountain itself was about 13,000 ft. high, but the crater was situate on its side at an altitude of only 3,000 ft. It was about nine miles in circumference and about 800ft. deep.

The lecture was illustrated by a series of excellent photographs taken by the lecturer, two of which attracted very special attention, the one being a photograph which had been taken in moonlight, and was the result of a two hours exposure; the other a photograph of the interior of Kilauea, the only photograph in the world that had been taken in the interior of a volcanic crater when in eruption.

At the conclusion of the lecture a hearty vote of thanks was accorded to the lecturer, upon the motion of Rev. J. C. Wetherell, M.A., seconded by Mr. W. J. Spratling.

JUNE 19.—126th Ordinary Meeting when a paper upon "Insects and Insectivorous Birds," was read by Mr. Jenner Weir, F.L.S., F.Z.S. The lecturer said that when the naturalist regarded the numerous birds ever on the alert to devour, and occupying almost every station to which insects could retreat, the wonder at first appeared great that any insect life could be perpetuated. The swallow and swifts during the day, the goatsuckers at night, the fly catchers in wooded district, the restless tits and creepers examining the lower sides of the branches of trees, the graceful and active wagtails by the sides of streams and in the grass of the meadows, the wrynecks, the woodpeckers, the dippers, the grebes, and many other insectivorous birds, to say nothing of such partially insectivorous birds as the finches, thrushes, buntings, starlings, crows, and many others being ever on the watch for their prey, it was clear that nothing but the marvellous fecundity of insects, coupled with innumerable contrivances for their safety, enabled them to perpetuate themselves in so sharp a struggle for existence. Among some of the modes in which this struggle is successfully carried on might be noticed the protection afforded by the resemblance which the coloration of that part of the wing which was exposed when the insect was at rest bore to its usual surrounding. Thus the underside of the wings of the orange-tip butterfly closely resembled the blooms of the cowparsley on which it rests at night. Other genera resembled a dead oak-leaf, the bark of trees, or lichen covered stone; in fact in the coloration of a large number of insects was to be seen this remarkable protective response to the coloration of their environment. Moreover, the protective coloration of the same insect sometimes varied according to its geological surroundings—*e.g.*, one British species on the South Downs resembled the light grey chalk in colour. At the New Forest, on the peat, it was nearly black, and on limestone or sandstone of an intermediate colour. Even where the imitative coloration was replaced by very conspicuous marking, the protection was still afforded, the lecturer having found by numerous carefully conducted experiments that such larvæ as those of the tortoise-shell or peacock butterflies, though conspicuous in appearance, were distasteful to birds, and in their strongly marked individuality and conspicuous appearance lay their safety. The result of his experiments was the conclusion that all conspicuously colored spinous and hairy caterpillars were refused by birds, and on the contrary, all caterpillars which seek concealment and are smooth skinned or, which had a coloration which assimilated them to the plants they fed upon, were greedily devoured. In conclusion the lecturer remarked that thanks to systematists, natural history was daily approaching nearer to completion, but his audience must not suppose that when every living thing had been described and named the occupation of the naturalist had ceased, for, on the contrary, it was only when every species was well known that the philosophical naturalist was able to efficiently work. Philosophical Natural Science was in its infancy, and it was to be hoped that the rising generation would not neglect so great a source of pleasure, combined as this study was with elevation of the intellect.

JUNE 28.—Excursion to Hampstead which proved most successful both as regards numbers and finds.

JULY 3.—50th Usual Gossip.

JULY 26.—Excursion to Epping Forest kindly led by the Secretary of East London Society; though few went, those who did were amply repaid by the beauty of the forest and the numerous specimens collected.

AUGUST 7.—51st Usual Gossip, attendance small owing to many members being out of town.

AUGUST 30.—Excursion to Hampton Court instead of Burnham Beeches as announced, owing to distance of the Beeches from Railway Station. Owing to alteration few attended.

SEPTEMBER 4.—52nd Usual Gossip.

SEPTEMBER 18.—127th Ordinary Meeting. In the absence of Dr. Tayler who was announced to lecture, a paper was read by the Hon. Secretary, Mr. M. J. Lindsey, jun., on "Food and its use." The essayist said the necessity for taking food was apparent to everybody, but the reason why we took it was not so obvious. Take for instance a man weighing 154 lb.; he would lose by the various vital processes of his body from 3lb. to 4lb. in the course of the day; this must be made good, and was one of the reasons we took food. But food not only nourished the body, but it maintained its heat. At different times there had been various classifications of foods, but he had selected the one given by Dr. Lankester as being the simplest and the best. Dr. Lankester divided foods into "necessary," and "auxiliary," the "necessary" including (1) mineral, such as water, salt, ashes; (2) carbonaceous or heat-giving, such as starch, sugar, fat; (3) nitrogenous or nutritious, albumen, fibrine, caseine, and the "auxiliary," being sub-divided into (1) stimulants as alcohol, (2) neurotics as the alkaloids, (3) narcotics as tobacco. Water and salt might be regarded as amongst the most important of the constituents of our daily food. The carbonaceous foods were required in great measure for keeping up the heat of our bodies, and to shew how necessary a constant supply of this carbon was it might be mentioned that a full-grown healthy man emitted 8½oz. of carbon daily from his lungs. Foods containing starches were very useful in maintaining the heat of the body, and also in the production of fat. Starch is almost the most abundant product of the vegetable kingdom. It was to be obtained from most grasses, also from the seeds of the pea, bean, lentil, &c., and was also very abundant in the cells of the potato, and in the roots of the tapioca and arrowroot. The following comparative table would shew to what extent starch was present in some of our foods:—Arrowroot, 82.0; rice, 80.0; wheaten bread, 47.0; potatoes, 20.0; carrots, 8.0; turnips, 5.0; parsnips, 9.0 per cent. Starch was of itself quite insufficient to support life as it contained no nitrogen; but it was exceedingly useful when mixed with other foods. After describing at some length the nature and use of sugar, fats and oils, the lecturer proceeded to consider the nitrogenous foods, or foods that supplied our bodies with nitrogen. Nitrogen could not take the place of food, and it was only when combined with the carbonaceous foods that the nitrogenous foods could be assimilated. About 200 grains of nitrogen were estimated as required daily by a full-grown man. A pound of Cheddar cheese contained 300 grains of nitrogen, and this was why a working man regarded it so highly. The essayist then gave a most interesting description of bread making and the various methods by which the rising of the dough was obtained, including Whiting's and Daughlish's patent processes. Drinks, alcoholic and non-alcoholic, fish, vegetarianism having in turn been considered, Mr. Lindsey remarked that good digestion was greatly assisted by cheerfulness. A much larger amount of food could be disposed of properly digested when we were in the company of two or three old friends, than if we took our dinners alone. The state of mind also has a very great effect on the digestive powers. For an active man three meals a day were necessary, whereas a person sitting all day would require but two meals a day, one in the morning and one in the afternoon.

SEPTEMBER 27.—Excursion to Tooting Bec. Attendance small owing to bad weather.

OCTOBER 1.—53rd Gossip as usual.

OCTOBER 16.—128th Ordinary Meeting. Auditors appointed to audit the Accounts of the Society. W. G. Ranger, Esq., gave a paper on Leaf Insects. The lecturer said that so called leaf insects are not really so, as they do not go through the 3 metamorphoses, giving as an example butterfly, dragon-fly. Real leaf insects are not much known in this country, most species coming from abroad and are dried. He divided them into 4 groups. Forficula, specimen earwig whose care of young was mentioned. Blatta, Cockroach, Black-beetle, Prautes Religiosa, Fasmadi. The true leaf insect so much resembles a leaf, small antennae, double wing cases, natives of China, South America and India, very fond of fighting. There were some very fine specimens of Fasmadi handed round, mode of laying eggs peculiar, they make a capsule in which they deposit their eggs and then put it on a branch. The Larva is not a maggot but has 5 moults and then emerges a perfect insect. The structure and habits of house-cricket, grass hoppers, and locusts were then mentioned. These Fasmadi are much venerated by the Turks on account of devotional attitude assumed by them. Some insects were then exhibited and remarks made by Mr. J. Jenner Weir. An insect called the stick insect, is so much like a stick that the eminent Naturalist E. R. Wallace was not able to discern it.

NOVEMBER 1.—54th Gossip as usual.



MEETINGS

OF THE

New Cross Microscopical & Natural History Society

AT THE

ST. PETER'S HALL, CRANFIELD ROAD,
BROCKLEY.

1884.—	THURSDAY,	December	...	...	...	4*	...	18
1885.—	"	January	...	...	...	1*	...	15
	"	February	...	...	...	5*	...	19
	"	March	...	...	...	5*	...	19
	"	April	...	...	...	2*	...	16
	"	May	...	...	...	7*	...	21
	"	June	...	...	...	4*	...	18
	"	July	...	...	...	2*	...	—
	"	August	...	...	...	6*	...	—
	"	September	...	...	...	3*	...	17
	"	October	...	...	...	1*	...	15
	"	November	...	...	...	5*	...	19

THE ORDINARY MEETINGS are held on the *Third Thursday* in each month, except July and August. Business commences at Eight o'clock, p.m.

THE GOSSIP NIGHTS (marked thus *) are held on the *First Thursday*, at Eight o'clock, for the examination of specimens, &c., and exchange of information.

THE ANNUAL GENERAL MEETING will be held on Thursday, November 19th, 1885, (immediately after the Ordinary Meeting), for the Election of Officers, and other business.

PRESENTED
14 NOV 1904



643 2 in 1 vol Case in Ant. Linn.



