

NORTH STAFFORDSHIRE

Naturalists' Field Club,

AND

ARCHÆOLOGICAL SOCIETY.

1881.

PRESIDENT :

W. CHALLINOR, ESQ.

VICE-PRESIDENTS :

R. GARNER, ESQ., F.L.S.

J. T. ARLIDGE, ESQ., A.M., M.D., LOND.

T. WARDLE, ESQ., F.G.S., F.C.S.

JAMES YATES, ESQ.

C. LYNAM, ESQ.

J. WARD, ESQ., F.G.S.

W. MOLYNEUX, ESQ., F.G.S., F.R.HIST.S.

W. S. BROUGH, ESQ.

REV. THOS. W. DALTRY, M.A., F.R.S.

E. EARL, ESQ.

J. L. CHERRY, ESQ., F.G.S.

A. SMITH, ESQ.

W. SCOTT, ESQ., F.M.S.

E. BRUNT, ESQ., F.G.S., F.R.HIST.S.

W. BENNETT SPANTON, ESQ.

W. LITCHFIELD, ESQ.

A. A. SCRIVENER, ESQ.

TREASURER :

W. DUNNETT SPANTON, ESQ.

SECRETARY :

REV. THOS. W. DALTRY.

LIBRARIAN :

MR. E. BRUNT.

LOCAL SECRETARIES :

LOCAL TREASURERS :

BURSLEM AND TUNSTALL, ...	MR. ARTHUR ELLIS, ...	MR. E. FORESTER WOODS
HANLEY, ...	MR. A. SMITH, ...	MR. E. BRUNT.
LEEK, ...	MR. W. S. BROUGH, ...	MR. J. B. BLADES.
LONGTON, ...	MR. J. WARD, ...	MR. T. TURNER.
NEWCASTLE, ...	MR. D. B. HURLEY, M.A. ...	MR. E. EARL.
STOKE, ...	MR. J. KIRKBY, ...	MR. A. SCRIVENER.

COMMITTEE

MR. T. BLACKSHAW.  
 REV. D. EDWARDES, M.A.  
 MR. W. H. GOSS, F.G.S.  
 MR. THOMAS HAMPTON.  
 MR. L. H. JAHN.

MR. A. LEECH,  
 MR. A. M. MC ALDOWIE, M.D.  
 MR. J. G. R. POWELL.  
 MR. J. G. U. WEST.  
 MR. C. L. WRAGGE, F.R.G.S., F.M.S.

## EXCURSIONS AND EVENING MEETINGS, 1881-2.

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**EXCURSIONS :—**

**LEADER :—**

- |   |                     |
|---|---------------------|
| 1.—Wednesday, April 20, <i>Melbourn and Bredon</i> , with the Burton Club ... | } Mr. A. Scrivener. |
| 2.—Friday, May 20, <i>Cloud Hill</i> ... ..                                   | Mr. Goss.           |
| 3.—Tuesday, June 28, <i>Pickwood and Haregate</i> ..                          | The President.      |
| 4.—Thursday, July 21, <i>Wilbournclough</i> , with the Manchester Clubs.. ..  | } Mr. Wardle.       |
| 5.—Friday and Saturday August 26 and 27, <i>Llangollen</i> ... ..             | } Mr. Leech.        |
| 6.—Tuesday, September 20, <i>Dale Abbey</i> ...                               | Rev. T. W. Daltry.  |
| 7.—Thursday, October 20, <i>Sandbach and Brereton</i> ... ..                  | } Mr. Lynam.        |

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**EVENING MEETINGS :—**

**LOCAL SECRETARY :—**

- |  |               |
|--|---------------|
| 1.—Thursday, November 17, <i>Stafford</i> , with the Stafford Institute and Field Club | } Mr. Cherry. |
| 2.—Friday, January 20, <i>Hanley</i> ... ..  | Mr. A. Smith. |
| 3.—Thursday, February 23rd, <i>Uttoxeter</i> ...                                       | Mr. Wilkins.  |
| 4.—Wednesday, March 22, <i>Stoke—Annual Meeting</i> ... ..                             | } Mr. Kirkby. |

The Treasurer in Account with the North Staffordshire Naturalists' Field Club and Archæological Society.

The Treasurer has the pleasure to report that the finances of the Club continue in a satisfactory condition. Owing to the change in the method of collecting subscriptions by appointing a Collector, some delay has occurred, so that the receipts are considerably below the average amount. But this will be remedied another year: and so long as the present number of members is maintained, a sufficient income to provide for all probable expenses will be ensured.

The receipts have been £51 15s., and this with a balance of £24 9s. 2d. from last year gives a total income of £76 4s. 2d. The expenditure has been £74 14s. 10d. leaving a balance in hand of £1 9s. 4d., as shown on the accompanying balance sheet:—

BALANCE SHEET FOR THE YEAR 1880.

DR.	£ s. d.	CR.	£ s. d.
To Balance in hand .....	24 2 2	Allbut and Daniel for Periodicals .....	11 8 3
— Subscriptions .....	51 15 0	Dilworth for Printing, &c. ....	28 14 0
		S. H. Cowell for Lithographic Printing.....	5 4 8
		Jobetson and Stewart for Box ....	0 13 6
		Geological Reports, 2 years.....	1 2 3
		Expenses of Stone Meetings.....	6 9 9
		Do. Longton Meeting .....	3 3 0
		Do. Newcastle Meetings (2) .....	8 0 0
		Do. Hanley Meeting .....	2 2 0
		Do. Excursions .....	4 12 11
		Postage and Postal Orders.....	0 7 6
		Commission on collecting Subscriptions.....	2 17 0
		Balance in hand .....	1 9 4
	£76 4 2		£76 4 2

March 17th, 1881, Examined and found correct,  
T. J. ROBINSON.

# REPORT

*Read at the Sixteenth Annual Meeting, held at Stoke-on-Trent, on  
Thursday, March 17th, 1881.*

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In presenting their usual report at this the Sixteenth Annual Meeting of the North Staffordshire Naturalists' Field Club and Archaeological Society, your Committee can congratulate the members upon a fairly successful year. The Excursions having, with two exceptions (those in June and September), been favoured with fine weather were tolerably well attended, the only decided failure being the Cat and Fiddle Excursion in September, which, as just stated, was not only wet but failed to draw, only eight members having faith in the proverbial good luck of the Club. They, however, as usual, had their reward in a brilliant sunset on the homeward journey across the moors, and as the rain came only in showers, the party were generally able to escape them and contrived to go through the programme for the day with complete satisfaction to themselves.

The Excursions were as usual, seven in number, and were as follows:—

- 1.—Tixall, Cannock Chase, Shugborough and Colwich, on Tuesday, April 20th.
- 2.—Marple, on Saturday, May 29th.
- 3.—Stone and Bury Bank, on Saturday, June 19th. Leader : Mr. Woolley.
- 4.—Warwick, Kenilworth and Coventry, on Friday and Saturday, July 16th and 17th. Leader : Mr. Wardle, F.G.S., F.C.S.
- 5.—Farley, the Weaver Hills, Oakamoor and the Churnet Valley, on Friday, August 20th. Leader : Mr. Clement L. Wragge, F.R.G.S., F.M.S.

## SECTIONAL REPORTS.—No. I : GEOLOGY.

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 NO REPORT SENT IN.

## SECTIONAL REPORTS.—No. II : ARCHÆOLOGY.

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 NO REPORT SENT IN.
 

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## SECTIONAL REPORTS.—No. III : ENTOMOLOGY.

So little Entomological work was done last year by the members of the Club, that there is scarcely anything to say by way of a Report from the Section. For the first time since the publication of the North Staffordshire list of Moths-Lepidoptera, I have no addition to record. It will be remembered that at our last annual meeting I had the satisfaction of announcing the capture of no less than seven additional species, as the result of the previous season's work, being a much larger number than had been added for some years. The year 1880 was unfortunately a blank in respect of discovery, the reason unquestionably being want of work rather than absence of opportunity; for I have no hesitation at all in saying that our list, valuable as it is, is by no means complete—and be it remembered, it only includes one great Order of Insects—and not even all the classes of that one order—the Tortrices (towards compiling a list of which, however, some little work has been done) and the Tineina being altogether omitted. And what shall we say of the other great Orders, the Coleoptera, the Hymenoptera, the Hemiptera, the Neuroptera, the Diptera, and the rest, which, so far as I know, have been left altogether out of sight by our members—as much, indeed, as if they did not exist, and possessed no attractions of their own.

But although I have nothing new to tell you as the result of the very limited work done in this branch of natural history, there are

## EXCURSIONS.

I.—TIXALL, CANNOCK CHASE, SHUGBOROUGH AND COLWICH,  
TUESDAY, APRIL 20TH, 1880.

(From the *Staffordshire Sentinel*.)

The first excursion of the season of the North Staffordshire Naturalists' Field Club and Archaeological Society took place on Tuesday, in conjunction with the Stafford Institute and Field Club, when the localities visited were Milford, Tixall, Shugborough, Great and Little Haywood, Colwich, and various places of interest on Cannock Chase.

The members left home a little after ten o'clock, and, arriving at Stafford, should, according to arrangement, have visited the Salt Library, Wragge Museum, and the Churches of St. Mary and St. Chad, but for some reason the programme was in this respect departed from, and the party, about thirty in number, proceeded to Milford Station, and the Stafford contingent fell in with them later on at Tixall.

Mr. Molyneux, of Burton, should have been the leader of the party for the day, but as he has removed to Natal Dr. E. D. Tylecote, of Great Haywood, proved a very efficient and agreeable substitute.

Through drenching rain the party proceeded from Milford Station to Tixall Hall and the famous Gatehouse, through what, under more favourable circumstances, would have been very pleasant country lanes. At Tixall, however, the rain held off, and did not prove very troublesome afterwards during the whole day.

It was explained that the Gatehouse was built in 1500 when the architecture of Greece and Rome had begun to be fashionable in England. The general architecture of the building was mixed gothic, with three different orders of columns up the sides of each window of the three stories of the building, each supporting a Doric frieze. The first columns were Doric, the second Ionic, and those of the top story Corinthian. From each end of the gateway to the two corners of the old hall there was a wall, thus forming an enclosed court between the gatehouse and the mansion. The gatehouse had three stories and a flat lead-covered roof, protected by a balustrade and an octagon tower at each of the four corners, sixty feet high, the building itself being but fifty feet long, and twenty-five broad. There is an archway in the centre through which carriages used to pass to the hall door, on either side was a lodge for the porters, and in the upper stories, apartments for servants.

The old mansion was built by Sir Edward Aston, in 1555, but James, fifth Lord Aston, commenced to build the present mansion, but only built the quadrangle in the rear of the old house, and the Hon. Thomas Clifford, husband of Barbara Aston, built the new portion of the quadrangle, in 1787.

Mary, Queen of Scots, was brought to Tixall for a fortnight from Chartley, in order that during her absence her cabinets might be searched, and papers seized, and it is related that when being removed back to Chartley, a crowd of beggars begged alms of her as she passed through Tixall gateway, and that she freely conversed with them informing them that she was in a far worse position than they were.

## EVENING MEETINGS.

I.—HANLEY MEETING,

FRIDAY, NOVEMBER 19TH, 1880.

The first meeting for the winter season was held at Hanley last night. The Rev. T. W. Daltry, the secretary, who presided, exhibited mounted specimens of plants, found by him during the past seasons in Kent, Staffordshire, and other counties, his comments upon the same forming an interesting feature in the evening's proceedings. Some birds were shown by Mr. Keeling and Mr. Smith, Mr. Keeling and Mr. Brunt lending some interesting and valuable books. Several cases of insects were also shown by Mr. Smith. Mr. Clement L. Wagge, F.R.G.S., F.M.S., read a paper entitled "The Autumn and Close of 1879 in the vicinity of the Staffordshire Moorlands and Churnet Basin; with Remarks on Barometric Range, Phenological Notes and Observations on the Peculiarities of the Local Climate," from Observations taken by him and under his direction and superintendance at Farley on the Left Main Watershed of the Churnet River, 620.5 feet above the Sea; and at Oakamoor, in the Valley, barely a mile W. by N. from the former Station, and 350 feet above Mean Sea Level. There was a good attendance, and Mr. Wagge was formally thanked for his interesting paper.

**"THE AUTUMN AND CLOSE OF 1879 IN THE VICINITY OF THE STAFFORDSHIRE MOORLANDS AND CHURNET BASIN, WITH REMARKS ON BAROMETRIC RANGE, PHENOLOGICAL NOTES AND OBSERVATIONS ON THE PECULIARITIES OF THE LOCAL CLIMATE."**

The period under consideration was as abnormally dry as that of the previous Summer was wet; for whereas 17.555 inches of rain fell during June, July and August, but 8.151 inches fell during the last four months of this extraordinary year, showing a total of 1,773 tons per acre against 823 tons respectively. October, usually one of the wettest months, ranked second in point of dryness. An explanation of the diminution of the rainfall must be sought in those conditions of Nature that caused the unusually high crests of atmospheric pressure of the period, especially those about the middle of December, and the consequent anticyclonic conditions. Another

## ANNUAL MEETING.

STOKE-UPON-TRENT, THURSDAY, MARCH 17TH, 1881.

The Sixteenth Annual meeting was held in the New Hall of the Station Hotel. The chair was taken by the retiring President, E. Earl, Esq., and there was a large attendance of members and friends, numbering over seventy.

Amongst the objects of interest exhibited (the display of which, though good in many respects, was not so large as usual) were several curiosities from Usangi, the capital of Mtesa's country in Central Africa, lent by the Rev. Mr. Litchfield, a missionary to that country, and son of Mr. Litchfield, of Stone; scarce illustrated works, lent by Mr. Goss, Mr. Daltry, and other gentlemen; a binocular microscope, by Mr. F. Adams; a collection of British birds, reptiles, &c., by Dr. Aldowie; a large medallion of Oliver Cromwell, supposed to have been contemporaneous with the Protector, lent by Mr. Arthur Leech.

There were no new members to be elected, but eight ladies and gentlemen were nominated for election at a future general meeting.

The Report of the Committee was read by the Secretary, and having been adopted, was ordered to be printed.

The Entomological Report was read by the Secretary, from whom it emanated. No Archæological or Geological Report was sent in.

The Treasurer's Report was read by W. Dunnett Spanton, Esq. It shewed that the receipts had been £51 15s. from subscriptions, which, added to the sum of £24 9s. 2d., the balance in hand at the commencement of the year, amounted to £76 4s. 2d. The expenditure had been £74 14s. 10d., leaving a balance in hand of £1 9s. 4d. The statement was adopted on the motion of Mr. J. Ward, F.G.S.

The Officers for the ensuing year were appointed, in accordance with the recommendations of the Committee.



phenomenon assign a cause in *insect agency*. *Tragopogon*, vulgarly called *Go-bed-at-noon*, invariably closes just before twelve. *Mirabilis*, or *Belle-de-nuit*, opens exactly at four o'clock; the evening *Primrose* visibly opens its flower for the crepuscular moths about sunset. Some species of *Lychnis* and *Silene* are night flowers, to which we may add the well-known night-blooming *Cereus*. This class of plants includes species very odorous at night, which indeed is the case with many other plants, so as to require some caution in rooms and wards occupied by sick persons. The prophetic part of our floral kalendar is not rich; the scarlet *Pimpernel* is, you know, the farmer's weather-glass, and I have heard it observed that years which are good for mushrooms are not so favourable for health. An abundance of berries has been considered prophetic of a severe winter. I think this is not the fact, but that birds, like human beings, are ordained sometimes to have an abundance of food and sometimes to be more stinted in supply.

A delicate hygrometer may be constructed from the awn of the wild—or mad-oat—not without its use to the ordinary observer.

I have just told you of *Sinnaeus's clock*; I may conclude with a kind of endiometry, also derived from the vegetable world, and which I think is of some use to medical men and to aletudinarians. Thus in a deteriorating atmosphere—

1.—The larch, heath, ling, bilberry, and Scotch fir die. No lichens live on the trees.

2.—The common laurel, Portugal ditto, araucaria, *lignum-vitæ*, and acacias die successively, or at least do not flower.

3.—*Rhododendrons*, *rubus*, almond die, or do not flower; holly and oak die, or become stationary in growth; variegated holly hardier.

4.—Many culinary vegetables, as peas and French beans fail; laburnum, lilac, and Guelder-rose still live; also annuals and wheat especially, and some other plants partial to the coal strata; also curiously enough some mountain and sea-side plants, saxifages, willow-herb, and thrift.

The above characteristic of wheat is fortunate; the tainted atmosphere seems to ripen it, and possibly the calcified refuse when used to the poor clays of a coal district would act as a fertiliser.

## ANNUAL ADDRESS.

LADIES AND GENTLEMEN,

It now devolves upon me to close my year of office by saying a few parting words in the shape of an address. I found the other day in looking over the first Report that it is now sixteen years since the Society held its first meeting, and I recollect well on one occasion in the first year a solitary member constituted the entire party in the excursion, and on another occasion in the same year two members had done what they considered the objects of interest in the excursion when they came across, to their great surprise, another party consisting of two, and these constituted the entire number on this occasion. Now it is no unusual thing for sixty or eighty to attend some of our summer excursions, and I just refer to these points to show how much larger some kind of interest is in these excursions than it was then, for although the number of members is much greater than it was then, it is not so much greater in proportion. Whether there is sufficient scientific work done for all this outlay of force it is not for me to

## RAINFALL AT BARLASTON IN 1881.

520 FEET ABOVE SEA LEVEL.

	Total.	Greatest in 24 hours.		No. of days rain.
January .....	3·50	·280	28th	5
February .....	4·585	1·000	8th	13
March .....	2·128	·235	23rd	11
April .....	1·451	·590	15th	8
May .....	1·942	·400	27th	11
June.....	2·954	·460	6th	17
July.....	2·265	·700	6th	11
August.....	6·072	1·350	8th	21
September .....	·742	·240	20th	7
October.....	4·091	·540	14th	15
November .....	3·529	·672	2nd	14
December .....	3·108	·930	6th	12
Year.....	33·017			146

## LIST OF MEMBERS CORRECTED TO MARCH, 1882.

TOTAL NUMBER 334.

## HONORARY MEMBERS.

Dunedin, Right Rev. the Bishop of, D.D., F.L.S., Otago, N.Z.  
 Davis, J. E., 4, Whitehall, London.  
 Broad, Rev. J. S., M.A., Pentney Vicarage, Swaffham, Norfolk.  
 Molyneux, W., F.G.S., F.R.Hist.S., Inchanga, Durban, Natal.

## ORDINARY MEMBERS.

Acton, John, Hillside Villa, Stoke  
 Adams, Captain Rd., Congleton  
 Adams, Frank, Stoke  
 Adams J., Longton  
 Adams, Joseph, Rathbone-street,  
 Tunstall  
 Adams, H. Dilhorne  
 Adams, Miss, Stoke Villa, Stoke  
 Ager, William, Uttoxeter  
 Alcock, John, M.R.C.S., Burslem  
 Allen, F., District Bank, Newcastle  
 Annan, Miss, N Staffs. Infirmary  
 Arlidge, J. T., M.D., Leno, The  
 High Grove, Stoke, *Vice-Pres.*  
 Armitage, Rev. G., B.A., Silverdale  
 Vicarage  
 Ash, Frederic, Stoke Villa, Stoke  
 Ashdown, Rev. G. M., B.A.,  
 Madeley  
 Ashwell, John B., Newcastle

Badnall, Rev. James, B.A., Endon  
 Badnall, Mrs.  
 Bagnall, Miss Sara, Mere House,  
 Alsager  
 Bagnall, Wm., Glebe-street, Stoke  
 Baildon, Mrs., 12, Park Terrace,  
 Southport  
 Baildon, W. P., 59, Burton Crescent,  
 London, W.C.  
 Bakewell, Geo., Greenfields, Great  
 Fenton  
 Bamber, W. F., Liverpool-rd., Stoke  
 Barke, F., 8, Wellesley-st., Shelton  
 Barke, Mrs.  
 Barker, Wm., Mere House, Alsager  
 Barton, Miss Ellen, The Willows,  
 Macclesfield  
 Bateman, James, M.A., F.R.S.,  
 F.R.H.S., and F.L.S., 9, Hyde  
 Park Gate South, London, W.  
 Bateman, Robert, Biddulph Hall  
 Bickley, Thos., Broad-st., Hanley

Birks, Arthur, Ivy Cottage, Great  
 Fenton  
 Birks, John, Cobridge  
 Blackshaw, T., Burslem  
 Blackshaw, Miss  
 Bladen, W. Wells, Sandon, Stone  
 Blades, Josiah B., Leek  
 Blaikie, John, F.G.S., F.L.S.,  
 Newcastle  
 Blaker, Rev. W. J., B.A., 6, Wel-  
 lesley-street, Shelton  
 Bland, Miss, Northwood  
 Boothman, Rev. E. D., M.A., Shel-  
 ton Rectory  
 Bostak, Edwin, Stone  
 Boucher, Rev. A. W., M.A.,  
 Chaddleton  
 Boulton, W., Burslem  
 Brade, Thomas H., Victoria-road,  
 Newcastle  
 Bradford, George, Hanley  
 Brashaw, John, 14, Wellington-  
 place, Hanley  
 Bramwell, Rev. John, Bransstone  
 Vicarage, Burton on Trent  
 Brander, James, Bagnall, Stoke  
 Briggs, Miss, 10, Stoke Villas,  
 Stoke  
 Broady, J., Glebe-street, Stoke  
 Brough, William S., Leek, *Vice-  
 President*  
 Brunt, E., F.G.S., Havelock-place,  
 Hanley, *Vice-President* and  
*Librarian*  
 Bull, George, Newcastle

Caddie, Alfred, Penkhill  
 Campion, Rev. Alfred, B.A., Leek  
 Capewell, W., 6, Clyde-st., Hanley  
 Carr, Chas., Moorland House, Leek  
 Carr, Henry, Moorland House, Leek  
 Carryer, J. Y., The Mount, Stone  
 Cartlidge, Alfred C., Oulton, Stone

## CONTENTS.

	PAGE.
List of Officers, 1881 ... ..	Title Page
Excursions and Evening Meetings, 1881-2 ... ..	3
Treasurer's Report ... ..	4
Report of Committee... ..	5
Sectional Reports :—	
I. Geology, (no Report) ... ..	10
II. Archaeology, (no Report) ... ..	10
III.—Entomology, (Thos. W. Daltry) ... ..	10
Excursions :—	
I. Tidal, Cannock Chase, Shugborough, and Colwich ... ..	13
II. Maple ... ..	17
Abstract of Mr. Leo H. Grindon's Address ... ..	21
III. Stone and Bury Bank ... ..	23
Paper on Stone Priory, by the Rev. W. Beresford ... ..	23
IV. Warwick, Kenilworth, and Coventry ... ..	29
Paper on "Fortified Coventry," by Mr. W. G. Fretton, F.S.A. ... ..	31
V. Alton, Farley, the Weaver Hills, and Oakamoor ... ..	37
Address on "Meteorological Instruments, &c." by Mr. C. L. Wragge, F.R.G.S., F.M.S. ... ..	38
"The Highest Point in Staffs:" Letter from Mr. Wragge ... ..	43
VI. Cat-and-Fiddle and Bunton ... ..	45
VII. Chester ... ..	49
Evening Meetings :—	
I. Hanley ... ..	54
Paper.—"The Autumn and close of 1879, in the vicinity of the Staffordshire Moorlands and Churnet Basin, &c." by Mr. C. L. Wragge, F.R.G.S., F.M.S. ... ..	54
List of Plants exhibited by the Rev. Thos. W. Daltry, M.A., F.L.S. ... ..	69
II. Burslem ... ..	70
Papers :—(1) "The Natural Sciences in relation to Beauty and Sublimity," by Dr. A. M. M'Aldowie... ..	70
(2) "The Food of Plants" by Mr. F. M. Sexton, abstract ... ..	76
III. Newcastle ... ..	78
Papers :—(1) "Medals Ancient and Modern, having special reference to the Napoleonic Series," by Mr. A. Leech ... ..	79
(2) "The Ecclesiastical Norman Architecture of Staffordshire," by Mr. C. Lynam ... ..	86
IV. Annual Meeting Stoke ... ..	82
Paper :—"The Natural Kalender," by Mr. R. Garner, F.L.S... ..	94
Annual Address by the President, Mr. E. Earl ... ..	99
Table of Rainfall at Barlaston, for 1881, by Mr. W. Scott, F.M.S. ... ..	105
Library... ..	106
Periodicals ... ..	106
Catalogue of Bound Books ... ..	107
Sections ... ..	107
Associated Societies ... ..	108
List of Members ... ..	109
Rules ... ..	114