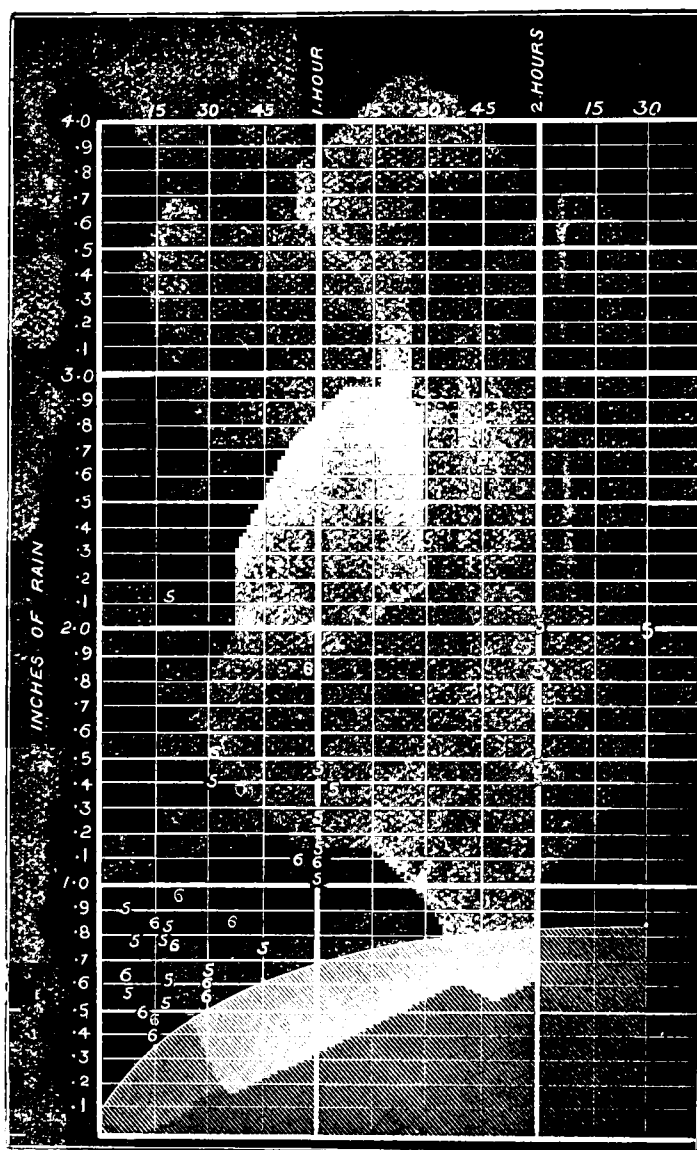


DIAGRAM ILLUSTRATIVE OF
HEAVY FALLS OF RAIN OF SHORT DURATION.



The shaded portion indicates the limit below which falls are of such frequent occurrence as not to require insertion in the annual
"Heavy Falls of Short Duration."—See p. 140.

BRITISH RAINFALL, 1876.

ON

THE DISTRIBUTION OF RAIN

OVER THE

BRITISH ISLES,

DURING THE YEAR

1876,

AS OBSERVED AT ABOUT 2000 STATIONS IN GREAT BRITAIN
AND IRELAND,

WITH MAPS, AND ILLUSTRATIONS.

COMPILED BY

G. J. SYMONS,

*Secretary of the Meteorological Society; Membre de la Société Météorologique de France;
Member of the Scottish Meteorological Society; Member of Council of the
Royal Botanic Society; Fellow of the Royal Colonial Institute;
Hon. Mem. Watford Nat. Hist. Soc., &c.*

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CONTENTS.

PREFACE	5
REPORT	6
FINANCIAL... ..	12
ON RAINFALL IN RELATION TO AGRICULTURE, by William H. Watson, Esq., F.C.S., F.M.S....	16
ON RAIN GAUGES, by E. E. Dymond, Esq., F.M.S.	20
AGRICULTURAL DEPRESSION AND BAD SEASONS, by the Editor, with a Letter from F. Bravender, Esq.	24
ON THE DIMINUTION IN THE AMOUNT OF RAIN COLLECTED IN ELEVATED GAUGES	34
THE ROTHERHAM EXPERIMENTAL GAUGES	38
RAIN GAUGE EXPERIMENTS, ULLEY RESERVOIR, ROTHERHAM, 1876... ..	39
RAINFALL AT THE ROYAL OBSERVATORY, GREENWICH, communicated by Sir G. B. Airy, K.C.B., D.C.L., &c., Astronomer Royal	41
DEW PONDS	42
CHRONICLE OF NEW STATIONS ESTABLISHED AND REQUIRED, AND OF CHANGES IN THE PERMANENT STAFF OF OBSERVERS DURING THE PAST YEAR	45
HISTORY OF THE RAINFALL OBSERVATIONS AT SEATHWAITE	53
OBITUARY	61
ON THE METEOROLOGY OF 1876, WITH NOTES ON SOME OF THE PRINCIPAL PHENOMENA	64
OBSERVERS' NOTES ON THE MONTHS OF 1876	93
OBSERVERS' NOTES ON THE YEAR 1876:—	
England	122
Wales	134
Scotland	135
Ireland... ..	137
HEAVY RAINS OF SHORT DURATION	140
HEAVY DAILY FALLS IN 1876. Part I., Chronicle	142
" " " Part II., Abstract	146
MONTHLY FALL OF RAIN IN 1876	150
COMPARISON OF THE FALL IN 1876 WITH THE AVERAGE OF PREVIOUS YEARS	160
EXTREMES OF RAINFALL IN 1876	165
BRITISH RAINFALL IN MILLIMETRES	166
SUGGESTIONS FOR SECURING UNIFORMITY OF PRACTICE AMONG RAINFALL OBSERVERS	168
ARRANGEMENT OF GENERAL TABLES	171
COUNTY INDEX TO GENERAL TABLES	172
GENERAL TABLES OF TOTAL RAINFALL IN 1876 AT ABOUT 2,000 STATIONS IN THE BRITISH ISLES:—	
England	173
Wales... ..	204
Scotland	207
Ireland	217
SUPPLEMENTARY TABLE OF IMPERFECT RETURNS	222
LIST OF STATIONS OF WHICH THE RECORDS WERE QUOTED IN 1875 BUT ARE NOT IN 1876, WITH THE REASONS FOR THEIR OMISSION	229

ILLUSTRATIONS.

Heavy Rains of Short Duration	...	...	...	...	...	...	<i>Frontispiece.</i>
Diagram.—Temperature of the Inside of Rain Gauges...	...	...	...	...	...	...	<i>face page</i> 20
Diagram.—Decrease of Rainfall with Height above Ground	...	...	...	...	...	...	37
Bradford Water Works Rain Gauge	...	...	...	...	...	...	50
Map of the Rain Gauges on the Gathering Grounds of the Bradford	...	...	...	...	...	...
Waterworks and in the vicinity	...	...	...	...	...	...	<i>face page</i> 50
Map of the Rain Gauge Stations in the upper watershed of the Tees	...	...	...	...	...	...
and its vicinity	...	...	...	...	...	...	52
Map of the Divisions adopted in this work...	...	...	...	...	...	...	170

ERRATA IN BRITISH RAINFALL, 1875.

- Page 169.—Newick (Ketches) 26·50 should be 27·50.
 „ 177.—Topsham (Clyst St. George) 35·75 should be 36·63.
 „ 178.—Truro (Penarth) 41·37 should be 43·39.
 „ 206.—Thurso (Holburn Head) 27·24 should be 27·60.
 „ 215.—Navan (Balrath) 34·5 should be 35·5.
-

ERRATA IN BRITISH RAINFALL, 1876.

- Page 118, line 28, for “imperatoniis,” read “Imperati.”
 „ 133, „ 9, for 14°, read 44°.

The above occur only in some copies.

BRITISH RAINFALL, 1876.

VERY few people have the remotest idea of what is implied by the familiar word, million ; if, therefore, I said that the preparation of this work involved the examination of more than a million figures, few persons would realise what the statement implied. It will, perhaps, give a better idea of the labour expended if I state that before one figure was printed, upwards of 20,000 columns of figures have been checked, and that every error detected in any one of them has been the subject of a communication to the person who made the mistake.

Statistical work is good for nothing if it is not accurate, and though it is extremely difficult to ensure accuracy in such a work as this, I hold it to be my duty to spare neither money, time, nor thought in attaining as nearly perfect accuracy as is humanly possible.

I am proud of being able again to refer to the very short table of errata. The table of monthly fall contained 9,700 figures, and not one was wrong. These facts prove that our efforts were successful last year, and I trust that they have been equally so with the following pages.

There being, at present, considerable mis-apprehension as to the amount of Government aid granted to Meteorology, it may be well to state that the expenses of the system of which the following is the annual report, are entirely borne by the gentlemen named on pages 13 to 15, and by the profits of the sale of this work, while the observations are made gratuitously by nearly two thousand observers.

G. J. SYMONS.

62, CAMDEN SQUARE, N.W.,
May 19th, 1877.

REPORT.

ALTHOUGH the final separation between the rainfall organization and the British Association for the Advancement of Science did not occur until the autumn of 1876, I think it will be better that this report should not entirely pass over the work of the early part of that year. I think so because it appears to me that (inasmuch as the entire rainfall organization is now solely supported by the observers and contributors to the present volume) it is right and proper that full information should be given as to the work done.

It is impossible to render this report strictly chronological, because different branches of work are necessarily carried on simultaneously, *e.g.*, during January and February I usually receive between 2,000 and 3,000 separate documents; the majority of these refer to the rainfall of the previous year, but about 400 would be the monthly returns for December and January respectively, all which have to be examined at once, and many of them tabulated for the *Meteorological Magazine*. Besides which there is an almost ceaseless flow of correspondence upon all kinds of meteorological questions, notes of new stations, and of old ones terminated, changes of observers, changes of residence, deaths of observers, applications for altitudes of bench marks, for latitudes and longitudes, for compass variation, for advice as to instruments, books, and points of practice; enquiries as to floods, water supply, drainage, health resorts, and on all sorts of difficult questions, a very favourite one being, "Please tell me whether it is true that less rain falls on the top of a house than on the ground? and if it really is so, why it is?" which last question is not very easily answered in the compass of a note. Although the labour of replying to these and similar questions falls chiefly upon myself, I do not regard it as by any means waste time, because all that tends to inform, correct, or assist the observers neces-

sarily raises their qualifications, and therefore adds greatly to the value of their work and of mine.

I think that the best plan of stating the work done in connection with rainfall will be to give a sort of chronicle. The list may not look very long or imposing, but it must be remembered that the greater part of the time of myself and my assistants is taken up with work of the class already mentioned, and which it would be ridiculous to specify at any length. Moreover, there is no reference to British Association work, as up to September that was not chargeable to our general funds.

The first item which is worth mentioning is the Loan Collection at South Kensington, for which I arranged a set of typical rain gauges, which were exhibited, together with a specially-prepared map of all the stations in operation. I also lent all the aid in my power to the authorities in connection with the Meteorological section, and gave a popular address on rainfall measurement at one of the Conferences.

About this time I also prepared a paper on the Floods of 1875, and on Water Economy, which was read and discussed before the Institution of Civil Engineers, and for which a Telford Premium was awarded.

Another paper which I wrote, upon Water Supply, for the Social Science Congress at Liverpool, being only partially upon rainfall, I merely mention it and pass on.

The brother of one of our best observers, being engaged in important railway works in Eastern Europe, and, requiring information upon rainfall and other matters, was advised as to instruments, &c.

The engineer of Bristol Docks, requiring a rain gauge to be available by night and by day, and to indicate in such a manner that anyone could read it, a modification of my storm rain gauge was designed for him; it was constructed by Pastorelli, of Piccadilly, exhibited at the Meteorological Society, and since its erection has given perfect satisfaction.

With the preparation of the report for the British Association meeting at Glasgow, my duties for that body ceased; but I cannot refrain from stating here what occurred after its being read.

“Mr. SYMONS (Secretary) having read the report,

Mr. F. J. BRAMWELL, F.R.S., said that he was aware that it was contrary to the rules of the Association to discuss reports, but he felt much inclined to ask Mr. Symons a question with reference to the

continuance of rainfall observations after the cessation of the labours of the Association's Committee. "What was to be the future of rainfall observations?"

Mr. SYMONS having intimated that a reply to that question would occupy some little time,

The PRESIDENT put it to the meeting whether the members desired to hear Mr. Symons' statement or not, and it was unanimously decided affirmatively.

Mr. SYMONS said that up to 1858 there had been no attempt whatever to collect in any single publication all systematic rain records. Accordingly in 1860, he himself had commenced by issuing a leaflet, containing such returns as he could collect, and this had gone on till matters had reached their present stage. The action of the Association had been to supplement his work, principally by defraying the expenses of branches of it which could not otherwise have been met. In early years a large proportion of the grants was expended in providing rain gauges gratuitously to persons resident in districts where observations were necessary, and had not been made, thus observers had been scattered throughout the country. They belonged to all classes, from shepherds who took the gauges upon the mountains, and were paid by himself, to noblemen and gentlemen who bore some portion of the expense of the inquiry. The consequence was that at the present moment we had in this country a system of observation which was the admiration of other countries, and was being imitated in France, America, &c.; that system now embraced some 2,000 stations, so disseminated that it was scarcely possible to drop on any district in the British Isles which was more than four or five miles distant from a station. Therefore, also, when hydraulic and water-works questions turned up, data were almost always available, which did not exist ten years ago, for ascertaining the quantity of water which could be collected from any given gathering ground.

With respect to the future maintenance of this system it simply rested with himself, and if anything happened to himself he did not quite see how the work could be maintained, but he hoped that a sufficient amount of interest would be awakened to make the sale of publications yield a sufficient revenue to maintain it. He was thankful for what the Association had done in the past, and regretted any breach in the connection between it and the Committee.

Captain GALTON, C.B., F.R.S., referred to the remark in the report respecting the desirability of appointing a permanent inspector of rain

gauge stations, the whole or nearly the whole of whose time should be devoted to travelling inspection, and asked if Mr. Symons could state what such an officer would cost.

Mr. SYMONS said that the cost would be so far in excess of any funds hitherto at the disposal of the Committee or himself, that he had made no estimate ; but as such an officer must be a person of scientific attainments, and would be brought into contact with all classes of observers, the salary could hardly be less than £100 or £150 per annum. To that must be added hotel and travelling expenses, for which he believed commercial travellers were allowed £1 per diem, at that rate the total cost would be nearly £500 per annum, which he need not say was far beyond what he could reasonably spare upon public work.

Dr. C. W. SIEMENS, F.R.S., explained that the work of the Committee had such an important bearing on the professional work of engineers, that it was felt that observations should be supported, if not by Government, by the leading engineering bodies. That was simply the reason why the grant to the Committee was not intended to be renewed by the Association.

Sir J. HAWKSHAW, F.R.S., stated that no one failed to appreciate the importance of the work undertaken by the Committee, but it was thought that that work should now be undertaken by engineers, who were so largely interested in it.

Mr. EDWIN CHADWICK, C.B., urged the importance of the work, as contributing to sanitary science, and that it should be comprised within the functions of the local sanitary authorities, beginning with the greater provincial centres, such as Glasgow and the chief provincial cities. The Registrar-General included the observations of the rainfall in his periodical reports of the meteorology, and the local sanitary authorities should follow the practice closely for their respective districts. Agriculture would be interested in these observations, and in connection with sanitary administration they would be best utilized and popularized.

Mr. BRAMWELL thought it would be well to bring the influence of the section to bear on this question, and he therefore moved :—

“That in the opinion of Section G, the labours of the Rainfall Committee have proved most useful, that it is in the highest degree desirable that the Committee should be continued, and that further money grants should be made as occasion may require.”

Sir JOHN HAWKSHAW supported the motion, it was put by the President and unanimously agreed to.

The PRESIDENT considered that it would be a great misfortune were the observations referred to discontinued, but it was generally felt that the funds of the Association are best employed in initiating any good and valuable work of this kind, and that when once set agoing it should be left to those chiefly interested in maintaining it. It was also objectionable to grant anything like a permanent annuity out of the funds of the Association, but he should take care that the matter was considered in Committee.

On the following day the President reported that the matter had been considered in the Committee of the Section, and that the following resolution had been passed :—

“The Committee have taken into consideration the resolution of the Section as to the re-appointment of the Committee on the Rainfall of the British Isles ; but after conferring with Mr. Symons, they have concluded that the time has now arrived when this work should be taken up in a larger public spirit, and consequently that the grant hitherto made should now cease. The Committee do so with the confident expectation that those who have hitherto so greatly benefited by the laborious and successful work carried on by Mr. Symons for the Association, will come forward and make this work of the Rainfall their own. The Committee of Section G records its most hearty and warmest thanks to Mr. Symons for his valuable services, which have proved so important to many branches of science, and have redounded to the credit of the British Association.”

I am sorry to say that up to the present time the expectations entertained by the various speakers have not been realized. It was thought that the best plan would be for those who had spoken on the subject to place their names at the head of any circular which might be issued. Accordingly proofs of it, together with proofs of the discussion as given above, were sent to all the speakers and to one or two others closely connected with the subject, but from only three has any reply been received. The President, Captain Galton and Mr. Carbutt have expressed their approval and promised subscriptions of one guinea each, but as it would obviously be better to have many more than three names, I have not taken any further steps in the matter.

In the autumn I obtained reports from the whole of the stations on the Highland and Dingwall and Skye railways as to the condition of the rain gauges, supplied all deficiencies, and also provided new gauges for the extension lines running to Wick and Thurso. Therefore, although there are several stations omitted in the present volume, I have taken all the steps possible to ensure efficiency at the present time and in future.

About the same time I prepared, at the request of the Institute of Surveyors, a paper for that body, upon "Rainfall and its relation to Civilised Life." I also designed and superintended the construction of two sets of meteorological apparatus for the monasteries on St. Bernard and the Simplon; and drew out specifications for the equipment of meteorological stations at Caterham, and other places.

Later in the year, heavy rains and floods occupied much time, and I had to prepare reports on heavy rains in the valley of the river Don, for the local authorities, and subsequently on those in the Thames, for the Thames Conservancy.

In the early months of the present year such time as could be spared from rainfall work has been devoted to preparing, for the Royal Colonial Institute, a paper on the "Climates of the British Empire."

Up to September, 1876, the details of all examinations of rain gauges were furnished to, and will be published by, the British Association. From various causes I have not been able to examine many since that time; only eleven, viz. :—

Bushy Hill, Cambuslang, Renfrew.	Lucknow House, Addiscombe, Surrey (2).
Annanhill, Kilmarnock.	Oxford Road, Red Hill, Surrey.
Meadow View, Whitehaven.	Weedon Beck, Northamptonshire.
Irish Street, „	Park Hill Rise, Croydon.
Scaleby Hall, Carlisle (2).	

The number being so small, I reserve the details until next year, when I trust it will be greatly augmented; but I have not the B.A. grant to trust to, and my wishes may be checked by my wants.

I hope that this report is not egotistical. I am very desirous that it should not be, and I have written what I have written because I felt that those who supply me with funds ought to know in what way their money is expended, and I wish them to feel that the publication of this volume (though in itself, owing to the scrupulous accuracy of its compilation, a very laborious work) is by no means all that is done for the advancement of rainfall by myself and my assistants.

G. J. SYMONS.

FINANCE.



I do not exactly know for what reason this subject has hitherto been relegated to the end of the book. Possibly because in the earlier days even the aggregate contributions of the observers amounted but to a fraction of the entire cost of the work. Slowly and very gradually the total subscriptions have crept up, in spite of serious losses through the death of contributors. The expenses have likewise increased, but by rigorously economical (which by no means implies parsimonious) administration, I have so contrived to keep down the expenses that the work has become self-supporting, that is to say, wholly supported by the contributors. I think, therefore, that it is proper to bring this subject to a more prominent part of the book.

There is not much to say respecting the following list of subscriptions. I am very glad to see that it is rather longer, and for a rather larger amount than last year. I note this fact with satisfaction for two reasons—neither of them the reason which many persons would expect. My satisfaction is based (1) on the fact that if a gentleman trusts me with one, two, or ten guineas on behalf of rainfall work, it is substantial proof that he is satisfied with what I have done in the past, and considers the work worthy of support. I therefore regard each name as a token of approval. (2) The greater the funds at my disposal, the more nearly perfect shall I be able to make our organization, and therefore, the more money the better the work.

I regret that we have not nearly made up the £100 previously paid by the British Association, and that therefore some of our operations must be curtailed ; but although I shall be conscious of the restriction, I trust that few persons will be able to detect it, nay even that the relief from any responsibility to that Association, may develop such vigour that rainfall work may be regarded as progressing as fast as, or faster than, in any previous year.

List of all Sums of £1 and upwards received in payment for Books, Diagrams, &c., or as Contributions to the General Expenses of Rainfall Investigations in 1877.

	£	s.	d.		£	s.	d.
Abbotts, R. W., Esq.	3	10	0	Carr, Rev. D.	1	2	6
Abercromby, Hon. R.	1	0	0	Chapman, E., Esq.	2	2	0
Ainsworth, Col.	1	5	0	Charlton, W. H., Esq.	1	0	0
" R. H., Esq.	2	16	0	Chrimes, R., Esq.	10	0	0
Aire and Calder Navigation ...	1	11	0	Christopherson, Rev. A.	1	0	0
Alexander, J., Esq.	1	0	0	Clark, Charles, Esq.	1	0	0
Allison, R. A., Esq.	1	5	0	Clegam, W. B., Esq., C.E. ...	2	0	0
Ames, E. L., Esq.	2	0	0	Clermont, Right Hon. Lord.	1	0	0
" H. St. V., Esq.	1	0	0	Collins, C. R., Esq.	1	15	0
Appach, R., Esq.	1	0	0	Coode, E., Esq.	1	3	0
Arnold, W., Esq.	2	0	0	" W., Esq.	1	7	0
Assheton, R., Esq., M.P.	1	0	0	Cooke, The Rev. R. B.	1	0	0
Atkinson, A., Esq.	1	14	6	" J. H., Esq.	1	13	0
Backhouse, T. W., Esq.	2	2	9	Corden, G., Esq.	1	1	0
Baker, W. C., Esq.	1	1	0	Courtauld, S., Esq.	1	11	6
Balme, E. B. W., Esq.	3	3	0	Courtown, Right Hon. Earl of	1	5	0
Barber, J. T., Esq.	3	3	6	Cowper, the Dow. Countess ...	1	1	0
Barrington, E., Esq.	1	0	0	Crowley, P., Esq.	1	12	0
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Bateman, J. F., Esq., C.E.,				Darby, C. E., Esq.	1	12	6
F.R.S. (6 years)	12	12	0	Davey, E. C., Esq. (3 years)...	2	2	0
Baxendell, J., Esq.	1	12	0	Davies, Rev. R. P.	1	0	0
Bayning, The Lady	1	1	0	Davis, T. H., Esq.	1	5	0
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Bicknell, P., Esq.,	3	0	0	Divett, J., Esq.	1	0	0
Biddell, G. A., Esq.	1	1	0	Dixon, J., Esq.	1	1	0
Bigge, Rev. J. F.	1	0	0	Dod, Whitehall, Esq.	4	0	0
Birkbeck, W., Esq.	1	0	0	Dodgson, H., Esq., M.D.	1	2	0
Blackmore, R. D., Esq. (2 years)	2	2	0	Doncaster, D., Jun., Esq.	1	10	0
Blake, W., Esq.	2	5	0	Douglas, S., Esq.	1	0	0
Blamire, Rev. W. H.	1	8	6	Drake, Rev. R.	1	5	0
Blomfield, Rev. L.	1	10	0	Du Port, Rev. J. M.	1	5	0
Bosanquet, S. R., Esq.	1	2	6	Dymond, W. P., Esq.	1	1	0
Boscawen, Capt. Griffith.	1	4	0	Eaton, H. S., Esq.	1	0	0
Bowen, Mr. W.	1	0	6	" C. O., Esq.	1	6	0
Boyd, Rev. Canon	1	1	0	Eden, The Hon. R. H.	1	1	0
Boyle, The Hon. R.	1	1	0	Elwyn, Rev. W. M. H.	1	0	0
Bravender, J., Esq., F.G.S. ...	1	5	0	Erschine, Sir T., Bart.	1	5	0
Bridgeman, Hon. & Rev. J.R.O.	1	1	0	Estlin, J. P., Esq.	1	1	0
Brooke, The Rev. J.	1	6	0	Evans, F. G., Esq.	1	12	6
Brown, A. J. D., Esq.	1	0	0	" J., Esq., F.R.S.	1	0	0
" Rev. D.	1	0	0	Eyre, Rev. W. L. W.	2	0	0
Bryan, Mr. J.	1	0	0	Fawcett, Major (4 years)	2	2	0
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Bumpstead, The Rev. T. J.	1	0	0	Ffolkes, The Rev. H.	1	0	0
Burder, G. F., Esq., M.D.	1	0	0	Field, Rogers, Esq., C.E.	2	13	0
Burgess Wilson, Mrs.	2	0	0	Filliter, E., Esq., C.E.	1	14	6
Burlingham, R., Esq.	1	12	6	Foord, Rev. R. H.	2	2	0
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Bywater, Mrs.	1	1	0	Fox, J., Esq., C.E.	1	1	0
Caldicott, R., Junr., Esq.	1	1	0	Gainsford, W. D., Esq.	1	9	0
Campbell, Major	1	5	6	Gamlan, W. H., Esq.	1	10	0
" A., Esq.	1	0	0	Garnett, W., Esq.	5	2	6
" Colin, Esq.	1	0	0	Gavin, Mrs.	1	1	0
Carbutt, E. H., Esq.	1	1	0	Giles, J., Esq.	1	10	0
Carmichael, P., Esq.	1	5	0	Gill, H. Septimus, Esq.	1	1	0

	£	s.	d.		£	s.	d.
Graves, Rev. J.....	1	0	0	Malden, The Rev. C.	1	5	0
Grey, Right Hon. Earl, K.G...	1	0	0	Marshall, A., Esq.....	5	0	0
Grubb, Miss	1	0	0	" H. C., Esq.	5	0	0
Gulson, J., Esq.	1	16	0	Marten, J., Esq.	1	15	0
Hadden, J. P., Miss.....	1	5	0	" E. B., Esq., C.E.	1	14	0
Hankinson, R. C., Esq.	1	5	0	Massie, R., Esq.....	1	5	0
Harcourt, Colonel.....	1	1	0	" Rev. E.....	1	5	0
Hare, T. H. Esq.....	1	3	6	Mathew, Major	2	13	6
Harris, W. J., Esq.	2	15	6	Matthews, J., Esq.	1	1	0
" C. E., Esq.	1	0	0	Mawley, E., Esq.	2	2	0
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" W. F., Esq.	1	11	0	Meares, J. L. D., Esq.....	1	5	0
Hayhurst, Colonel.....	1	1	0	Melville, A. S. L., Esq.	1	1	0
Healey, G., Esq.	1	5	0	Merrifield, J., Esq.	1	0	0
Heberden, Rev. W.	1	0	0	Merriman, Rev. Dr. (2 years)..	1	0	0
Hedgeland, Rev. Preb.....	1	1	0	Mitchell, F. J., Esq.....	1	1	0
Herbert, J. M., Esq.....	1	8	6	Morrell, E. C., Esq.....	1	1	0
Hill, The Rev. E.....	2	1	6	Muirhead, H., Esq., M.D.	2	2	0
" J. H., Esq.....	2	2	6	Murdoch, Rev. J. B.	1	0	0
Holdsworth, J. S., Esq.	1	12	0	Musgrave, W., Esq.....	1	1	0
Hopkins, Rev. T. A. T.	1	14	0	Nash, W. D., Esq.	1	1	0
Horncastle, H., Esq.	1	5	0	" Mr. W. R.	1	1	0
Horner, Mrs.	1	0	0	Neame, G., Esq.	1	1	0
Howard, W. D., Esq.	10	10	0	Neumann, H., Esq.	1	5	0
Howes, Rev. J. G.	1	2	6	Newnham, Rev. P. H.	1	1	0
Hubbard, Egerton, Esq. M.P...	2	2	0	North, A., Esq.	1	1	0
Hudson, H., Esq., M.D.....	3	0	0	Nutter, J., Esq.....	1	15	0
Hughes, G. P., Esq.	1	0	0	Ogilvy, T., Esq.	1	1	0
Hutchinson, A., Esq.	1	12	6	Ormerod, G. W., Esq.....	1	0	0
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ON RAINFALL IN RELATION TO AGRICULTURE.

By WILLIAM H. WATSON, Esq., F.C.S., F.M.S.

THE influence which the amount of rain and the time of fall has upon the growth and cultivation of crops is each season indicated in agricultural practice.

A certain amount of rain is necessary at the proper time, in order to keep the land in a sufficiently damp condition for the germination of the seed and the growth of the plant: for the solution and conveyance to the plant of the various inorganic compounds on which it is largely dependent for its nutriment. When a plant, or a portion of one, is burnt with a free supply of air, we notice a considerable reduction in its weight and bulk. The remaining residue represents chiefly those substances which the plant had derived from the soil, such as potash, lime, phosphoric acid, sulphuric acid, chlorine, &c., while that portion which burns off represents the elements obtained from the air in the gaseous form. In cultivated lands the necessary inorganic substances are supplied in the form of manures, but on land not under cultivation we find luxuriant and abundant vegetation, deriving its inorganic constituents from the soil; yet here no artificial supply of plant-food is afforded. This fertility must, then, be kept up by natural circumstances, and I think we might find, on enquiry, that the rain is a considerable benefactor in this instance.

Another cause of the continued fertility of uncultivated land is the natural decay of vegetation, the result of such decay not being removed, but remaining to exercise its beneficial influence upon the future generation of plants. This natural decay is aided by rain, and other atmospheric phenomena.

The effect of a shower of rain, preceded by lightning, upon grass-land is often very marked,—the grass seems to spring up with increased vigour, and the colour of it is a much richer green. This is owing to the lightning passing through the air causing the nitrogen and oxygen of the atmosphere to combine, to some extent, together chemically, the result being nitric acid; this is washed down by the rain, and thus an additional supply of nitrogen in an available form is conveyed to the land.

It is said, also, that the grass crops are generally largest in those years when there has been a large number of thunderstorms. With regard to the amount of nitric acid and nitrate of ammonia contained

in rain and snow-water, Gopelsröder made a number of experiments at Basel. His results are as follows (*Zeitschr : Anal. Chem.*, x, 259 ; xi, 16) :—

Months, 1870-71.	Total amount of rain and snow water.	MINIMUM.		MAXIMUM.	
		Amount contained in 1,000,000 parts of collected rain or snow water.			
		Nitric Acid.	Nitrate of Ammonia.	Nitric Acid.	Nitrate of Ammonia.
October, 1870 ..	101·2 mm.	Trace.	Trace.	13·6	20·1
November ,, ...	123·9 ,,	0·5	0·7	1·2	1·8
December ,, ...	91·2 ,,	0·4	0·6	5·3	7·8
January, 1871...	37·4 ,,	3·1	4·6	5·3	7·8
February ,, ...	38·5 ,,	2·2	3·2	4·4	6·5
March ,, ...	27·5 ,,	2·6	3·8	12·3	18·2
April ,, ...	107·4 ,,	2·2	3·2	4·6	6·8
May ,, ...	41·3 ,,	2·2	3·2	10·0	14·8
June ,, ...	114·5 ,,	2·3	3·2	6·2	9·1
July ,, ...	141·4 ,,	6·41	0·6	1·1	0·63
August ,, ...	26·9 ,,	0·08	0·11	0·98	1·4
September ,, ...	41·6 ,,	0·6	0·87	1·0	1·46

Thus we see that the rain supplies annually a very considerable amount of nitrogen to the land. Chabrier has asserted, upon this subject, that rain fallen when the air is still, contains more nitrous than nitric acid, while in stormy weather the opposite is the case.

During the first 6 months of last year (1876) I made determinations of the amount of solid matter and chlorides in the rain water fallen here, only about half a mile from the sea. The following results were obtained :—

Grains per gallon.

1876.	Total solids.	Loss on ignition.	Fixed solid residue.	Chlorine equal to Chloride of Sodium.
January	4·000	0·014	3·986	1·092
February.....	5·173	0·017	5·156	2·135
March	4·666	0·010	4·656	1·480
April	2·710	0·010	2·700	0·786
May.....	6·736	0·100	6·636	2·847
June	2·348	0·060	2·288	1·100

The amount of chlorides in rain water naturally depends chiefly on the distance from the sea and the direction and force of the wind at the time of collection, though in towns the large consumption of coal may to some extent influence the amount of these constituents. With

regard to the influence of the sea upon the purity of the rainfall, I made an experiment, with the following result :

No. 1.—Fallen about a mile from the sea.

No. 2.—Fallen about 50 yards from the sea.

No. 1.		Parts per 100,000.
Total Solids		5·67
Containing—		
Sodium Chloride		2·45
Magnesium Chloride		0·67
No. 2.		
Total Solids		17·10
Containing—		
Sodium Chloride		12·20
Magnesium Chloride		3·43

It has been observed that land which has been inundated by the sea, although containing scarcely one-tenth per cent. of sodium chloride, fails to be productive. I need scarcely say that the influence of rain water containing such large quantities of chlorides, as indicated above, must be great upon the water of wells in the neighbourhood.

Dr. R. Angus Smith, F.R.S., has examined the rain water fallen in various districts. The following are the results as published (Sixth and Seventh Reports of the Inspector, under the Alkali Act of 1863) :—

Rain water—average impurities per 1,000,000 parts.

Where Collected.	Hydro chloric acid.	Sulphuric acid (anhydrous).	Sulphuric acid for 100 of hydro-chloric acid.	Free acids calculated as sulphuric acid.	Ammonia (inorganic).	Albuminoid Ammonia.	Nitric acid.	Oxygen required as permanganate.
Ireland, Valencia	48·67	2·73	6	None.	0·18	0·03	0·37	0·05
Scotland, 5 sea coast } country places, west }	12·28	3·61	29	0·14	0·48	0·11	0·37	0·02
Scotland, 8 sea coast } country places, east }	12·91	7·66	59	2·44	0·99	0·11	0·47	0·65
Scotland, 12 inland } country places	3·38	2·06	61	0·31	0·53	0·04	0·31	0·26
England, 12 inland } country places	3·99	5·52	138	None.	1·07	0·11	0·75	0·47
Scotland, 6 towns } (Glasgow included) }	5·86	16·50	282	3·16	3·82	0·21	1·16	1·86
Darmstadt	0·97	29·17	2998	1·74	...	...	...	...
London	1·25	20·49	1645	3·10	3·45	0·21	0·84	...
England, 6 manu- } facturing towns ... }	8·70	34·27	394	8·40	4·99	0·21	0·85	2·74
Manchester.....	5·83	44·82	768	10·17	5·96	0·25	1·01	3·22
Glasgow	8·97	70·19	782	15·13	9·10	0·30	2·44	10·04

With regard to rainfall and drainage ; if the rain be great at that period when manure is applied to the land, or soon after, the soluble portion is largely washed away, and it happens that the soluble substances are those which are chiefly of value as plant-food, including salts of ammonia and other compounds containing nitrogen. The examinations which have so far been made of drainage waters by various agricultural chemists, clearly point to the great loss of plant-food by drainage, and the evidence thus obtained clearly shows that at least three or four times as much of the more important fertilizing substances has to be applied to the land as is removed or absolutely taken up by cropping ; but of course the amount of valuable fertilizing matter lost by drainage will depend largely upon the nature of the soil and the amount of rainfall. The nitrogenous compounds used as manures are very liable to loss by drainage, nitrate of soda especially, from the fact that soils do not possess the power of absorbing and retaining nitrates for any lengthened period. It is evident, then, that the salts of ammonia, being more readily retained by soils, may be more safely applied for the purpose of furnishing nitrogen to plants, although, to some extent, the ammonia thus absorbed by porous soils is subject to oxidation. This oxidation of ammonia resulting in the formation of nitrates, which are, as just mentioned, especially subject to loss by drainage.

In the case of the application of guano, which contains ammonia in the free state, or in a very weak state of combination, if warm, dry weather follows closely after its application, the ammonia is very liable to be volatilised, and a loss thus occasioned.

The average statistics of the rainfall of past years would suggest that nitrogenous compounds, *such as nitrate of soda*, now largely used for the purpose of top-dressing grain crops, should be applied later in the spring than others, such as ammoniacal manures.

Very little potash is applied to the land as compared with other fertilizing substances, although it is much required for the nutrition of plants, and this is doubtless owing considerably to the power which soil has of retaining it, and thus preventing its loss by drainage. The application of potash-manures does not appear, then, to require the same attention to meteorological conditions as is undoubtedly desirable in other instances.

*Braystones, near Whitehaven,
March, 1877.*

ON RAIN GAUGES.

By E. E. DYMOND, Esq., F.M.S.

HAVING some doubts whether the gauges in common use really collected and preserved all the rain that fell into them, and in particular, whether there was not a considerable loss in the collection of hail and snow, and a further loss by evaporation from the bottle after collection, I had a 5-inch gauge made in 1873, in which the funnel was placed 5 in. below the edge of the gauge, and the bottle was sunk to a depth of 2 ft. below the surface of the ground. This was placed at a short distance from one of the ordinary pattern and the differences of their readings were such that it seemed desirable that further observations should be made. See *Brit. Rainfall*, 1874, p. 35.

Accordingly, in 1874, I had a set of four gauges made :

A. Ordinary pattern gauge, No. XII. *British Association Report*, 1866, pl. vi.

B. Modified Snowdon pattern. The funnel 4 in. below the rim, and the bottle entirely above ground.

C. Ordinary pattern, as A. but with the bottle 2 ft. below ground.

D. Modified Snowdon, as B, but bottle 2 ft. below ground.

A small Six's thermometer was placed in A. and a similar one in C.

A small anemometer was set up near the gauges, 13 ft. above ground.

A plan of the arrangement will be found in *British Rainfall*, 1875, p. 27.

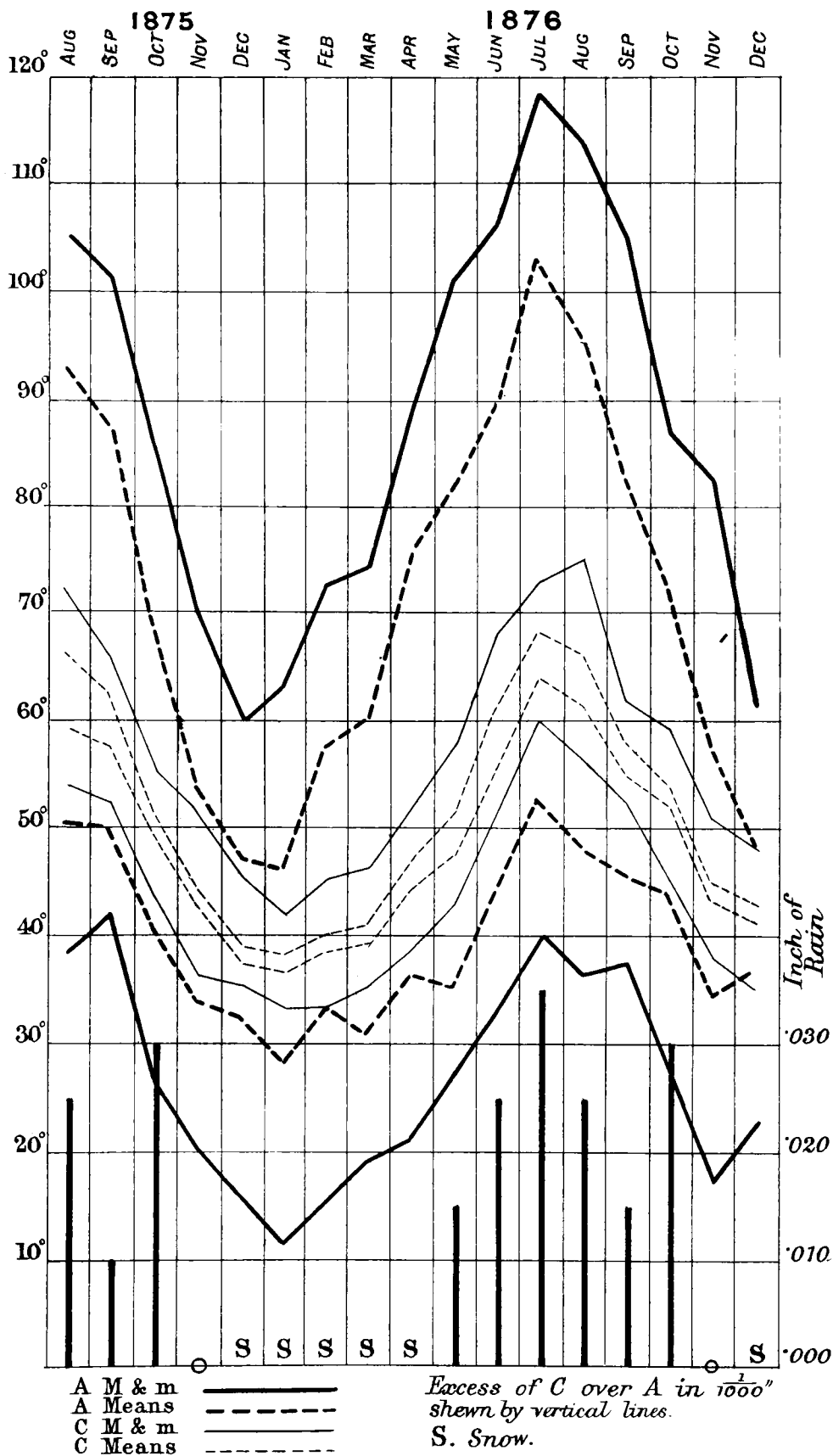
These gauges were placed at the corners of a square of 5 ft., on a level, well-exposed piece of ground, in September 1874, and were read daily to the end of 1876.

A snow gauge was added in December 1875, and placed in the middle of the square. This was a cylinder 5 in. in diameter and 18 in deep, sunk 6 in. in the ground, so as to bring its mouth level with the rest of the gauges.

Unfortunately an accident to D has prevented its readings from being trustworthy. They have, therefore, been omitted from the following tables and diagram.

The daily readings of A, B and C varied slightly and irregularly, but on taking out the totals for each month, the differences are tolerably regular, as appears by the following table :—

TEMPERATURE OF THE INSIDE OF RAIN GUAGES, AND ITS EFFECT.



MONTH.	Number of Observations. R. S.	Rainfall.			Differences.		Temperature in A.				Temperature in C.				Average miles of Wind on wet days.
		A.	B.	C.	A±B	A±C	Max.	Mean.		m.	Max.	Mean.		m.	
								in.	in.			in.	°		
1875.		in.	in.	in.	in.	in.	°	°	°	°	°	°	°	°	°
August	11	.625	.590	.650	+.035	-.025	105	93	50	39	71	66	59	54	121
September	14	2.560	2.535	2.570	+.025	-.010	101	87	49	42	66	62	57	52	164
October	20	5.565	5.550	5.595	+.015	-.030	86	68	40	26	56	51	48	43	162
November	21	4.000	3.975	4.000	+.025	=	70	54	34	20	51	44	42	36	194
December	14 [7]	.915	.990	.885	-.075	+.030	60	47	32	15	45	39	37	35	182
1876.															
January	11 [4]	2.210	2.315	2.200	-.015	-.010	63	46	28	11	42	38	36	33	173
February	22 [7]	1.965	2.065	1.980	-.100	-.015	72	57	33	15	45	40	38	33	204
March	18 [6]	2.620	2.695	2.665	-.075	-.045	74	61	31	19	46	41	39	35	206
April	15 [2]	2.545	2.885	2.575	-.310	-.030	90	75	36	21	52	47	44	38	193
May	11	.540	.520	.555	+.020	-.015	101	82	35	24	58	51	48	42	134
June	11	1.425	1.425	1.450	=	-.025	107	90	45	32	68	61	56	51	111
July	10	.570	.590	.605	-.020	-.035	118	103	52	40	73	68	64	60	152
August	12	2.110	2.140	2.135	-.030	-.025	115	96	49	36	75	66	61	55	183
September	20	4.040	4.055	4.055	-.015	-.015	104	83	45	37	62	58	55	52	124
October	14	1.780	1.775	1.810	+.005	-.030	87	71	43	28	59	54	52	45	149
November	18	3.645	3.630	3.645	+.015	=	82	57	34	17	51	46	43	38	172
December	23 [3]	5.340	5.350	5.270	-.010	+.070	61	48	36	23	48	43	41	35	207

The figures in brackets shew the number of days on which snow fell.

It will be seen that, except on two occasions when they were equal, and two others when snow interfered, less rain was registered by A than by C. Rejecting all the months in which snow fell, the total excess of C over A amounts to $\cdot 21$, and it will be seen that, except in October in each year, the monthly excess follows pretty closely the curves of temperature. On one day in each October there was a heavy rainfall, and on each occasion C caught $\cdot 20$ more than A. This was, of course, an occasional or accidental difference, and the result of the seventeen months' work seems to be that there is a slight but appreciable loss by evaporation from those gauges whose bottles are above the ground. In cases where there is either no cylinder or where there are "openings at the side for the convenience of observing approximately the collected rainfall without disturbing the frame" (as in Nos. III. and XI., *British Association Report*, 1866, pl. vi.), and where, consequently, there is an opportunity for the vapour to escape, the loss is probably much greater; and it would, I think, be well if the use of such gauges were discontinued.

As usual, snow caused great irregularities, the following table showing its effects:—

	No. of Observations.	A	B	C	Snow Gauge.	A+B	A+C	Average miles of Wind.
1875.								
December	7	$\cdot 575$	$\cdot 655$	$\cdot 560$	{ not set up	$-\cdot 080$	$+\cdot 015$	121
1876.								
January	4	$1\cdot 200$	$1\cdot 290$	$1\cdot 175$	$1\cdot 365$	$-\cdot 090$	$+\cdot 025$	114
February	7	$\cdot 435$	$\cdot 515$	$\cdot 455$	$\cdot 505$	$-\cdot 080$	$-\cdot 020$	167
March	6	$1\cdot 095$	$1\cdot 175$	$1\cdot 120$	$1\cdot 115$	$-\cdot 080$	$-\cdot 025$	172
April	2	$\cdot 535$	$\cdot 830$	$\cdot 540$	$\cdot 905$	$-\cdot 295$	$-\cdot 005$	284
December	3	$1\cdot 035$	$1\cdot 055$	$1\cdot 030$	$1\cdot 090$	$-\cdot 020$	$+\cdot 005$	67

This likewise seems to indicate a superiority in C over A, but still more striking is the advantage that, in snowy weather, B has over both. When the funnel of the gauge is not deep enough to hold all the snow that falls, the excess is, in most cases, lost; although if the snow has fallen lightly and with little wind, it will generally get piled up and may, with care, be pressed back into the funnel and measured; but if there has been any drift, all that falls after the funnel is full is irrecoverably lost. This was strikingly the case in the snowfall on the 13th April 1875, which fell with a strong wind and drifted a good deal afterwards; and the amounts caught were respectively, A $\cdot 390$, B $\cdot 625$, C $\cdot 395$; snow gauge $\cdot 715$.

The result of the whole experiment seems to be that the Snowdon

pattern is certainly the best of those now commonly used, and if it were made a few inches deeper and the lower part a little larger, so as to contain a Winchester pint-bottle, we should then attain the desired gauge that would hold 4 in. It would also, by going rather further into the ground, tend to save the bottle from being burst by the frost. As, however, the opticians consider any variation from the patterns in use a good reason for an increase in price, I suppose we must be content to use the present Snowden pattern ; and when our bottles overflow, to collect the surplus from the cylinder in the best way we can.

AGRICULTURAL DEPRESSION AND BAD SEASONS.

BY THE EDITOR,

WITH A LETTER FROM F. BRAVENDER, ESQ.

IN February, 1877, we received a letter from Mr. F. Bravender, of Cirencester, in which he stated that at several meetings of the Cirencester Chamber of Agriculture, the depressed state of agriculture had been discussed, and doubts had been expressed whether one cause was the greater frequency of dry summers during recent years than formerly. He also forwarded reports of some of the meetings, from which we make a few extracts :—

“ Mr. Holborow, at a meeting of the Kingscote Farmers Club, asked the question, ‘ Have not the repeated unfavourable seasons of the last ten or twelve years helped to spoil the crops ? ’ and added that ‘ During the last few years the seasons have been very awkward. ’

Mr. B. Drew thought that the seasons had a great deal to do with the falling-off in the crops. [He admitted that his wheat crops were not so good as they used to be ; but the seasons had been very bad. He believed he had had more bad seasons than his father, grandfather, and great-grandfather put together.

Mr. Peters believed the falling-off in the crops was entirely due to the bad seasons. His father talked about only two bad seasons for 36 years, while he could mention a good many in 10 years.

Mr. R. A. Iles, at a meeting of the Cirencester Chamber of Agriculture, said that the seasons of 1864, 1865, 1868, 1869, 1870, 1874 and 1876 were very bad for light lands.”

Mr Bravender suggested that the rain records for the vicinity of the Cotswolds ought to show whether there had been any increase in the number of droughty seasons, and offered to examine some of the returns if we would send them to him. As, however, it is a rule never to allow original MSS. to go out of the office, and it was not any more trouble to work up the results than to make the necessary copies, the

work has been done by ourselves. We, however, by no means desire to imply that the figures which we now give are to be accepted as a final and conclusive report upon the subject.

Few things are more difficult to define than what constitutes a good or a bad summer, and when it should be considered to begin or end. The effect upon vegetation of three months each with two inches of rain is almost wholly dependent upon its distribution; *e.g.*, suppose 2 inches of rain falls in the first three days of May, and no more rain till the end of June, when a week of violent thunderstorms gives the 2 inches for June and 2 for July, followed by three weeks' drought, the effect of such a season would be entirely different from one with the same rainfall as a constant drizzle. Thanks, however, to our insular position, neither of these extremes is likely to occur; and a fair notion of the character of a season may be drawn from the monthly fall of rain. After consulting with Mr. Bravender, we have taken June, July and August as the months to be investigated, and we now proceed to state the facts as recorded at some of the oldest west-country stations.

ORLETON.

This station is about six miles E. of Tenbury, 13 miles N.W. of Worcester, and 11 miles S.W. of Kidderminster, on the river Teme, an affluent of the Severn. The gauge is 200 ft. above ordnance datum, and the observations are, we believe, thoroughly trustworthy throughout. The record extends over nearly half a century, as it begins with January, 1831.

The mean fall has been as follows:—

	1831-9.	1840-9.	1850-9.	1860-9.	1870-6.	1831-76.
	in.	in.	in.	in.	in.	in.
June	2·74	2·34	2·73	2·96	2·42	2·64
July	2·68	2·11	2·89	2·13	2·89	2·51
August	2·59	2·92	2·97	2·82	2·61	2·80
Three Months ...	8·01	7·37	8·59	7·91	7·92	7·95

It is perfectly clear that there is no decrease in the mean amounts; the averages are remarkable for their steadiness, and the only difference, a trifling one of about 0·20 in., is an increase in the last 26 years.

We have next extracted all the seasons with less than 5 inches of rain in the three months; they are—

	1831.	1835.	1836.	1847.	1849.	1850.	1864.	1869.	1870.	1874.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
June.....	1·59	2·04	1·45	1·91	1·17	·81	1·86	1·02	·61	1·15
July.....	1·45	·82	2·14	·89	2·15	2·57	·82	1·00	1·68	·80
August.....	1·82	1·40	1·32	1·55	1·33	1·46	·79	1·20	2·09	2·64
Three Months...	4·86	4·26	4·91	4·35	4·65	4·84	3·47	3·22	4·38	4·59

Here also we see no sign of any change ; there are rather more dry seasons in the first half of the period than in the second, but on the whole they are very equally distributed. The three pairs, 1835-6, 1849-50, and 1869-70 are perhaps worth noting.

BURFORD.

Although this station is in Shropshire, it is only about a mile N.W. of Tenbury, and $7\frac{1}{4}$ miles W. from Orleton, and like it, close to the river Teme. The record is perfect from 1847 to the present time, and it is, therefore, in all respects suitable for comparison with Orleton, and for the present enquiry. The mean values are—

	1847-9. in.	1850-9. in.	1860-9. in.	1870-6. in.	1847-76. in.
June	2·92	2·32	2·47	2·26	2·42
July	1·94	2·60	1·85	2·55	2·27
August	1·68	2·54	2·13	2·25	2·25
Three Months...	6·54	7·46	6·45	7·06	6·94

These values are nearly as steady as those for Orleton, but there is a slight deficiency during the ten years, 1860—9.

As the mean fall is an inch less than at Orleton, we have only extracted the seasons in which the fall was less than 4 inches, so as to keep the number within reasonable limits :—*

	1859. in.	1864. in.	1869. in.	1870. in.	1874. in.	1876. in.
June	1·18	1·53	·92	·38	·52	·93
July	·57	·64	·00	·92	1·24	·97
August	1·16	·29	1·82	1·69	2·17	1·12
Three Months ...	2·91	2·46	2·74	2·99	3·93	3·02

This certainly indicates an increased tendency to dry summers, for if we divide the period in half, viz., at 1862, we have only one dry summer in the first 15 years, and five in the second ; or, if we divide it into three periods of 10 years each, we have none in the first, two in the second, and four in the third.

HAUGHTON HALL, SHIFFNAL.

This station is about 25 miles N. of the two previously mentioned. Observations were commenced by Mr. Brooke, at Shiffnal Vicarage, in 1835, and continued until 1846, at the end of which year he removed to Haughton Hall. As we have no means of knowing whether there

* As the present enquiry is merely directed to the frequency, or distribution *in time*, of dry seasons, it is evidently not very important what limit is taken, as it will apply equally to the whole period of observation.

is any constant difference due to the two localities, we only use the 30 years records made at the latter station. It is a fortunate coincidence that this is exactly the period covered by the Burford register.

The mean fall has been—

	1847-9. in.	1850-9. in.	1860-9. in.	1870-6. in.	1847-76. in.
June	2·70	2·61	2·43	2·30	2·48
July	2·10	2·96	1·84	3·06	2·53
August	2·84	2·77	2·86	2·90	2·84
Three months ...	7·64	8·34	7·13	8·26	7·85

Here again the differences are slight ; 1850—9 is the wettest, but 1870—6 is nearly the same. The mean fall being within 0·10 in., the same as Orleton, we take out all the seasons with less than 5 inches.

	1854. in.	1864. in.	1868. in.	1869. in.	1870. in.	1874. in.
June	1·57	1·22	·14	·96	·54	·77
July	2·42	·58	·45	·72	1·04	1·17
August	·97	1·36	3·18	1·41	2·92	2·62
Three Months ...	4·96	3·16	3·77	3·09	4·50	4·56

This gives nearly the same result as Burford, viz., divide the register in halves there is one dry summer in the first and there are five dry summers in the second half ; divide it in thirds and the numbers are 1, 1, and 4.

WEST LODGE, LEOMINSTER.

This is a shorter register, but it extends without a break for 20 years, and is, therefore, well worthy of examination.

The mean fall has been—

	1857-9. in.	1860-9. in.	1870-6. in.	1857-76. in.
June.....	2·75	2·30	1·95	2·25
July	2·34	1·93	2·52	2·19
August	3·01	2·41	2·08	2·39
Three Months	8·10	6·64	6·55	6·83

This looks like a decided decrease, but it must not be forgotten that the first column represents only three years, while the second represents ten, and the third seven.

The seasons below 4 inches have been—

	1864. in.	1869. in.	1870. in.	1874. in.
June.....	1·37	1·01	·24	·66
July	·53	·56	·92	·92
August.....	·72	1·09	1·05	2·89
Three Months	2·62	2·66	2·21	4·47

In the first ten years one dry season, in the second ten years three dry seasons.

ROCKLANDS, ROSS.

This station is on the banks of the Wye, in the extreme south of Herefordshire. The register extends back 25 years, and is perfect throughout.

The mean fall has been—

	1852-9. in.	1860-9. in.	1870-6. in.	1852-76. in.
June.....	2·44	2·56	2·03	2·37
July	2·75	2·03	3·45	2·66
August.....	3·03	2·67	2·78	2·82
Three Months	8·22	7·26	8·26	7·85

These results are remarkably accordant with those for Shiffnal. The dry seasons have been—

	1858. in.	1864. in.	1869. in.	1870. in.
June.....	·99	1·51	1·00	·44
July	1·50	·84	·41	1·38
August.....	2·47	·82	1·07	1·47
Three Months	4·96	3·17	2·48	3·29

Dividing the period into halves, or rather into two periods of 12 years, we have one dry season in the first 12 years, one in the middle year 1864, and two in the last 12 years.

FURTHER BARTON, CIRENCESTER.

Our copy of this register extends from 1844 to 1871, both inclusive. As it is the longest perfect record we have from that neighbourhood we include it, although it does not come down to the present time.

The mean values are—

	1844-49. in.	1850-9. in.	1860-9. in.	1870-1. in.	1844-71. in.
June	2·49	2·88	2·81	1·88	2·70
July	2·11	2·96	2·25	3·06	2·53
August.....	2·31	2·70	2·97	2·76	2·57
Three Months ...	6·91	8·54	8·03	7·70	7·80

The seasons with less than 5 inches have been—

	1844. in.	1849. in.	1864. in.	1869. in.
June... ..	·70	1·72	1·35	1·52
July	2·00	1·20	·88	·72
August.....	1·70	·93	1·24	1·51
Three Months	4·40	3·85	3·47	3·75

This gives two dry seasons in each half of the period.

The following table gives a summary of the results, which appear to us to show that the dry summers are scarcely more numerous than

they were 30 years since. It is true that 1864, 1869, 1870, and 1874, being four out of eleven years, is an excessive proportion, but so is

	Orleton.	Burford.	Shifnal.	Leominster.	Rocklands.	Cirencester.
1831	Dry	—	—	—	—	—
2	+	—	—	—	—	—
3	+	—	—	—	—	—
4	+	—	—	—	—	—
5	Dry	—	—	—	—	—
6	Dry	—	—	—	—	—
7	+	—	—	—	—	—
8	+	—	—	—	—	—
9	+	—	—	—	—	—
1840	+	—	—	—	—	—
1	+	—	—	—	—	—
2	+	—	—	—	—	—
3	+	—	—	—	—	—
4	+	—	—	—	—	Dry
5	+	—	—	—	—	+
6	+	—	—	—	—	+
7	Dry	+	+	—	—	+
8	+	+	+	—	—	+
9	Dry	+	+	—	—	Dry
1850	Dry	+	+	—	—	+
1	+	+	+	—	—	+
2	+	+	+	—	+	+
3	+	+	+	—	+	+
4	+	+	Dry	—	+	+
5	+	+	+	—	+	+
6	+	+	+	—	+	+
7	+	+	+	+	+	+
8	+	+	+	+	Dry	+
9	+	Dry	+	+	+	+
1860	+	+	+	+	+	+
1	+	+	+	+	+	+
2	+	+	+	+	+	+
3	+	+	+	+	+	+
4	Dry	Dry	Dry	Dry	Dry	Dry
5	+	+	+	+	+	+
6	+	+	+	+	+	+
7	+	+	+	+	+	+
8	+	+	Dry	+	+	+
9	Dry	Dry	Dry	Dry	Dry	Dry
1870	Dry	Dry	Dry	Dry	Dry	+
1	+	+	+	+	+	+
2	+	+	+	+	+	—
3	+	+	+	+	+	—
4	Dry	Dry	Dry	Dry	+	—
5	+	+	+	+	+	—
6	+	Dry	+	+	+	—

NOTE.—No observations is indicated by “—”.
Years in which the summer fall was not excessively small are indicated by “+.”
Very Dry Summers are marked “Dry.”

three out of six (1831—36), and three out of four (1847—50). On

the other hand, if we halve all the registers, we find the earlier halves contain 13 dry years, and the later 21. On the whole, therefore, we arrive at the conclusion that there have been rather more dry summers lately than usual. Of course it does not at all follow that this is a permanent change; there is nothing indicative of material change except at Burford and Shiffnal, and even as regards them much will depend on the next few years.

Without wishing to go beyond our own province, we can hardly close this article without asking whether the farmers do not complain rather of deficient humidity than of deficient rain? The former is far more influenced by agriculture and drainage than the latter, which is almost entirely regulated by the great currents of the atmosphere, and independent, or nearly so, of the puny works of man upon the surface of our little islands. It is not so with the humidity of the air or the soil; drainage has been regarded as a universal panacea, and has in many cases been carried to such an extent that the soil has nothing to fall back upon when a rather dry season comes. The soil being dry the air becomes so too, and a general scorching is the result; for it should not be forgotten that dry air implies great range of temperature, hot sun, and cold nights. We are by no means sure that the farmers are not suffering from, and complaining of, what they themselves have caused.

The foregoing paper owing its origin to Mr. Bravender's letter, we thought it only right to forward a copy of it for his perusal, and, at the same time, to ask him to send any remarks which he might have to make upon it, in such a form as to allow of our submitting them to our readers. Hence the following letter:—

SIR,—I have looked over the paper you sent me, but I hope you will excuse my saying that I am rather disappointed with the results obtained up to the present time, and think you have not been very fortunate with the places selected for comparison. I should think they must be liable to be affected by their nearness to the rivers Severn and Teme, although in some of the seasons of late years land in the Vale of Gloucester has been seriously affected by drought.

In a letter I wrote to you some time since, I said that I thought there had been an unusual number of dry seasons during the last ten years ending 1876. I should like to see how this works out with regard to Orleton and some of the other places.

In an inquiry like this, Mr. Brown's return is of the greatest value,

being, I suppose, the only one in this part of the country which extends so far back; but to make it complete *our return* for the missing five years should be added, saying, of course, how it had been obtained, and then I should like to see all the three summer months given from 1844 down to the present time. I think from Mr. Brown's return, and our own, and other information which I have at hand, I can establish the fact that we have suffered from an unusual number of drouthy seasons lately. I propose to begin with the year 1868. Our record of rain did not begin until the following year, but I distinctly remember how excessively hot and dry the weather was that season, and things were more burnt up than I ever remember before in my lifetime. In the following year, 1869, we experienced a dry summer. Our rainfall was only 3·27 inches, which is less than half Mr. Brown's average for the 27 years. The year 1870 was also dry, our rainfall being 5·15 inches, which is below the average, and in some parts of the country there was less rain. In the *Meteorological Magazine* for September, 1870, there is a letter from Mr. C. O. F. Cator, of Beckenham, Kent, on the subject of the drought, in which he states that the lawns were more burnt up than in the previous year, &c., &c. There is also a letter from Mr. J. H. Cooke, of Berkeley, on the same subject, and another from Mr. R. F. Wheeler, of North Shields.

I now pass on to the year 1874. This was a year of deficient rainfall, ours being 6·11 inches, and in consequence of the previous months being dry, the effect was felt all the more; but if we keep strictly within the months of June, July, and August, as proposed, it can be shown that nearly the whole of the month of June passed without rain, a most unusual circumstance, and one likely to have injurious effects on the light lands. The dry weather of this season was felt in other parts of England. Mr. J. Robson, in an article sent to the *Horticultural Journal* for 6th August, 1874, gives an account of the rainfall of Linton Park, Kent, in which he says the rainfall for June was only 0·67 inch. He says—"The current opinion, therefore, that we are passing through a dry period is well founded, yet I think there have been summers in which the vegetation seemed in greater distress. In general I believe corn is good and the straw of a full average length. The hay crop has certainly been light, and the pastures at the present time have a burnt-up appearance, yet not worse than they have often done, and not so bad as at the same time in 1868, when, in addition to the turf, many timber trees showed symptoms of distress, and in some places even healthy, long-established trees died.

I have certainly not met with anything of the kind the present season, but we may have it yet, for at the time I write (August 1st) there are no immediate signs of rain, and of late we have often been tantalised by prospects of it which have never been realised, so that we have given up regarding a close, sultry atmosphere, or a cloudy sky and falling barometer, as the indication of coming rain. Very hot days have given place to moderately warm ones without any downfall ; and we have, in a manner, become so accustomed to dry weather, that were it not for the want of water we might almost think that vegetation was getting inured to it, and that rain could be dispensed with." In the *Meteorological Magazine* for September, there is a communication from Mr. Jas. Nutter, of Cambridge, on the subject of the drought for the same year.

There is only one year left now, viz., 1876.

Our rainfall was considerably below the average, viz., 5·44 in. ; and June was 1·46 in. and July only 0·98 in. The heat was excessive and the grass and crops about here were very much burnt up, and I believe it was the same in many other parts of the country. It certainly was a very unfavourable season for the farmers about the Cotteswold Hills.

I think, now, that I have shown that all the years mentioned by Mr. Iles out of the last ten, viz., 1868, 1869, 1870, 1874 and 1876, were more or less droughty, and that in all those cases the rainfall was below the average, and in most of them considerably so. If this fact can be established from further information, as I think it can, the result would be that we have had five dry seasons (or five which have been sufficiently so to be injurious to the farmer on light lands), and if this fact is satisfactorily established, surely five seasons out of ten must be a very large proportion, and more than occurred no further back than 20 or 30 years ago.

I entirely agree with Mr. Robson's remarks as to the season of 1874, before quoted, about rain not coming particularly when, he says, "there are no immediate signs of rain ; and of late we have been often tantalised by prospects of it which have never been realised, so that we have given up regarding a close, sultry atmosphere, or a cloudy sky and falling barometer, as the indication of coming rain, &c., &c." This has been a common state of affairs not only in 1874, but in many summers lately, and reminds me very much of the state of the weather described to me by a friend as prevailing in Australia. I think, in some of the very droughty seasons here, the same phenomenon prevails, only on a small scale, as in the deserts of Arabia. The clouds

come up and the sky looks threatening, and the air appears sultry, but there is no rain, only a thickish mist. It would appear as though clouds came, but that the atmosphere was so warm and dry that they were absorbed or all the moisture taken from them, and they disappeared.

This condition of things only prevails in certain seasons. In others, as 1875, for instance, when the rainfall was excessive, the state of affairs was altogether different. In June and July of that year there was too much rain and also in the autumn following, so that the farmers could not plant their wheat in many instances, and although the following summer, 1876, was too dry, in the autumn there was again an excess of rain; also during the winter the weather was wet and unfavourable for stock.

The weather the last two or three years has certainly been unfavourable to the agriculturist; let us hope now that it will take a favourable turn, and that the farmer will be blessed with good crops of hay and corn, and a fair amount of turnips and swedes in the present season, which is now so full of promise.

I remain, dear Sir, yours very truly,

FREDK. BRAVENDER.

The Firs, Cirencester.

[We are glad that Mr. Bravender does not agree with us, because a little difference of opinion is a very healthy stimulant; but we do not quite understand why he disagrees with us—surely he must have overlooked the following sentence :—

“On the whole, therefore, we arrive at the conclusion that there have been rather more dry summers lately than usual.”

There is one slight correction which we desire to make. The stations can hardly be said to be selected, inasmuch as the sole ground for their use is the fact that they are the *only* long registers in that part of England.—Ed.]

Rainfall at various heights at Boston Reservoir, Rotherham.

	1 ft.		5 ft.		10 ft.		15 ft.		20 ft.		25 ft.	
	D.	M.	D.	M.	D.	M.	D.	M.	D.	M.	D.	M.
1866 (imp.)...	in. 25·011	in. 25·340	in. 23·809	in. 23·730	in. 23·134	in. 23·368	in. 22·962	in. 23·174	in. 22·773	in. 22·837	in. 22·528	in. 22·720
1867.....	22·801	23·386	21·548	21·803	20·526	21·032	20·227	20·712	20·054	20·328	19·720	20·169
1868 (imp.)...	21·899	22·070	20·386	20·367	19·475	19·648	19·104	19·230	18·763	18·936	18·579	18·482
1869.....	25·420	25·463	23·587	23·574	22·508	22·881	22·172	22·503	21·658	22·074	21·449	21·730
1870.....	20·921	20·640	19·670	19·340	18·805	18·611	18·536	18·649	18·330	18·242	18·168	18·047
1871.....	25·094	25·021	23·684	23·634	23·169	22·860	22·575	22·731	22·621	22·611	22·465	22·161
1872.....	37·029	37·549	35·548	35·712	34·459	34·366	34·133	34·447	33·750	34·018	33·834	33·738
1873.....	16·789	16·976	15·967	16·201	15·105	14·970	15·066	15·428	14·650	15·175	14·587	14·537
Means	24·37	24·56	23·03	23·05	22·15	22·22	21·85	22·11	21·57	21·78	21·42	21·45
Percentage of 1 foot falls.	100	100	94·5	93·9	90·9	90·5	89·7	90·1	88·5	88·7	87·9	87·3
Means	100	100	94·2	94·2	90·7	90·7	89·9	89·9	88·6	88·6	87·6	87·6

It is evident from the run of the differences which we have inserted in small type that the records of the daily gauges are the more trustworthy, but as there is no case in which the per-centage of deficiency by the two series differs by one part in 160, it is also evident that both sets are very accurate.

We next proceed to compare these results with those of some other series.

In 1863, Colonel Ward erected at Castle House, Calne, Wiltshire, a series of nine gauges on posts, similar to those at Rotherham, except (1) that they were 8 in. gauges instead of 5 in. ones, (2) that there was only one gauge at each height, (3) that Castle House is by no means so exposed a locality as Boston Reservoir.

The results of these observations were fully discussed in the *British Association Report* for 1870, but we need only quote here the percentages found for each elevation.

Level.	0 ft. 2 in.	0 ft. 6 in.	1 ft.	2 ft.	3 ft.	5 ft.	10 ft.	20 ft.
106·7	... 104·7	... 101·5	... 100·0	... 98·8	... 98·2	... 96·6	.. 95·0	... 94·3

In 1864, the Rev. J. Chadwick Bates erected three pairs of rain gauges at Castleton Moor, Manchester, a bleak locality, but, perhaps, not quite so exposed as Boston Reservoir. The results (as given in *British Rainfall*, 1867, p. 29) are as follows:—

1 ft.	8 in. gauges.		20 ft.	1 ft.	5 in. gauges.		20 ft.
100·0	... 96·0	... 90·3	.....	100·0	... 94·3	... 88·7	

During 1870 and 1871, the Rev. F. W. Stow observed three gauges, 3 in. in diameter, erected in an exposed position at Hawsker, near Whitby.

We will now collect the figures together for all the points common to any two sets.

Height.	8 in. gauges.			5 in. gauges.			3 in. gauges.	
	Calne.	Castleton.		Castleton.	Boston Res.		Hawsker.	
1 ft. ...	100·0	... 100·0	.....	100·0	... 100·0	.....	100·0	
5 „ ...	96·6	... 96·0	.....	94·3	... 94·2	.....	92·0	
10 „ ...	95·0	... —	.....	—	... 90·7	.....	89·1	
20 „ ...	94·3	... 90·3	.....	88·7	... 88·6	.....	—

These values (together with others) are represented on the following diagram.

Finally, we draw the following conclusions:—

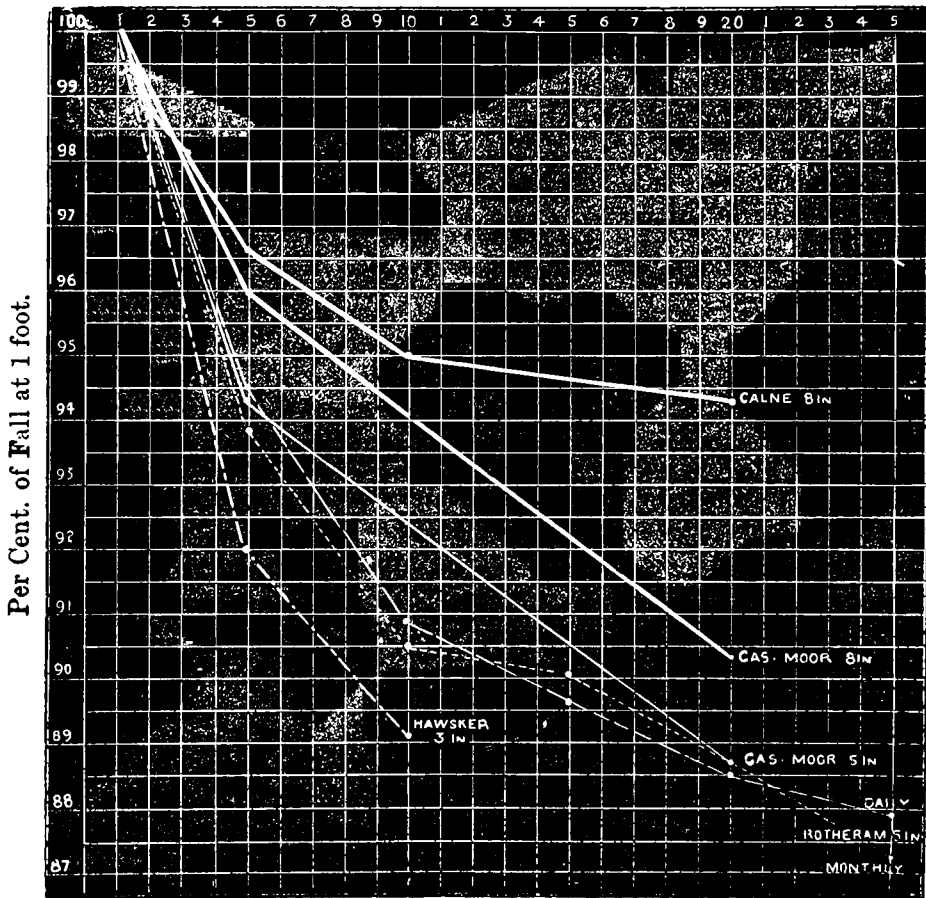
- (1) The deficiency produced by the *four* feet between 1 ft. and 5 ft. is very nearly the same as that produced by the *fifteen* feet between 5 ft. and 20 ft.

- (2) The decrease is greater in exposed than in sheltered localities. This is shown by the much sharper curve at Castleton than at Calne, and this agrees perfectly with the conclusion drawn in *British Rainfall*, 1869, pp. 17-24, that the principal cause of elevation-decrease is wind. Of two stations, the decrease will be greater at the more windy one, just as at the same station the decrease will be greater on a windy day than on a calm one.
- (3) The decrease is greater the smaller the gauge; it is greater with 3 in. than with 5 in., and with 5 in. than with 8 in. gauges.

Does not this last fact indicate that the decrease observed is, in part at least, due to the mode of measurement, rather than to an actual decrease in the fall of rain.

Decrease of Rainfall, with height above ground.

Height above ground in feet.



THE ROTHERHAM EXPERIMENTAL GAUGES.

IN our last volume we gave a general view, and a ground plan, of the position in which these gauges have been re-erected, and among other remarks we said :—

“ We should never recommend a reservoir bank as a good place for determining the true fall of rain ; there is usually too great a sweep of wind. But the object of these experiments was not to determine the true fall of rain at a given spot, but to ascertain the angle at which rain falls, the connection between that angle and the velocity of the wind, and various matters of that kind. We have found what the gauges indicated when they were on the level flat of Boston Reservoir, we shall now see what they will indicate on Ulley Bank.”

These remarks have been supported by the records forwarded, to an extent by no means satisfactory. We have spent many hours in examining and testing the original entries, but although some of the individual readings look as if they were wrong, almost every one of them is supported by the monthly observations or by some other gauge. As proof of something mysterious, we may cite the decrease between 1 ft. and 5 ft., which both by the daily and monthly gauges is three times as much as it ought to be, and the fact that the elevation deficiencies from 5 ft. upwards, decrease instead of increasing, *e.g.* :—

Height.	5 ft.	diff.	10 ft.	diff.	15 ft.	diff.	20 ft.
Daily gauge ...	23·480	+ 0·665	... 24·145	+ 0·023	... 24·168	+ 0·609	... 24·777
Monthly ,, ...	23·861	+ 0·384	... 24·245	— 0·146	... 24·099	+ 0·705	... 24·804

We cannot tell what is the cause of these curious indications ; it may be the locality, but we do not think that any local circumstances would produce so entire a reversal of the normal phenomena. It is more likely that the gauges are either loose or not truly horizontal. It is no use making a cursory inspection, but we hope to make a thorough one before our next issue. Meanwhile, we print the usual abstract, because it is quite possible that some of our readers may tell us, on merely looking at the results, what is the cause of the anomalies.

**RAIN GAUGE EXPERIMENTS, ULLEY RESERVOIR,
ROTHERHAM, 1876.**

FIVE MOUTHED GAUGE.

INCLINED ROTATING GAUGES.

Height above ground.	5ft.					5 ft.			
Months.	Facing East.	Facing North.	Facing West.	Facing South.	Horizon Centre.	22½°	45°	67½°	90°
January.....	·255	·933	·116	·497	1·031	1·403	1·437	1·571	1·707
February	·401	·996	·951	1·542	1·862	2·787	3·640	3·993	3·553
March.....	·145	1·539	3·731	·570	2·200	3·103	4·531	5·690	5·325
April	·121	·655	·485	·741	1·236	1·289	2·076	1·992	1·511
May	·036	·352	·204	·081	·480	·586	·480	·629	·463
June	·115	1·579	·590	·283	2·673	2·769	2·982	2·545	1·923
July	·015	·360	·862	·384	1·373	1·301	1·395	1·700	1·286
August.. ..	·059	·125	·140	·890	·921	1·249	·488	1·148	1·473
September.....	·346	1·182	·453	1·118	3·007	4·063	4·436	4·183	3·606
October... ..	·003	·110	·217	·935	2·159	2·532	2·669	2·385	1·766
November.....	1·577	·895	·184	·953	2·984	4·077	4·994	4·845	4·181
December ...	3·140	1·684	·687	2·923	5·273	6·423	9·536	9·710	9·169
Totals.....	6·213	10·410	8·620	10·917	25·199	31·582	38·664	40·391	35·963

ELEVATED GAUGES.

Height above Ground ...	1 ft.			5 ft.			10 ft.		
Months.	Read Daily.	Read Mnthly.	Diff.	Read Daily.	Read Mnthly.	Diff.	Read Daily.	Read Mnthly.	Diff.
January	1·243	1·284	+·041	·980	·994	+·014	·986	·998	+·012
February	2·135	2·190	+·055	1·638	1·722	+·084	1·707	1·726	+·019
March	2·554	2·390	—·164	1·960	2·004	+·044	2·131	2·063	—·068
April	1·666	1·685	+·019	1·159	1·201	+·042	1·169	1·164	—·005
May	·652	·712	+·060	·462	·472	+·010	·463	·458	—·005
June.....	2·949	2·999	+·050	2·621	2·618	—·003	2·657	2·643	—·014
July	1·618	1·595	—·023	1·332	1·330	—·002	1·389	1·401	+·012
August	1·085	1·159	+·074	·819	·816	—·003	·886	·884	—·002
September ...	3·518	3·613	+·095	2·933	3·081	+·148	3·060	3·122	+·062
October	2·348	2·434	+·086	2·027	2·032	+·005	2·064	2·078	+·014
November ...	3·296	3·402	+·106	2·801	2·813	+·012	2·789	2·839	+·050
December ...	5·591	5·711	+·120	4·748	4·778	+·030	4·844	4·869	+·025
Totals	28·655	29·174	+·519	23·480	23·861	+·381	24·145	24·245	+·100

ELEVATED GAUGES (*continued*).

Height above ground	15 ft.			20 ft.		
Months.	Read Daily.	Read Monthly.	Diff.	Read Daily.	Read Monthly.	Diff.
January.....	·977	·984	+·007	·983	·995	+·012
February	1·689	1·710	+·021	1·761	1·844	+·083
March	2·089	2·037	—·052	2·151	2·219	+·068
April	1·176	1·173	—·003	1·199	1·234	+·035
May	·463	·465	+·002	·460	·467	+·007
June	2·636	2·636	·000	2·692	2·650	—·042
July	1·376	1·397	+·021	1·414	1·445	+·031
August	·884	·860	—·024	·927	·944	+·017
September...	3·071	3·085	+·014	3·140	3·107	—·033
October	2·079	2·067	—·012	2·129	2·141	—·012
November	2·835	2·823	—·012	2·890	2·815	+·075
December	4·893	4·862	—·031	5·031	4·943	—·088
Totals	24·168	24·099	—·069	24·777	24·804	+·027

The records of the 25 ft. gauges are suppressed, as they were not in perfect order.

RAINFALL AT THE ROYAL OBSERVATORY, GREENWICH.

Lat. 51° 28' 38" N. Long. 0° 0' 0"

Communicated by SIR G. B. AIRY, K.C.B., D.C.L., &c., Astronomer Royal.

No. of days on which rain fell.	1876	MONTHLY AMOUNT OF RAIN COLLECTED IN EACH GAUGE.								
		Self-registering Gauge of Osler's Anemometer.	Second Gauge at Osler's Anemometer.	On the roof of the Octagon Room.	On the roof of the Library.	On the roof of the Photographic thermometer shed.	Crosley's.	Cylinder partly sunk in the ground. read daily.	Cylinder partly sunk in the ground. read mntly	On the Royalist Police Ship.
13	Jan. ...	in. 0·46	in. 0·48	in. 0·70	in. 0·90	in. 1·06	in. 1·03	in. 1·11	in. 1·10	in. 0·60
19	Feb. ...	1·11	1·12	1·33	1·27	1·52	1·82	1·50	1·60	1·16
18	March	1·15	1·45	1·87	1·91	2·27	2·64	2·32	2·53	1·74
9	April..	0·51	0·57	0·83	0·96	1·28	1·66	1·27	1·37	0·81
5	May...	0·77	0·77	0·97	1·08	1·14	1·33	1·13	1·09	0·65
10	June...	0·77	0·84	0·96	1·11	1·09	1·12	1·08	1·00	1·02
8	July...	0·41	0·41	0·53	0·50	0·64	0·71	0·66	0·64	0·49
13	Aug....	1·37	1·37	1·63	1·75	1·92	2·50	2·01	1·70	1·65
22	Sept...	1·70	1·85	2·10	2·36	2·48	3·07	2·58	2·66	1·75
12	Oct. ...	0·97	1·14	1·34	1·42	1·50	1·80	1·61	1·71	0·91
16	Nov...	2·20	2·51	2·56	3·14	2·99	3·56	3·06	3·03	2·38
22	Dec. ..	3·96	4·48	4·67	5·38	5·63	5·42	5·76	5·82	4·43
167	Sums..	15·38	16·99	19·49	21·78	23·52	26·66	24·09	24·25	17·59

The heights of the receiving surfaces are as follows :

	Above the mean level of the Sea.		Above the Ground.	
	ft.	in.	ft.	in.
The two Gauges at Osler's Anemometer	205	6	50	8
Gauge on the roof of the Octagon Room	193	2½	38	4½
Gauge on the roof of the Library	177	2	22	4
Gauge on the roof of the Photographic Thermometer Shed	164	10	10	0
Crosley's Gauge	156	6	1	8
The two Cylinder Gauges, partly sunk in the ground	155	3	0	5
Above deck.				
Gauge on the "Royalist" Police Ship moored in Blackwall Reach	17	0	8	8

G. B. AIRY.

D

DEW PONDS.*

WE do not usually give reviews in this work, but Mr. Slade's pamphlet is so original, so good, and so strictly germane to rainfall questions that we make an exception in its behalf. As everyone may not know what a "Dew Pond" is, and as Mr. Slade has a happily terse style of writing, we reprint the first page of his pamphlet, and will subsequently say a few words respecting his mode of observation and conclusions. But we strongly recommend careful perusal of the whole pamphlet and examination of the figures and diagrams.

"These ponds, as far as can be ascertained, are generally known by the name 'Dew Ponds,' being quite distinct in character from ordinary ponds. They are artificially made, and usually placed on the high table-lands and hills, where sheep and cattle, during the summer months, need a plentiful supply of water. If situated in valleys, and nourished by springs or surface drainage, they will bear no analogy to this treated of here. These observations have been made upon what is most strictly termed a 'Dew Pond.' It is almost a unique specimen of its kind. Located near to Loughborough, the highest point in the Berkshire hills) which rises 618 feet above mean sea level), it occupies part of the crest of the neighbouring hill to the northward, and rests for a foundation immediately upon the chalk strata. Its position on the map is determined from its latitude $51^{\circ} 32' 58''$ N., and longitude $1^{\circ} 13' 20''$ W. It is bedded in the Thorpe Downs, 450 feet above the level of the sea, and is the property of R. H. Valpy, Esq. The nearest station is Moulsoford, on the Great Western Railway, three and a half miles distant. The uphill farm of Sheepcote (some 135 feet lower in level, $4\frac{1}{2}$ furlongs farther north) lies in a valley, and derives its supply of water from a draw-well, 108 feet in depth. Clearly, then, the pond cannot be supplied from springs; neither, situated as described, can there be any surface drainage. It must be fed from the heavens, and it is this fact probably which has given rise to its name. The construction took place in the year 1836, at a cost of £40. In shape it much resembles a shallow rain gauge, without the vertical rim. Its greatest diameter is $69\frac{1}{2}$ feet. The straight sides meet nearly at a point in the bottom, and form an angle of $11^{\circ} 21'$ with the surface horizon. A layer of clay, about 12 inches thick, mixed with lime to stay the progress of earth worms, and covered over with first a coating of straw (to prevent the sun

* *A Short Practical Treatise on Dew Ponds, the Farmer's Summer Water Suppliers, being invaluable on Hilly Farms and Sheep Runs, Self-supporting, need no Repair, and always Efficient.* By Harry Pool Slade, Blewberton House, Aston, Wallingford, Berks. London: E. and F. N. Spon, 1877. 8vo., 31 pages and three plates.

cracking the clay), and finally with loose rubble, make up its waterproof bed. The extreme depth is 80 inches. It does not, however, hold this head of water, since a ring of the slope, extending from the top, and some four feet in width, is unpuddled, in order to avoid an overflow and the consequent deterioration of the sides.

“Exposed to the wind and the direct influence of the summer sun, it has till the present year, 1876, *i.e.*, after an interval of forty years, only once been dry.* To start it again, advantage was taken of a heavy snowstorm, and a few days were spent in carting the drifted snow from the downs, and piling it up in a heap in the pond's basin. This expedient, though it did not nearly fill the pond with water, gave it an impetus forwards, and in the winter and spring months it gradually replenished itself, and since that time has never failed. This leads us to the vital question, by what means is it filled? All whom we asked referred us to the name by way of answer. The men, too, who made this pond stated that the higher its position above sea level, the greater amount of dew imbibed. Continuing our enquiries, we were doubly perplexed to find shepherds who reported that some dewy nights had added nearly an inch to the height of the water measurement of the afternoon before. These assertions we did not then deny; but subsequent investigation has abundantly proved that the dew plays so unimportant a part in its filling as to deserve little notice, and renders the name ‘dew pond’ a decided misnomer, and the cause of a wide-spread public fallacy.”

The author has designed and carried out his observations in a remarkably complete and satisfactory manner. Nothing seems to have been overlooked; he kept a regular meteorological journal, he took the temperature of the air on the top of the pond, and of the water in it at 3 in., 1 ft., and 3 ft. deep. He kept score of the sheep which went to drink at the pond, and even ascertained approximately how much they drank; he exposed cotton wool, and so ascertained the amount of dew. On one occasion he took hourly observations from 8 p.m. one day to 6 p.m. the next, of seven sets of temperatures, wind, variation in depth of pond, of two evaporators, &c. In another part the author investigates the change in volume of the contained water due to increase of temperature. Another feature in the work is the great general accuracy of the calculations. Although we have reworked in a different form the whole of the measurements for four months, we have not detected a single misprint or mistake.

The conclusions of the author may, we think, be summed up as follows:—(1) The term dew ponds is a misnomer, dew has hardly any

* The failure occurred about the year 1854, and necessitated repairs. It resulted principally from the growth of rushes whose roots struck through the clay bottom, causing leakage. The rush of cattle down its sides also helped to damage the clay bed. The ponds, kept free from these pernicious influences, have never been known to fail even in seasons of extraordinary drought.

share in their supply ; (2) they are fed almost solely by the rain which falls upon them ; (3) they are drawn upon by evaporation and by animals drinking the contained water.

We see few respects in which the book could be improved, but we are bound to mention the points in which we do not agree with the Author. In the passage which we have quoted, Mr. Slade speaks thus of the dew pond : “ In shape it much resembles a shallow rain gauge without the vertical rim. Its greatest diameter is $69\frac{1}{2}$ feet.” We regret that Mr. Slade who has not stinted his inquiry either as regards instruments, observations, or calculations has not given the following columns in his general tables.

Date.	Contents of pond yesterday.	Rainfall over watertight pond.	Surface on which rain fell.		Contents of Pond.		Loss.		Estimated proportion.	
			Water.	Puddled	Computed.	Observed.			Evaporation.	Sheep.
	gallons.	gallons.	per cent.	per cent.	gallons.	gallons.	galls.	inch.	inch.	inch.
June 8	24,719	—	—	—	24,719	24,375	344	·17	·05	·12
9	24,375	59	100	—	24,434	24,420	14	·01	·01	—
10	24,420	17	98	2	24,437	24,283	154	·08	·08	—

This shews that the pond is a large rain gauge, partly watertight and partly slightly pervious. One inch of rain over the whole surface is 1970 gallons, but over the watertight portion it is only about 1200 gallons, and we have, in the above specimen, taken the rainfall equivalent of the lesser area. It would be beyond our province to compute, or give here, all the tables which the above proposal would involve ; but Mr. Slade has done his work so well that we wish he had finished it by some such debtor and creditor statement as we give above. We believe that he would find the accounts balance very satisfactorily, and it might lead him to conclude that the ponds would be better if the sides were steeper than those of that on Thorpe Downs, upon which, in all other respects, we look with much veneration as having been the subject of one of the best memoirs we have ever seen, as the first dew pond scientifically examined, and the first to show that if dew pond means a pond filled by dew, there is no such thing in the kingdom.

CHRONICLE OF NEW STATIONS ESTABLISHED, AND REQUIRED, AND OF CHANGES IN THE PERMANENT STAFF OF OBSERVERS, DURING THE PAST YEAR.

THE notices respecting the gains and losses which occur among our staff of observers prove extremely useful, inasmuch as although they show plainly the districts in which observations are deficient, the very fact that they do so, leads many of our friends to exert themselves to remedy these deficiencies. Nor are we in the least degree ashamed to acknowledge that we have not succeeded in securing a perfectly equal geographical distribution of stations. With a staff composed almost entirely of volunteers, each of whose record for the year may be spoiled by a single case of an overturned, or cracked, or leaky rain gauge, or by the weariness, illness, removal, or death of the observer, most persons would expect very great changes to be reported every year; but the fact is quite the reverse. The absentees, from all causes, are not ten per cent. of the total number; and even this, if unexplained, represents matters to be less remarkably favourable than they really are.

An annual absence of ten per cent. might be supposed to indicate a change of nearly half the staff in seven years. That would be very serious for a work in which continuity is of the very highest importance, and we are glad to be able to state that reference to the table of "Missing Returns" will show that most of the absentees marked N R (indicating that they do not reply to our communications) are observers of comparatively recent standing.

We may prove this in another way. Our first table, that for the year 1860, contained 168 records (rather a contrast to the 1835 given in *British Rainfall 1875*). An annual loss of ten per cent. would have reduced that number from 168 in 1860 to 31 for 1876; but instead of that, we rejoice in the fact that we still have with us more than twice that number. Out of the 168 records published in our leaflet of 1860, we have 80 in the present volume.

We greatly regret the loss of one of our most energetic county superintendents, the Rev. Nash Stephenson, whose work in Herefordshire we have more than once had occasion to notice with approval. Dr. Chapman, of Burghill, Hereford, has forwarded to the *Hereford*

Times so excellent a summary of the rainfall in that county during 1876, that there can be little doubt that the county is again provided with one fully competent to see that matters are kept in order. We are sorry that not one gentleman has intimated his willingness to undertake the very light duties of county superintendent for any fresh county, and that, therefore, the list stands as it did last year, excepting only the alteration above-mentioned.

COUNTY SUPERINTENDENTS, 1877.

Sussex	F. E. Sawyer, Esq., F.M.S.....	Buckingham Place, Brighton.
N. Hants	Rev. C. H. Griffith, F.M.S.	Strathfield Turgiss, Winchfield.
*Northampton.....	H. Terry, Esq.	Northampton.
Bedford	E. E. Dymond, Esq., F.M.S.....	Oaklands, Aspley Guise.*
*Cambridge.....	S. H. Miller, Esq., F.R.A.S., F.M.S.	Observatory, Wisbeach.
*Norfolk	Rev. J. M. Du Port, M.A.	Mattishall, E. Dereham.
*Hereford ...	T. A. Chapman, Esq., M.D.	Burghill, Hereford.
*Leicester	H. Billson, Esq. ..	Saxe-Coburg Street, Leicester.
Stafford	W. Arnold, Esq., F.M.S.....	Lichfield Street, Tamworth.
N. Yorkshire.....	Rev. F. W. Stow, M.A., F.M.S....	Aysgarth, Bedale.
Denbigh	Whitehall Dod, Esq..	Llanerch, St. Asaph.
Flint	Capt. Griffith Boscawen	Trevalyn Hall, Wrexham.

The gentlemen against whose names an * is placed, publish monthly summaries of the rainfall, at stations in their neighbourhood, in local newspapers or otherwise ; a practice which it is very desirable should be greatly extended.

We now proceed to mention the *principal alterations* during the past year. We have italicised the above words because it is impossible to mention all the changes without rendering this article both too long and too wearisome.

DIVISION II.—SOUTH-EASTERN COUNTIES.

Surrey.—We regret the loss of Nutfield Priory and Caterham (Upwood Gorse), and also the non-arrival of a promised record from Ashstead, near Epsom. A station at or near Epsom is needed.

Kent.—A station is required between Chatham, and Sheerness.

Sussex.—We have here two important losses, but fortunately there are so many old-established records in this county that even without Dale Park and Uckfield Observatory there is no deficiency of evidence as to secular change, or the relation which the fall in 1876 bore to that of previous years. And as regards geographical distribution, Patching is an efficient substitute for Dale Park, while as Framfield and Buxted are both within two miles of Uckfield, its loss, in that respect,

* We are again indebted to Mr. Dymond for much assistance in checking returns.—ED.

is not serious. There is a considerable vacancy around Warbledon, but the record is being continued at that station, though it is entered among the incomplete returns for 1876, because the position of the gauge was changed during the year.

Hampshire.—The principal losses are Aldershot and Litchfield Rectory. The former is replaced by Blackwater, but we have nothing within seven or eight miles of Litchfield, and the sooner a new observer is obtained for that neighbourhood the better.

DIVISION III.—SOUTH MIDLAND COUNTIES.

Herts.—Considerable improvement is noticeable in the representation of this county, which is mainly owing to the efforts of Mr. Hopkinson, the Secretary of the Watford Natural History Society.

Buckingham.—The returns from the centre of this county are very puzzling. The record from Peverell Court, Aylesbury, is so excessively small—6 inches less than the average of other stations in the county, and 10 inches less than at Aylesbury, from which it is only two miles distant (in a moderately level country)—that we have felt obliged to place it among the imperfect records. The observer, however, believes it to be correct, and therefore the only thing to be done is to go and examine it and the adjoining stations. A new station is needed near Beaconsfield.

Northampton.—There are seven stations deficient out of the twenty-four quoted last year, and there are only four new ones, but as they are well distributed the deficiencies are not serious.

Huntingdon.—This county has always been rather badly represented, and this year Conington Castle has sent no record. One or more new stations in the west and north of this county are very necessary.

Bedford.—We are still without a single record from the north of this county, adjoining the part of Huntingdonshire just mentioned.

Cambridge.—Thanks to the assistance of Mr. S. H. Miller, the stations in this county may be regarded as sufficient.

DIVISION IV.—EASTERN COUNTIES.

Essex.—The renewal of the observations at Tilbury is very satisfactory, as the station is the only one in the extreme south of the county and the opposite (Kentish) shore of the Thames is also badly provided with stations. On the other hand, the absence of both the records from the neighbourhood of Maldon leaves the east of the county even worse provided than usual. Mr. Tamplin has left Purleigh and gone to the neighbourhood of Saffron Walden, where there are three gauges

already. Meteorologically, it is a great pity that he did not go to Burnham or St. Lawrence. The Cold Norton record is merely remitted to the imperfect list owing to a removal of about half-a-mile; the record is continuous, and the altitude the same. The register so long kept by Mr. Dixon, at Dorward's Hall, Witham, terminated with his death, but a new record has been commenced in continuation of it in the immediate neighbourhood, viz., at Rivenhall.

Suffolk.—Stations near Debenham and Haverhill would be useful.

Norfolk.—There is only one record missing, viz., Long Stratton, but it is rather important, as it leaves a tract of land S.E. and S.W. of Wymondham, and about 24 miles by 12 miles, without any station; its absence is, however, only temporary. All the rest of the county is well represented.

DIVISION V.—SOUTH-WESTERN COUNTIES.

Wilts.—Five observers have removed and one has not replied. The termination of two of these records is much to be regretted, for observers are not to be obtained every day in such places as Orcheston and Imber. However, there are several new stations, and the principal, and only pressing, necessity is a station south of Devizes, and between it and Amesbury.

Dorset.—No material alteration. A new station was started at Sherborne Water Works in the autumn, and we now find that one had previously been begun at the School. There is obviously no harm in having two strings to our bow. A station near Wareham is still required, and one between Sturminster Newton and Cerne Abbas would be useful.

Devon.—There are only four records missing from this great county, and they are not very important ones; and there are ten new records, but they also do not materially affect the geographical distribution of the stations. The Devonshire Association have not yet succeeded in starting the gauge at Cranmere Pool which we wish them to do, and of which we have spoken almost *ad nauseam*, and stations are still wanted near Chagford, and near Hartland.

Cornwall.—The record at St. Sennen, Land's End, is terminated, owing to Mr. Symons's death, and that near Camelford also from the death of the observer. New stations are required to replace these two, and others would be useful near the Lizard, and near Looe.

Somerset.—A station is required between Bridgewater and Watchet.

DIVISION VI.—WEST MIDLAND COUNTIES.

Gloucester.—No material alterations. There is no station within

nine miles of Chipping Sodbury, therefore there is a tract of more than 250 square miles without a single station. A new station has been started through the assistance of Mr. H. V. Cobb, at the Edge Hill Mines, Mitcheldean, which will usefully represent the Forest of Dean.

Hereford.—The Goodrich register was omitted for a few days during the observer's absence, and that at Bromyard is terminated through the death of the observer, but all others are perfect, and we have three additions, rendering the system complete.

Shropshire.—No reply has been received from Knowbury or Chesswell Grange, although the usual thrice-repeated applications have been sent. The Knowbury station is very important both as regards secular and geographical questions—as regards secular questions, because it is an old station with a perfect record from 1852, and geographically, because it leaves Ludlow, Cleobury Mortimer, and the intermediate country unrepresented.

Stafford.—One of the Burton registers is terminated, but as there are four stations in the vicinity, its loss is of little moment. The record from Wincle has for fourteen years been inserted as “Wincle [Macclesfield],” because a former engineer of the Trent and Mersey Navigation stated that it was on the Staffordshire side of the county boundary. We are now informed that it really is in Cheshire, in which county the record is now placed. We insert with pleasure Mr. Marten's records of the fall at the stations established in connection with the works constructed under the South Staffordshire Mines Drainage Acts.

Worcester.—The only loss is that of the Moseley record, while there are several new stations, the most important being that at the Stoke Reformatory, Bromsgrove.

Warwick.—Only two records missing, one an unimportant station, the other fortunately replaced by the new station of Barrells Park, Henley-in-Arden. A new station near Southam would be acceptable.

DIVISION VII.—NORTH MIDLAND COUNTIES.

Leicester.—There is only one loss, but it is a rather vexatious one, viz., Ashby de la Zouch. Its absence leaves the west of the county from Market Bosworth to Breedon without a single station. There are several new and useful stations, but none of special importance.

Lincoln.—The absence of the Heydour record is the only important deficiency in this county, while Bloxholme and Caistor are very useful new stations. Others near Holbeach, Folkingham, and Kirton would be useful.

Derby.—The records from Trent College, West Hallam, and Bamford are the most important absentees, in fact there are only four, while there are nine new stations, several of them usefully placed. We still require one or two stations in the west of the county.

DIVISION VIII.—NORTH-WESTERN COUNTIES.

Cheshire.—Stations sufficiently numerous, but a new one required at or near Chelford, in consequence of the death of Mr. Nicholls.

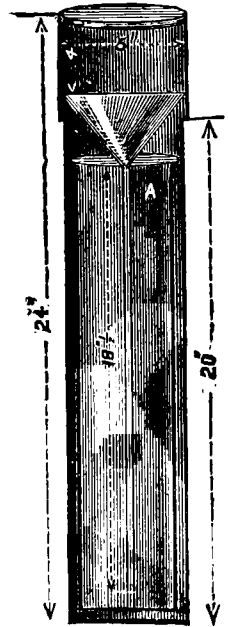
Lancashire.—There are several returns missing from this county. The most important are Wigan Water Works and Caton. The latter is terminated owing to the removal of Mr. Christopherson, but it is possible that the Wigan record will be continued, although our receipt of it is interrupted owing to the death of Mr. Hunter. There are many new stations, the most important being Lytham, Kirkham (though the amount there seems very small), and the two gauges erected by Mr. Mansergh on the Fells, South East of Lancaster.

DIVISION IX.—YORKSHIRE.

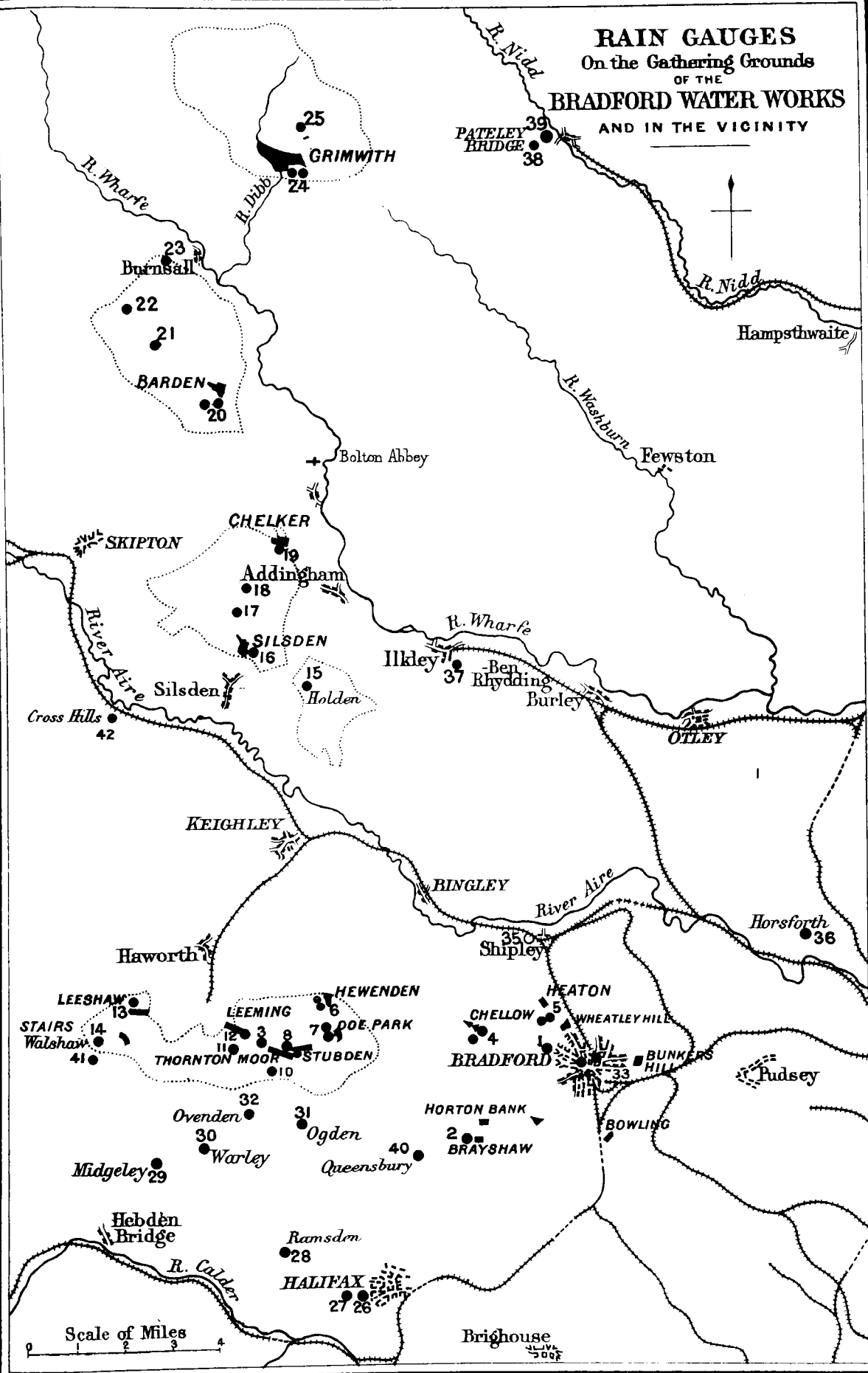
West Riding.—There were upwards of 100 returns from this Riding last year, and this year we have all of them again perfect except four, and only two are of serious importance, Stansfield Hall, Todmorden, and Balne Vicarage, Snaith. We should be glad of new stations near these places.

The additions are very numerous, and are nearly all due to the new series of gauges erected on the gathering grounds, &c., of the Bradford Water Works, under the superintendence of Mr. A. R. Binnie, C.E. There have been a few gauges on the grounds for some years, and the record of one goes back for a quarter of a century. It has, however, been said that they were inaccurate, and that they were not well placed. Mr. Binnie, therefore, wisely decided upon beginning *de novo*, but at the same time keeping the old gauges going, so as to obtain precise information respecting their errors, and also concerning the relative wetness of recent and byegone years. The pattern of gauge which he adopted is shown in the accompanying cut.

Evaporation is thoroughly guarded against by a lid on the top of the inner case A. The gauge has a Snowdon rim,



RAIN GAUGES On the Gathering Grounds OF THE BRADFORD WATER WORKS AND IN THE VICINITY



and the inner vessel will hold 17 in. of rain, so that there is no risk of overflow. The position of the gauges will be seen by reference to the accompanying map, which has been reduced from a large one, forwarded by Mr. Binnie.

East Riding.—All the 1875 records are continued and perfect for 1876, and in addition we have three returns of considerable importance: Hornsea, the only station for that part of the coast, and two stations near Hunmanby. The records of these two differing considerably, we wrote to ask Mr. Ackland if he could offer any explanation, and received the following reply:—

Wold Newton Vicarage, York,

May 11, 1877.

MY DEAR SIR,—I do not think my rain gauge is to blame for the excess of rainfall here; it is the same which I had at Balne, and there its results were in harmony with others. I believe that we have here an exceptional rainfall. I have frequently compared notes with Mr. Foord, of Foxholes, which is about $2\frac{1}{2}$ miles higher up the valley, and about 40 ft. higher above the sea level. We frequently have rain here when there is none at Foxholes, and heavy rain here when there are only light showers there: but the converse very rarely, if ever, happens. Ganton, though only six miles off, is under such different circumstances that no comparison can be made.

Wold Newton lies at a point where the valley, which runs up from Bridlington, narrows very considerably, and there are remarkable eddies in the wind. I constantly see the smoke of the cottages below my house blowing in the opposite direction to that indicated by the church weathercock, which is only a few yards higher up than the Vicarage; and both on the north and south there is a rise of at least 250 feet within a mile of the village. I imagine these circumstances may account for the excessive rainfall which we undoubtedly have. The whole bottom of the valley is also in a swampy state during the winter and spring, from the outbreak of a periodical spring called the Gypsy. This, by lowering the temperature, may contribute to the precipitation of clouds fresh from the sea.—Yours very truly,

THOMAS S. ACKLAND.

North Riding.—There are very considerable alterations in the stations in this Riding. The absent records are Filey, Grosmont, Whitby (North Light House), Barningham Park, Richmond, and Saltburn (Easington Rectory), besides which serious list of losses several returns expected from Mr. Stow have not arrived. Still, it

happens that the additions are twice as numerous as the absentees. This is mainly due to the erection, by Mr. Symons, in the autumn of 1875, of a large number of rain gauges in the upper watershed of the Tees. As the Tees itself is the county boundary, these stations are scattered partly in the North Riding of Yorkshire, partly in Durham, partly in Cumberland, and partly in Westmoreland. Their position is, however, shown by the accompanying map. These stations are of considerable importance, as partly filling a large district whence we have often tried (but previously always without success) to obtain information. As almost all the observers have to be paid, it has been found impossible to continue all the records, and therefore a selection has been made, and only the most important ones will be continued, some of them at our cost, and others at that of the corporations of Stockton and Middlesborough, which have obtained important water rights in the district.

While, however, we rejoice that this district is so well represented, we must not ignore the serious deficiency of stations in the eastern half of the North Riding. By far the largest district in England without a gauge, is that reaching about forty miles inland from Scarborough, and averaging nearly twenty miles broad—800 square miles without, as far as we know, a single rain gauge. Surely some one of our readers knows somebody living within the tract bounded on the west by the railway from York to Darlington, on the south by the York and Scarborough line, on the north by the railway from Yarm to Whitby, and on the east by the sea. Helmsley, Kirkby Moorside, or Pickering, would be the most desirable, but anywhere within the district we have mentioned would be useful.

DIVISION X.—NORTHERN COUNTIES.

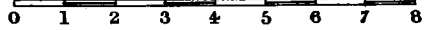
Durham.—The only missing return which affects the geographical distribution is Sedgfield: a new station near it would be useful. The additions are principally Teesdale stations already mentioned.

Northumberland.—Only the Shotley Hall record is missing, and that we hope to have again in 1878. There are two or three useful new stations, but we wish for one more in the extreme west of the county, near Clintburn, Wellough, or Tyne Head.

Cumberland.—The losses are by no means important, but they may as well be mentioned: they consist of one Whitehaven station, one at Keswick, one at Penrith, and one at Wigton, there being second stations close to all these, and one station for which we have no substitute, viz., Croft House, Brampton.

Rain Gauge Stations
IN
THE UPPER WATERSHED OF
THE TEES
AND ITS VICINITY

Scale of Eng. Miles



There are seven additions. The most important is a new gauge at Seathwaite, erected by, and observed for, H. C. Marshall, Esq. As the history of the Seathwaite observations has never been written, and as the erection of this new gauge depends upon that history, we think that it may be well to give it.

THE HISTORY OF THE RAINFALL OBSERVATIONS AT SEATHWAITE.

In November, 1843, Mr. John Fletcher Miller, F.R.S., of Whitehaven, established a gauge at Ennerdale Lake; in July, 1844, he started one at Wastdale Head; and in January, 1845, he placed a gauge in a garden in the hamlet of Seathwaite, $3\frac{1}{2}$ miles S.E. of Buttermere, and $4\frac{1}{2}$ miles south of the southern extremity of Derwentwater Lake. This garden (which belongs to the owners of the Borrowdale Plumbago Mine) was in the occupation of John Dixon, a very intelligent man, the resident foreman or manager of the Mine. He undertook, whether with or without payment we do not know, to make daily observations of the rainfall, and, to anticipate events a little, we may say that that identical gauge has been observed daily up to the present time. Dixon not only observed this gauge regularly, but when its very large returns raised doubts as to its accuracy, he observed another in an adjacent field. The following are the results:—

	1847. in.	1848. in.	1849. in.	1850. in.	1851. in.	1852. in.	1853. in.
Seathwaite, Garden .	129·24	160·89	125·47	143·96	139·60	156·74	113·69
„ Field ...	126·80	157·22	121·57	...	135·86	150·88	111·61
Ratio (per cent.) ...	98	98	97	...	97	96	98

These figures bear strong internal evidence of their accuracy, and coupled with the obvious reasonableness of a heavy rainfall in that locality, and of the mass of subsequent proof of its reality, ought to be sufficient to satisfy every one.

The next thing which Mr. Dixon did, was to urge Dr. Miller to put a rain gauge on the Styne, about one mile S.S.W. of the Seathwaite gauge, assuring him that it often rained there when there was no rain at Seathwaite. That was done, and the fall proved to be 18 per cent. greater than at Seathwaite, greater than has yet been observed in any part of the British Isles, and we are inclined to think greater than in any part of Europe.

In 1854 Dr. Miller gave up most of his mountain stations, and in 1856 he died.

Mr. Dixon, however, without payment—without recognition or encouragement, continued his observations, until in 1861 *British*

Rainfall began to be published, and of course it was our duty to hunt up the observations ; for a year or two we received them through Mr. H. C. Marshall, who has always taken a lively interest in them ; then for a year or two we had them direct from Mr. Dixon, and after he died, his widow continued the record.

Late in 1864 Mr. I. Fletcher, M.P., having started a new set of mountain gauges, placed one of them by the side of the gauge erected by Dr. Miller, and asked Mrs. Dixon to observe it monthly. For this, we believe, some small payment was made.

In 1866 Mr. Symons erected a large number of gauges in the Eastern Lake district, and in order to secure information as to the relative indications of those gauges, and of those of the pattern erected by Mr. Fletcher, he, with Mrs. Dixon's consent, placed one in the garden by the side of Dr. Miller's and Mr. Fletcher's. Although this gauge would not require attention for more than a few minutes per month, it was extra work for which payment was quite proper.

At length Mrs. Dixon's age caused the observations to devolve upon a relative, whose interest seemed to be principally financial. However, with the various means in our power of checking the records, we have no doubt that the results which we received and published were correct. Then Mrs. Dixon died, and the relative scarcely gave us 24 hours' notice of her removal from the district. We, however, could not agree to the abrupt termination of so valuable a record ; we therefore telegraphed to Mr. Crosthwaite, of Keswick, and he most kindly drove off to the hamlet to make enquiries as to a new observer. Very fortunately he found one both able and willing (for a small payment) to undertake the duties. And Thomas Birkett has done his work well from that time to the present.

Our troubles and Mr. Crosthwaite's journeys, were, however, not over. The mine being closed, the cottage and garden remained without a tenant, but early in 1875, a new agent was appointed, and he gave summary notice that the gauges must be turned out of the garden. Mr. Crosthwaite's services were again requisite, and finally on payment of £1 per annum rent (as much as the whole garden is worth) the gauges are allowed to stop where they were.

This double payment for making the observations and for ground rent is not satisfactory, and we have no kind of security against further demands. On the other hand, we should neither have taken nor given the trouble which we have, nor incurred considerable expense, but for the consciousness that continuity is of almost priceless value.

Fortunately we have now an entirely independent record in the same hamlet. Mr. H. C. Marshall, both as one of our best supporters, and as owner of nearly all Seathwaite except *the* garden, was aware of the above-mentioned difficulties, and in June, 1875, asked us to obtain for him as perfect a gauge as possible, which was erected in July, 1875, about 100 yards west of the old gauges, and it is observed by some of the persons in Mr. Marshall's employ.

While, therefore, we shall not willingly allow the old gauges to be abandoned, we are by the new one rendered almost independent of them—a fact which of itself may very possibly render their maintenance easier and more enduring.

East Cumberland.—Although we do not yet divide this county, we have put these words in italics because we desire to give a word of recognition for what Mr. Fawcett, of Blencowe, has been doing to fill up the blanks mentioned in our last volume; but perhaps as the returns are not perfect for 1876 (*i.e.*, were commenced during the year) we had better merely say that he has fully succeeded, and that we shall have valuable new stations next year.

Westmoreland.—No important alterations, except the loss of Martindale, and the addition of Dufton Fell and Hurth Syke, the latter being south-east of Cross Fell.

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS.

Monmouth.—Two returns missing, viz., Newport Water Works, and Rhymney House; and four additions. A station near Tredegar would be useful.

Glamorgan.—The absence of the Swansea record is the most important of the three returns which are missing, the four new ones are of nearly equal utility. The county is well provided.

Carmarthen.—No change. Stations needed in the north of the county.

Pembroke.—The only alteration is the loss of the Tenby record, owing to the death of Mr. Leach. A station at, or near, Fishguard would be useful.

Cardigan.—No change. A new gauge has been started by Sir Pryse Pryse at Warnhill, but there are gauges needed near Aberaeron and Tregaron.

Brecknock.—No alterations. This is perhaps the worst represented county in the country, for there are no stations in the nearly 400 square miles north of the county town. Gauges are much needed near Builth and Llanwrtydd.

Radnor, Montgomery, Flint and Denbigh.—No material alterations, and but few additions.

Merioneth.—No losses, and three useful additions, viz., Aberdovey, Peniarth near Towyn, and Rhug near Corwen.

Carnarvon.—The only loss is the rather important one of Bodfaen, near Pwllheli. We are still without any station at Llanrwst or south thereof.

Sark.—We much regret the interruption of this record consequent upon the death of Mr. Cachemaile; Mr. Vibert, of Jersey, is trying to secure a fresh observer.

SCOTLAND.

DIVISION XII.—SOUTHERN COUNTIES.

Wigtown.—No alteration. A station needed in the north of the county.

Kirkcudbright.—No alteration, except the useful addition of Slogarie. A station is wanted in the west of the county, adjoining Northern Wigtown.

Dumfries.—All the Eskdale records are missing, owing to the death of Mr. Little, of Carlesgill. We have written to his representatives, who, we learn, take no interest whatever in rainfall, to ask who were his observers, and also for any papers upon the subject which he may have left, but, unfortunately, we have had no reply. The copy of the Carlesgill register in our possession is incomplete, and as it was commenced about 1844, it would be very valuable if rendered perfect. Moreover, it is very desirable to ascertain by whom the observations at the other Eskdale stations were made. If, therefore, any of our readers can call at, or send to, Carlesgill, they will render good service by doing so. The absence of these stations leaves a considerable blank around, and especially north of, Langholm.

DIVISION XIII.—SOUTH EASTERN COUNTIES.

Berwick.—The continued great dependence upon the single return from Thirlestane Castle is to be regretted; and also the great want of stations on the Lammermuir Hills.

Edinburghshire.—All the old returns are perfect, and there are several additional ones.

DIVISION XIV.—SOUTH WESTERN COUNTIES.

Lanark.—The only missing return is Carnwath; being only 5 miles

from the stations at Lanark it is not a serious loss, but we should prefer to see it replaced.

Ayr.—There are three losses in this county. The most serious is that of Mansfield, Largs; this is a loss both geographically and secularly. [May we use that word as an abbreviation of the expression, “as regards the investigation of secular variation, or the difference of the rainfall of any year or group of years from any other year or group of years”? Some single word is necessary to designate the fluctuation of the yearly fall of rain either as regards individual years, or groups of years. Will anybody suggest a better term?] Mansfield is a loss geographically, because we have now no station in Northern Ayrshire. They have dropped off one by one, Blair-by-Dalry, then Brisbane, then Skelmorlie, and now Mansfield, the last of the group. And secularly the loss is almost worse, for it was a very good register, and reaches back more than a third of a century without a break.

DIVISION XV.—WEST MIDLAND COUNTIES.

Stirling.—No losses, two new records, but one or two more needed between Strathblane and Kilsyth.

Bute.—We regret that we have only the record from Pladda Lighthouse, as our observer at Sannox, Arran, has been frequently absent, and the register was neglected during his absence.

Argyll.—The most important loss is the Oban register, through the death of Admiral Otter. Surely some one will commence observations in that capital health resort? There are several valuable additions; perhaps the most so is Laudale, near Strontian.

DIVISION XVI.—EAST MIDLAND COUNTIES.

Clackmannan.—We are glad to receive a record for 1876 from Dollar; it is a pity that the register at this old station has lately been very irregularly kept, and we hope that we may regard the present record as an augury of a better future.

Perth.—Out of the thirty-two records given last year, only one is missing for 1876, but it (Kinloch Rannoch) is geographically the most important of them all. Its absence leaves a blank 55 miles from E. to W., and about 22 miles from N. to S., more than 1,000 square miles without a single station. This is especially aggravating, as it includes the Loch Tay and Loch Rannoch districts, for which instruments were purchased years ago by Lord Breadalbane, but from which no results have ever been received. Of the new returns, the most valuable are:

Tyndrum, on the borders of Argyllshire, and Glensherup on the Ochills.

Forfar.—No missing returns ; a station is still very much needed in the north west of the county.

DIVISION XVII.—NORTH EASTERN COUNTIES.

Kincardine.—No alterations. One or more stations much needed in a tract extending 40 miles W. from Stonehaven, and about 10 miles from N. to S.

Aberdeen.—Alterations immaterial, but new stations required in the N.W. of the county.

Banff.—No alterations. Observations were re-commenced January, 1877, at Tomantoul, a very useful station in the south of the county.

DIVISION XVIII.—NORTH WESTERN COUNTIES.

Ross.—As regards both East and West Ross, we feel that there is every reason to be satisfied with the distribution of the stations, considering the sparseness of the population, especially in West Ross. We have lost one useful station, Strathconan, but we believe that for 1877 we shall have perfect records from some more of the stations on the Dingwall and Skye line. While, therefore, we should not object to a few additions, we do not ask for them as necessities.

Inverness.—The stations in this county are steadily increasing ; there is not one absentee, and there are three useful new stations, one near Fort William and two near Roy Bridge. Two others are much required, one in Strath Dern and one in Glen Morriston.

DIVISION XIX.—NORTHERN COUNTIES.

Sutherland.—The north and centre of this large county are still without a single station ; in fact, there is a square of nearly 900 square miles without one station. Will not somebody rectify this ?

Caithness.—There is no change this year, but, thanks to the assistance of the directors and officials of the Highland Railway, we hope to give a series of inland returns next year.

Orkney.—We have lost one station, Papa Westray, and gained another, Deerness ; it would have been better had Papa Westray been continued, but the islands are on the whole well represented.

Shetland.—The regretted death of Dr. Hamilton interrupts, if it does not terminate, the valuable record at Bressay Manse. It is a great pity, as, with the exception of Light-house returns, we have now only one station in Shetland.

IRELAND.

DIVISION XXI.—MUNSTER.

Cork.—A new gauge has been started at Queen's College, Cork, without any attention being paid to Rule II., so that the continuity of that record is irreparably destroyed. Fortunately we are glad to find that an old correspondent (Mr. Binyon) has a set of observations extending back for several years, so that although the secular variation cannot be ascertained from the Queen's College record, it can be from other sources.

Kerry.—The observations were inaccurately made at Kenmare, and the gauge has, by Mr. Mahony's directions, been removed. No other alteration.

Tipperary.—Three valuable new reports have been received from near Lough Derg, which lessen the injury arising from the temporary interruption of the record at Killaloe [Clare.] There is a vacant spot of 40 miles in diameter, or 1,200 square miles, around Thurles.

Limerick.—One useful new record, viz., Kilcornan; but there is no station in the S.E. of the county, nor in the adjoining parts of N.W. Cork, and E. Kerry. The district between Limerick and Skibbereen, nearly 80 miles by 40 miles, or 3200 square miles, is without a single observer. This is by far the worst represented part of the United Kingdom.

Clare.—The loss of Killaloe has already been mentioned, the only other is Kilrush, and that is only temporary. Corofin is a useful new station.

DIVISION XXI.—LEINSTER.

There is only one loss throughout this province, and it (Fassaroe, Bray) is only temporary. On the other hand, there are eleven new stations: the most important are Naas (Ballymore Eustace), Kildare, and Streete (Rathowen) Westmeath. The principal necessity is an improvement in Wicklow, stations at Arklow, Wicklow, and between these towns and Portarlington are desirable.

DIVISION XXII.—CONNAUGHT.

The only loss is a serious one (Glenturk, near Bangor), which leaves N.W. Mayo without a single station. There are many additions, but the most interesting are the Leitrim gauges, near Lough Allen. We regret that we have not a single return from county Longford.

DIVISION XXIII.—ULSTER.

There is only one loss and one change of importance. The loss of Templecrone leaves the extreme west of Donegal without a representative, and although, through the courtesy of Mr. Scott, we have a fresh station at Moville, we regret the absence of our old one. As to the additions, they are much too numerous to mention. County Down is covered with a network of stations, and except near Cushendall (Antrim) and east of Strabane (Tyrone) we do not think that any more stations are needed.

OBITUARY.

WE regret having to insert an unprecedentedly long list of deceased observers. We mentioned last year that the number was usually very nearly constant, and that it averaged 21, this year there are 37. The only consoling features in the table are (1) that several of the most important records are being continued, and (2) that there are few very long records among this numerous list.

Meteorology has sustained a severe loss during the past year in the death of three meteorologists of high qualifications, Dr. Jelineck, of Vienna; M. Charles St. Claire Deville, of Paris; and Mr. Cator, of Beckenham. We ought also to mention the first death among the little band of county superintendents, viz., that of the Rev. Nash Stephenson. Perhaps, however, as respects the mere measurement of rain, the greatest loss is that of Mr. Little, of Carlesgill, as there seems to be considerable doubt if all his stations will not be allowed to be abandoned.

		Perfect Yearly Records.
Atkinson, G. C., Esq.	{ West Denton.....	{ C 1845—1852 T 8
	{ Wylam Hall, Newcastle-on-Tyne.	{ C 1854—1874 imp. T 20
Bourne, J. W., Esq., Ilchester		C 1863—1875 T 13
Bruce, W., Esq., Bogside, Leochel Cushnie, Aberdeen ...		C 1866—1876 imp. T 10
Cator, C. O. F., Esq., M.A.	{ Bryanstone Square, London	{ C 1858 imp.—1865 T 7
	{ Parkside, Beckenham	{ C 1866—1874 imp. T 9
	{ The Hall, „	{ C 1874 imp.—1875 T 1
Cawley, C. E., Esq., M.P., Nayden Dane, Rochdale		C 1848—1876 C 29
Crawdson, G. B., Esq., The Wood, Windermere		C 1865—1875 C 11
Dodds, Mr. A., Abbeygate, Melrose		C 1871 imp.—1876 C 5
Eller, Rev. J. Irvin, Faldingworth, Market Rasen		1872—1875 T 4
Ellis, J., Esq., The Mount, Worksop.....		1872—1875 T 4
Forbes, Rev. G. H., Burntisland, Fife, N.B.		1870—1875 T 6
Garnett, W., Esq., Churchtown, Crosthwaite, Kendal ...		1869—1875 T 7
Grieve, J., Esq., Dalbeattie, Kirkcudbright, N.B.		C 1865—1876 C 12
Hambly, H. A., Esq.	{ Treharrock, Wadebridge, Cornwall	{ C 1870—1873 imp. T 3
	{ Park Villas, St. Endellion, „	{ C 1873 imp—1874 imp T 0
	{ Barn Park, Boscastle, „	{ C 1874 imp—1876 imp T 1
Hamilton, Rev. Dr. Bressay Manse, Shetland ...		C 1849 imp.—1866, 1868—75 25
Hildred, J., Esq., Batley, Yorks		C 1874 1
Hunter, J. L., Esq., C.E., Wigan Water Works		C 1863—1875 13
Ingle, Mr. W., Birch Hall, Colchester		C 1866—1876 11

		Perfect Yearly Records.
James, J. W., Esq., Harbour Office, Swansea	1864—1875	12
Jones, T., Esq., Kensworth, Dunstable... ..	C 1864 imp.—1876 C	13
Leach, J., Esq., Ivy Tower, Tenby, S. Wales	1871—1876 imp. T	5
Little, J., Esq., Carlesgill, Westerkirk	1844—1854, 1856—1875	31
Marx, F., Esq., Arle Bury, New Alresford, Hants.....	C 1862—1875 C	14
Moriman, W. C., Esq., Kingsbury Street, Marlborough...	C 1861—1876	16
Muriel, J. T., Esq., Cheltenham, Suffolk	C 1875—1876 T	2
Mylne, W. C., Esq., C.E., Nag's Head Lane, Enfield.....	1864—1875 C	12
Nesbitt, Rev. C. J., West Hallam, Derby	C 1865—1875 T	11
Nicholls, C., Esq., Chelford, Chester	C 1863—1875 T	13
Philliskirk, Mr. D., Filey, Yorks.	C 1865—1875 T	11
Rankin, W., Esq., Chapel Brampton, Northampton	1874—1875	2
Stephenson, Rev. Nash, Bromyard, Hereford	C 1872 imp.—1876 imp. T	3
Swire, Mrs., Littlethorpe, Ripon.....	C 1868—1875 T	8
Symons, J., Esq., Mayen Ho., St. Sennen, Cornwall	C 1871—1875	5
Turner, H., Esq., Beech Hill, Bury St. Edmunds	C 1860 imp.—1876 imp. T	15
Walker, Rev. J. T., Ashdon, Linton, Cambridge	C 1858—1876 T	19
Watt, D., Esq., Londonderry	C 1862 imp.—1876 imp. T	13
Wilkinson, Rev. J. J., Lanteglos, Camelford, Cornwall...	1863—1868, 1873—75 T	9
Winter, T. L. M., Esq., Brookmead, Dorking	1870—1876	7

RAINFALL AND METEOROLOGY
OF
1876.

ON THE METEOROLOGY OF 1876,
WITH SOME NOTES ON THE PRINCIPAL PHENOMENA.

[These Notes should be read in conjunction with those on Heavy Rains in 1876,
on pages 140 to 149].

JANUARY.

1st.—*Shap*, X. Very mild, warm, and bright, quite May-like.

2nd.—*Addington*, III. Min. temp. 22° , temp. at 9 a.m. 24° , at 9 p.m. 50° , a difference of 28° ; rain fell during the day.

3rd.—*Coston*, VII. Aconite in flower.

6th.—*Cambridge*, III. Frost set in from N.E., with slight fall of snow. This frost lasted to the 16th at 2 p.m., when it broke up, the min. temp. of the month (19°) being on the 12th.

7th.—*Bromley*, II. Great depth of snow.

8th.—*Hindringham*, IV. Min. in shade 24° .—*Bincombe*, V. Very cold, temp. in the day 29° , and sinking to 19° at night.—*White Lackington*, V. Min. temp. of year 10° .—*Middlesborough*, IX. Snow, ther. 22° .

9th.—*Addiscombe*, II. Min. on grass 3° , min. on Glaisher's stand $10^{\circ}0$.—*Oxford*, III. Min. temp. 21° .—*Halifax (Moorside)*, IX. Min. on grass, $6^{\circ}7$.

11th.—*Court Grange*, V. The coldest day.

12th.—*Addington*, III. A bitter cold day; min. temp. 17° ; snow fell in the afternoon.—*Exe Villa*, V. Coldest night, 12° .—*Brereton*, VI. Min. on grass 9° ; heavy snow fall 11 a.m. to 4 p.m.—*Buntingsdale*, VI. $1\frac{1}{2}$ in. of snow; temp. 20° .—*Coston*, VII. Heavy snow in afternoon, with S. wind.—*Woodlands, Elterwater*, X. Snow in the morning and rain, with wind, in the afternoon.

13th.—*Druid House, Ashburton*, V. Very dark and dull.—*Llanfrechfa*, XI. Dark, thick fog at 9 a.m.; $\cdot 06$ of snow measured, which was the only fall between the 2nd and the 19th.

14th.—*Ballinasloe*, XXII. Thick fog all day, cleared at 7 p.m.

15th.—*Ipswich*, IV. Very high bar., $30\cdot 63$ reduced to sea level.—*Diss*, IV. Mercury standing at $30\cdot 67$ in., reduced, in the middle of the day.

16th.—*Melrose*, XII. Sea gulls 30 miles inland ; high winds on following four days.

17th.—*Brereton*, VI. Thick fog all day; rapid thaw.—*Coston*, VII. Rapid thaw.—*Strathconan*, XVIII. Very stormy.

19th.—*Holehouse*, XIV. Night very wet, .50 in. of rain fell.—*Ewrick Tyndrum*, XVI. High wind and heavy rain, 2.16 in., max. of month.—*Strathconan*, XVIII. Hailstorms.

20th.—*Castle Malgwyn*, XI. Stormy, with heavy rain, .90 in.

21st.—*Addington*, III. Rain and snow, .90 in ; very stormy rain till 2 p.m., then snow ; great flood ; the ground was so wet from the rain which had fallen in the morning that at first the snow melted as it fell, but in the evening it lay 3 in. deep.—*Cambridge*, III. Heavy rain from 11 a.m. to 6.30 p.m., and then snow till 10 p.m., total fall .94 in.—*Diss*, IV. Heavy rain with snow, the latter extremely heavy in the evening and night, total fall 1.12 in.—*Pewsey*, V. Storm of rain and snow, 1.20 in.—*Compton Bassett*, V. A remarkable day ; rain fell heavily all the morning, and afterwards snow in enormous flakes.—*Druid*, V. Ther. fell from 44°·5 to 35° between 9 and 11 a.m.; at 12 o'clock, snow.—*Brereton Villa*, *Leamington*, VI. The wind changed from S.W. to N.E., bringing with it a very heavy snowstorm ; the snow was wet, and did not lie on the roads. During the night a very sharp frost set in and turned the roads into sheets of ice, the trees also were covered with ice ; all telegraphic communication was cut off, owing to the gale, and the watery snow freezing upon the wires.—*Coston*, VII. Blinding snow storm continuing all day, loading the trees to windward and everything with which it came in contact.—*Partney*, VII. A wretchedly cold, rainy day, with strong wind in the afternoon.—*Strolomus*, *Skye*, XVIII. Frost and snow, thaw towards morning.

22nd.—*Woodlands*, *Elterwater*, X. Fine and frosty until night ; rain in the night 1.48 in., max. of month.—*Holehouse*, XIV. Morning frosty, night wet, .52 in. of rain, max. of month.

23rd.—*Melrose*, XII. Severe S.W. gale for 24 hours.—*Glenturk*, *Bangor*, XXII. Hurricane all day from S.

24th.—*Compton Bassett*, V. A thaw set in.—*Stanley*, IX. A fine day, birds singing.

25th.—*Cambridge*, III. Diffused auroral glare in E. at midnight.—*Stanley*, IX. Beautiful day, lark singing.—*Strolomus*, XVIII. High wind.

26th.—*Sansaw*, VI. Distant heavy thunder from 5 to 7 p.m., in about S.W. and W. by S.

27th.—*Cambridge*, III. Damp, dense fog from 4 to 6 p.m.—*Stanley*, IX. Fine day, thrush singing.

29th.—*Altarnum*, V. Snowdrops in flower, three weeks late.—*Halifax*, IX. Very dense black fog.

31st.—*Addiscombe*, II. Max. in shade $54^{\circ}3$, the highest I have registered in either January or February since I commenced on January 1st, 1873.

FEBRUARY.

2nd.—*Plymouth Grove*, *Manchester*, VIII. Fine and sunny.—*Ewick Tyndrum*, XVI. Sleet and rain, 1.27 in.; snow on the hills; thunder.

3rd.—*Strolomus*, *Broadford*, XVIII. Thunderstorm from 11 a.m. to 0.30 p.m.

4th.—*Diss*, IV. Snow.—*Holehouse*, XIV. Heavy rain, hail and thunder.—*Strathconan*, XVIII. Distant thunder.

6th.—*Compton Bassett*, V. Boisterous wind; snow in the evening.

7th.—*Newcastle West*, XX. Small quantity of snow fell.

10th.—*Castle Malgwyn*, XI. Snow all day.

11th.—*Enfield*, I. Dense fog.—*Bromley*, II. Fog.—*Addiscombe*, II. Min. $18^{\circ}1$; on grass 16° .

12th.—*Sansaw*, VI. Min. on grass $6^{\circ}5$; 4 ft. above ground 13° ; these are the lowest temperatures I have ever recorded.—*Bushey Hill*, XIV. Aurora N.W.

13th.—*Harrow*, I. Snow fell $2\frac{1}{2}$ in. deep, yielding .48 in. of water.—*Enfield*, I. Heavy snow.—*Addiscombe*, II. Min. $19^{\circ}3$; on grass $14^{\circ}0$.—*Croydon (Bramley Hill)*, II. 3 in. of snow fell between 6.30 and 9 p.m.—*Forest Hill*, II. Min. temp. of month $20^{\circ}8$, and on grass 15° , the lowest temp. yet registered for February.—*Cambridge*, III. Solar halo in morning; snow began falling at 8.30 p.m., and became $2\frac{1}{2}$ in. deep.—*Coston*, VII. Heavy snow during the night.—*Walton*, VIII. Heavy snowstorm, depth about 5 in., from 7 p.m., with high wind.—*Shap*, X. A fall of snow.

14th.—*Diss*, IV. Heavy rain at night.—*Compton Bassett*, V. Dull morning; heavy rain at night.—*Woodlands*, *Elterwater*, X. Very cloudy; snow and rain in the evening.—*Shap*, X. Bitter cold thaw.—*Castle Malgwyn*, XI. Heavy rain; max. of month $\cdot68$ in.

15th.—*Druid House*, *Ashburton*, V. Lightning in evening.—

Hagley, VI. Violent thunderstorm, with hail, at 2 a.m.—*Coston*, VII. Great rise in temp. during the night.—*Llanfrechfa*, XI. High wind at night. *Castle Malgwyn*, XI. Thunderstorm.—*Ballinasloe*, XXII. Thunderstorm, with hail at night.

16th.—*Cambridge*, III. Lightning in early morning.

17th.—*Shap*, X. Great storm of wind and rain; 1·21 in. fell.—*Llanfrechfa*, XI. Heavy gale, with rain.

18th.—*Forest Hill*, II. The shade max., 58°·9, was the highest yet registered in this month.—*Epping*, IV. Gales.—*Melrose*, XII. Stormy; high wind S.W. and W.

19th.—*Diss*, IV. Distant thunder about 1 p.m.—*Calcethorpe*, VII. Aurora.—*Melrose*, XII. Aurora at 9 p.m.

20th.—*Llanfrechfa*, XI. High wind and rain; max. of month 1·37 in.—*Glenturk, Bangor*, XXII. Bright aurora in evening.

21st.—*Cambridge*, III. Stormy; S.W. breeze at night.—*Coston*, VII. Very high wind all day and night.—*Bashall Lodge, Clitheroe*, IX. The wettest day in the year; 1·38 in. fell.—*Shap*, X. A perfect deluge of rain; max. fall of month 1·32 in.; wind S.W.

22nd.—*Enfield*, I. Slight aurora.—*Sheering*, IV. Thunder, lightning and hail.—*Buckden*, IX. Wind fresh; max. fall of month 2·29 in.; aurora.

23rd.—*Addington*, III. Wind very high.—*Cambridge*, III. Very squally in evening.

24th.—*Melrose*, XII. Aurora 5.30 a.m.—*Cessnock Park*, XIV. Snowing all day and the previous night, about 7 to 8 in. deep, which gave, when melted, ·62 in.

25th.—*Woodlands, Elterwater*, X. Snowing all day, depth 8 in. yielding 1·32 in.; very dark during the day.—*Llanfrechfa*, XI. High wind and rain.—*Melrose*, XII. Snow 8 in. deep; wind S.E.

26th.—*Bushey Hill, Cambuslang*, XIV. Snow 12 in. deep.

27th.—*Strathconan*, XVIII. Snow and sleet; max. of month 1·10 in.

29th.—*Harrow*, I. Apricots almost out in bloom.

MARCH.

1st.—*Addington*, III. Thunder, rain, and hail.—*Ewick, Tyndrum*, XVI. Thunder and rain.

3rd.—*Coston*, VII. High wind all day.—*Dalnaspidal*, XVI. Sleet and rain, max. of month 1·63 in.—*Holehouse*, XIV. Very stormy.

4th.—*Addington*, III. Hail storm.—*Walton*, VIII. Heavy gale in afternoon.—*Woodlands*, X. Very stormy, snow and rain in the afternoon.—*Strolomus*, XVIII. High wind.—*Glenturk*, XXII. Hurricane all last night and all to-day.—*New Barnsley, Belfast*, XXIII. Great storms.

5th.—*Weston, near Bath*, V. Very rough wind.—*Halifax*, IX. Lunar rainbow seen.—*Castle Malgwyn*, XI. Heavy rain all day, max. fall of month .55 in.—*Port Madoc*, XI. Whole gale.—*Erwick, Tyn-drum*, XVI. Thunder.—*Skibbereen*, XX. Thunderstorm.

6th.—*Oxford*, III. High wind.—*Cambridge*, III. Squally, gale from W.—*Coston*, VII. High wind with hailstorms.—*Walton*, VIII. Stormy and squally ; thunderstorm with hail and tremendous wind at 8.15 p.m.

7th.—*Burnham*, V. Thunderstorm.—*Blundellsands*, VIII. High wind with rising bar. ; one clap of thunder with flash of lightning and hail ; the bar. then fell rapidly, nearly 1 in. in 24 hours, when the wind again rose and blew a gale, accompanied by heavy rain. I was quite alarmed at the sudden drop, especially as it remained calm till 10 p.m. on 8th.—*Cessnock Park*, XIV. Thunderstorm with hail at 4 a.m.—*Glenturk*, XXII. Violent gale all day, and heavy rain in evening.

8th.—*Shap*, X. Storm of rain (1.11 in.) causing floods.—*Skibbereen*, XX. Severe storm with hail.

9th.—*Arlington*, V. Heavy fall of snow with thunder and lightning.—*Oscott*, VI. Thunder.—*Coston*, VII. Very high wind, especially at night.—*Port Madoc*, XI. Whole gale.—*Cessnock Park*, XIV. Thunder mid-day, storm in the night.—*Keith*, XVII. Snow, with heavy drift.

10th.—*Alderbury*, V. Heavy squall at 5.30 a.m. ; lightning at 8 a.m.—*Buckden*, IX. Thunder and heavy rain.

11th.—*Druid Ashburton*, V. Fine day, but heavy rain in night, 1.10 in., max. of month.—*Blockley*, VI. Very deep snow.—*Bucknall*, VII. Thunder.

12th.—*Enfield*, I. Very heavy snow.—*Muswell Hill*, I. 1.12 in. of rain fell between midnight on 11th and 6 p.m. on 12th.—*Eastbourne*, II. A gale. *Addington*, III. Snow began about 5.30 a.m. and continued till 3 p.m.—*Waresley*, III. Snow = .56 approximately.—*Sandy*, III. Stormy day.—*Cambridge*, III. Gale from N., incessant snow from 7 a.m. to 2 p.m.—*Diss*, IV. This was a day to be remembered for the wild fury of its weather. Snow fell incessantly from 7 a.m. to 4 p.m. ; wind from S.W. to N.E. and N. before the storm, and back to W. immediately after ; strong gale in afternoon, continuing to the follow-

ing day, on which there were floods.—*Pewsey*, V. Great snow storm. *Bincombe*, V. Gale from N.W. at 10 a.m.—*Hagley*, VI. Thick, driving snow storm from 7 a.m. till 1 p.m.—*Coston*, VII. Snow nearly all day ; wind E. in early morning, N.E. at 9 a.m., then by N. to W. by sunset ; bar. fell rapidly during the day, but rose at night.—*Stanley*, IX. Sweet violet in flower.—*Melrose*, XII. Very stormy ; snow and sleet.

14th.—*Addington*, III. Very high wind.—*Diss*, IV. Heavy gale from S.W. ; thunderstorm at 7 p.m.—*Druid House*, V. Squally ; heavy storm at night.—*Weston, near Bath*, V. Almost a hurricane.—*Walton*, VIII. Heavy gale all day.—*Shap*, X. Heavy storm of wind for several hours, displacing slates, chimney pots, &c.—*Castle Malgwyn*, XI. Great storm at night.—*Port Madoc*, XI. Whole gale.—*Holehouse*, XIV. Thunder and rain.—*Strathconan*, XVIII. Very stormy with snow during eight days, 14th to 21st.

15th.—*Bromley*, II. Gale in the night.—*Bishops Castle*, VI. Heavy gale, with rain and snow.—*Walton*, VIII. Strong gale ; thunderstorm at 4.50 p.m.

16th.—*Compton Bassett*, V. Boisterous wind by day, clear and frosty at night.

17th.—*Dalnaspidal*, XVI. Terrific storm of snow, drift, and wind.

18th.—*Walton*, VIII. Min. on ground during the night 15°, and on the following night 14°.—*Rhug*, XI. Snow in night 6 in. deep.

19th.—*Hanworth*, I. Min. temp. 22°·0.—*Burnham*, V. Snowy ; ice $\frac{3}{4}$ in. thick.—*Sansaw*, VI. Very hard frost ; one of the coldest days of the winter ; ice about 1 in. thick.—*Macclesfield*, VIII. Min. temp. of year 18°.—*Keith*, XVII. Snow with heavy drift ; railway blocked and trains stopped.

21st.—*Oxford*, III. Snow all day.

22nd.—*Middlesborough*, IX. Snow.

25th.—*Swallowfield*, II. Found a nest of young blackbirds.

27th.—*Enfield*, I. Heavy rain, .57 in.—*Cambridge*, III. Incessant rain from 7 p.m. to 6 a.m. of 28th.—*Diss*, IV. Thunder at mid-day.

28th.—*Druid House*, V. Dense fog till 11 a.m.—*Coston*, VII. Thunderstorm with heavy rain between 5 and 7 p.m., much like a summer storm in the violence and suddenness of the rain.—*Bucknall*, VII. Thunder.—*Caistor*, VII. Thunderstorm.

29th.—*Addington*, III. Thunderstorm with hail.—*Cambridge*, III. Thunder at times from 2 to 2.30 p.m.—*Compton Bassett*, V. Thunderstorm with hail at 11.51 a.m.—*Fairford Rectory*, VI. Thunder and

lightning.—*Stanley*, IX. Wind at 8.30 a.m. E., at 10 a.m. S., at 3 p.m. S.W., and at 6 p.m. W.S.W.—*Shap*, X. Heavy fog at night.

30th.—*Addiscombe*, II. Lightning in N.E. at 7 p.m.—*Melrose*, XII. A flock of wild geese passed overhead going from S.E. to N.W. at a great altitude.

31st.—*Bromley*, II.—Heavy rain at 10.30 p.m., when .09 in. fell in ten minutes.—*Compton Bassett*, V. Thunder and rain at night.—*Buckden*, IX. Thunder.—*Gainford*, X. Comparatively warm; thunder and lightning in the afternoon.—*Melrose*, XII. Thunder and forked lightning at 3 p.m.

APRIL.

2nd.—*Harrow*, I. Bees and butterflies out.—*Swallowfield*, *Horsham*, II. Saw the first snakes.—*Cambridge*, III. Tortoiseshell butterfly seen.—*Glenturk*, *Bangor*, XXII. Fine, and everything blooming.

4th.—*Buncrana*, XX. Snow and high cold winds, W. and N.W.

6th.—*Cambridge*, III. Plum tree in bloom.—*Alderbury*, V. Wry-neck heard.

7th.—*Buckden*, IX. Thunder and haze.—*Holehouse*, XIV. Fine growing weather.

8th.—*Cambridge*, III. Splendid warm weather.—*Strathconan*, XVIII. Snow, and snow fell every day of the week following.—*Tain*, XVIII. Snow.

9th.—*Pinner Hill*, I. Swallows and cuckoos mate; nightingale came.—*Andover*, II. Cold, yet sunny, March-like day.—*Epping*, IV. Hail.—*Diss*, IV. Distant thunder at 4.30 a.m.—*Leaton Vicarage*, *Shrewsbury*, VI. Snow.—*Burton on Trent*, VI. Cold as January.—*Stanley*, IX. Swallows appeared.—*Allenheads*, X. Snow, hail, thunder, and lightning.—*Budgate*, *Cawdor*, XVIII. Snow.—*Glenturk*, XXII. Heavy rain.

10th.—*Bromley*, II. Snow.—*Andover*, II. Snow.—*Epping*, IV. Snow.—*Kings Lynn*, IV. Snow.—*Southwell*, *Notts*, VII. Snow.—*Walton*, VIII. Snow and hail showers.—*Llanfrechfa*, XI. Gale and heavy rain in morning.—*Buckden*, IX. Snow.—*Woodlands*, X. Snow.—*Melrose*, XII. Snow.—*Holehouse*, XIV. Snow.—*Aviemore*, XVIII. Very stormy at night.—*Strome Ferry*, XVIII. 1 in. of snow fell.—*Carrick on Shannon*, XXII. Snow.

11th.—*Enfield*, I. Snow and hail.—*Pinner Hill*, I. Snow.—*Andover*, II. Snow fell; ground in the morning quite white.—*Addiscombe*,

II. Slight fall of snow at noon and at intervals throughout the day.—*Eastbourne*, II.—Snow and hail.—*Oxford*, III. Snow and very high wind.—*Cambridge*, III. Snow, and very cold.—*Diss*, IV. Short, sharp, hail, storm, with gale from S. by W.—*West Tofts*, IV. Snow.—*Beaminster*, V. Snow.—*Alderbury*, V. Snow; two swallows seen.—*Druid*, *Ashburton*, V. Snow.—*Court Barn*, V. Unusually cold N. wind with snow.—*Middlecott*, V. Snow.—*Northam Vicarage*, V. Snow.—*Burnham*, V. Hills white with snow.—*Sansaw*, VI. Snow.—*Llanfrechfa*, XI. Scuds of fine snow.—*Rhug Corwen*, XI. Very heavy snow.—*Ewick*, *Tyndrum*, XVI. Snow.—*Nairn*, XVII. Snow.—*Strome Ferry*, XVIII. $1\frac{1}{2}$ in. of snow fell.—*Bushmills*, XXIII. Snow storm with N. wind.

12th.—*Harrow*, I. Thunderstorm.—*Addiscombe*, II. Snow showers; thunder heard once in the E. at 1.5 p.m., and again at 2.30 p.m.—*Riverhead*, II. Temp. 17° at midnight.—*Forest Hill*, II. Thunder and lightning.—*Diss*, IV. Hail and heavy snow, thick on the ground; wind E. by S.—*Bincombe*, V. Snow about 3 in. deep.—*Ivy Lodge*, VI. Extraordinary snow storms.—*Caistor*, VII. Thunder and snow.—*Partney*, VII. Snow and strong gale, continuing to the morning of 14th.—*Calcethorpe*, VII. Snow and very rough weather.—*Llanfrechfa*, XI. Snow and sleet in the night.—*Strome Ferry*, XVIII. 1 in. of snow fell.

13th.—*Harrow*, I. Snow.—*Muswell Hill*, I. Snow 5 in. deep. It is singular that the heaviest falls of snow in each month this year have occurred between the 11th and 13th, viz., January 12th, February 13th, March 11th and 12th, April 12th and 13th.—*Enfield*, I. Heavy snow, it fell almost incessantly.—*Addiscombe*, II. Snow.—*Forest Hill*, II. Heavy snow storm, which is very unusual so late in the spring.—*Addington*, III. About the wildest day I ever saw; snow 8 to 10 in. deep, but drifting very much.—*Waresley*, III. Snow .58 in. approximately.—*Oxford*, III. Snow all night.—*Coldham Hall*, *Elm*, IV. One of the worst days ever remembered in Cambridgeshire; a gale of wind and ceaseless snow.—*Teignmouth*, V. Snow fell heavily in the early morning.—*Reevey*, VI. Snow.—*Bishops Castle*, VI. Snow 5 in. deep.—*Thorpe Arnold*, *Leicester*, VII. Very deep snow; some of the roads blocked for two or three days.—*Coston*, VII. More than 10 in. of snow fell between 3 and 9 a.m.; the wind was high, and snow much drifted during the night.—*Spondon*, VII. Depth of snow water .99 in.; snow 14 in. deep.—*Solva*, *Haverfordwest*, XI. Ground covered with snow.—*Glenturk*, XXII. Heavy snow.

14th.—*Diss*, IV. Swallows seen and cuckoos heard while the snow was still on the ground.—*Broughton in Furness*, VIII. Thunder.

16th.—*Forest Hill*, II. Min. on grass $24^{\circ}9$.—*Addington*, III. Plum, pear, and cherry trees in full flower; they do not seem to have suffered from the snow storm.—*Sansaw*, VI. Min. on grass 20° .—*Coston*, VII. Roads still in some places impassable from the remaining snow drifts.

17th.—*Pinner Hill*, I. Cuckoo came.

18th.—*Bromley*, II. Cuckoo heard.—*Andover*, II. Heavy storm at mid-day.—*Cambridge*, III. Aurora in N.W. at 9 p.m.

19th.—*Alderbury*, V. Nightingale and cuckoo heard.—*Compton Bassett*, V. Thunder.—*Coston*, VII. Distant thunder at 4.30 p.m.—*Stanley*, IX. Cuckoo seen; vegetation making rapid progress.—*Woodlands*, X. Thunder heard.

20th.—*Bromley*, II. Nightingale heard.—*Andover*, II. Cold stormy day, one hail shower.—*Ballinasloe*, XXII. Bright and fine.

21st.—*Cambridge*, III. Weather milder; nightingale heard.—*Hagley*, VI. Cuckoo first heard.—*Coston*, VII. Thunder and vivid lightning from 6.30 to 7 p.m.—*Caistor*, VII. Thunderstorm.—*Calcethorpe*, VII. Thunderstorm at 6 p.m.—*Walton*, VIII. Thunderstorm at 11.30 a.m.—*Buckden*, IX. Thunder.—*Melrose*, XII. Distant thunder at 5 p.m.

22nd.—*Harrow*, I. Cuckoos, nightingales, and martens, all here.—*Swallowfield*, II. Swallows arrived.—*Addington*, III. Cuckoo arrived.—*Cambridge*, III. Small white butterfly out.—*Ewick*, *Tyndrum*, XVI. Snow, sleet, and rain.

23rd.—*Addiscombe*, II. Cuckoo first heard.—*Cambridge*, III. Cuckoo heard and swallow seen; hail at 3 p.m.—*Stanley*, IX. Rooks hatched.

25th.—*Enfield*, I. Lightning.—*Addington*, III. Thunderstorm with hail.—*Cambridge*, III. Sharp thunderstorms 0.15 to 2.33 p.m.; lightning in evening.—*Epping*, IV. Hail, snow, and thunder.—*Diss*, IV. Thunderstorm in afternoon; sharp lightning at 3.30 p.m.—*West Tofts*, IV. Hail.—*Coston*, VII. Thunderstorm at 10 a.m.; occasional hail storms.

26th.—*Calcethorpe*, VII. Cuckoo heard and swallows seen.—*Addington*, III. Swallows arrived.

28th.—*Pinner Hill*, I. Thunder.—*Addiscombe*, II. Nightingale first heard; thunder heard in N.—*Bromley*, II. Thunder.—*Forest Hill*, II. Thunder and lightning.—*Addington*, III. Thunder; nightingale heard.

—*Cambridge*, III. Thunder at 3 p.m.; lightning in N. at 8 p.m.—*Teignmouth*, V. Heavy storm of hail and rain at 6 p.m.—*Melrose*, XII. 1.05 in. of rain fell in 12 hours.

29th.—*Court Barn*, V. Cuckoo first heard, very late, usually heard between 17th and 21st.—*Caistor*, VII. Hail.—*Coston*, VII. Hail at 10 a.m.; heavy rain from 2.30 p.m. to about 2 a.m. of the 30th, total fall 1.15 in.

30th.—*Sansaw*, VI. Cuckoos first heard.—*Glenturk*, XXII. Clear and sunny.

MAY.

1st.—*Enfield*, I. Hail.—*Cambridge*, III. Slight hail shower 11 a.m.; frosty night.—*Halifax*, IX. Snow.—*Allenheads*, X. Snow and hail; temp. at 9 a.m. $36^{\circ}6$, and at 3 p.m. it had only risen to $38^{\circ}0$.—*Woodlands*, X. Very fine, bright sun all day.—*Melrose*, XII. Swallows arrived.

2nd.—*Pinner Hill*, I. Hail; and min. temp. of month 30° .—*Enfield*, I. Snow.—*Allenheads*, X. Cuckoo heard.

3rd.—*Harrow*, I. Min. 30° .—*Druid House*, *Ashburton*, V. White frost in the valley.—*Melrose*, XII. Cuckoo arrived.

4th.—*Calcethorpe*, VII. Solar halo.—*Melrose*, XII. Lightning at 9.30 p.m.

5th.—*Shap*, X. Distant thunder.—*Melrose*, XII. Landrail heard.—*Ewick Tyndrum*, XVI. High wind.

6th.—*Addiscombe*, II. Min. temp. $32^{\circ}3$; max. $66^{\circ}9$; range $34^{\circ}6$.—*Woodlands*, X. Fine solar halo at 1 p.m.

8th.—*Woodlands*, X. Fine solar halo at 11 a.m.

9th.—*Epping*, IV. Gale.

14th.—*Allenheads*, X. Rain, sleet, and snow during the day and night.

16th.—*Enfield*, I. Lightning.

20th.—*Walton*, VIII. Solar halo at 7 p.m.—*Allenheads*, X. Beautiful day; swallow first seen.

21st.—*Melrose*, XII. Distant thunder.—*Harrow*, I. Max. temp. $74^{\circ}0$; all the birds particularly merry on that lovely day.—*Pinner Hill*, I. Wind changed from N.E. to S.W., and the max. temp. of the month took place, 69° .—*Epping*, IV. Wind changed from the E., at which, or N.E., it had been for three weeks.

22nd.—*Enfield*, I. Thunderstorm at 7 p.m.—*Addiscombe*, II. Thunder twice in N.W. about 7.30 p.m.—*Compton Bassett*, V.

Thunderstorm at 3 p.m.—*Pewsey*, V. Thunderstorm.—*Coston*, VII. Thunder and lightning during the afternoon.—*Woodlands*, X. Showery.—*Melrose*, XII. Lightning at noon.

23rd.—*Cambridge*, III. Thunder showers.—*Caistor*, VII. Thunder.

24th.—*Compton Bassett*, V. Thunderstorm.—*Court Grange, Abbotskerswell*, V. A terrific squall, with thunder, lightning, and hail between 1.30 and 2 p.m.; $\cdot 60$ was registered in the gauge.—*Druid House*, V. Thunder shower; rain $\cdot 19$ in., which was the max. fall of the month, the total of the month being only $\cdot 35$ in., only four days with rain being recorded.—*Cheadle*, VI. Violent hailstorm at 3 p.m., coming from N.E.—*Coston*, VII. Distant thunderstorm in afternoon.—*Woodlands*, X. Showery and rather windy.—*Melrose*, XII. Solar halo at 6 a.m.

27th.—*Coston*, VII. Very dark in the morning.—*Ewick, Tyndrum*, XVI. High wind.

30th.—*Addiscombe*, II. Max. (Glaisher's stand) $70^{\circ} \cdot 5$.—*Leaton Vicarage*, VI. Short, sharp shower and one flash of lightning, but no thunder heard.—*Coston*, VII. Lightning to the W. about 10 p.m.

JUNE.

1st.—*Enfield*, I. Frost on the grass.

3rd.—*Bromley*, II. Windy.—*Druid House, Ashburton*, V. White frost.

4th.—*Cambridge*, III. Solar halo, a.m.

5th.—*Druid House*, V. Fog and rain in early morning; evening clear.—*Calcethorpe*, VII. Solar halos.—*Melrose*, XII. High wind.

7th.—*Diss*, IV. The first wild rose.—*Melrose*, XII. Lightning and hail 8 a.m.

8th.—*Enfield*, I. Thunder from 6 to 7 p.m.—*Forest Hill*, II. Solar halo.

9th.—*Andover*, II. Very severe thunderstorm.—*Compton Bassett*, V. Thunder at 4 p.m.—*Pewsey*, V. Thunder.—*Bincombe*, V. Heavy thunderstorm.—*Cheadle*, VI. Thunder in afternoon; rain began 2 p.m.—*Buckden*, IX. Thunder.—*Llanfrechfa*, XI. Thunder.—*Melrose*, XII. Very stormy; thunder, lightning, hail and heavy rain; $1 \cdot 09$ in. fell in 5 hours.

10th.—*Stanley*, IX. Very fine; vegetation progressing rapidly.

11th.—*Enfield*, I. Min. temp. of month $38^{\circ} \cdot 1$.—*Addiscombe*, II.

Min. temp. on Glaisher's stand $36^{\circ}\cdot 1$, on grass $29^{\circ}\cdot 0$; hoar frost on grass in early morning.—*Addington*, III. Grass quite white with frost in the early morning.

12th.—*Bromley*, II. Was the first day this year on which the shade temp. reached 70° .—*Glenturk*, XXII. Wind boisterous.

13th.—*Castle Malgwyn*, XI. Hot sun; frost at night.

14th.—*Newcastle West*, XX. High wind S.W.

15th.—*Cambridge*, III. Solar halo 2 p.m.; heavy rain at night.

16th.—*Teignmouth*, V. Heavy hailstorm at 11 a.m.

17th.—*Epping*, IV. First wheat ear, very late.

18th.—*Newcastle West*, XX. High wind, S. by E.

19th.—*Cambridge*, III. Hot weather set in.—*Druid House*, V. Dense fog 7 to 9 p.m.—*Calcethorpe*, VII. Wheat in ear.

20th.—*Addiscombe*, II. Max. temp. on Glaisher's stand $82^{\circ}\cdot 7$, in sun $135^{\circ}\cdot 5$.—*Diss*, IV. Brilliant day; max. temp. 84° in shade; lightning in E. at night.—*Beaminster*, V. Very hot.—*Pewsey*, V. Very hot.—*Sansaw*, VI. Thunder.—*Walton*, VIII. Very hot; temp. in shade $83^{\circ}\cdot 0$.—*Stanley*, IX. Corn shot in Stanley.—*Strathconan*, XVIII. Very dry, scorching weather.

21st.—*Addiscombe*, II. Glaisher's stand, max. temp. $84^{\circ}\cdot 6$; in sun $137^{\circ}\cdot 0$.—*Addington*, III. Thunder, but no rain here, though it fell heavily a few miles distant; the day was very hot; the following day 20° colder.—*Cambridge*, III. Distant lightning from 10.30 p.m. to midnight; max. 83° .—*Diss*, IV. Very fine; max. temp. 80° ; wind variable.—*Burnham*, V. Sudden change from hot to cold at 11.30 a.m.—*Leaton Vicarage*, VI. Thunderstorm at 3 p.m. with violent W. wind, and heavy rain between 3 and 3.15 p.m. (in 15 minutes $\cdot 39$ in. fell).—*Cheadle*, VI. Thunderstorm at 5.30 p.m., duration half an hour; rain $\cdot 54$ in.; at the beginning of the storm, dry bulb 73° , wet bulb 65° ; at the end of the storm dry bulb 64° , wet bulb 63° ; a fall of 9° in the dry and of only 2° in the wet.—*Whitchurch*, *Salop*, VI. Max. fall of rain in the year 1.55 in.—*Coston*, VII. Thunderstorm from 7.45 p.m. to 8.15 p.m.—*Macclesfield*, VIII. Max. fall of the year 1.10 in., in less than one hour.—*Walton*, VIII. Very hot; temp. in shade $85^{\circ}\cdot 5$; severe thunderstorm 4 to 6 p.m.—*Broughton-in-Furness*, VIII. Thunder and max. rainfall of month, 1.02 in.—*Halifax*, IX. Thunderstorm.—*Stanley*, IX. Thunder shower.—*Buckden*, IX. Thunder.—*Middlesborough*, IX. 1.50 in. of rain during the night.—*Foxholes*, IX. Very heavy thunderstorm at night.—*Gainford*, X. Severe thunderstorm at 3 a.m.—*Allenheads*, X. Thunderstorm during the night,—

Woodlands, Elterwater, X. Thunderstorm from 7 to 9 p.m.—*Shap*, X. A great storm of wind, which lasted till 6 p.m., and was followed by loud thunder at 7 p.m.—*Bushey Hill*, XIV. Distant thunder.—*Hole House*, XIV. Thunder shower; .60 in.—*Stratheconan*, XVIII. Nice showers; fine, growing weather.—*Bushmills*, XXIII. Thunderstorm.

22nd.—*Brighton, Buckingham Place*, II. The greatest rainfall, 1.99 in., ever recorded at Brighton; the greatest previously recorded was 1.81 in., on the 17th July, 1850 (the Pool Valley flood).—*Swallowfield*, II. 1.91 in. of rain, the greatest fall not merely of the month, but of the last four years.—*Cambridge*, III. Sudden fog at midnight.—*Caistor*, VII. Thunderstorm.—*Partney*, VII. Thunder in morning, lightning at night; high and distant.—*Calcethorpe*, VII. Thunderstorm after midnight.—*Stanley*, IX. Thunder shower.—*Gainford*, X. Thunderstorm 5 a.m. to 6 a.m., very severe; damage done to farm buildings about a quarter of a mile E. of the village; chimney knocked down, iron spouts injured, and a man deprived of his senses for a short time.—*Allenheads*, X. Fog in afternoon; dense fog and thunderstorm during the night.—*Melrose*, XII. Thunderstorm at 5.30 a.m.—*Newcastle West*, XX. Sultry fog in morning.

23rd.—*Lynwood*, II. 1.00 of rain fell between 9 p.m. on 23rd, and 9 a.m. on 24th.—*Cambridge*, III. Thunder and lightning at 2 a.m., and violent showers.—*Addiscombe*, II. Thick white fog in the fields below Addiscombe station at 8 p.m., about as high as the hedges.—*Stuffynwood Hall, near Mansfield*, VII. 1.32 in. fell, max. fall in year.—*Buckden*, IX. Thunder.—*Langton, near Malton*, IX. Thunderstorm, which lasted 10 hours, and was the only one in the year.—*Stanley*, IX. Rain all day.—*Melrose*, XII. Thunderstorm during night.—*Bushey Hill*, XIV. Shott's Steeple, 18 miles E., struck by lightning.

24th.—*Kcith*, XVII. Very warm.

25th.—*Shap*, X. A little grass is already cut, one field of hay was housed to-day.—*Nairn*, XVII. Clear sky, and very hot.

26th.—*Stanley*, IX. Haymaking commenced.—*Skibbereen*, XX. This day was the warmest felt for a period of 47 years.

27th.—*Enfield*, I. Very dense fog on evening of 27th and morning of 28th.—*Diss*, IV. Splendid day; sudden fog between 9 and 10 p.m.; wind veered from N. to S. during the night.—*Calcethorpe*, VII. Barley in ear.—*Oastle Malgwyn*, XI. Very sultry.

28th.—*Enfield*, I. Max. temp. 85°; thunder from 4 to 6.15 p.m.—*Addiscombe*, II. Very dry air; at 3 p.m. dry bulb 80°·0, wet bulb 65°·1; thunder heard three times in N.E. between 6.10 and 6.20 p.m.,

accompanied by stormy-looking sky.—*Bromley*, II. Thunder, the first heard this year.—*Forest Hill*, II. A thunderstorm passed about 5 miles to the E. of us from the N.N.W., in the evening.—*Cambridge*, III. Max. temp. in shade 82° .—*Diss*, IV. Tremendous thunderstorm between 6 and 7 p.m.; .42 in. of rain fell in 35 minutes.—*Compton Bassett*, V. Thunder at 3.25 p.m.; no rain.—*Chalbury*, V. Heavy thunderstorm from 3.45 p.m. to 5.15; the lightning killed three persons within 8 miles of this station, destroyed many oaks, and did much damage.

29th.—*Partney*, VII. Distant thunder.

JULY.

3rd.—*Diss*, IV. Singular rainbow, commencing six minutes before sunrise, owing, I suppose, to reflection from illuminated clouds high in the N.E.

4th.—*Cambridge*, III. Fine golden sunset.—*Melrose*, XII. High W. wind.

5th.—*Calcethorpe*, VII. Lunar halo.

6th.—*Harrow*, I. Cuckoo very late, heard on this day.—*Wetherden Rectory*, IV. Heavy thunderstorm at night.—*Calcethorpe*, VII. Thunder heard.—*Walton*, VIII. Very hot; temp. in shade $86^{\circ}5$.

7th.—*Buncrana*, *Lough Swilly*, XXIII. Very hot.

8th.—*Harrow*, I. Thunderstorm.—*Pinner Hill*, I. Thunderstorm.—*Enfield*, I. Distant thunder in the day.—*Addington*, III. Thunder.—*Diss*, IV. Sharp thunderstorms at 0.30 p.m. and 4.30 p.m.—*Wetherden Rectory*, IV. Thunder before noon.—*Coston*, VII. Thunderstorm about noon; the main storm passed N. of this village.—*Stuffynwood Hall*, VII. Thunderstorm.—*Shap*, X. Thunder.—*Melrose*, XII. .60 in. of rain fell in two hours.

9th.—*Cambridge*, III. High W. wind.

10th.—*Court Barn*, V. Ground getting very dry and hard.—*Skibbereen*, XX. Very hot and dry.

12th.—*Addington*, III. Very cold in the early morning, ther. on grass $35^{\circ}0$.—*Bromley*, II. Fog early in morning.—*Druid House*, *Ashburton*, V. 5 p.m., two whirlwinds, travelling S. to N.

13th.—*Enfield*, I. Temp. $88^{\circ}1$.—*Hengoed*, VI. Excessively hot, the max. in shade reaching 95° —*Stanley*, IX. Temp. in shade on the ground 83° .

14th.—*Enfield*, I. Max. temp. 88° —*Addiscombe*, II. Max. temp. in

shade at 2 p.m. $87^{\circ}2$, difference between wet and dry bulb $16^{\circ}4$, max. during the day $88^{\circ}6$, min. $53^{\circ}6$, range 35° .—*Burton-on-Trent*, VI. Max. in shade, 91° —*Shap*, X. At 8.10 p.m. there was not a cloud to be seen ; this clearness lasted several hours.

15th.—*Harrow*, I. Fine aurora at 10 p.m.—*Enfield*, I. Max. temp. 92° —*Addiscombe*, II. Difference between wet and dry bulbs at 5.30 p.m. $19^{\circ}5$, max. temp. of day $90^{\circ}5$, min. $56^{\circ}1$, range $34^{\circ}4$.—*Court Barn*, V. This, and seven following days, unusually hot and dry.—*Exe Villa*, V. This and the 17th the hottest days in the year, 89° in shade.—*Altarnum*, V. Max. in shade 90° —*Walton*, VIII. Very hot, temp. in shade 84° —*Keith*, XVII. Very warm.

16th.—*Enfield*, I. Dense fog in the morning ; max. temp. $91^{\circ}4$ —*Addiscombe*, II. Temp. at 3 p.m. $87^{\circ}8$, difference of wet and dry bulbs, $24^{\circ}0$ (another hygrometer showed the same difference), max. of day $88^{\circ}4$, min. $56^{\circ}1$, range $32^{\circ}3$; 13th to 22nd, inclusive, the average range of temp. was $29^{\circ}7$.—*Cambridge*, III.—Max. temp. of month 91° ; air calm, and a golden sunset.—*Hindringham*, IV. Max. in shade $93^{\circ}3$; hottest day in the year.—*Compton Bassett*, V. The hottest day of the month, being 91° —*White Lackington*, V. Max. temp. of year, 85° —*Hagley*, VI. Ther. 86° at 1 p.m. ; thunder from 2.30 to 6 p.m.—*Staunton Long Vic.*, VI. At 3.45 p.m. heavy rain began, and hailstones as large as pigeons' eggs fell with great force, breaking 21 panes of glass in the greenhouse. Some of these hailstones were not melted on the third day, and lay some inches thick. Two cows and some pigs were killed, and trees and flowers cut. Storm over at 5.30 p.m. ; 2.65 in. of rain fell in one hour and forty-five minutes ; area of storm about six square miles ; £10,000 damage done.—*Sansaw*, VI. Heavy thunder in north at Crewe.—*Macclesfield*, VIII. Temp. 90° —*Gainford*, X. Hottest day, $89^{\circ}5$.—*Llanfrechfa*, XI. Distant thunder all the afternoon ; very hot ; very heavy storm at Monmouth, 20 miles to E.—*Trevalyn Hall*, XI. Max. temp. of the year, $94^{\circ}5$.—*Glenam*, *Clonmel*, XX. Max. temp. of year, 94° .

17th.—*Enfield*, I. Max. temp. 92° —*Swallowfield*, II. Heavy storm of hail and rain in the western part of the parish, but no appreciable quantity fell here ; lightning very vivid, accompanied by thunder.—*Trevarrick*, V. Max. temp. of month, $84^{\circ}9$.—*Burnham*, V. A most gorgeous sunset, superior to any in our recollection, but followed by thunder at 11.30 p.m.

18th.—*White Lackington*, V. Marvellous sunset.—*Torrington*, V.

Aurora between 9 and 10 p.m.—*Buckden*, IX. Distant thunder.—*Buncrana*, XXIII. Scotch mist.

20th.—*Enfield*, I. Dense fog in the morning.

21st.—*Stanley*, IX. Wheat cut at *Snaith*.—*Bushmills*, XXIII. Thunderstorm.

22nd.—*Enfield*, I. Lightning at night.—*West Tofts*, IV. Thunderstorm.—*Kings Lynn*, IV. Thunderstorm commenced at 7.55 p.m., and continued until 8.5 a.m. on 23rd; rain (.95 in.) commenced about 4.45 a.m. on 23rd.—*Calcethorpe*, VII. Thunderstorm from 2 to 6 p.m.—*Partney*, VII. Thunderstorm.—*Stuffynwood Hall*, VII. Violent thunderstorm with great hail, especially so, at and about *Mansfield*.—*Coston*, VII. Very severe storm of thunder, lightning and hail to the N.; much injury done 7 miles off.—*Bucknall*, VII. Hailstorm.—*Walton*, VIII. Lightning in N.E. at 11 p.m.—*Woodlands*, *Elterwater*, X. Lightning from 10 to 11 p.m.—*Shap*, X. Lightning at 11 p.m.

23rd.—*Tottenham*, I. The hailstorm of the 23rd July deserves notice as being by far the most remarkable that has occurred here for many years (I can speak personally of 16 years). It commenced about 8.25 p.m., and lasted about 12 or 15 minutes. The hailstones were large (in the first minute or two of the fall about .25 in., but during the greater part of the storm from .5 to .75 in. in diam.), for the most part nearly spherical, and breaking with a transparent fracture. I gathered handfuls about .6 in. diam. from the lawn, where they lay from 1 to 5 inches deep. Many were broken into two clear hemispheres by striking against the building. More than 150 panes of glass were broken on the west front of the house, and in one or two windows the sashes were also broken. The air during the storm did not seem violent, but the trees were in most violent agitation. The night following was close and warm, yet, after more than 12 hours, I picked up next morning stones still .5 in. diam., and more than 30 hours after the storm a tiny glacier of amalgamated hailstones, nearly 3 inches thick, lay under one of the faces of the house. As the papers shewed much injury was done to conservatories and to garden crops, but the area of damage was very limited, appearing confined pretty much between *Edmonton* and *Stamford Hill*. Lightning accompanied the storm, but this did not attract my attention so much as the air darkened as it was with hail and thousands of leaves cut off from their twigs. Ten or twelve birds were picked up on the premises the next morning—killed, no doubt, by the hail. The stones penetrated the vegetable marrows about two-thirds of the stones' diameter. The .82 in. of rain

registered must be considered below the mark. The gauge must have been filled in a few minutes, and it is probable that one-third of the hailstones falling into it rebounded and were lost, but it was impossible to go out in such a storm of bullets. Still, registered as it was, a fall of .8 in. in 15 minutes is a very unusual phenomenon here.—*Enfield*, I. Heavy thunderstorm in the evening.—*Adelcombe*, II. Thunderstorm nearly overhead between 8.50 and 9 p.m.—*Bedford*, III. You would hear of the extraordinary hailstorm here on Sunday, July 23rd. It was very local in its character: commencing here it crossed the country in a south-western direction some eight miles, with a breadth of one to two miles. Some of the hailstones measured 3 to 4 inches in circumference, and one accredited farmer states that the hail at several places lay on the ground to the depth of 4 inches. The duration of the downfall was about an hour, and the depth when melted measured 1.85 in. in the gauge.—*Cambridge*, III. Thunderstorm at 8 a.m., and another at 7 p.m.; distant lightning from 10 p.m.—*Wetherden Rectory*, IV. Heavy thunderstorm about noon.—*Diss*, IV. Rather heavy thunderstorm from 9 a.m. to 1 p.m., doing some damage in the neighbourhood.—*Compton Bassett*, V. Thunder at night, but no rain.—*Exe Villa*, V. Warmest night, minimum 61°.—*Sansaw*, VI. Thunder towards E.—*Calcethorpe*, VII. Lightning seen.—*Walton*, VIII. Thunder and lightning from 4 to 5.30 p.m.—*Stanley*, IX. A slight thunder shower.—*Gainford*, X. Dull and very cold, max. in shade only 57°·1, or 22° 9 below that of the previous day (80°·0).—*Shap*, X. Thunderstorm at 2 a.m.

24th.—*Sansaw*, VI. Thunder in distance.—*Shap*, X. Thunder in the distance.

25th.—*Shap*, X. Loud thunder at night.

26th.—*Walton*, VIII. Heavy rain (1.09 in., max. fall of month) without thunder.

29th.—*Shap*, X. A great storm of wind swept over this district.—*Melrose*, XII. High W. wind.—*Glenturk*, *Bangor*, XXII. Heavy southerly storm during the night.

31st.—*Enfield*, I. Heavy thunderstorm.—*Oxford*, III. Thunder in the distance.—*Calcethorpe*, VII. Thunder.—*Partney*, VII. Thunderstorm.—*Walton*, VIII. Thunder and lightning at 8.30 p.m.—*Stanley*, IX. Thunder.—*Woodlands*, X. Lightning from 9 to 10 p.m.

AUGUST.

1st.—*Diss*, IV. Wheat cut.—*Buckden*, IX. Distant thunder.—*Stanley*, IX. Corn cut in Stanley.

2nd.—*Druid House*, *Ashburton*, V. Storm all night ; 1·02 in. of rain fell (max. of month).—*Woodlands*, X. From 9 a.m. on 2nd to 8 a.m. on 3rd, 2·38 in., max. of month.—*Ewick Tyndrum*, XVI. Rain continuously ; 2·19 in., max. of month.—*Blandsford*, XXI. 1·37 in. fell. *Drumcushel*, XXI. 2·24 in. fell, an unusually heavy fall for this county.—*New Barnsley, Belfast*, XXIII. Great storm.

3rd.—*Bromley*, II. Gale.—*Oxford*, III. High wind.—*Cambridge*, III. Gale from S. to W.—*Buckden*, IX. Strong wind and heavy rain (2·25 in.), max. of month.—*Melrose*, XII. Stormy, S.W.—*Newcastle West*, XX. High wind.

4th.—*Woodgreen, Forlingbridge*, II. 1·00 in. fell in afternoon and night.—*Bishops Cannings*, V. Heavy rain fell, just in time to prevent having to give hay to the cows.

6th.—*Stanley*, IX. Harvesting going on.

7th.—*Cambridge*, III. Hot weather set in. ; max. 81°.

8th.—*Lynwood*, II. Very hot.

9th.—*Enfield*, I. Dense fog.—*Addiscombe*, II. At 1·45 p.m., dry bulb 86°·3, wet bulb 66°·4, difference 19°·9.—*Diss*, IV. Harvest general.

12th.—*Addiscombe*, II. Max. temp. 80°, min. 48°·6, range 31°·4.—*Bromley*, II. Fog up to 8 a.m.—*Diss*, IV. Much wheat and barley carried.

13th.—*Addiscombe*, II. Max. temp. 93°·6, min. 56°·3, range 37°·3.

		Dry bulb.		Wet bulb.		diff.
9 a.m.	...	84°·1	...	68°·0	...	16°·1
11 „	...	90 °0	...	67 °5	...	22 °5
Noon	...	90 °3	...	66 °4	...	23 °9
2 p.m.	...	92 °0	...	67 °0	...	25 °0
3 „	...	93 °0	...	68 °2	...	24 °8
9 „	...	67 °2	...	62 °5	...	4 °7*

Maresfield Forest Lodge, II. Temp. in shade 90°·4, the highest I can find in my record.—*Addington*, III. The warmest day in the year ; temp. 92°·0.—*Oxford*, III. Temp. at 10 a.m., 77° ; at 7 p.m., 80° ; and max. 89°.—*Hagley*, VI. Thermometer 86°, and 14th 87°.—*Leaton Vicarage*, VI. Cloudless ; wind S.E. and max. temp. of month 83°.—*Macclesfield*, VIII. Temp. 90° ; the highest ever registered here in August during 26 years.

14th.—*Enfield*, I. Max. temp. of month 94°·6.—*Lynwood*, II. Max. 91°·7.—*Audley End*, IV. Max. temp. of the year 91°·8.—*Hindringham*, IV. Max. in shade 91°·8.—*Druid House*, V. Thick fog all the morning.—*Cheadle*, VI. At 0·45 p.m. the dry bulb was 83°, wet 67°.

* Showing a fall of temp. between 3 and 9 p.m. of 25°·8.

difference 16° .—*Llanfrechfa*, XI. Fog early.—*North Esk Reservoir*, XIII. The hottest day in the year, temp. 83° .

15th.—*Enfield*, I. Thunderstorm.—*Bromley*, II. Distant thunder.—*Cambridge*, III. Severe thunderstorm from 4 to 6 p.m.—*Compton Bassett*, V. Dense fog.—*Coston*, VII. A very severe thunderstorm 10 miles to the N., in the Vale of Belvoir.—*Llanfrechfa*, XI. Slight fog at 9 a.m. ; lightning in N. at 9 p.m.

16th.—*Long Wittenham*, II. Violent thunderstorm near Buscot.—*Oxford*, III. Thunderstorm, with rain.—*Walton*, VIII. Thunder at 1.50 a.m.—*Shap*, X. Loud thunder ; no rain.—*Newcastle West*, XX. Thunder.—*Butler House, Kilkenny*, XXI. Thunderstorm.

17th.—*Pewsey*, V. Thunderstorms.—*Court Barn*, V. Thunderstorm.—*Beaminster*, V. Thunderstorm 4 to 7 p.m.—*Dartmoor*, V. Thunderstorm.—*Babbacombe*, V. On the evening of August 17th there was very frequent and vivid lightning, often only a quarter or half a mile distant ; at 8.44 p.m. there were thirty flashes per minute and thirty-seven per minute at 10.24 p.m. ; the lightning was chiefly sheet lightning from one cloud to another, but there were also some terrific fork flashes ; the lightning was pink at first, then blue and yellow, over the sea.—*Bincombe*, V. Thunderstorm, with great heat.—*Kilworthy Hill, Tavistock*, V. Thunderstorm.—*Bishops Cannings*, V. Thunderstorm and heavy rain at Weymouth ; not much here.—*Llanfrechfa*, XI. Frequent thunder and lightning to S., 7 to 11 p.m.—*Solva*, XI. Heavy thunder.—*Castle Malgwyn*, XI. Very sultry ; thunder and rain at night.—*Castle Lough*, XX. An unusually severe thunderstorm, doing much damage over a wide district ; this was the only thunderstorm in the year at this station, though distant thunder was heard on two other occasions.—*Courtown*, XXI. The heaviest thunderstorm experienced for many years.—*Blandsford*, XXI. 1.53 in. of rain fell, the max. fall in the year.—*Kilsallaghan*, XXI. Thunderstorm.—*Kilkenny*, XXI. Thunderstorm and 1.49 in. of rain, max. fall of month.—*Ballinasloe*, XXII. Severe thunderstorms and 1.41 in. of rain, the max. of month, falling at intervals all day, accompanied by thunder ; and from 8 p.m. to midnight we had the most severe thunderstorm that has visited the neighbourhood for years ; from 8.30 to 10 the lightning was almost continuous.—*Glenturk, Bangor*, XXII. Thunder at noon.

18th.—*Pinner Hill*, I. Thunder, 6 a.m.—*Enfield*, I. Thunderstorm.—*Bromley*, II. Foggy after noon.—*Stanley*, IX. Very fine weather ; a mirage seen here.—*Shap*, X. Dry ; thunder.

19th.—*Muswell Hill*, I. Thunderstorm between midnight of 19th and 1 a.m. on 20th.—*Harrow*, I. Heavy thunderstorm at midnight.—*Addiscombe*, II. Lightning at 8.30 p.m. ; thunderstorm began at 0.30 a.m. of 20th ; very vivid lightning, followed by thunder, for about half an hour.—*Addington* III. Distant thunder ; much lightning at night.—*Oxford*, III. Heavy thunder showers ; max. rainfall of month .81 in.—*Cambridge*, III. Lightning in S. after 10 p.m. —*Compton Bassett*, V. Thunderstorm at 0.30 p.m. ; thunder at night ; large elm tree rent by electricity.—*Kilworthy*, V. Thunderstorm.—*Weston, near Bath*, V. Thunderstorm, 8 to 9.40 p.m.—*Llanfrechfa*, XI. 3.06 in. of rain, max. fall of month ; rain from 3 to 11, with thunder and lightning, 2 to 5 miles distant.—*Castle Malgwyn*, XI. Sultry ; thunder and rain at night.—*Solva*, XI. Heavy thunder.

20th.—*Pinner Hill*, I. Thunderstorm, 1 a.m.—*Addiscombe*, II. Heavy rain and boisterous wind from 1.30 to 2.30 p.m.—*Woodgreen, Fordingbridge*, II. 1.70 in. of rain, nearly all in one storm.—*Bromley*, II. Thunderstorm midnight to 1 a.m.—*Oxford*, III. Thunder.—*Babbacombe*, V. Distant thunder.—*Llanfrechfa*, XI. Distant thunder, p.m.

21st.—*Enfield*, I. Dense fog.—*Acle*, IV. 1.16 in. of rain fell between 3.30 p.m. and 6.0 p.m. ; up to 3 p.m. the sky was cloudless and heat great ; at Blofield, 5 miles distant, there was little or no rain.—*West Tofts*, IV. Thunderstorm, with 1.14 in. of rain, max. fall of month.—*Coston*, VII. Very heavy rain on the E. border of the parish, about 1½ miles distant, but only a few drops fell here.—*Shap*, X. Distant thunder.—*Melrose*, XII. Lightning during the night.

22nd.—*Pinner Hill*, I. Foggy.—*Cambridge*, III. Cooler weather commences.—*Leaton Vicarage*, VI. Solar halo.—*Dava*, XVIII. Thunderstorm.

23rd.—*Llanfrechfa*, XI. Night temp. 12° below that of the previous night.

24th.—*Addington*, III. Stormy.—*Shap*, X. Loud thunder, cold, and rain.—*Stanley*, IX. Thunder shower.—*Woodlands, Elterwater*, X. Thunder with heavy rain from 4 p.m.

25th.—*Enfield*, I. Min. temp. of month 42°·0.—*Addington*, III. Frost on grass, temp. 31° ; 4 ft. above ground, 38°.—*Compton Bassett*, V. White frost ; temp. in shade 38°.

26th.—*Melrose*, XII. High west wind.

28th.—*Pewsey*, V. Stormy.

29th.—*Pickenham Hall*, IV. Harvest completed.—*Newcastle West*, XX. Thunder.—*Glenturk*, XXII. 1.08 in. of rain, max. of month, fell in 2 hours.

30th.—*Babbacombe*, V. Sheet lightning.—*Court Barn*, V. Thunderstorm, with heavy rain; $\cdot 78$ in. max. fall of month.—*Buckden*, IX. Thunder.—*Shap*, X. A great storm of thunder and lightning, commencing at 7 p.m. and lasting till 10 p.m.; no damage done in this locality.—*Gainford*, X. Thunderstorm, 9 p.m.—*Woodlands*, X. Very heavy thunder from 6.40 to 7.40 p.m.—*Melrose*, XII. Thunder and lightning 10 p.m., and max. rainfall of month $1\cdot 48$ in., and $1\cdot 09$ in. next day.—*Cessnock Park, Glasgow*, X. Heavy rain from 5 p.m. till 7 a.m. on 31st; total fall $1\cdot 52$ in., max. of month.—*Bush Mills*, XXIII. $\cdot 94$ in. of rain fell in less than 3 hours.

31st.—*Addington*, III. Stormy, with frequent showers.—*Cambridge*, III. Short thunderstorm at 4.30 p.m.—*Diss*, IV. Thunderstorm at 10.30 p.m.; harvest generally over.—*King's Lynn*, IV. Thunder and lightning from 8.40 to 9.20 p.m.—*Compton Bassett*, V. Boisterous wind.—*Druid House*, V. Squally.—*Woodlands*, X. Heavy rain from 11 a.m. to 9 p.m.; $1\cdot 53$ in. fell.—*Llanfrechfa*, XI. Heavy gusts of wind.—*Dyffryn Aled*, XI. An astounding fall of rain, $2\cdot 37$ in., the max. fall of the year.—*Melrose*, XII. Very stormy, with N.E. wind.

SEPTEMBER.

1st.—*Enfield*, I. Thunderstorm at 2 p.m.

3rd.—*Woodlands, Elterwater*, X. Very fine until late in the night, after which 1 in. of rain fell.—*Holehouse*, XIV. Night storms.

4th.—*Druid House*, V. Heavy rain from 1 p.m. ($\cdot 70$ in.), with fog.—*Pewsey*, V. Thunderstorm, rain $\cdot 63$ in.—*Miltown Malbay*, XX. $1\cdot 18$ in. of rain fell in 8 hours.—*Kilrush*, XX. Heavy rain at night; good breeze.

5th.—*Oxford*, III. Heavy rain ($\cdot 93$ in.) with thunder, max. fall of month.—*Pewsey*, V. Thunderstorm; max. rainfall of month, $1\cdot 52$ in.—*Broadford, Skye*, XVIII. The heaviest rainfall ($1\cdot 90$ in.) registered during the last nine months.

6th.—*Addington*, III. Thunder at 3 a.m.—*Pewsey*, V. Thunderstorm; rain $\cdot 75$ in., being $2\cdot 90$ in. in the three days.—*Beaminster*, V. Very stormy.—*Partney*, VII. Thunder.—*Llanfrechfa*, XI. Thunderstorm at 10 p.m.

7th.—*Enfield*, I. Thunderstorm from 2 to 4 p.m.—*Addiscombe*, II. Thunder heard several times in the N.W. from 5.15 p.m. to about 6 p.m.—*Addington*, III. Thunder in afternoon.—*Cambridge*, III. Thunder in W. at 5 p.m.—*Diss*, IV. Frequent thunderstorms; half-

an-inch of rain fell between 11 a.m. and 1 p.m.—*Babbacombe*, V. Thunder.—*Caistor*, VII. Thunderstorm.—*Shap*, X. Very loud thunder at 5.25 p.m.

8th.—*Addiscombe*, II.—Lightning in S. at 8.45 p.m.

9th.—*Enfield*, I. Thunderstorm at 4 p.m.—*Cambridge*, III. Thunder.

12th.—*Addiscombe*, II. Very dull, misty, and almost dark at 9.30 a.m., but did not last long.—*Castle Malgwyn*, XI. Showery and stormy.

14th.—*Enfield*, I. Lightning at night.—*Compton Bassett*, V. Thunderstorm at noon.—*Stanley*, IX. Thunder.

15th.—*Benenden*, II. Thunderstorm felt at Benenden and Rolvenden, not at Headcorn nor at Staplehurst; rain on that day at Benenden .42 in., Tenterden .05 in.—*Keith*, XVII. .51 in. of rain fell between 5 and 6 p.m.

17th.—*Enfield*, I. Heavy thunderstorm from 2.30 to 6 p.m.—*Addiscombe*, II. Heavy shower at 2.10 p.m., thunder heard several times in N.—*Addington*, III. Distant thunder.—*Cambridge*, III. Thunderstorm from 6 to 6.30 p.m.—*Kings Lynn*, IV. Lightning, very near from 6 to 6.30 p.m., object struck within 200 yards.—*Bramford Speke*, V. 1.22 in. of rain fell between 5 and 8.30 p.m., being the anniversary of the great fall in 1875.—*Hagley*, VI. Thunderstorm and violent hail from 2.30 to 3.30 p.m.—*Coston*, VII. Distant thunder at 1 p.m.: severe thunderstorm and heavy rain from 4 to nearly 6 p.m.—*Melrose*, XII. Thunder.—*Kilsallaghan*, XXI. Distant thunder, the storm breaking over Drogheda.

18th.—*Cambridge*, III. Thunderstorm from 4 to 5 p.m.—*Diss*, IV. Frequent heavy showers, with distant thunder.—*Babbacombe*, V. Solar halo at 4.15 p.m.—*Coston*, VII. Wet afternoon; thunder at 4.30 p.m.

19th.—*Partney*, VII. Very fine weather lasting, until the early morning of the 23rd.—*Shap*, X. Very hot all day; frost at night.

20th.—*Addiscombe*, II. Max. temp., Glaisher's stand, 70°—*Druid House*, V. White frost; fog in the valley.

21st.—*Addiscombe*, II. Max. temp., Glaisher's stand, 70°·4, min. temp. 41°·5, over grass 34°·0.—*Druid House*, V. Dense fog.

22nd.—*Oxford*, III. Thunderstorm in the night.—*Compton Bassett*, V. Thunderstorm in early morning.—*Trevarrick*, V. Thunderstorm at night.—*Druid House*, V. Mist in morning; dense fog at 7 p.m.

23rd.—*Pinner Hill*, I. Thunder.—*Enfield*, I. Heavy thunderstorm from noon to 4.30 p.m.—*Addington*, III. Thunder.—*Cambridge*, III. Thunder at 2 and 4 p.m.—*Compton Bassett*, V. Thunderstorm between

1.55 and 2.30 p.m., accompanied by hail at first, then by heavy rain ; clouds and wind from the E.—*Druid House*, V. Heavy storm in the night ; 1.47 in. (max. of the month) fell between 2 a.m. and 9 a.m.—*Partney*, VII. Heavy rain, commencing at 5 a.m. and continuing till the afternoon ; very warm.

24th.—*Babbacombe*, V. S.W. gale.—*Dartmoor*, V. A gale.—*Coston*, VII. High wind all night and during the day of the 25th.—*Broughton in Furness*, VIII. Thunderstorm with 1.16 in. of rain.—*Gainford*, X. Thunderstorm and 1.25 in. of rain.—*Woodlands*, X. Thunder, lightning, and heavy rain from 7 to 7.35 p.m.

25th.—*Llanfrechfa*, XI. Heavy gale of wind from S.W.

27th.—*Babbacombe*, V. Lightning.—*Buckden*, IX. Aurora.

28th.—*Enfield*, I. Very heavy storm from 9.30 a.m. to 9.55 a.m. ; it was overhead from 9.35 to 9.50 ; a tree was struck about 200 yards to the S. of this house ; very heavy rain (.41 in.) between 9.20 and 9.50 a.m.—*Addiscombe*, II. High wind.—*Isle of Wight*, II. Violent tornado (see *Meteorological Magazine*, vol. xi., pp. 121 and 180.)—*Northampton*, III. Heavy storm of rain all the day and during the night, total fall 1.97 in., the heaviest fall in 24 hours in the present year ; rainbow at 7.30 a.m.—*Epping*, IV. Hurricane at Takeley.—*Diss*, IV. Distant thunder.—*West Tofts*, IV. Thunderstorm and .76 in. of rain.—*Teignmouth*, V. Very heavy mist in the night.

29th.—*Druid House*, V. Storm in night ; rainfall 1.04 in.

30th.—*Bincombe*, V. Very rainy, with a gale ; 1.28 in. of rain fell during the night.—*Babbacombe*, V. Easterly gale.—*Dartmoor*, V. Heavy rain and storm at night.—*Shap*, X. Strong wind.

OCTOBER.

4th.—*Coston*, VII. Heavy rain about 6 a.m., max. fall of the month.—*Buckden*, IX. Thunder.

5th.—*Enfield*, I. Thunderstorm at 8 p.m. ; max. temp. 68°·5.—*Babbacombe*, V. Lightning in E. from 7.30 to 8 p.m.—*Stanley*, IX. Beautiful day, lark singing at 3 p.m. ; rain in the night.

6th. *Pinner Hill*, I. Rain cloud passing over made almost total darkness about 11 a.m., wind S. by S.W.—*Addiscombe*, II. Max. temp, 72°·1.—*Cambridge*, III. Noon, thunder ; 3 p.m., heavy rain.—*Pewsey*, V. Thunderstorm.

7th.—*Enfield*, I. Thunderstorm at 10.20 a.m.—*Coston*, VII. Thunder about 2 a.m.—*Partney*, VII. Thunderstorm in the early morning.

8th.—*Sansaw*, VI. The rainfall this day (1·53 in.), with one exception, exceeds any amount on one day that I have registered before, during a period of nine years, or ten years including the present year.—*Walton*, VIII. Steady and continuous rain, max. fall of month, 1·05 in.—*Stanley*, IX. Rain from 1.45 p.m. to midnight, 1·00 in., max. fall of month.—*Chapel Allerton*, *Yorks*, IX. The heaviest fall of the year, 1·50 in. fell in 16 hours.—*Solva*, *Haverfordwest*, XI. Max. fall of month, 1·50 in., 1·27 of which was measured at 4.20 p.m.—*Bush Mills*, XXIII. Continuous rains from this date to 19th, which caused considerable floods in the river Bush.

9th.—*Babbacombe*, V. W.S.W. gale in evening.—*Druid House*, *Ashburton*, V. Squally.—*Coston*, VII. Very high wind in the afternoon.

10th.—*Woodlands*, *Elterwater*, X. Showery ; thunder and lightning with hail and rain between 6 and 7 p.m.—*Shap*, X. Thunder and hail at 5.25 p.m.—*Melrose*, XII. Stormy, S.W. wind ; thunder and lightning in the night.—*Cessnock Park*, XIV. Lightning.—*Ballinasloe*, XXII. Squally ; thunder at noon.

11th.—*Enfield*, I. Lightning in evening.—*Addiscombe*, II. High wind.—*Coston*, VII. Wind very high all the afternoon and night.—*Thorpe Arnold*, VII. Several fields of barley still out.—*Buckden*, IX. Thunder and aurora.—*Woodlands*, X. Thunderstorm with hail at 6.30 p.m.—*Shap*, X. South wind and heavy rain, 1·62 in., max. fall of the month.—*Solva*, XI. Heavy gale.—*Cessnock Park*, XIV. Very stormy and showery ; max. fall of the month, 1·03 in.—*Miltown*, *Malbay*, XX. 1.20 in. of rain fell in four hours, during a thunderstorm.—*Ballinasloe*, XXII. Heavy squalls all day.

12th.—*Druid House*, V. Very heavy rain.

13th.—*Cambridge*, III. Lightning in distance from 8 to 9 p.m.—*Shap*, X. Thunderstorm.—*Newcastle West*, XX. Very slight frost, followed by rain.

14th.—*Melrose*, XII. Lightning in night.

16th.—*Ewick Tyndrum*, XVI. High wind and heavy rain.

17th.—*Cambridge*, III. Warm day.—*Druid House*, V. Lightning in the evening.—*Landscare*, *Teignmouth*, V. 1 in. of rain fell, flooding lower streets of the town.

18th.—*Harrow*, I. Fieldfares appeared.

19th.—*Addiscombe*, II. Thick fog in early morning, clearing off at 9 a.m.—*Cambridge*, III. Fog in morning ; warm day.—*Shap*, X. Quite a summer day.

24th to 29th.—*Keith*, XVII. Very fine.

26th.—*Coston*, VII. Very misty at 9 a.m.

29th.—*Melrose*, XII. High W. wind.—*Keith*, XVII. To the end of month cold and stormy.

30th.—*Hanworth*, I. The first frost this season.

31st.—*Enfield*, I. Min. $32^{\circ}8$.—*Addington*, III. Tender plants cut down by frost.—*Cambridge*, III. Keen wind from N.N.W.—*Babbacombe*, V. First frost this season.—*Druil House*, V. White frost.—*Coston*, VII. Great fall of temp., $19^{\circ}7$ on grass.—*Walton*, VIII. Sharp frost; watering carts used to lay the dust.—*Gainford*, X. Fine, but very cold.—*Cessnock Park*, XIV. First frost; temp. 28° .—*Tomin-toul*, XVII. First fall of snow this season.—*Newcastle West*, XX. Very severe frost and N. wind.

NOVEMBER.

1st.—*Swallowfield*, II. Saw the first ice.—*Wetherden*, IV. Rainbow at 9 a.m.—*Stanley*, IX. Two swallows seen here.

3rd.—*Enfield*, I. Heavy rain.

5th.—*Enfield*, I. Fogs.

7th.—*Cambridge*, III. Snow at night.—*Middlesborough*, IX. First snow; ther. 32° .—*Melrose*, XII. Snow and sleet.—*Budgate, Cawdor*, XVII. Cold, snow and rain showers.—*Nairn*, XVII. Snow.

8th.—*Harrow*, I. Snow.—*Enfield*, I. Lightning at night; snow.—*Addiscombe*, II. Short and sharp snow shower at 0.50 p.m., and a few flakes at times in the afternoon; snow at night.—*Bromley*, II. Hail and snow.—*Swallowfield*, II. Slight fall of snow.—*Ipswich*, IV. Snow.—*Wetherden*, IV. First snow.—*West Tofts*, IV. Snow and hail.—*Kings Lynn*, IV. Snow, with thaw and rain.—*Coston*, VII. A little fine snow fell in the morning, and there were frequent snow showers during the afternoon and evening.—*Caistor*, VII. Snow.—*Stanley*, IX. Snow.—*Buckden*, IX. Snow.—*Gainford*, X. First snow this season.—*Shap*, X. A bitter cold day, with snow.—*Melrose*, XII. Snow and thunder at 9 p.m.—*Burghead*, XVII. Snow.—*Keith*, XVII. Snow.

9th.—*Hindringham*, IV. Min. in shade 22° ; coldest day in the year.—*Bushey Hill*, XIV. Temp. at 4 ft. 6 in. above ground fell to $12^{\circ}5$.

10th.—*Harrow*, I. A very sharp night.—*Hailsham*, II. Rain, freezing as it fell.—*Nant y Glyn, Denbigh*, XI. A severe frost, cutting down dahlias, heliotropes, and even pelargoniums in exposed places, a thing which rarely occurs here till after Christmas.—*Dalnaspidul*,

XVI. 10th, 11th, 24th and 25th, snow.—*Broadford, Skye*, XVIII. Snow.

11th.—*Enfield*, I. Min. temp. of month, $22^{\circ}9$.—*Addiscombe*, II. Min. temp. 22° .—*Babbacombe*, V. A heavy easterly gale.—*Leaton Vic.*, VI. Snow.—*Rhug*, XI. Snow in night, 1.20 in.—*Kwick Tyn-drum*, XVI. Snow.—*Budgate, Cawdor*, XVII. Snow showers.

12th.—*Coston*, VII. Heavy snow before 9 a.m.

13th.—*Dalnaspidal*, XVI. Sleet.

14th.—*Bromley*, II. Ther. registered 64° , a point it has never before reached in November since I have kept a register, 30 years.—*Addington*, III. Foggy and very mild; ther. 60° .—*Cumbridge*, III. Great rise in temp.; max. in shade on this and following day 61° .—*Shap*, X. A great storm of wind and rain; max. fall, 1.02 in.—*Dava*, XVIII. Rain, with high wind; max. fall (2.05) of month.

23rd.—*Coston*, VII. Very cold; south wind.

26th.—*Chapel Hill, Basingstoke*, II. 1.92 in. of rain fell, the greatest fall ever registered in 24 hours.—*Sherborne St. John*, II. 1.82 in. of rain fell between 4 p.m. and 8 a.m.—*Strathfield Turgiss*, II. Very heavy rain (1.48 in.), max. fall of month.

28th.—*Cambridge*, III. Lunar halo at 10 p.m.

30th.—*Coston*, VII. Cold south wind.

DECEMBER.

2nd.—*Strathfield Turgiss*, II. Gale from S.W.—*Cambridge*, III. Heavy squalls.—*West Hendon*, X. Greatest fall during the year .75 in.; thus this is the first year, since 1868 at least, that 1.00 in. has not fallen on any one day.—*Shap*, X. On the night of the 2nd and morning of the 3rd a dreadful storm of wind (S.E.), with rain, swept over this district, causing much damage to the roofs of houses, &c., and blowing down trees.—*Melrose*, XII. Stormy.—*Dublin, Fitzwilliam Square*, XXI. Max. fall of the year 1.83 in.—*Killygarvan*, XXIII. The heaviest easterly gale that has been known here for probably 10 years. *Bushmills*, XXIII. Violent storm from E.

3rd.—*Enfield*, I. Lightning seen.—*Addington*, III. Brooks much flooded and wind high.—*Epping*, IV. Gale.—*Diss*, IV. Gale (S.E.) from 2 a.m.; bar. (corrected) 28.45 in.—*Alderbury*, V. Great storm through the night; bar. down to 28.04 in.—*Druid House, Ashburton*, V. Heavy rain (1.32 in.), and squally.—*Spondon*, VII. 1.53 in. of rain measured.—*Enniscroe*, XXII. Bar. fell to 28.56,

4th.—*Pinner Hill*, I. Windy.—*Addington*, III. Bar. (corrected and reduced) 28·31 in., the min. pressure of the year.—*Cambridge*, III. Squally ; bar. 28·39 in.—*Diss*, IV. Gale ; bar. 28·37 in. (corrected) at 11 a.m.—*Trevarna*, V. My bar. stood at 28·3, which is the lowest point it has ever reached since I have kept a register, now 12 years.—*Bincombe*, V. Bar. fell to 28·23 at 7 a.m.—*White Lackington*, V. Lowest bar. in year 28·10.—*Dunrobin*, XIX. Destructive gale.

6th.—*Addington*, III. Mild and fine throughout ; birds singing as if it were spring.

7th.—*Coston*, VII. Thick fog all day.

8th.—*Stanley*, near *Wakefield*, IX. Thrush singing.

9th.—*Long Wittenham*, II. Flood within 2 ft. of that of November 8th to 15th, 1875.

13th.—*Enfield*, I. Fog.

15th.—*New Barnsley*, XXIII. Very dense fog.

17th.—*Woodlands*, *Elterwater*, X. The darkest day this season.

19th.—*Bincombe*, V. Thunderstorm, with hail.—*Coston*, VII. Thick fog ; very heavy rain at night.—*Llanfrechfa*, XI. Sudden and great depression of the bar. ; no particular weather here, but very heavy gales on N.E. coast.—*Keith*, XVII. Snow 19th to 24th inclusive.

20th.—*Enfield*, I. Lightning seen.—*Bushmills*, XXIII. Snow and sleet.

21st.—*Melrose*, XII. Max. fall of month 2·70 in. ; 3·95 in. fell in 40 hours.—*Dunrobin*, XIX.—Destructive storm, causing many shipwrecks.

23rd.—*Teddington*, I. 1·52 in. of snow and rain ; this was the greatest fall I have registered since I commenced in 1866.—*Pinner Hill*, I. Snow.—*Enfield*, I. Min. temp. of month 25°·3 ; very heavy snow.—*Croydon*, II. The heaviest fall of snow and rain in the year was 1·40 in.—*Glynde*, II. 1·65 in. fell, being the heaviest fall in 24 hours in 21 years.—*Addington*, III. Heavy snowstorm ; snow 6 in. deep next morning ; very cold, the average max. of three days being only 31°.—*Adstock*, III. Snow and rain.—*Heddingham Castle*, IV. I measured, on 24th, 1·32 in. of rain, the largest fall I ever recorded, 1·10 in. of which fell in 5 hours on the 23rd.—*Cold Norton*, IV. The heavy fall of rain (1·63 in.) caused greater floods in this neighbourhood than have been known for many years.—*Compton Bassett*, V. A slight frost and a fall of snow, 2 in., which was followed by rain and a rapid thaw.—*Beaminster*, V. Frost and snow.—*Coston*, VII. Heavy

fall of snow during the night.—*Eaton, Leicester*, VII. The snowstorm was very heavy, but entirely without wind, though all round the coast it blew a gale. The depth of the snow at 9 a.m. on 24th was 11 in., and the quantity registered (.91 in.) was estimated from that, as the gauge was covered with snow.—*Stanley*, IX. Snow all the night.—*Carrick-on-Shannon*, XXII. Snow.

24th.—*Enfield*, I. Snow.—*West Tofts*, IV. Snow and rain.—*Ashley Down, Bristol*, VI. Mean temp. $31^{\circ}0$.

25th.—*Cambridge*, III. Slight snow in morning.—*Hedingham Castle*, IV. On this day there was a heavy fall of snow from London to Colchester, but very little fell West of the Great Eastern Railway.—*Stanley*, IX. Fine day.—*Woodlands*, X. Fine and sunny.—*Rhug*, XI. Fine day.

26th.—*Enfield*, I. Very heavy snow in the evening.—*Cambridge*, III. Snowstorm from 9 to 11 p.m.—*Druid House, Ashburton*, V. Heavy rain from 8 a.m. all day and all night, 2.97 in.; all day and night on 27th, 1.92 in.; from 26th to 31st inclusive the rain registered was 8.16 in.; the total fall of the month 16.92 in.—*Bincombe*, V. Gale at night from S.S.W., with very heavy rain (1.88 in.)—*Coston*, VII. Very cold all day, N.E. wind; snow and hail at night.—*Partney*, VII. Cold day; at 10 p.m. snow, succeeded in the early morning of 27th, by beating rain, which caused temporary floods.—*Broughton-in-Furness*, VIII. Snow and rain.—*Woodland Rectory*, VIII. Began with snow, ending in rain; the floods on 27th and 28th the highest known in this neighbourhood.—*Stanley*, IX. Frost in the day; snow and rain at night.—*Woodlands*, X. Dull day; snowstorm at night, followed by rain; the fall for this day and the 5 following was 5.80 in.; total for month 13.08 in., falling on 27 days, on 11 of which the fall exceeded half an inch.—*Llanfrechfa*, XI. 26th and 27th, heavy falls of rain and snow, with high wind; the rainfall on 26th was 1.04 in., and on 27th 1.89 in.; wind on 26th N.E.; on 27th S.W.—*Ewick Tyndrum*, XVI. Very high wind.—*Glenville*, XX. 1.51 in., the heaviest fall during the year 1876.—*Newcastle West*, XX. Stormy.

27th.—*Coston*, VII. Rapid thaw; great rise in temp.—*Woodlands*, X. A very remarkable day; the therm. had kept at from 35° to 37° till 4 p.m., when the wind shifted from the E. to S.W., and the thermometer rose to 52° , or 17° in 2 hours; previously to the sudden rise in temp. the thermometer had, for the space of an hour and a half, risen and fallen 2° about every 10 minutes.—*Castle Malgwyn*, XI.

Snow showers and heavy rain at night (1·26 in.), max. fall of month.
—*Melrose*, XII. Sea gulls 30 miles inland.

28th.—*Diss*, IV. Much wind.—*Ashley Down*, *Bristol*, VI. Heavy rain ; mean temp. 55°.—*Melrose*, XII. High wind.

29th.—*Pinner Hill*, I. Gale.—*Addington*, III. High wind.—*Alderbury*, V. Great storm after 2 p.m.

30th.—*Weston*, *Bath*, V. 30th and 31st very rough and stormy.

31st.—*Bishop's Castle*, VI. Gale and thunderstorm, with hail and rain.—*Gainford*, X. Wet night ; fair till noon ; wet afternoon ; a very strong gale all day from W. to W.S.W., with very violent squalls and rain at intervals. From 5 to 7 p.m. a very magnificent lunar rainbow spanning the sky, varying in brightness, and at the brightest from 6.15 to 6.30, when the prismatic colours were very distinct ; soon after 9 p.m. the sky cleared, but became again overcast afterwards.—*Broadford*, XVIII. High S.E. wind.

OBSERVERS' NOTES ON THE MONTHS.

JANUARY.

I.—*Enfield*. Severe frost prevailed from 5th to 16th, and there was altogether frost on 19 nights.—*Harrow*. A comparatively genial month.—*Muswell Hill*. The rainfall this month (1·23 in.) was less than half the average of the last four years.

II.—*Bromley*. A fine month ; temp. very variable ; the latter part of the month unusually mild, bringing up the average of temp. very rapidly. Bees abroad on several days in the last week.—*Forest Hill*. This was the driest January yet recorded here, and the coldest since 1871, though the adopted mean temp. was slightly above the Greenwich average for 60 years. Severe frost, snow, and polar winds prevailed from 5th to 16th, after which date equatorial winds and mild weather mostly prevailed, as they also did at the beginning of the month. Bar. very high, more so than I have before observed in January.—*Hayward's Heath*. Remarkably dry, only ·73 in. fell.—*Andover*. A grand old-fashioned January, cold but healthy.—*Lynwood*. Cold, gloomy, and dry.

III.—*Cambridge*. A changeable month, but periods of change well-defined ; mild weather to the 6th, steady frost to 16th, after that mild, but with frequent frosty nights ; mean min. temp. 4°·5 lower than that of December, 1875.

IV.—*Sheering, near Harlow*. Only 1·06 in. of rain fell during the month, which is less than half the average of 12 years.—*Diss*. Chilly, sunless weather during the first three weeks, but the last week fine. Much sickness, pulmonary and bilious disorders, accompanied by jaundice, being very prevalent.

V.—*Compton Bassett*. The greater part of the month very cold, with frequent frosts and snowstorms.—*Druid Ashburton*. Fogs frequent, especially towards the end ; rain on 10 days, but the heaviest fall was only ·47 in., on 20th.—*Court Barn*. A remarkably mild month.—*Altarnum*. The driest January since 1863.—*Taunton*. A most favourable month for agricultural pursuits.

VI.—*Brereton, Leamington*. A cold month ; rainfall 1·18 in. less

than last year; much snow fell during the month, especially in the middle.—*St. Mary's, Oscott*. Snow on 11 days, fog on 10 days.

VII.—*Ashby de la Zouch*. Total rainfall 1·87 in., which is considerably below the January average for the last three years (2·44 in.).—*Coston*. The beginning and end of the month mild, the middle extremely cold, the min. temp. being more than 5° lower than that of the last three years.

VIII.—*Walton, near Liverpool*. A very dry month.—*Heath House, Blundellsands*. A very dry month, the total rainfall being only ·99 in. E. and S.E. winds prevalent, with haze and fog.

IX.—*Buckden*. Temp. mild and equable, with the exception of about 10 days; prevailing winds S. and S.W. to 7th, from 7th to 15th E. and N.E.; general character mild and open, transient frosts and little snow; very fine at the end of the month.

X.—*Gainford*. Remarkable for the small quantity of rain or snow, although one or the other fell on 13 days; the average of the preceding eight years was 2·17 in., and the fall this month only ·30 in., or one-seventh of the average.—*Allenheads*. Very fine, and very much warmer than is usual at this time of the year, the last week being more like May than January.—*Woodlands, Elterwater*. Very much drier than the average; the mean temp. was 37°·7, which is 3°·2 below the average of the last four years.—*Easedale*. Fine mild weather.—*Mardale*. Fine mild weather, no snow.—*Shap*. A dry month; snow fell on several days, but not in great quantities; frost did not last long; the weather on the whole was too mild for the time of year. Plants and trees in a forward state, and birds singing as if it were spring; fields looking very fresh and green, and farm work in a forward condition.

XI.—*Castle Malgwyn*. A month of fine, seasonable weather.

XII.—*Melrose*. Exceedingly dry and fine throughout; frequent high winds, generally from W. or S.W.; thrush singing at the end of the month.

XVI.—*Kinloch Rannoch*. One of the finest months of January in man's remembrance; no melted snow, and though an occasional frost set in, it was of short duration.

XVIII.—*Strolomus, Broadford, Skye*. Frosty from 7th to 10th; the total rainfall during the month was 16·88 in.; there was rain or snow on 27 days, and on 8 days the fall exceeded 1·00 in.

XXII.—*Ballinasloe*. The rainfall of this month was only 1·77 in., of which ·74 in. fell on the night of the 29th; the rainfall for the

corresponding months of 1873, 1874, and 1875 was 7·60 in., 3·43 in., and 5·71 in. respectively, showing a great deficiency this month.—*Carrick on Shannon*. Fair and frosty at the beginning of the month, rain towards the end, with S. and S.W. winds.

XXIII.—*Bushmills*. Unusually mild.—*Buncrana*. Mild, with fine open weather; the last few days strong S. and S.W. winds at intervals.

FEBRUARY.

I.—*Harrow*. Temp. varied very much during the month.—*Muswell Hill*.—The total rainfall was about 50 per cent. above the average of the last four years, and was distributed over an unusually large number of days.

II.—*Bromley*. Weather very variable during the month; mild, though windy, at its close. Rain frequent, but not in large quantities.—*Forest Hill*. This was the wettest February yet registered here, and the number of wet days (22) was more than has occurred in any month since December, 1872. A cold period, with polar winds, prevailed from 4th to 13th, after which date it was generally very mild and wet, with equatorial winds. The bar. read generally below the average; evergreens were nipped by the frost in the second week; the shade max. was 58°·9 on 18th, and above 50° on 12 days.—*Lynwood*. Mild and wet.

III.—*Addington*. A wet month, the total rainfall (2·54 in.) having exceeded the average of the last 5 years by 1·12 in.; consequently the land is in a very wet condition.—*Cambridge*. Frequent showers, more heavy in the latter half; cold and snowy for 11 days; very mild after the 14th, with much S.W. wind.

IV.—*Sheering*. Total rainfall 2·37 in., being ·67 in. above the average (1864 to 1875).—*Ipswich*. Very cold from 9th to 11th.—*Diss*. Wet, but not cold; farming operations in arrear owing to the wet state of the land; young wheat on heavy soils looks badly; much sickness; throat affections, bronchitis and bilious indigestion, with febrile accompaniments, most prevalent.

V.—*Compton Bassett*. The first week dull and gloomy; the second, cold and stormy; the third, incessant rain and boisterous winds from N.E. and S.W. alternately; the fourth week, sky much overcast and frequent showers of drizzling rain; the temp. rose considerably during the last four days.—*Altarnum*. Except 1872, the wettest February since 1863.—*Taunton*. The rainfall this month (3·56 in.) exceeds

the average of 20 years by 1·18 in., and is the largest recorded during that period ; the next highest were 3·52 in. in 1867 and 3·51 in. in 1872.

VII.—*Coston*. Very wet ; the number of days on which ·01 in. of rain fell, is the greatest since my record began in 1873 ; cold from 2nd to 14th, with N. and N.E. winds and frosts at night ; but the temp. of the latter part of the month rose considerably under the influence of W. and S.W. winds, making the mean 38°·8, or 4° higher than the mean of the last three years.—*Appleby*. The wettest February since my record began in 1849.

VIII.—*Blundell sands*. Wet, with frequent changes of temp. ; the driest part of the month was the beginning, when the wind was from the W. or N.W. ; from the 12th to the end of the month the wind was generally more or less southerly, but on the 19th it blew fresh from the N.W., and changing to S.W. next day ·39 in. of rain fell.

IX.—*Buchden*. The high temp. of the first few days was followed by frost and falls of snow, with low temp. ; the latter part of the month was mild and open, though a large quantity of rain fell.

X.—*Gainford*. Total rainfall 1·89 in., being ·41 in. above the average (8 years).—*Easedale*. Fine, growing weather.—*Mardale*. Very stormy weather during the month.—*Measand*. Beginning of month showery, with occasional falls of snow ; latter part mild but rainy.—*Shap*. The month began with a few miserably cold, wet days, and frequent but not heavy snow ; this was followed by a frosty period, but on the 14th a bitter cold thaw took place, and from that date rain fell every day in large quantities, which kept the rivers full, and the land in a very wet, cold condition, out-door labour being nearly suspended ; lightning and thunder only once or twice during the month.

XI.—*Llanfrechfa*. Stormy, with short, heavy gales ; the total rainfall greater than has occurred in any other February for 11 years, and more than double the average of that period.—*Castle Malgwyn*. Cold, but fine to 10th ; after that date boisterous and very changeable.

XVII.—*Keith*. Except from 4th to 9th inclusive, and also the 1st and 20th, snow, sleet or rain fell on every day.

XIX.—*Dunrobin*. Very unfavourable for out-door operations.

XX.—*Tralee*. Unusually mild, but stormy, a great contrast to February, 1875.—*Newcastle West*. Rain fell every day from 7th to 29th inclusive ; wind S.W. from 17th to 29th, and at times, as on 17th and 26th, amounting to a storm.

XXIII.—*Buncrana*. 17th to 29th wind varied from S.W. to N.W.

MARCH.

I.—*Enfield*. A remarkable quantity of snow, it fell nearly every day from 4th to 22nd, yielding altogether nearly 2·50 in. ; frost in shade on 12 nights, and on the ground on 15.—*Muswell Hill*. The total rainfall (3·06 in.) is very nearly double the average of the last four years, but the very small amount registered in March, 1874 (·67 in.) and in March, 1875 (·79 in.), no doubt makes this average less than it would be for a longer period.

II.—*Bromley*. The rain has been constant, rather than heavy, except on 31st at 10.30 p.m., when ·09 in. fell in 10 minutes.—*Forest Hill*. The wettest March yet observed here ; a large amount of snow fell, especially on 12th ; first and last weeks warm, with equatorial winds ; from 17th to 24th cold, with polar winds.—*Lynwood*. Wet and variable ; strong N.W. winds with snow showers from 16th to 20th.—*Andover*. A blustering, stormy, wintry month till near the end, when the lion became like a lamb.

III.—*Cambridge*. Cold and stormy ; bar. only reached 30 in. on one occasion ; strong frosts every night from 19th to 23rd, injuring apricot blossoms.—*Addington*. Most unfavourable for out-of-door work, the ground being constantly saturated, as might be expected from the number of days on which rain fell and the large amount ; in fact, the land has been charged with water for the last six months, during which time we have had rather more than 20 in. of rain.

IV.—*Sheering*. Total rainfall 2·63 in., being ·96 in. above the average of 12 years.—*Ipswich*. Cold and wet.—*Diss*. A bitter, wintry month ; one continuous storm of snow and wind (frequently heavy falls and furious gales) raged from the 6th to the 22nd, inclusive. The intense cold of the S.W. winds has been remarkable. Farming operations greatly impeded by the floods, and by the sodden condition of the land ; the young wheat is either invisible or looking bad. Much sickness prevailed, especially pleuritic and pulmonary affections, a severe form of muscular rheumatism, and remittent fever with cerebral complications. After the 23rd the weather improved greatly and became more spring-like, an important change, as the lambing season is now on.

V.—*Compton Bassett*. First week cold and wet ; second colder, with frost and snow showers ; third tempestuous, and more snow ; the last week warmer, but showery.—*Northam Vicarage*. A very disturbed month, with plenty of thunder.

VI.—*Burton on Trent*. A succession of snow storms with N.W.

winds during the last three weeks ; very little E. wind ; cold, checking weather.—*Sansaw*. This I should think was as cold a March as is often known ; a very late spring in consequence. There was thunder to the W. and N.W. of this place about the middle of the month, but none heard here.

VII.—*Coston*. The rainfall almost four times that of last March ; the mean temp. slightly below that of February, the wind from whatever quarter it blew being cold, and the 3rd, 28th, and 31st the only days that could be called warm, the 28th was more like a summer day than one belonging to a cold month.

VIII.—*Walton*. A most remarkable and unsettled month.—*Blundell sands*. A very remarkable month of wind storms ; from the 14th to 17th, inclusive, it blew continuously and hard from N.W. and W. ; I never remember such persistent, steady wind ; the bar. rose, and fell and rose again, as if a vast wave had passed over. The monotonous howling and sighing of the wind was varied by batteries of hail and storms of rain, snow, and sleet ; strange to say, little or no damage was done to buildings. The month, especially the latter part, was distinguished by prevalence of colds, coughs, influenza, and an epidemic of whooping cough.—*Broughton in Furness*. Violent wind, hail, snow, and sleet until the 22nd.

IX.—*Halifax*. An almost unprecedentedly rough month ; continuous high wind, with squalls of rain, hail, and snow.—*Stanley*. A most trying month to invalids, the temp. from 1st to 28th being 8° below the average ; farming operations were greatly delayed, and vegetation is very backwards.—*Buckden*. Cold and inclement, with biting, tempestuous winds ; frequent and heavy falls of rain and snow, and hard frosts. The temp. was low throughout, except a few days at the beginning.

X.—*Easedale*. Stormy, but there was some fine weather at the close.—*Measand*. Stormy at the beginning of the month, snow storms in the middle, and mild towards the end.—*Woodlands*. Very violent winds prevailed nearly the whole month, with showers of hail, snow, and rain on most days ; mean temp. (39°) less than the average.—*Shap*. A prevalence of hail, rain, and snow, with frequent thunder, made the weather miserable. Labour at a standstill, the land is so wet ; towards the end of the month the weather was more seasonable, seed time just beginning.

XI.—*Llanfrechfa*. Very wet and stormy weather.—*Castle Malgwyn*. Rough, cold, wintry weather.—*Rhug*. From the 20th to 28th, inclu-

sive, quite fine.—*Douglas, Isle of Man*. The rainfall, great as it was (3·29 in.) for a month usually dry, was probably less than actually fell, as all the early part of the month the rain was accompanied by heavy S.W. gales, and my house partly shelters the gauge under these conditions.

XII.—*Melrose*. Very stormy ; prevailing winds W. to S.W.

XX.—*Tralee*. Very wet and cold, with more hail and snow on the mountains than usual.—*Newcastle West*. From 2nd to 15th wind very strong, amounting in many cases to a storm ; hail fell on 15 days and snow on 8 days ; frost began on 21st and continued to the end of the month.

XXII.—*Glenturk*. Rain daily, with two exceptions, to 19th, then fine, with one exception, to the 30th, and the last few days warm.

XXIII.—*Bushmills*. From the 3rd to the 23rd the weather was remarkably stormy and severe. It is the general opinion that the month of March has not been so severe for many years.—*Buncrana*. Hail, snow, and strong winds, varying from S. to N.W., backing and veering alternately, from 1st to about 23rd ; the last few days of the month fine, E. and S.E. winds drying the land, which was much wanted to enable agricultural labour to proceed, and farmers are now very busy.

APRIL.

II.—*Bromley*. A fine month ; vegetation backward for want of sun ; winds mostly southerly.—*Forest Hill*. The rainfall about the average ; first week fine and warm ; second a great contrast, very cold, with low bar. and high wind, it afterwards became warmer, but the last day was very raw and cold.—*Andover*. A most uncertain month, almost always cold and sometimes quite wintry ; more like February than April.

III.—*Addington*. Very ungenial ; only ·02 in. of rain until the 9th, but from that date to the 29th it rained every day, with the exception of the 14th to the 18th, and the total for the month (3·87 in.) is greater than I have registered in any April since I commenced in 1871.—*Cambridge*. Memorable for the great snowstorm of the 13th ; weather warm and fine to the 9th, then showery to the end of the month ; a very cold period 11th to 20th ; cold again after a thunderstorm on 26th.

IV.—*Sheering Rectory*. Total rainfall 2·17 in., being ·76 in. above the average (1864—1875).—*Diss*. With the exception of the first week, which was very fine, and a few days here and there in the last

fortnight, the weather was cold and cheerless in the extreme. The swallows and cuckoo arrived when snow was on the ground (on the 14th); winter clothes with Christmas fires were indispensable to the end of the month. The appearance of the young crops, however, has greatly improved, and the lambing season has been fairly favourable in its results in spite of the cold. It is remarkable that in such a season the swallow, cuckoo, and nightingale (which was heard on 20th) were all seen or heard at an exceptionally early date. Much illness prevalent, especially pulmonary, pleuritic, and catarrhal affections, with neuralgia and muscular rheumatism.

V.—*Compton Bassett*. The weather during the first week was dry and cold; the second, a return of winter, with snowstorms on five days; the third, dull, cold and showery; the fourth and last, rough and squally, with frequent thunderstorms. A most ungenial April, and vegetation very backward.

VI.—*Sansaw*. Early in month warm; middle and end very cold and rainy; farm operations quite stopped; hardly any seeds, barley, &c., got in; no mangolds.—*Burton-on-Trent*. April began with a week like summer, followed by 10 to 15 in. of snow, the deepest of the winter; the 9th, 10th and 11th were as cold as January.

VII.—*Coston*. Almost like summer at the beginning of the month; fine, cloudless days till the 8th, when the bar. began to fall at night, followed by a week of more wintry weather than anyone can remember so late in April; the month ended with another wet, cold period, seriously delaying, if not altogether preventing, the spring sowing; snow was on the ground in some places from 11th to 23rd.—*Horncastle*. Of the 3·68 in. measured in this month, ·80 in. was from snow; ·72 in. from that which fell on 12th and 13th.—*Stuffynwood Hall*. First week warm and fine; the rest of the month very cold and wet; N.E. winds prevalent.—*Partney*. The first week warm and rainless, but after the 8th the temp. was low, and rain fell on every day but three.

VIII.—*Walton*. A very cold and unsettled month.—*Blundellsands*. The month was remarkable for variations of temp. and the backwardness of vegetation.—*Broughton-in-Furness*. A most disagreeable April, with extremes of heat and cold.

IX.—*Halifax*. From 1st to 8th the weather was very fine, after that time cold, wet and cloudy.—*Buckden*. Genial weather at the beginning of the month, promising a mild and early spring, but on the 8th the temp. fell, with cold, cutting winds from N. and N.W., which continued to the end of the month.

X.—*Gainford*. First week remarkably fine ; the max. temp. of the month 68° , being on the 8th, after which day the weather was generally bad, and more like February than April ; changes of temp. frequent and great.—*Allenheads*. The first week fine, and as if winter were gone, but on the 9th it returned, and snow fell daily to the 14th, although it did not lie long, as the sun had great power when it did shine, which was not often ; rain or snow fell on every day after the 8th, except on 15th and 26th.—*Woodlands*. Mean temp. $44^{\circ}7$, being 2° below the average ; the rainfall (4.61 in.) was more than usual for April ; the total fall since January 1st is 31.77 in., being 5.61 in. more than fell in the corresponding period last year.—*Measand*. Bitterly cold, with snow and occasional showers of rain.—*Copy Hill, Shap*. At the beginning of the month a few mild days, with growing showers, put the ground in fine condition for the seed crop ; grass land improved fast, lambs skipped about, birds sang from morn till night, and spring flowers were plentiful ; all at once, on the 9th, winter returned, snow fell on two days, and bitterly cold winds continued to the end of the month.

XI.—*Llanfrechfa*. Total rainfall 3.86 in., being 1.30 in. above the average (12 years).—*Castle Mulgwyn*. Cold, wintry weather, much more so than last December ; fine during the first week, although cold.—*Rhug, Corwen*. No rain fell before the 8th, and only .04 in. on that day, but 2.60 in. was obtained from melted snow or rain in the four days, 9th to 12th.—*Glan y Wern*. E. and S.E. winds prevalent.

XII.—*Melrose*. The early part of the month was fine, the remainder cold and stormy ; E. and N.E. winds most prevalent.

XVII.—*Keith*. Fine every day to the 9th, then rain, sleet or snow almost daily to the end of the month.

XVIII.—*Strathconan*. Fine to 8th, snowy and cold after.

XX.—*Tralee*. Weather unusually cold for the time of year.—*Newcastle West, Limerick*. Vegetation is in a very backward state, owing to the rainy character of the month, rain or snow having fallen on every day but two from 8th to 29th inclusive, and also to the cold winds from the N. and E.

XXII.—*Ballinasloe*. Many and sudden changes of temp. ; the first week, with the exception of the first day, the min. reading was 42° ; it then suddenly dropped to 30° , with a heavy fall of snow, and on two days it was only 25° ; this low temp. continued to the 15th, when it again changed suddenly.—*Glenturk*. From the 2nd to 9th fine, and everything blooming, but after then, cold winds, snow, hail and rain.

XXIII.—*Bushmills*. Month very fine up to 10th, with S. wind ;

a biting N. wind then set in, followed by a storm of snow on the 11th and 12th, which for severity (at this season of the year) is looked on as unprecedented here; the wind changed to the S. again on 15th, and the weather was mild to the end of the month.—*Moneydig*. Very warm for the first 8 days, during which time I never remember seeing such a beautiful green hue on the grass fields; heavy snow on 11th and 12th, and very cold; the latter half of April fair, but temp. very variable, going to extremes.

MAY.

I.—*Harrow*. Cold and dry.—*Muswell Hill*. Nineteen consecutive days without rain, 3rd to 21st inclusive, the largest number recorded since I began in January, 1872; the total fall, .62 in., is (with the exception of December, 1873, when only .54 in. was registered) the smallest amount that I have recorded during that period, and the number of days on which it fell (6) is the lowest.—*Pinner Hill*. 1st to 20th, E. or N.E. wind.—*Enfield*. Frost in the shade on three nights and on grass on 13 nights.

II.—*Bromley*. A dry and very fine month, but with cold N.E. winds and an unusual amount of frost; vegetation very backward, and fruit much injured by the frost.—*Forest Hill*. No measurable quantity of rain fell during the first 21 days, being the longest dry period I have ever registered; it was also the coldest May yet recorded.—*Eltham Green*. No rain to 21st.—*Andover*. A warm, dry month; E. winds almost incessant, everything parched for want of rain.—*Lynwood*. First part cold and dry, with frosty nights; latter part warm and fine.—*Swallowfield*. Rain on only four days; total fall, .80 in., of which .60 in. fell on 24th.

III.—*Addington*. This has been a dry, cold month, E. and N.E. winds from 1st to 20th.—*Cambridge*. Very dry, scarcely any rain till the last week; cold, parching E. and N.E. winds incessant till 19th.

IV.—*Diss*. Bright, but very cold, with N. winds to the 20th, when a most welcome change to the S. took place, and the remainder of the month was lovely spring weather. The extraordinary abundance, rich colour, and luscious sweetness of the furze blossom this year made the country hereabouts unusually delightful; the appearance of the grass and young crops has improved greatly; there will be but little wall fruit, and the gooseberry crop has generally failed. Muscular rheumatism, bronchial and catarrhal affections very prevalent.—*Pickenham Hall*. Dry and cold, with E. winds.

V.—*Compton Bassett*. The first three weeks dry and cold, with frequent night frosts and cutting N.E. winds ; the last 10 days warmer.—*Altarnum*. One of the driest months since 1863, with 23 frosty nights, grass min. frequently going down to 22° ; probably the coldest May on record.—*Taunton*. Wind N. or N.E. on 24 days, which, with the unusual drought, has made the season most backward.

VI.—*Sansaw*. Terribly dry and ungenial weather ; crops of all sorts suffering, grass going back rather than improving.

VII.—*Coston*. Very cold and dry until the 20th ; from the 21st to 27th cold and wet, though the quantity of rain which fell was small ; then a few fine days at the end of the month ; wind E. and N. 20 days ; many ash trees hardly yet in bud.—*Partney*. Harsh and dry at the beginning, but more genial towards the close ; vegetation generally backward.—*Stuffynwood Hall*. Very cold N.E. winds most of the month.

VIII.—*Blundellsands*. Very dry, with cold E. and N.W. winds ; bronchitis very prevalent.—*Walton*. Very dry and cold.—*Holker Gardens*. Very trying for vegetation ; the month came in with a temp. of 27° , the night temp. continuing cold throughout, though the days were hot ; the air dry, N.E. winds being prevalent ; no rain fell in the first 20 days, and only $\cdot 33$ in. in the whole month.

IX.—*Halifax*. Very cold and dry ; prevailing winds E. and N.E.—*Stanley*. The cold dry weather has shrivelled up the grazing grounds very much, but meadows look well, and vegetation improved rapidly with the rains of the 22nd and 27th.—*Otterburn in Craven*. Drought, cold winds, and low temp. very prejudicial to pastures in this upland country ; the hay crop was late, and cattle made little improvement during the spring.—*Buckden*. Dry, cold, and ungenial, winds N. and N.E. ; snow at the beginning ; frequent frosty nights ; vegetation very backward.—*Langton, Malton*. Excessively cold.

X.—*Allenheads*. The month began with a cold day, the temp. being as low as $36^{\circ} \cdot 6$ at 9 a.m. and 38° at 3 p.m., but it gradually got warmer till the 5th, when the temp. at 3 p.m. was $58^{\circ} \cdot 5$; it kept fine till the 14th, but all this time E. and N.E. winds prevailed, so that the grass did not grow much ; snow fell on 14th, and the 15th was more like a day in autumn than one in May ; the next week was fine, but cold ; rain daily from 21st to 26th, inclusive.—*Woodlands, Elterwater*. Mean temp. $48^{\circ} \cdot 6$, which is the lowest for May since 1869, when the mean was $47^{\circ} \cdot 1$; the hay crops will be light and very backward, from the long continuance of dry weather (1st to 20th, inclusive)

and prevalence of N.E. winds.—*Shap*. Cold and dry, consequently a very unfavourable season ; hard frosts at night and bitter E. winds by day were very injurious to the early potato crops ; gooseberries will be scarce ; the hay time will be late, and it is feared that the crop will be light ; pasture land has suffered greatly ; towards the end of the month a little rain fell, but more is yet wanted.—*Easedale*. Very dry fine weather.—*Mardale*. Very dry, with high wind.—*Measand*. Beginning and middle part of the month dry, with cold winds ; latter part mild and rather showery.

XI.—*Castle Malgwyn*. Cold and unseasonable ; crops of all kinds backward.—*Glan y Wern*. E. and N.E. winds from 1st to 21st.—*Dyffryn Aled*. Great drought.—*Bryn Gwynant*, *Beddgelert*. Dry and cold.

XII.—*New Abbey*. There was only one day in May on which rain fell, the 22nd, .40 in.—*Melrose*. The driest May for the past five years, with cold, hard E. and N.E. winds and several frosty nights, doing considerable damage to the fruit and crops.

XIV.—*Holehouse*. No rain till 21st ; total fall for month .72 in., of which .36 in. fell on the 30th ; frosty and withering during the dry period.

XVI.—*Leny*. The rainfall in this month was singularly small, being only 0.05 in. ; in April, 1861, a similar register of 0.0 occurred, as well as in February, 1862.—*Ewick Tyndrum*. Warm from 3rd to 12th, hot from 14th to 20th, cold and windy from 24th to 27th, inclusive, warmer again on the last two days.

XVIII.—*Strathconan*. First fortnight calm and almost cloudless, a little rain on 14th and 15th, helping vegetation, then again fine, dry, and cold.—*Broadford, Skye*. No rain till 18th ; the driest month of May in Skye for the last five years, enabling the farmers to get on with their work ; the grass now looks well.—*Sligachan*. Very cold N.E. winds, and 20 days without rain.

XX.—*Skibbereen*. Remarkably dry, with E. winds to 16th, afterwards it was beautifully fine.—*Glenville, Fermoy*. The driest month of May ever known here.—*Castle Lough*. Exceptionally dry, with bright sun and cold E. wind.—*Kilrush*. Hot sunshine, but cold E. winds and frequent frosty nights.—*Milltown Malbay*. This month began with frosts and bitter parching winds, which greatly checked vegetation.

XXI.—*Drumcashel*. Unusually dry.

XXII.—*Ballinasloe*. The rainfall of this month (.67 in.) was the

lowest registered here for years ; rain fell only on five days, and then in small quantities ; there has been a prevalence of cold N. and E. winds.

XXIII.—*New Barnsley, Belfast.* Dry and cold. — *Newtownards.* In this month only .44 in. was registered.—*Ballyshannon.* The driest month in the year.—*Buncrana.* No rain fell before the 20th ; wind varying from E. to N.E. ; weather cool and favourable for farm operations in the way of preparing the land for green crops, but parching grass land, so that the cutting crop of forced grasses will be light in the North of Ireland, and cattle and sheep are suffering in condition from the bareness of the grazing land ; after the 21st frequent light rain, improving the grass and cereals.

JUNE.

I.—*Harrow.* A fine month, cuckoo singing all through it.—*Muswell Hill.* The total fall (1.73 in.) is considerably below the average. In the four years that a record has been kept here the total rainfall for June has been remarkably uniform, ranging from 2.41 in. to 2.89 in., and averaging 2.60 in.—*Enfield.* Fine and dry, the latter part being favourable for haymaking.

II.—*Bromley.* Remarkably few thunderstorms ; wind variable.—*Forest Hill.* A dry month, less rain having fallen than in any previous June since I have kept a register here ; fogs occurred on 23rd, 24th, 27th, and 28th, rather unusual for June.—*Andover.* A beautiful summer month, perhaps a little too dry, but beautiful for hay at the close.

III.—*Addington.* Very fine, with a mean temp. of 57° ; now and then great variations of temp. occurred in a short time, as on the 21st—max. temp. 84°, on 22nd max. only 65°, again on 28th, max. 80°, on 29th, 65° ; on the morning of the 11th white frost. The end of the month very favourable for haymaking, which was then general in the neighbourhood. The only thunder during the month was on the 21st, about 5 p.m. ; no rain fell here, but four miles W. there was a regular downpour for 20 minutes ; the day was oppressively hot and sultry, temp. 20° cooler on the day following.—*Cambridge.* Many fine days, heavy rains only on 15th and 23rd ; thunder occurred but once (on 23rd) ; generally cool till the 19th, then warm to the close.

IV.—*Sheering.* Rainfall 1.28 in., being .66 in. below the average of 12 years.—*Ipswich.* Sudden and great changes in temp. till towards the end of the month, when there were nice warm days and nights.

—*Diss.* Fine, but the wind cold; after the 19th it was hot and summer-like. I have particularly noted the week following the 19th as including the days referred to by Lieutenant Saxby in his published prediction of greater disturbance. There was nothing remarkable in this district till the 28th, then we had a thunderstorm of very unusual severity with 35 minutes of very heavy rain, .42 in. falling during that time; trees and telegraph posts in and about the town were much injured. There is, I think, a fine crop of hay and splendid "haysell," much being well made and carried by the end of the month. The farmers were much cheered by the fine growing weather of the last week, the root crops having greatly improved, as well as the cereals; gardens looking well, and the public health has improved.

V.—*Compton Bassett.* The first half of the month cold, dull, and showery, the latter part, clear, bright, and sunny.

VI.—*Sansaw.* Weather generally cold for June.

VII.—*Coston.* First part of the month rather dry, but the steady rain falling on the 23rd greatly improved the prospects of the hay harvest.

VIII.—*Walton.* First half of the month very cold, the latter half warmer than usual; rainfall about the average.

IX.—*Buckden.* Warm and genial; extremely favourable to vegetation, which being no longer checked by dry, harsh weather, as in May, shot up rapidly and vigorously.

X.—*Allenheads.* Very fine; the grass did not grow much during the first fortnight, but did rapidly during the second fortnight.—*Woodlands, Elterwater.* Mean temp. $55^{\circ} \cdot 6$, which is about the average; the first part of the month much colder than the latter part.—*Shap.* Rather a wet month; grass is now improving very fast; the farmers' prospects are a little more promising, though the hay time will be at least 10 or 15 days late; potatoes and turnips are looking well. Thunder has been heard frequently, but at a distance, and generally late in the afternoon; high, shifting winds have swept over this part of the north, some of the trees have suffered much by the wind tearing off their leaves.—*Measand.* Weather mild and seasonable, with occasional thunder showers.—*Mardale.* Very dry, and rain much wanted for the grass.

XI.—*Castle Malgwyn.* Cold up to the middle of the month; crops of all kinds very backward; they will be late and light.

XII.—*Melrose.* Fine, growing weather; wind chiefly W. and S.W., and temp. high even for June.

XX.—*Skibbereen*. Most of the rain which fell this month was from S. and S.W.

XXI.—*Kilsallaghan*. Dry, with the exception of a few heavy showers, and colder than usual.

XXII.—*Ballinasloe*. Though rain fell on 15 days it was in such small quantities that the total was only 1·54 in., being more than 2·00 in. below the fall of June, 1875.

XXIII.—*Buncrana*. 1st to 6th, strong, cold W. winds, and from 9th to 24th strong S.W. winds.

JULY.

I.—*Harrow*. Temp. in shade above 80° on 13 days, and above 90° on 4 days.—*Muswell Hill*. A very dry month, rain having fallen on only 8 days, the total fall being little more than half the average.—*Enfield*. The month was very dry and hot, 92° on 3 days, with little cloud or wind, and the corn ripened rapidly, harvest being general at the close of the month, when the drought was beginning to be severely felt, the pastures being scorched and bare, and many wells nearly dry.

II.—*Addiscombe*. On 11 days the shade temp. rose above 80°, on Glaisher's stand; from 13th to 22nd inclusive the daily range of temp. averaged 29°·7, and the difference between the wet and dry bulb was even greater in proportion, being generally during the day above 14°, frequently above 19°, and on the 16th, from 2 p.m. to 5 p.m., above 20°, the max. being at 3 p.m. when, by two different instruments, it reached 24°.—*Bromley*. A dry, scorching month, but in this locality quite free from thunderstorms; everything is burnt up; no grass; pastures are quite brown; hay crop light but well secured. The rain-fall is 1·92 in. below the average of 10 years; mean temp. 1°·6 above that of 20 years.—*Hayward's Heath*. Remarkably dry, only ·56 in. fell.—*Andover*. Very fine, and intensely hot.—*Lynwood*. Warm and dry; middle of the month, very hot days and cool nights.—*Wantage*. Unusually dry.

III.—*Addington*. From 6th to 23rd, 16 consecutive days, not a drop of rain fell; from 13th to 26th, very hot weather, the max. in shade reaching 90° on 15th.—*Oxford*. Oxford again showed its remarkable immunity from thunderstorms. While so many raged in other parts, thunder was only heard on 31st, and on 16th at a distance; great

heat was registered from 13th to 24th. The river Cherwell showed a temp. on

	13th, at the surface,	64·5, 3 ft. below surface,	64·0.
14th	„	66·5	„ 66·5
15th	„	69	„ 68
16th	„	71	„ 70
17th	„	71·5	„ 71
18th	„	71	„ 71
19th	„	71	„ 70
20th	„	70	„ 69
21st	„	70	„ 70
22nd	„	70·3	„ 70

Cambridge. Intense heat prevailed from 13th to 27th, ripening the cereals with great rapidity; hardly any rain till the last two days; thunder only heard once (23rd); greatest heat on the five days, 13th to 17th; mean max. for the month, 78°, mean min., 54°·7.

IV.—*Diss.* Splendid weather and high temp.; during the drought and great heat between the 8th and 23rd the corn seemed to be ripening prematurely, but the rain (·53 in.) on the latter day came opportunely to the rescue, and by the end of the month all bid fair for an early and good harvest; little or no disease in the potatoes; scarcely any wall-fruit, and apples and pears are few and far between; public health much improved; no prevailing epidemic.

V.—*Compton Bassett.* Fine, dry weather; intensely hot in the middle part; temp. from 80° to 91° on 11 days; vegetation much injured by the long drought.—*Dartmoor.* First 10 days, rain daily and almost constant fog; absolutely cloudless from 10th to 25th.—*Altarnum.* The shade max. reached or exceeded 80° on 10 days in July, and was 90° on 15th and 16th.—*Taunton.* Very hot, with deficient rainfall; hay crop very scant.

VI.—*Hagley.* Very fine, hot weather.—*Sansaw.* Very dry and hot; not a blade of after grass, but burnt up almost to the roots.

VII.—*Coston.* Very dry, particularly when compared with July, 1875; the thunder of 22nd seemed to bring a few showers, but the rain since has been very partial.—*Thorpe Arnold.* 13th to 17th very hot.

VIII.—*Walton.* A fair average month, but much drier than usual.—*Holker Gardens.* The heat of July, accompanied by a very fine rainfall, just suited this locality; apricots ripening off, a fine, golden colour, a rare occurrence in N. Lancashire; gooseberries, too, were here a great crop, while in many places they were a failure, owing, no doubt, to the spring frosts.

IX.—*Buckden*. High temp. and showery weather at the beginning and end of the month ; from 11th to 24th, dry and excessively hot, in some parts scorching the grass ; but the rain which fell during the last week gave a fresh impetus to vegetation.—*Langton, Malton*. Very hot.

X.—*Hesleyside*. Remarkably dry.—*Woodlands, Elterwater*. A dry and moderately hot month ; mean temp. $59^{\circ}7$, or $1^{\circ}1$ above that of last July ; the shade temp. was above 80° on four days, 14th, 15th, 16th and 21st.—*Shap*. The weather was favourable for the corn and turnip crops, both of which are looking well ; corn is in general a good crop ; pastures looking well ; haymaking in full force, some good crops have been secured in fine condition ; some days in the middle of the month very warm.—*Mardale*. Very dry till the last week, then rainy.—*Measand*. Very dry till the latter part of the month, then rainy.

XI.—*Llanfrechfa*. Unusually dry and hot, especially 11th to 25th ; much cooler after.—*Crockherbtown*. No rain from the 9th to 20th inclusive.—*Castle Malgwyn*. Fine, warm weather ; but the crops will be light, for want of rain.

XX.—*Skibbereen*. Unusually dry, no rain having fallen during the twenty days, 5th to 24th inclusive ; it was also the hottest month this year.—*Glenville*. The driest July I remember.

XXI.—*Kilsallaghan*. Remarkably dry ; the drought, which commenced about June 17th, continued to July 25th, when showery weather succeeded.

XXII.—*Ballinasloe*. The rainfall of month ($1\cdot57$ in.) was unusually light, July being generally a wet month.

XXIII.—*Buncrana*. Weather generally fine and seasonable.

AUGUST.

I.—*Enfield*. Max. temp. above 80° on 10 days ; min. below 50° on 13 days ; thunderstorm on four days, and thunder or lightning on 10 days ; the month has been remarkable for great extremes of temp., it having been 84° at 9 a.m. on 13th, and $49^{\circ}6$ at 9 a.m. on 31st.—*Harrow*. A month of fine weather, the rain in the after part very acceptable ; a heavy thunderstorm at midnight of 19th ; beautiful weather afterwards.

II.—*Bromley*. A very variable month ; warm to the 22nd, and cold afterwards ; the max. of ther., 91° on 13th, had not, up to this, been reached since July 18th, 1859, when 92° was recorded ; it is remark-

able that on the 11th the min. temp. was 44° , being within 1° of the lowest point of the month, and showing a range of 47° in 48 hours.—*Andover*. Very fine and dry; heat at most times excessive.—*Brighton, Buckingham Place*. Total fall in August 4.04 in., the largest for that month during many years.—*Lynwood*. 8th to 18th very hot; end of the month wet.

III.—*Addington*. Very fine, beautiful weather for the ingathering of the harvest; a month of extremes; the temp. was above 80° on seven days, and on grass below 36° on five days; distant thunder heard three times, but no heavy storm here.—*Cambridge*. Excessive heat prevailed from 7th to 18th; mean max. 12th to 18th inclusive, $88^{\circ}7$; little rain except at beginning and end of month. •

IV.—*Sheering*. Rain a little below the average of 12 years.—*Ipswich*. Dry, hot, bright, free from cloudy, leaden skies, and in this part from thunder.—*Diss*. A run of splendid harvest weather, and the sun's heat at times intense; the yield of barley and wheat on light lands is said to be short, but elsewhere fair, and in some places decidedly good; the heavy rainfall of the last day was most acceptable, as water was becoming scarce and the root crops were flagging; summer diarrhoea and sore throat have been very prevalent, and cases of sunstroke not infrequent.

V.—*Compton Bassett*. First week dull and showery, with high wind from S.W.; thence to 17th bright and sunny, on some days intensely hot; on the 19th a terrific thunderstorm at noon, and another in the early evening, a large elm tree rent by electricity; wind and clouds from N.E.; the latter part of the month cold and showery, with boisterous winds from the N.W.—*Babbacombe*. With the exception of the first four days it was fine till the 17th, when thunderstorms occurred, and afterwards the weather was wet and unsettled.—*Altarnum*. The shade max. reached or exceeded 80° on eight days; after the 17th it was very wet.—*Taunton*. Although the total rainfall was slightly in excess of the average of 21 years, yet from the great heat and from the deficiency of rain in the previous three months we suffered from drought.

VI.—*Hagley*. Remarkably fine, hot, and dry until the last week.

VII.—*Thorpe Arnold*. Early part of the month very great heat; 13th and 14th were the hottest days, 89° in the shade.

IX.—*Stanley*. The showers during the last eight days improved the root crops wonderfully, and did no harm to the corn.—*Buckden*. Temp. very high, mean at 9 a.m. $65^{\circ}5$; excessively hot on 13th and 14th,

on the latter day ther. reached 128° in the sun and 82° in the shade ; electrical disturbances at the beginning and end of the month ; rainfall (5·87 in.) not superabundant, but exceeding that of any of the preceding four months ; winds variable, not long steady in any point, but S. and S.W. predominating.

X.—*Gainford*. Temp. at or above 80° on four days, the max. being 88° ·8 on 14th.—*Woodlands, Elterwater*. Some portions of the month were warm and some very cold ; between 12th and 20th the temp. was above 80° on seven days, reaching 88° on 14th ; the last two days were the most remarkable, the 30th for a thunderstorm from S.; thunder very loud, and lightning very vivid and forked. The storm of 31st all came from the N., with a violent wind, but no thunder ; such a quantity of rain (1·53 in.) from the N. is very unusual here.—*Shap*. Harvest going on briskly during the middle of the month ; the weather very hot ; corn in general under the average, but well ripened. August has ended with the rivers in many places full, and the fishers are active ; tourists have had a fine time of it, but the season is nearly at an end.—*Easedale*. Very heavy rain with thunder during the month.—*Measand*. Beginning of month dry, latter part cold, with heavy rain.

XI.—*Llanfrechfa*. Very hot from 10th to 22nd, then suddenly cold, especially at night.—*Castle Malgwyn*. Generally fine harvest weather, though at times rather stormy.

XII.—*Melrose*. The hottest August during the last five years ; splendid harvest weather, with the exception of the 3rd and the last three days, which were stormy ; wind first part of the month W., the second part from E. and N.E. ; the rainfall of 30th and 31st amounted to 2·57 in. falling in 28 hours ; the daily max. temp. from the 8th to the 21st ranged from 72° ·5 to 83° ·5.

XVIII.—*Inverie House*. Remarkably hot.

XXII.—*Ballinasloe*. Rainfall heavy, 4·33 in., of which 2·81 in., or nearly two-thirds, fell on two days, the 2nd and 17th.

XXIII.—*Moneydig*. August had in it some of the hottest days of a hot summer.—*Buncrana*. From 10th to 20th the weather was very fine and the heat greater than on any other days during the summer ; the wind blew strongly from the E. during the month.

SEPTEMBER.

I.—*Harrow*. Much rain at the beginning and end of the month ; fogs, and some very heavy dews.—*Muswell Hill*. Total fall 3·82 in. ;

the wettest month this year, and also the wettest September since the gauge was placed in 1872.

II.—*Bromley*. Mean temp. $0^{\circ}\cdot4$ above the mean of 20 years ; rainfall $\cdot75$ in. above mean of 10 years.—*Lynwood*. Cold, wet and gloomy.

III.—*Addington*. More rain has fallen, and on more days, this month than in any corresponding month since a register has been kept here (1871).—*Cambridge*. Very wet and cool.

IV.—*Sheering*. The most rainy September in the last 13 years ; more than an inch above the average.—*Diss*. Heavy storms, in the beginning of the month, damaged a considerable quantity of barley and wheat, belonging to some of our farmers who had not, during the last month of splendid weather, harvested their well-ripened crops ; generally speaking, the corn was well secured and the yield of the heavier soils, I believe, good. Root crops good ; the potatoes seem excellent, and I have neither heard of, seen nor *smelt*, in the course of my daily drives, any disease among them. Sportsmen and their friends may be congratulated on a good supply of partridges. The public health has not been good ; there has been much bronchial and pulmonary disease, much rheumatism, and many old people fatally or seriously affected by the trying transitions from heat to cold and from dry to wet.—*Letheringsett Hall*. The heaviest rainfall I ever remember in September.

V.—*Compton Bassett*. Very wet month, rain having fallen more or less on 27 days.—*Babbacombe*. Very wet, especially during the first and last weeks ; prevailing winds W. and N. till the middle, and S.W. to E. to the end of the month ; the temp. was mild and agreeable, except during the second week, when it was cold ; solar halos were frequent after the 18th.—*Taunton*. A greater rainfall ($5\cdot89$ in.) than any other September for 21 years, with one exception, September, 1866 ($6\cdot87$ in.)

VII.—*Coston*. Very wet and cold ; harvest operations greatly hindered by the continued rain of the last 8 days ; much barley, &c., spoiled.

VIII.—*Walton, near Liverpool*. A wet, unsettled month throughout.

IX.—*Stanley*. The weather was not so suitable, in the early part, for harvest operations as for the grass and turnips, to which it was most beneficial ; a wet month, but most of the harvest was secured before the rain came.—*Buckden*. Temp. high, and for the most part equable ; rainfall ($5\cdot57$ in.) slightly under that of August ; winds

variable, N. predominating ; rainy, warm and foggy, and for the most part, calm.

X.—*Woodlands, Elterwater*.—The mean temp. ($53^{\circ}\cdot 1$) is $3^{\circ}\cdot 6$ below that of September, 1875 ; the fall of rain ($6\cdot 95$ in.) is considerably below the average.—*Shap*. Cold and wet ; very unfavourable for gathering in the harvest, some of the corn in this district being still out at the end of the month ; the land is very cold and wet, weather generally cloudy, with occasional frosts at night.—*Easedale Tarn*. Very fine weather.—*Mardale*. Much rain during the last week, with cold, cloudy weather.—*Measand*. Weather bleak and cold, with occasional heavy rain.

XI.—*Castle Malgwyn*. With the exception of a very few fine days, this has been a rainy, but for the most part warm, month (so rainy that the land is quite saturated).—*Bryn Alyn*. The wettest September I have recorded since I began observations at Wheldrake, in Yorkshire, in 1844 ; it was $\cdot 08$ in. in excess of September in the very exceptional year 1872.

XII.—*Melrose*. Unfavourable for the in-gathering of the harvest, owing to frequent rains and absence of wind.

XVI.—*Inver Braan, near Dunkeld*. Wind chiefly easterly during last 20 days of the month ; sunshine after the 20th somewhat scant. The river Tay unusually small all the month.

XVIII.—*Strathconan*. Very good harvest weather.

XX.—*Newcastle West*. Total rainfall $3\cdot 99$ in., being above the average ; the winds during the month were moderate, seldom more than a breeze.—*Miltown Malbay*. The fall ($5\cdot 91$ in.) the greatest of any month in the year.

XXI.—*Kilsallaghan*. A showery month, especially at the beginning and towards the close.

XXIII.—*Moneydig*. Notwithstanding much rain, a good harvest month.—*Buncrana*. Although more than an average quantity of rain fell, the month was, on the whole, fine and enjoyable, some portions particularly warm and salubrious ; winds have been light, nothing approaching to equinoctial gales having been felt.

OCTOBER.

I.—*Muswell Hill*. Remarkably dry, the total rain ($1\cdot 22$ in.) being $2\cdot 87$ in. below the average.—*Enfield*. No rain fell after the 17th, with the exception of $\cdot 04$ in. on the 23rd. The month remarkable for

not having had a single night frost except on the grass ; cucumbers and marrows were growing in the open gardens, and in full flower till the 31st, when the cold wind damaged them considerably.

II.—*Bromley*. Total rainfall .98 in., being 2.00 in. below the average.—*Andover*. Very fine in all respects (save perhaps its being trying to children and invalids), carrying us well on to winter.—*Brighton, Buckingham Place*. Total rainfall .66 in., the smallest at Brighton for many years.—*Maresfield, Forest Lodge*. Only .98 in. fell, the average for the month being 3.97 in.—*Lynwood*. First half wet and warm, second half dry and cold.—*Wantage*. Unusually dry.

III.—*Cambridge*. Very mild weather till the 20th, scarcely any rain after the 12th.

IV.—*Sheering*. The driest October since 1864, when the rainfall was only 1.12 in. ; this year it is 1.24 in., but as the average (last 12 years) is 2.84 in., the present fall has not been half what might have been expected ; no rain recorded after the 16th.—*Ipswich*. Very warm and dry, especially the last half of the month ; more than half the total rainfall (1.15 in.), viz., .63 in. fell on the 10th.—*Diss*. Warm and open till the last week, when it became raw and chilly, with N.W. winds ; the root crops are good, and farming operations continue under favourable conditions ; the late potatoes have failed in a very curious way ; there has been no disease of the ordinary kind amongst them, and the tubers were raised in an apparently good condition, but became rotten soon afterwards ; when not actually bad, many of them have an earthy taste. Public health fairly good ; attacks of painful indigestion have been signally prevalent.

V.—*Compton Bassett*. The first half of the month was showery, the latter half bright and sunny ; no frost, so that half hardy plants are still green and growing ; the potato crop half diseased here.—*Pewsey*. Dry month.—*Kilworthy Hill, Tavistock*. First half of the month rainy, the latter part fair but overcast.—*Taunton*. The first part of this month wet and warm, the latter part very fine.

VI.—*Sansaw*. Remarkably dry and warm, but the rainfall on the 8th (1.53 in.), with one exception, exceeds any amount in one day that I have before registered during a period of nine years.

VII.—*Coston*. The first part of the month damp and stormy, with prevalent S. and S.W. winds ; the latter part dry with cold winds, very favourable for getting in the autumn wheat, &c.

VIII.—*Walton*. First half of month wet, latter half dry ; watering carts used to lay the dust on 31st.

IX.—*Stanley*. The dry weather from the middle to the end of the month has been most favourable for the farmers getting in their seed.—*Buckden*. Rainy, mild and warm up to about 18th, then mostly dry to the end ; very little frost or wind.

X.—*Shap*. The early part very rainy, with high S. wind ; floods in the middle of the month ; land about that time very damp and cold ; towards the end of the month dry and cold, with a little frost ; snow has not yet made its appearance on the hills.—*Easedale*. Very fine autumn weather.—*Mardale*. Frost at the close.—*Measand*. Early part of the month rainy, middle and latter part mild and dry.

XI.—*Castle Malgwyn*. Exceedingly wet and stormy to the 20th, but after that date very fine autumn weather.

XII.—*Melrose*. The month throughout has been wet (with the exception of a few fine days near the end), which made the work of carrying home the grain from the higher lands almost impossible ; the sun was rarely seen during the month.

XX.—*Newcastle West*. Until the 18th rather wet, and the winds between S.E. and S.W.; after the 18th, fine.

XXII.—*Ballinasloe*. Dull and gloomy, but fine on the whole ; with the exception of two days, viz., the 8th and 15th, southerly winds prevailed in the early, and easterly in the latter part of the month.

XXIII.—*Buncrana*. The whole of the last fortnight of this month has been particularly fine and dry, and most favourable for the raising of the potato crop.

NOVEMBER.

I.—*Harrow*. The rainfall this month (3·37 in.) will help to make up the average for the year ; middle of the month was very mild.—*Muswell Hill*. The total rainfall during the month (3·46 in.) is the greatest during any month this year except September (3·82 in.), and is half-an-inch above the average of the previous four years.—*Enfield*. Very wet, and the changes in temp. great and sudden, the max. on the 10th being only 37°·8, that on the 14th 60°·3 ; fogs on six days, snow on three, and heavy rain on four.

II.—*Bromley*. The commencement of the month was cold and cheerless, with sharp frost and fog ; wet in the middle, and then unusually mild till the close.—*Andover*. Close, muggy, damp weather ; much illness among children, and trying to all.—*Lynwood*. First 10 days dry and cold, then very wet and gloomy.

III.—*Addington*. Some very fine days; fogs less prevalent than usual; no very severe frost occurring during the month, the leaves remained on the trees until nearly the end, and the autumn tints were remarkably beautiful, more so than usual.—*Cambridge*. Very cold for short time in second week; rest of the month mild and open, with some frosty nights; remarkably warm in the third week.

IV.—*Sheering*. Rainfall 3·25 in., being 1·32 in. above the average of 12 years.—*Bishops Hill, Ipswich*. Unusually mild, with the exception of a few cold days during the second week of the month, when the ther. fell to 30°; rainfall above the average.

V.—*Compton Bassett*. Slight night frosts occurred during the first part of the month; from thence to the end variable.—*Cleavelands, Lyme Regis*. The November fall is more than double the average.—*Holne Vicarage*. Four days on which the rainfall was 1·00 in. or more.—*Babbacombe*. With the exception of ·01 in. dew on the 3rd, no rain fell from October 18th to November 11th, from which date to the end of the month, with the exception of 19th to 22nd inclusive, it was very wet; the first two days and the second week were very cold, the rest of the month mild.—*Bratton Fleming*. In November we had less rain than many places whose general average is much below ours.—*Altarnum*. 1st, 2nd, 9th and 10th the severest frosts on record for the season, min. temp. at 4 ft. being 21°, 23°, 19°, and 16°; the trees rendered almost leafless by the frost on the 1st and 2nd; this early severity was followed, according to the old rule, by wet and mud to the end of the year.

VI.—*Saul Lodge*. The low-lying districts of the Severn were much flooded in November, and at the time I write (January 4th) the village of Saul is again under water; the vale of the Severn at Gloucester is under water for many miles.

VII.—*Coston*. An unsettled month; rainfall less than that of 1875, but greater than 1873 or 1874; the heavy snow of the 11th made the country for a time look quite wintry; the winds have been generally cold and drying, very beneficial to the farmers for getting in their seed; the S. wind on the 23rd and 24th was especially cold.

IX.—*Buckden*. Fine and mild up to the 8th, then a sudden change to snow and frost, which lasted, however, but a short time; then mild again with rain to the end of the month.

X.—*Woodlands, Elterwater*. Mean temp. 41°·7, or 1°·5 above the average of the last eight years, the rainfall (6·64 in.) considerably below the average.—*Shap*. Cold and damp, but seasonable for the

time of the year: total fall of rain 4·01 in. The month began with two dry, cold days, followed by rain on 3rd, 4th, and 5th; snow fell on the 8th and 9th, but soon vanished.

XI.—*Castle Malgwyn*. Weather very variable in the beginning of the month; hard frost, then summer weather again, and the latter end very wet and stormy.

XII.—*Melrose*. The month throughout has been stormy and cold; prevailing winds N.E. and E.

XX.—*Newcastle West, Limerick*. Frost occurred on seven days, and, what may appear strange, the wind was S. at 9 a.m. the following morning on every day but one, when it was S.W.; a regular break in the weather occurred on the 7th, which continued till the end of the month.—*Kilrush*. Mild as summer at the end of the month.

XXI.—*Kilsallaghan*. Very rainy, with scarcely any frost except at the beginning and end.

XXII.—*Ballinasloe*. Dull and gloomy, with few bright days and some severe frosts in the early part of the month; floods unusually high.

XXIII.—*Buncrana*. Some slight frosts this month, with a prevalence of E. winds, at times strong; many days fine, but more like March than November.

DECEMBER.

I.—*Muswell Hill*. The total fall (6·63 in.) for this month far exceeds that of any previous month during the five years completed this day, during which the gauge has been kept. The average of the previous four Decembers is 2·14 in., so that this month is more than three times the average; the fall on 23rd, of 1·29 in. is the heaviest in any 24 hours during the year; much of this fall was melted snow, which, on the morning of the 24th, was lying 7 in. deep; we have had deeper snow, but never any which did so much damage to trees and shrubs.—*Enfield*. The rainfall (6·08 in.) was the greatest I have recorded in December, or in any month since October, 1865; frost on 8 nights, and on grass on 10 nights.

II.—*Dorking, West Street*. December was the wettest month in Dorking since October, 1865.—*Hartley, Cranbrook*. 7·61 in. the largest monthly fall during 11 years.—*Goudhurst*. 6·90 in. the largest fall registered here.—*River Head, near Sevenoaks*. The wettest (8·80 in.) month I remember in this county.—*Bromley*. Very mild, very wet, and very stormy; the rainfall (7·74 in.) exceeds in amount that of any

month since I began to register, the nearest approach being in October, 1865, when the fall was 6·95 in.—*Shillinglee*. The greatest rainfall (7·02 in.) during the 10 years that the gauge has been in use, except in 1868, when 8·42 in. was measured.—*Glynde*. 8·96 in., the greatest fall in 21 years.—*Hayward's Heath*. Total fall 8·29 in., more than was ever registered in any previous month.—*Warren, Mitcheldever*. The excessively rainy period of November and December began on the 12th of November, after about a week of cold weather ; and there was generally a high temp., for the season, during these two months.—*Eling House*. The rainfall for December (8·22 in.) is, with one exception (1868), the heaviest we have had for 25 years, and the tide on New Year's Day the highest we have ever known these 30 years.—*Liss*. The wettest month (9·58 in.) registered since December, 1868, when 10·59 in. was registered.—*Andover*. A most trying, wet, stormy month ; at the latter part, tremendous winds.—*Dogmersfield Park*. The rainfall in this month is unprecedented in this county.—*Chapel Hill, Basingstoke*. (6·90 in.), the wettest December since I began to observe in 1868.—*Lynwood*. Very mild ; the wettest month in 9 years ; bar. very low.

III.—*Addington*. December came in very mild and went out the same ; no frost in shade till the 13th, then only 2° ; the 23rd, 24th and 25th were cold days, the average max. of those three days being only 31° ; the snowstorm of the 23rd began at 1.30 p.m., and on Sunday (24th) morning the snow was 6 in. deep ; it thawed very rapidly, causing a great flood. From 27th to end of month, mild but stormy ; owing to the mildness of the season, Christmas roses were beautifully in flower before the 25th, so also were helleborus atrorubens and the lovely crocus imperatorius.—*Cambridge*. Very mild and wet ; most unsettled weather ; three marked barometric depressions about the 4th, 21st and 31st ; the mildness of the season is shown by a mean daily max. of 48°·5, there being only one max. below 40°, and 24 above 45°.—*Kingham*. Though more rain has fallen this month than during October, 1875, the floods have not been so high ; I attribute this to the rain falling more gradually.

IV.—*Epping*. More flood than for 30 years.—*Sheering*. The most rainy month, except one (October, 1865), for 13 years, and 3·20 in. above the average of 12 years.—*High Roding*. The rainfall during this month (5·10 in.) exceeds that of any month during the last 11 years.—*Bishop's Hill, Ipswich*. Unusually wet and mild with a very unsteady bar. ; the sun has been but seldom visible.—*Diss*. Warm

and wet ; the rain and floods in the latter half have greatly hindered the ordinary gardening and agricultural operations ; much sickness chiefly in the form of colds and bronchial affections.

V.—*Compton Bassett*. This has been a mild but very wet month ; a slight frost and a 2 in. fall of snow occurred on 23rd, which was followed by rain and a rapid thaw ; from thence to the end of the month, incessant rain and high winds from the S.W.—*Lamorna, Torquay*.—The rainfall in November and December (15·82 in.) exceeds that in the same months during the preceding 12 years, and that of December (10·11 in.) was the greatest monthly fall during the 13 years ending December 31st, 1876 ; the nearest approach to it was that of October, 1875, when 9·31 in. was registered.—*Holne Vicarage*. Total fall, 21·94 in. ; ten days on which the fall exceeded 1·00 in.—*Babbacombe*. Total fall, 9·94 in. ; the first and last weeks were characterized by heavy rains, S.W. gales, and very low bar. ; the month has been very mild and cloudy ; vegetation sprouting and birds singing as if it were spring.—*East Budleigh*. The great rainfall unprecedented in my experience.—*Cleavelands*. 10·22 in., the wettest month ever recorded, the nearest approach being September, 1866 (9·08 in.), October, 1875 (8·25 in.), and December, 1868 (7·78 in.).—*Meshaw Rectory*. Total fall, 9·31 in., the greatest on record, the next greatest (October, 1875) being 8·66 in.—*Northam Vicarage*. December was very wet and rough.—*Taunton*. This present month has the largest rainfall (8·63 in.) here for 21 years ; October, 1875, 7·30 in. ; September, 1876, 6·87 in.—*Liskeard*. The rainfall of December (12·47 in.) is the largest ever registered in one month during 13 years.—*Bodmin*. The month has been remarkably wet, 13·40 in. having fallen ; I never registered so much before ; the month has been remarkably mild, more like June than December.—*Altarnum*. Seven days gave 1·00 in. each ; one of the two wettest months on record, the other being December, 1868 ; each of these above 13·00 in.

VI.—*Ashley Down*. Very wet, with gales and barometric fluctuations ; weather almost always cloudy ; the mean temp. of 24th 24° below that of the 28th ; bar. stood at 28·2 in. (corrected) at 8 a.m. on 3rd. ; mean temp. of the month 4° above the average ; the rainfall 4·48 in. above the average of the 20 years (1853 to 1872) at Clifton, 1½ miles west of, and about the same height above sea level as, this station.—*Witcomb*. More rain fell here during the past month (December) than I ever knew ; 7 in. were recorded by a friend of mine near here in November, 1852 ; I only began in November, 1855.—*Saul*

Lodge. The month of December was peculiarly unsettled ; I have no record, in the last 20 years, of so low a range of the bar. (28·28 in.) as on the morning of the 4th, at 8 a.m.—*Sansaw Hall.* Very warm and unhealthy ; winds high, and generally South.—*Burton-on-Trent.* The Trent in high flood during first and last weeks ; yellow primrose and common daisy in flower.—*Ivy Lodge.* Excessive rainfall (6·27 in.) ; the land wetter in December than in any period of last year.—*Leamington.* Heavy floods ; season very mild ; cut roses (the Duke of Edinburgh) in garden on 1st January, 1877.

VII.—*Coston.* Very stormy ; great fluctuations in the bar. ; rainfall excessive ; numerous floods ; sky overcast during the latter part of the month.—*Thorpe Arnold.* Snow on the ground on Christmas Day ; great floods on 26th, 30th and 31st.—*Partney.* Very wet and gloomy ; temp. unusually high.

VIII.—*Walton.*—Very wet and unsettled ; bar. below 29 in. on 8 days.—*Holker Gardens.* December, with its fall of almost 7 in., has brought up the total fall of the year to about the average.

IX.—*Stanley.* Bar. low, and rainfall excessive.—*Otterburn-in-Craven.* The heavy falls of rain have happily been accompanied by moderate temp. and but little wind.—*Buckden.* Temp. for the most part high ; rainfall excessive and floods frequent ; electrical disturbance about 6th and 31st ; bar. generally low and unsteady ; winds variable, but S. to S.W. predominating ; snow and frost from 21st to 27th.—*Middlesborough.* The wettest month I have ever recorded.

X.—*Darlington.* Exceptionally wet.—*Hesleyside.* The heaviest rainfall ever recorded here in one month.—*Town Moor, Newcastle.* The rainfall (7·18 in.) is the largest we have ever registered in one month.—*Cragside, Rothbury.* Rainfall in December (12·64 in.) by far the greatest we have ever had in one month ; the total for the year is only 43·51 in.—*Cresswell Vicarage.* I do not think I ever, in any one month, registered so much rain as in December (5·90) ; the nearest approach to it was September and October, 1872, when 4·70 in. and 4·80 in. respectively were recorded ; the rain, coming with an E. wind, penetrated everything, even the walls (sandstone) of my house.—*Woodlands, Elterwater.* In many respects a remarkable month ; the bar. was below 29 in. on no less than 12 days, but storms were not so violent in this district as they appear to have been in other parts of England. Mean temp. of month 41°·2, which was 3°·3 above the mean of the last 8 years.—*Shap.* Snow on 4 days, but it all melted in a day or two ; this has been the wettest month (10·55 in.), and the

31st of the month the wettest (2·41 in.) day, in the year. Great floods at the end of the year; the land cold and wet.—*Measand*. First part of the month rainy; heavy snow in the middle; latter part, heavy rain and sleet.—*Mardale*. Heavy floods.

XI.—*Castle Malgwyn*. Very changeable and stormy, with an unusual rainfall.—*Bryn Alyn*. The wettest month for December here, except 1868, which was more by ·73 in. than in this year.—*Guernsey*. Total fall 11·47; the nearest approach (since 1843) to this fall was in October, 1872, when 11·04 in. was registered; the amount for the whole of that year was 56·96 in., while the fall in 1876 was only 41·71 in.

XVI.—*Auchtermuchty*. The fall in December (10·02 in.) is tremendous; 3·02 in. of it was melted snow, which fell on 6 days; three of the falls were very heavy, and when melted yielded ·60 in., 1·70 in. and ·50 in. respectively.

XVII.—*Nairn*. Severe gales, principally from the E., also heavy falls of snow.—*Arnhall*. The rainfall of December, 1876 (13·00 in.) exceeds that of any month during the last 34 years by nearly 6 in.—*Blackstock*. The rainfall (12·79 in.) in December was unprecedented in my remembrance, the average for the last 10 years being only 3·00 in.—*Manse of Inverury*. The fall during the month was 10 in., of which 3·75 in. fell between 1st and 4th.

XVIII.—*Laggan*. Tremendous gales, accompanied by a slight sprinkling of snow.

XIX.—*Dunrobin*. High gales and heavy seas.

XX.—*Tralee*. The wettest month yet registered in Tralee; temperature unusually mild during the first three weeks.—*Miltown Malbay*. Wet but mild, save one week of slight frosts, with hail and snow.

XXI.—*Dublin, FitzWilliam Square*. The fall (7·57 in.) the greatest registered here within the past 12 years, the nearest approach being in October, 1875, when 7·04 was registered.

XXIII.—*Newtownards*. In December (which was the wettest month) 7·58 in. of rain was registered.—*Bushmills*. The amount of rainfall for this month (6·06 in.) is greater than for any other month during the past two years.—*Stewartstown*. 7·89 in. of rain, while the fall in December, 1875, was only 2·84 in.—*Buncrana*. The rain this month (7·08 in.) is the largest quantity registered at this station, for any one month, since I commenced observing, January 1st, 1875 (two years).

OBSERVERS' NOTES ON THE YEAR 1876.

ENGLAND.

DIVISION I.—MIDDLESEX.

MUSWELL HILL.—The total rainfall (29·55 in.) for the year 1876 is nearly 20 per cent. in excess of what may be considered the average for this district, though it is only $3\frac{1}{2}$ per cent. above that of the preceding four years (28·51 in.) The rain has been unequally distributed, January, May (only ·62 in.), June, July and October being all deficient, whilst March, September, November and December are in excess ; February, April and August being about an average. The most noteworthy fact in the whole year is the immense total which December furnishes, 6·63 in.; being some seven-eighths of an inch more than that wettest month, October (5·80 in.) of that wet year, 1872, when 37·91 in. fell ; in fact, the year 1876 may be said to owe its excess to the month of December alone, the excess of that month being about the same as that of the year. The greatest falls in 24 hours have been small : excepting that of 23rd December (1·29 in.), no month had a fall in 24 hours of more than five-eighths of an inch, March 12th (·62 in.) and June 15th (·60 in.) coming next in amount ; it may also be noticed that the two heaviest falls, those of December and March, were the result of snow.

DIVISION II.—SOUTH EASTERN COUNTIES.

CROYDON.—The rainfall for the year at this station was below the average up to the end of November, but the heavy rainfall of December, 7·43 in., made the total for the year 26·82, or slightly above it ; the rainfall here from November 1st, 1876, to January 11th, 1877 (72 days), was 14·22.

TENTERDEN.—Scarcely any thunderstorms, and no snow this winter.

WALTON HOUSE, EASTRY.—Total fall, 25·26 in., being 12·40 in. below that of 1872, and 1·62 in. below the average (5 years).

STOURMOUTH.—No snow this autumn or winter ; temp. unusually high. The rainfall here in the last two months less than in the county generally, and even in our own immediate neighbourhood.

GOUDHURST.—Dry January, wet spring, snow till late ; dry scorching summer, very wet autumn ; no fruit came to perfection here, except gooseberries and currants.

MARESFIELD, FOREST LODGE.—The total for the year (34·72) was 3·81 in. above the average of the preceding 20 years, and this notwithstanding a very hot summer ; something approaching to a drought in July, and the rainfall only ·98 in October, instead of 3·97, its average ; no abnormally large amount has fallen on any one day. It was the persistent and steady rain of November and December which raised the total yearly fall above the average ; snow fell intermittently to April 14th, and a very little on 8th November. A good deal of thunder and lightning during the summer months ; the winter has been unusually mild, and at the close of the year all the low-lying lands were flooded.

HAYWARD'S HEATH.—January to July remarkably dry, and December as remarkably wet.

CADLAND.—The rainfall for the year an average one. The driest May and the wettest December on record.

WARREN, MITCHELDEVER.—The springs in the chalk very high at the close of the year.

CHAPEL HILL, BASINGSTOKE.—Rainfall 6 in. above the average, 1869 to 1875 inclusive ; pressure below and temp. above the average.

LYNWOOD.—No apples, no holly berries, and but few pears, owing to the frosts in April and May.

PURLEY.—The year was characterized by a most ungenial spring ; heavy falls of snow till late in April, harsh, dry winds in May, great heat in July and August till the weather broke about 17th. Abnormal heat in September ; the rest of the year wet.

WANTAGE.—The winter was unusually prolonged, and there was no warm weather till the 21st of May ; the first summer day was June 12th ; July and October were unusually dry ; March, April, August, September, November and December wet, December extraordinarily so.

DIVISION III.—SOUTH MIDLAND COUNTIES.

BERKHEMPSTEAD.—The amount of rain this year is slightly above 1875, and about 6 in. above the average. I cannot find any record of

so wet, a December as the past (6·15 in.); the next highest was in 1868 (5·72 in.), in both cases following a dry summer.

DATCHET.—The oak buds and leaves appeared ten days before the ash in the spring of 1876, indicating a dry spring and summer, which we had, also a dry autumn until the end of October. In November and December much rain fell.

ADDINGTON.—No severe frost occurred during 1876; the coldest night was the 12th of January, when the therm. fell to 17°. A very heavy snowstorm, on April 13th, came from the S. in the morning, and from the N. in the afternoon. Very hot weather occurred about July 15th and August 13th, when the therm. rose to 92°; there were several long periods of wet weather, but no fall amounting to 1 inch; 0·92 in. was the most, on April 13th, and that was all snow. September and December were the wettest months, the former with 4·84 in., the latter 5·02 in.

NEWPORT PAGNELL.—The fall of rain in 1876 is a singular contrast to that of 1875; in both years it was much above the average, but in June, July and October, 1875, we had an aggregate of 16·36 in., while in the same months of 1876 we had only 2·87 in., our great falls in 1876 being in September and December.

BROUGHTON, NEAR BANBURY.—The rain this year has been 6·04 in. above the average (7 years), 1868—1874. It has, however, been 3·27 below that of 1875, but the number of days on which ·01 or more has fallen has been 22 above 1875.

GRANCHESTER MILL.—Mills stopped by floods 6 days in 1873, no day in 1874, 14 days in 1875, and 23 days (14 of them in December) in 1876.

MERTON VILLA, CAMBRIDGE.—Moderate rain during the first 4 months; 4 summer months dry, notably so in May; the last 4 months (except the last fortnight in October) continuously wet, producing large floods in December.

COLDHAM HALL, ELM.—Only three passably fine months, May, July and October. A bad year for agriculturists; November and December mild, wet and windy.

DIVISION IV.—EASTERN COUNTIES.

HIGH RODING.—Rainfall (27·60) 3·51 in. above 11 years' average.

STANSTEAD.—Very dry summer; November and December very dull and wet.

HEDINGHAM CASTLE.—Very little snow fell here this year. Rainfall exceeded our average by 2·00 in. this year.

AUDLEY END.—The early part of the year was dull and wet, with a late spring, though not much sharp frost; warm and dry summer all at once, continuing into August, which month was remarkable for its great range of temp., $57^{\circ}5$; wet, mild autumn, continuing to the end of the year. Highest temp. August 14th, $91^{\circ}8$: lowest, January 12th, $12^{\circ}5$.

BOXFORD.—The last two months have been dull, dark, wet, and occasionally windy, but we have not had the floods, gales and storms which have prevailed in other parts of the country. I have often seen (in 1875, for instance) our little river out much more than it was even in December.

ALDHAM.—Rainfall of 4 months, September, October, November and December: 1852, 14·55 in., of 1872, 14·16 in., of 1875, 12·81 in., and of 1876, 12·08 in.

GRUNDISBURGH.—We have suffered both from drought and rain this year; the first three weeks of May we only had ·16 in. of rain, with very cold, windy weather, from which our crops never wholly recovered; up to June 23rd did much to improve them, but from June 24th to August 29th inclusive (67 days) we had only 1·75 in. of rain, with the weather very hot; from that date to the end of the year it has been rain, rain, till the earth is saturated, and we long for a change.

BURY ST. EDMUNDS (ABBEYGATE STREET).—A general freedom from storms and atmospheric disturbances. No heavy fall, the heaviest being ·96 in. on 19th January.

BARNINGHAM.—April, May, June and July were genial months for farming operations, excepting two sharp frosts in July, which much injured the productiveness of wheat and barley.

GELDESTON.—No very heavy falls in 24 hours; the total fall was 3·15 in. above the 11 years' average.

GELDESTON RECTORY.—The year, especially the autumnal quarter, has been very wet, but we have not had any very heavy rainfall on any particular day. The Waveney Valley was flooded on the 1st of December, and the flood continued to the end of the year; we had only one short thunderstorm during the summer. The latter harvest was much injured by the heavy rainfall in September. Agricultural operations have been little delayed.

DIVISION V.—SOUTH WESTERN COUNTIES.

PENHILL.—Total rainfall 6·02 in. above the average of previous 18 years.

OSMINGTON.—The fall of the year has been 5·29 in. above the average of the previous 10 years. We have experienced, during the past year, the extremes of drought and wet, viz., 0·12 in. with one wet day in May, and 10·44 in. with 28 wet days in December; the nearest approach to such extremes are in June, 1870, 0·37 in. with 3 wet days, and December, 1860, 8·20 in. and 27 wet days.

STRETE, DARTMOUTH.—The year is remarkable for the small quantity of rain, comparatively speaking, that fell before August (16 in.), since which it has so increased as to bring up the total to nearly the same as last. Rainfall in 1875, 41·58 in.; 1876, 40·78 in.

MIDDLECOTT HOUSE, ILSINGTON.—We have had very little thunder or lightning during the year, although in July and August the weather was very hot. All the corn was gathered in splendid condition by the middle of August.

EAST BUDLEIGH.—Great drought in May, June and July, the fall of rain on June 13th and 15th and July 6th only just saving crops from disaster.

CLEVELANDS, AXMINSTER.—The total fall for the year (46·34 in.) nearly equals that of 1872 (46·53 in.), the wettest year ever recorded here; the fall in August was 1·79 in. above, in September 2·66 in. above, in October 0·49 in. below, in November 3·34 in. above, and in December 6·66 in. above the average of the previous 10 years.

BRAMFORD SPEKE.—January, May, June and July unusually dry; only 3·17 in. of rain fell in 15 weeks between April 30th and August 15th; March, September and December were very wet, September nearly twice and December thrice the average of 11 previous years. Rapid changes of temp. many times during the year; sharp frosts and keen winds in May destroyed most of our tree fruit, this and the drought following made hay and root crops very scarce and bad.

EXE VILLA.—The greatest number of consecutive dry days 21, May 1st to 21st; greatest number of consecutive wet days 17, from September 27th to October 13th inclusive.

LANGTREE WICK.—The weather during the year was very changeable, both as to temp. and rainfall.

MESHAW RECTORY.—The number of rainy days above the average (15 years); the amount of rain slightly above it. Bar. far lower than

average; the large amount of rain at some periods, and of drought at others, were equally unusual.

SOUTH MOLTON.—Snow fell on 21 days in the year 1876.

MAKER VICARAGE.—The fall of rain in the last 5 months (29 in.) has been fully 50 per cent. above the local average.

ALTARNUM.—Harvest late on the high lands.

HEXWORTHY.—Average (7 years) to and including 1875, 50·50 in.; 1875 was 0·67 in. and 1876 0·99 in. below this average.

WHITE LACKINGTON.—Storms from N. and E. about the vernal equinox.

WALROND PARK.—The distribution of rainfall over the year 1876 was singularly unequal; the periods of drought and rainfall were longer and more intense than in any of my past observations; December, usually the third wettest month, has gone to the front with a fall of 8·92, nearly three times the average, flooding tens of thousands of acres in the basin of Somerset deeper and for a longer continuous period than old people have ever noticed before.

BISHOPS LYDEARD.—Though this is the year in which the greatest rainfall has taken place since I began to take observations, there have been two of the driest months (May ·26 in. and July ·40 in.) I have ever recorded. Rain fell on the same number of days (188) as in 1875, but the quantity that fell during this year exceeded that of the previous one by nearly an inch.

EXFORD RECTORY.—In this hill country the year 1876, as regards rainfall, was a year of extremes; one month (May) producing little more than half-an-inch (·52), while in September and December the fall was unusually large, reaching to 10·48 in. and 10·86 respectively; the result is, that the total nearly equals that of the preceding year.

DIVISION VI.—WEST MIDLAND COUNTIES.

CLIFTON.—1875 and 1876 have been not only the wettest two years but the two wettest years in the last 24 years; 1875 = 44·05, or 10·94 above average; 1876 = 42·42, or 9·31 above average.

REEVY, FAIRFORD.—First week in April hot; very cold, with E. wind from April 10th to end of May; spring crops very bad.

CAINS CROSS.—Total fall 38·03 in.; fall in 1875, 42·36 in.

SAUL LODGE.—The rain this year (33·05 in.) has again been much, nearly 9 in., beyond the average at this station, and it has been chiefly in the last four months of the year.

ROCKLANDS, ROSS.—The rainfall this year is 11·29 in excess of the average of the previous 23 years, and the greatest in the last 24 years except that of 1872, which was 48·68 in.

THE CRAIG, ROSS.—The year is remarkable for the excess of rain in the months of February, March and April, and perhaps still more for the great number of days on which it fell; this wet season was followed by a dry period of 110 days, April 29th to August 16th, during which time only 3·22 in. fell, an almost unequalled drought. From August 17th to December 31st (excepting October 19th to November 11th) an unprecedentedly wet period, even exceeding 1852. The total fall in 1875 and 1876 (74·27 in.) is nearly 18 in. above the average. The average for the 5 years, 1861–5, was $25\frac{1}{2}$ in., the next 5 years 29 in., and the last 34 in., so that there has been a steady rise during the last 15 years.

STRETTON RECTORY.—We had, in 1876, a singularly rainy season during February and March, viz., 37 days consecutively (with the exception of two days only) on which rain fell, but the total fall was not great. The fall in September, November and December amounted to 16·88 in., a greater fall than I recorded during the 12 months of 1870, which was 16·77 in. The temp. in the shade was 80° or upwards on no less than 30 days, and on July 15th it reached 97°.

BISHOP'S CASTLE.—A late spring, followed by a short, hot summer, and it followed by a wet autumn, constitute the principal features in 1876. No thunderstorm within 3 miles of Bishop's Castle. At the close of the year there is more water about the meadows than I have ever seen in this district, and the total fall for December (6·70 in.) is the largest monthly fall yet registered by me.

MORE RECTORY.—This year has been remarkable here—first, for the long duration of great cold and unseasonable weather in the spring; second, in July, for the greatest heat I have hitherto recorded, being 91° on 15th, and 88° on 16th; in the autumn for the greatest rainfall since 1872, with a very mild and equable temp. Storms and tempests have not been frequent here. The comparative absence of fieldfares and redwings, and also of every kind of berry, their usual food, is very noticeable.

HENGOED.—May, June and July very dry; then wet to the end of the year.

WHITCHURCH, SALOP.—Only ·47 in. of rain fell between April 30th and June 4th, while 10·41 in. fell in November and December.

TAMWORTH.—Rainfall greatly in excess, but no remarkably heavy

falls here ; on no occasion has it reached an inch. A very cold and backward spring, but some intensely hot days in July and August. Began to cut oats and barley on 11th of August, wheat on the 14th ; finished cutting wheat on 24th. Harvest-home on 4th September ; both straw and corn much below the average. The early sown wheat went in well, but the later sown is much injured by the miserably wet months of November and December.

COVENTRY (PRIORY Row).—A year of great rainfall (34·16), but not equal to 1875, which was 34·61, while 1872 was 39·48 ; we have not had the great wind storms which have raged on the coast during December, but the bar. has been unprecedentedly low. We have not had any very heavy falls in 24 hours, the greatest being ·87 on the 28th of September.

DIVISION VII.—NORTH MIDLAND COUNTIES.

PODE HOLE, SPALDING.—1876 will leave a similar character to its predecessor, 1875, making another number on the fearful list of years of floods and disasters. The snow of Easter-tide, its sudden thaw and consequent heavy flood (now called the Snow-flood) will not readily be forgotten, nor will the heavy rainfall of April ; yet the harvest, for the most part, proved exceedingly fine, but before its termination wet weather set in, and continued, with more or less violence, to the end of the year.

GRANTHAM.—Weather very unsettled, with the exception of July ; a great preponderance of cloud and deficiency of sunlight throughout the year. I have never known the land wetter than at the present time.

WELBECK.—The rainfall of 1876, with its accompanying sleet and snow, will be long remembered for its irregular distribution in the several months ; the fall in this year is 32·14 in., 1875 was 31·48 in., so there was but very little difference between them, but they were both considerably above the average (40 years), which is about 25 in. The rainfall in November and December was 9·64 in., while that of the four months, April, May, July and August was only 5·95 in. ; January was an open, dry month, but February and March were very boisterous, with frequent falls of snow and keen frosts ; April and May were dry months, but cold ; fresh E. winds prevailed, causing a great failure in the fruit crop ; June a favorable month, with a high temp. at times ; July and August were excessively dry, with, at times,

a tropical heat, which so forced on the harvest that the bulk of the cereal crops was secured before the end of August. September was wet, and the potatoe disease appeared amongst the late varieties, causing great loss to the growers. October was a favorable month, but the rain in November and December completely saturated the land, and caused great floods in the valley.

HODSOCK PRIORY, WORKSOP.—Some very hot weather in the summer months, but no drought; much rain in December, and neighbourhood flooded.

DIVISION VIII.—NORTH WESTERN COUNTIES.

PULFORD, CHESHIRE.—The autumnal and winter rainfall has been exceptionally great; the land is even wetter than last year, and the waters are much out in the low-lying lands adjacent to the Dee; fortunately there was a dry fortnight between 19th to 31st of October, of which the farmers availed themselves to sow their wheat. The temp. was very high in October, the max. reaching 68° on several days, while there was not a single frost.

MACCLESFIELD.—The rainfall for January, May, July and October considerably below the average, while that of February, March, April, September and December was much above it.

WINNINGTON.—For the first seven months the rainfall was under the average of last 8 years; during the last five months above it, as was also the total fall of the year.

HINDERTON, NESTON.—Rainfall 16·6 per cent. above the average (14 years). More rain (18·54 in.) has fallen during the last four months than has ever been registered in any four consecutive months in this district.

GREENHILL, ALLERTON.—During the past year the rainfall has been greater, and the number of days on which it fell smaller, than in the past 3 years.

WALTON-ON-THE-HILL.—The first half of the year dry and fine; latter half very wet and unsettled, especially the months of November and December. Total rainfall only slightly in excess of the average, notwithstanding the wet autumn. Very few thunderstorms, considering the extreme heat of the summer.

PLYMOUTH GROVE, MANCHESTER.—More rain fell in Manchester in 1876 than in any year during the last 10, with one exception, viz.: the year of rain, 1872.

ECCLES, MANCHESTER.—The year has been a wet one (32·40) for this locality, more than 3 in. above the average.

HEATH HOUSE, BLUNDELLSANDS.—The early part of the year strong and continuous gales; the summer very fine, hot and dry, and the latter part of the year continuously wet; the excess of rain in November and December contrasts remarkably with the corresponding months in 1875. There have not been sudden downpours, but steady, heavy rains.

BOLTON-LE-MOORS.—In 1876 the rainfall (46·10) was 2·16 in. more than in 1875, but 0·99 in. less than the mean of the previous 45 years.

ROCHDALE.—The total fall this year (44·14) is 7 in. above the average (1864—1873); the total fall in February and March was 9·56 in., while for the same period last year it was only 2·04 in.; these are respectively the greatest and least falls for that period since I began to take observations in 1864.

RUFFORD.—The average rainfall for last 10 years (1867 to 1876) at this place is 34·79 in., the fall this year (36·57) is 1·78 in. above it.

SOUTH SHORE, BLACKPOOL.—The rainfall this year (32·77) is slightly above the average.

ALLITHWAITE.—The heaviest crop of wheat and wheat-straw for 20 years on our farm, but not throughout the district.

DIVISION IX.—YORKSHIRE.

RICHMOND HILL, SHEFFIELD.—The wettest year I have hitherto registered, *i.e.*, during past 9 years. December (6·69 in.) was, I believe, the wettest month since 1868, when the fall was 8 in.

STANLEY.—Total rainfall 29·26 in., being 3·26 in. above the average.

CHAPEL ALLERTON.—The wettest months were September and December, and, with the exception of a fortnight at the end of October and beginning of November, there has been almost continuous rain since the 26th of August, the quantity from that date being more than 18 in. The total for the year (33·59), is very nearly 7 in. above the average of the last 10 years.

BASHALL LODGE, CLITHEROE.—February had the greatest rainfall, but December the greatest number of wet days; on six days during the year the fall exceeded 1·00 in. The total fall this year (51·74 in.) is about 4 in. below the average of the preceding 10 years.

ASHBURN, ILKLEY.—It is observable that all the heavy rains during November and December came with E. or S.E. winds, very little from

S.W., which is usually our wettest quarter. The drought of July and August contrasted with the excessive rains of February, March and December, marking the year as one of extremes, with an unusually high range of temp. both in the dry and wet seasons.

BUCKDEN.—Mean temp. of the year at 9 a.m. has been $50^{\circ}\cdot7$.

CAM FELL, OUGHTERSHAW.—This gauge was placed, at the suggestion of Rev. F. Stow, on the Roman Road over Cam Fell, on the hill-top, 700 ft. above the Swarthghyll, in Wharfedale, half-a-mile distant to N.E.; it shows in this year, as might be expected, 16·97 in. less than gauge 700 ft. lower down.

SWARTHGHYLL.—This station is just at the source of the river Wharfe. The dale here receives the first fall of rain from the western vapour condensed on Ingleborough Hill; drought often prevails at Leyburn, 16 miles distant S.E., when much rain falls here.

YORK PARADE, HULL.—The year has ended very wet, the rainfall in December having only been once exceeded in the 19 years of continuous observations here, viz., December, 1868, when 6·54 in. fell; the total fall in the year (30·77 in.) is 5·61 in. above the average, and is only exceeded by 1872, with 36·51 in., and 1860, with 31·74 in.; the rainfall in the last quarter of the year (viz., 12 in.) is the heaviest we have had in any one quarter.

COTTINGHAM.—The months may be classified thus: dry, January and May; middling, February, April, June, August and October; wet, March, July, September and November, and December very wet.

GIVENDALE.—I have kept a gauge 11 years, but December, 1876 (7·25 in.) was the wettest month I have registered; the next wettest was September, 1871, when the fall registered was 7·20 in.

LANGTON, NEAR MALTON.—A year of great inequality of temp.; mean temp. of the year equal to average. No equinoctial gales at either equinox; rivers flooded all December.

FOXHOLES.—Dull weather in the early months, frost and snow continuing late into March, full half-an-inch of snow on the ground on the 18th, and a heavy fall again on 20th; fine, dry May; fine and hot during June, July and August, but a very wet autumn.

DIVISION X.—NORTHERN COUNTIES.

WEST HENDON HOUSE, SUNDERLAND.—Since 1860 inclusive, but two years have exceeded 1876 in their total rainfall, viz., 1860 and 1872. As in 1875, there was a great excess of easterly winds in

autumn ; this was especially the case in December, which was consequently a remarkably wet month. Greatest depth of snow $2\frac{1}{2}$ in. ; this depth was reached on February 14th, March 19th and November 8th. The winter of 1875-6 was remarkably mild, but from November to April was marked by a few brief periods of great bitterness, though the therm. (not verified) never fell below 25° .

HOWICK HALL.—January and February very mild ; from March to the end of June very cold ; temp. on 24th of June (9 p.m.) only 41° , while on January 24th, at the same hour, it was 14° , or 3° higher. Summer very dry, with cold winds at night ; autumn dull, cold and almost sunless ; it has been a very unfavourable season. The rain in November and December was almost entirely with E. winds ; very little frost or snow, the ground never quite white, and what fell never lay many hours ; much more snow 3 miles distant.

BRAYSTONES, WHITEHAVEN.—The rainfall $3\cdot20$ in. more than in 1875, and $0\cdot83$ in. more than the mean of the previous 12 years.

WHITEHAVEN.—The month of May this year was much the driest of which I have any record, $0\cdot15$ in. only falling on two days, whilst December was wet and stormy to a very unusual degree, the latter half of the month being a succession of heavy gales.

DERWENT HOUSE, COCKERMOUTH.—The rainfall for 1876 was about $4\cdot6$ in. below the mean of this station, and about 2 in. above the total fall of 1875. There were three dry periods, May 20 days, July 14 days, and August 19 days ; there were also three very wet periods, in March 17 days, last week in August and first half of September, and the last week in November and first week in December.

BLENCOWE SCHOOL.—The early part of the year was favorable to the farmers, but the heavy rains which set in on 14th of February, and lasted to March 19th, threw seed-time fully three weeks back ; spring work was consequently late, and the cold in April and early part of May put a stop to much growth ; June, however, made up for all. Seed grass a fair average crop ; meadow good and well secured between July 10th and 24th. Harvest earlier than expected, the greater part being well cut and in good condition. The rain that set in on 14th of August and continued through September, destroyed what would otherwise have been a most plentiful crop in this district, the consequence was, that the corn was badly housed and much moulded in the stack. The fine weather at the end of October and early part of November gave a fine opportunity to the farmers for the winter storage of turnips, &c. Gooseberries were a decided failure,

and fruit generally was so in some localities ; but on the whole, crops may be set down as a good average. Meteorologically the year has been noted for *periods* of weather, dry fits and wet fits. At this place there has been an almost total absence of thunder, the only storms of any moment August 24th and 30th, both of very short duration, but the latter awfully near ; the storm of March 12th was not at all felt here. High winds, too, have been almost unknown.

COPY HILL, SHAP.—The year 1876 has been a cold, wet one.

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS.

CARMARTHEN GAOL.—Rainfall in 1876 = 58·47 in., or 3·78 in. above the average.

BRYN ALYN.—I think the fall this year (37·67 in.) is between 5 and 6 in. above an average taken for a long period ; the fall in 1872 was 56·81 in., but that was such an exceptional year that it would disturb any average for a short period.

TREVALYN HALL.—The fall (1876 = 30·67 in.) exceeds the average of the 8 previous years (1868—1875 inclusive) by 2·11 in. ; it was remarkable for its very unequal distribution, some months, viz., May, January and June being unusually dry, and others, viz., September, December, November, February and August, excessively wet. The spring was singularly inclement, and the cold was protracted quite into the summer season ; warm weather did not set in here till June 19th ; some very hot periods occurred in July and August, the max. in shade on July 16th was 94°·5, the highest I have ever recorded here. The autumn was rainy, with the exception of the latter part of October. December was decidedly wet, with a generally high temp. ; very few gales here during the year.

BRYN GWYNANT, BEDDGELERT.—A backward spring ; ground too wet to work.

LLANDUDNO.—More than half the rainfall of the year (34·41 in.) fell in the last four months.

GUERNSEY.—The total fall (41·71 in.), is 5·36 in. above the average.

ST. AUBIN'S, JERSEY.—From the data at my disposal I conclude that notwithstanding a *very dry summer*, the rainfall of 1876 exceeds the average by nearly an inch and a half.

SCOTLAND.

DIVISION XII.—SOUTHERN COUNTIES.

KIRKTON, HAWICK.—The rainfall of this year (41·40 in.) is 7·10 in. above the average of the previous 15 years.

WOOLPLAW.—Stormy during March and April ; the latter part of the year (after August 28th) was wet, and on the whole the year's rainfall was above the average. Harvest late ; grain poor in quality and deficient in quantity ; E. and N. winds very prevalent.

DIVISION XIII.—SOUTH EASTERN COUNTIES.

INVERESK.—I have now registered the rainfall 40 years, and that in 1876 (38·70 in.) was the wettest year, with one exception, 1872, when the fall was 44·94 in. ; the fall in December (8·61 in.) was the greatest fall in any month during the 40 years.

DIVISION XIV.—SOUTH WESTERN COUNTIES.

AUCHINRAITH.—Total 35·83 in., being the greatest fall since 1872.

DIVISION XV.—WEST MIDLAND COUNTIES.

AUCHNABA.—Rainfall very abnormal ; greatest in March, which is usually one of our driest months ; August very heavy ; November very little rain ; an unusual amount of E. wind in the last quarter of the year.

INVERARY CASTLE.—March very cold and wet, which thinned the blossom off the fruit trees, but the wood, having been well ripened the previous year, those blossoms that were left after the cold weather, made great progress, so much so, indeed, that what was lost in quantity was made up in quality.

DIVISION XVI.—EAST MIDLAND COUNTIES.

LENY.—A marked peculiarity in the year was that dahlias and heliotropes decayed naturally, and were not cut down by the frost, and that snowdrops are unusually late, none being in flower to this time, the 27th of January, 1877.

DIVISION XVII.—NORTH EASTERN COUNTIES.

ARNHALL.—The rainfall of 1876 (43·30 in.) exceeds the average of the last 34 years by 9·30 in. ; the greatest rainfall in any one year during that period was 48·90 in., in 1872.

BLACKSTOCK.—The year has been characterized by a wet and cold spring, very dry summer (grass and crops burnt up), a bad and wet harvest, and excessive downfall in the end of the year. Thunder was only heard five times.

CLUNY CASTLE.—The year, as a whole, has been variable ; heavy snow fell in March and December, with heavy gales in the latter months ; the last four months of 1876 have been most antagonistic to all out-door work ; farming interests have suffered severely ; all low grounds have been covered with water during the greater part of December.

NEW BYTH.—Spring wet and bad ; summer dry, which made straw short and scarce. Harvest months wet (with no drying winds), which injured the grain crops ; since the beginning of September we have had wet and bad weather almost continuously.

DIVISION XVIII.—NORTH WESTERN COUNTIES.

BERNERA.—The last year the most unsettled and uneven I remember ; a great prevalence of E. wind.

ARDROSS CASTLE.—The year has been a very remarkable one ; January open and mild ; to the end of April snow and frost almost continuous, so much so as to make it impossible to get seed put in the ground in proper condition. May, June, July and August were scorchingly hot, and the succeeding months very wet ; spring frosts injured the fruit crop, and autumn rain the harvest.

SPRINGFIELD, TAIN.—The rainfall (30·41 in.) was slightly above the average for the last 9 years (29·69 in.) The spring was late and cold, considerable fall of snow occurring in April, and severe frost even to the beginning of June ; during the *growing months* the rainfall was below the average, but the harvest work was hindered by heavy rain.

INVERIE.—Less rain fell than average.

LAGGAN.—Intense frosts in January and February ; great depression of bar. in the beginning of March, followed by a snow fall of 17 days ; during the first three months most of the downfall was snow ; severe frosts in September, causing much injury to cereals and potatoes.

KINCHILLIE ROY BRIDGE.—This year has been considered very favourable and dry by the inhabitants. The prevailing winds have been E.

DIVISION XIX.—NORTHERN COUNTIES.

OSPISDALE DORNOCH.—The total rainfall (33·36 in.) has not differed

much from the average ; but its distribution has been abnormal and unfavourable. The spring seed time was *very* wet, the summer very dry ; the harvest very trying, not so much from the rain, which was scarcely above the average, as for the dull E. winds which brought it, and the almost total absence of the fine breezy weather from the S.W., which is so great a blessing to the husbandmen of the N.E. division of the Kingdom.

TANKERNESS HALL.—Total fall (37·77 in.) 9·11 more than last year, but exactly the same as fell in 1872.

IRELAND.

DIVISION XX.—MUNSTER.

GLENAM.—Three months unusually dry, and some days during them the hottest I have registered, being 94° on 16th July.

TIPPERARY.—The fall in September and October having been half that of the same months in 1875, the total fall of the year (40·17 in.) is 3·50 in. less than last year. The summer months were hot, but after the end of August the weather became cool ; the frosts were but slight.

DIVISION XXI.—LEINSTER.

DUBLIN, FITZWILLIAM SQUARE—Only 10·24 in. fell in the first six months ; the fall in the last three months was one and a half times as great—*i.e.*, 15·69 in. An inch of rain or upwards fell only on one day in the year ; that was Dec. 2nd, 1·83 in.

BELVEDERE.—First half of the year very severe and stormy ; summer months genial and warm, at times very hot ; autumn months wet, almost continuous rain, little or much, and very mild, with but slight frosts.

DIVISION XXII.—CONNAUGHT.

GARDENFIELD.—January, May, June, and July dry ; August to end of year wet.

DIVISION XXIII.—ULSTER.

FLORENCE COURT.—The rainfall during 1876 (58·60 in.) was above the

average ; the potato crop excellent, both in quality and quantity ; hay only about half a crop, in consequence of the very dry summer months.

NEWTOWNARDS.—The rainfall (39·77 in.) is 7·63 in. greater than last year ; from 22nd September to 31st December 21·08 in. of rain fell, while only 18·69 fell from 1st January to that date ; heavy rains were generally from S.E.

ALMA HOUSE, COUNTY DOWN.—The rainfall in 1876 was 49·49 in., 11·55 in. in excess of that recorded in 1875, and exceeding the average of the previous 9 years (1867 to 1875) by 12·39 in. The earlier spring and summer months were characterised by considerable drought, culminating in May, when the small fall of only 0·75 in. was recorded, 1·58 in. below the average. June was, however, "leaky" (1·23 in. above average), and this, assisted as it was by the high temp., which reached its max. on 16th July, when 89° in shade and 104° in sun were recorded (exceeding, by 6°, any recorded temp. during the preceding 16 years), favoured us with an abundant harvest, all being well matured and safely carried before the end of August. With the advent of September, however, an exceedingly rainy period set in, which extended almost continuously to the end of the year ; the abnormally large fall of 11·34 in. being noted in December, 8·95 in. above the previous year (1875) and 7·88 in. in excess of the mean average of the preceding 9 years, accompanied as it was by severe gales and unusually high tides, resulting in much flooding and great destruction of property.

WHITEROCK, NEW BARNSELY, BELFAST.—1876 is remarkable for severe gales from 4th to 9th March ; the cold dry May ; comparatively fine June and July ; great storm on 2nd August ; dense fog on Dec. 15th, and for the great rainfall of the year (nearly 45 in.)

MONEYDIG.—The crops were retarded by a cold May and rather prematurely ripened by the great heat of July and August, Potatoes good, larger and of better quality than any since 1846, considering the late time of planting ; food for cattle deficient.

POMEROY.—Heat of summer intense ; the floods caused by the unprecedented fall of snow and rain in November and December were extraordinary. Thrushes singing during November and December.

BALLYSHANNON.—The rainfall (37·20 in.) has exceeded that of 1875 by 3·51 in. ; the weather, though rainy, has been mild and favorable for outlying cattle ; potatoe crops unusually abundant, and the quality good.

KILLYGARVAN.—46·06 in., the greatest fall since I began to observe in 1873. Very hot occasionally, but by no means high as an average.

INVER, DONEGAL.—The excessive wet of March rendered the working of the land impossible, except where very well drained ; the crops were consequently nearly a month later than usual. The spring, too, was very late, but it did not seem to injure the harvest, which was good ; the hay was very short ; harvest weather was fine, and, though frequently broken, there was no rotting weather.

HEAVY RAINS OF SHORT DURATION.

THE following table shows that, either our observers have suddenly become very inattentive to the measurement of rain at short intervals or, that heavy rains of short duration were remarkably rare in 1876. There being much evidence that the observers were as much on the *qui vive* as in former years, we are driven to the conclusion that one of the special features of the rainfall of 1876 was the absence of falls of high intensity. We shall see, presently, whether this conclusion is supported by the examination of the records of the maximum falls in 24 hours, although it is obviously possible that a year remarkable for the absence of short, heavy rains may yet have many days with steady rain all day, thus yielding large maximum falls ; just as we often have large maximum falls in dry years, and wet years with small, and even insignificant, maximum falls.

The following list is much shorter than we have ever had before, and yet it contains all the instances which exceed the limits represented in the diagram given on page 122 of *British Rainfall*, 1874. We may, perhaps, explain that those limits were based upon the experience of several previous years, and showed that certain falls were so frequent that, in order to keep this part of the work within reasonable compass, it was necessary not to quote any instances in which they were not exceeded.

We desire to bring this point clearly before our readers, and we therefore give the diagram (see *frontispiece*) representing the above-mentioned limits, and also the instances during 1875 and 1876 in which those limits were exceeded. In order to make it as clear and easy of comprehension as possible, we have adopted the natural scale of one inch of paper for one inch of rain ; and we give the actual amounts, and not, as in the diagram above-mentioned, the rates per hour. The falls of each year are distinguished by the figures 5 and 6 ; the position of

the figure shows the fall and the time in which it occurred. For example, the highest figure on the diagram is a 6, whence we at once see that it represents a fall in 1876. Looking at the side scale it evidently amounted to between 2·6 and 2·7 inches, and looking at the top scale it will be seen that it fell in 1 hour and 45 minutes. Reference to the following table will show that it was a fall of 2·65 inches in $1\frac{3}{4}$ hours at Staunton Long Vicarage. Further explanation is surely unnecessary.

Heavy Falls in Short Periods.

Date.	Division.	Station.	Duration.		Amount.	Rate
			hr.	min.	in.	per hour.
July 22 ...	VII.	Mansfield .....	...	10 ?	·61	3·66
June 29 ...	X.	North Shields, Rosella Pl. ...	...	13 ?	·50	2·31
July 23 ...	I.	Tottenham (Grove House) ...	...	15	·82	3·28
Aug. 20 ...	II.	Woolston Lodge .....	...	15	·45	1·80
June 21 ...	VI.	Leaton Vicarage .....	...	15	·39	1·56
Aug. 16 ...	II.	Long Wittenham.....	...	20	1·00	3·00
Sept. 17 ...	XX.	Killaloe .....	...	20	·77	2·31
Aug. 19 ...	VI.	Ashley Down, Bristol.....	...	30	1·53	3·06
May 24 ...	V.	Court Grange .....	...	30	·60	1·20
June 21 ...	VI.	Heath Ho., Cheadle .....	...	30	·54	1·08
Aug. 19 ...	II.	Purley, Reading .....	...	40	·86	1·29
June 21 ...	VIII.	Macclesfield (Park Green) ...	...	55	1·10	1·20
July 23 ...	III.	Bedford	1	...	1·85	1·85
Aug. 19 ...	VI.	Ashley Down, Bristol.....	1	...	1·08	1·08
Sept. 23 ...	III.	King's Sutton, Banbury...	1	30	1·01	·68
July 16 ...	VI.	Staunton Long	1	45	2·65	1·52
Aug. 19 ...	„	Ashley Down, Bristol.....	7	...	3·25	·46

HEAVY DAILY FALLS IN 1876.

PART I.—CHRONICLE.

NOTE.—The letter **M** throughout this article is used as an abbreviation of the term, “Maximum daily rainfall during the year.” The day being in all cases, where not otherwise specified, the rainfall day, terminating at 9 a.m. on the succeeding civil day.

JANUARY 21st.

The **M** at 71 stations, chiefly in Bedford, Cambridge, Suffolk, Norfolk and Gloucester. Max. amounts 1·68 in., or 5·2 per cent. at Coldham Hall, Wisbeach, and 1·68 in., or 4·9 per cent. at Prestbury, Cheltenham.

FEBRUARY 21st.

The **M** at 11 stations round Kirkby Stephen, Westmoreland. Max. amount and per-centage, 2·39 in., or 3·7 per cent. at Stone House, Dent Dale, North West Yorkshire.

MARCH 4th.

The **M** at 3 stations in the N.W. of Scotland. Max. amount and per-centage, 3·00 in., or 3·1 per cent. at Glen Quoich, Inverness.

APRIL 13th.

The **M** at 20 rather scattered stations, chiefly in the East Midland and Midland counties. Max. amount, 2·21 in., or 6·7 per cent at Burnham, Norfolk ; max. per cent. 6·9 (2·05 in.) at Westgate, Peterborough.

MAY 24th.

The **M** at 18 stations in Kent and Sussex. Max. amount, 2·25 in., or 7·0 per cent. at Harefield, Selling, near Faversham. The fall at the drier station of Gosmere, Selling, was 2·09 in., and it was also 7·0 per cent. of the yearly total at that station.

JUNE 21st.

A very unimportant **M** at 14 stations, chiefly in Cheshire and Lancashire.

JUNE 22nd.

Two separate areas of **M** are apparent for this day. One consists of 16 stations in Surrey, Sussex and Berks; the max. amounts being 2·15 in., or 5·9 per cent at Lewes Road, Brighton, and the same amount fell at the Devil's Dyke, about 5 miles N.W. of the above station. A fall of $1\frac{1}{2}$ to 2 in. seems to have prevailed over the greater part of Central Sussex. The other area of **M** was on the N.E. coast of England; it prevailed at 15 stations, the max. being at Lowthorpe, in East Yorkshire, 1·97 in., or 5·3 per cent.

JUNE 23rd.

The **M** occurred on this day at 44 stations, most of them in Lincoln, Nottingham, and South Yorkshire; the largest amount was 2·00 in., or 6·7 per cent. at Barnsley.

JULY 26th.

The **M** at 17 stations, chiefly in Cheshire, Lancashire and North Wales. Max. amount, 2·71 in., or 2·7 per cent., at Rhiw-brifdir, Merionethshire.

AUGUST 2nd.

The most important **M** of the year. It was the date of **M** at 113 stations, all of them in Lancashire, North-West Yorkshire, the Lake District, Wales, the West of Scotland, or in Ireland. The following list of **M** of $2\frac{1}{2}$ in. and upwards will give a good general idea of the amount and distribution. :—

X. Seathwaite	3·36	or	3·0	XIV. Glenbrae	2·50	or	3·8
„ Little Langdale.	3·35		3·8	XXII. Spencer Harbour	2·56		4·8
„ Kirkstone Pass..	2·55		2·8	„ Spencer Harbour			
XI. Treorchy	2·63		2·5	Collieries	3·10		5·9
„ Golden Grove ...	2·78		4·2	XXIII. Florence Court..	2·54		4·3
XII. Carsphairn	2·61		4·3	„ Foffanny	4·50		5·5
„ Wanlockhead ...	2·97		4·7	„ Woodlawn	3·15		6·0
XIV. Mansfield	2·56		3·8				

AUGUST 4th.

The **M**, but a very unimportant one, at a few stations in the Isle of Wight and the South of England.

AUGUST 17th.

The **M** at 12 stations in the centre and South East of Ireland. Max. amount, 2·10 in., or 4·3 per cent. at Longraigue, New Ross, Wexford.

AUGUST 19th.

The **M** at 40 stations, a few of them in Surrey, Kent, Sussex, Hants and Dorset, but mostly in Somerset, Gloucester, Monmouth and Glamorgan. Upwards of 3 in. fell at Ashley Down, Bristol (3·57 in., or 8·1 per cent.), at Llanfrechfa, Newport, Monmouth (3·06 in., or 5·0 per cent.), and at Llansoar, near Caerleon, Monmouth (3·15 in., or 6·9 per cent.)

AUGUST 30th.

The **M** at 27 stations, almost all between lat. 55° and 56° N., and extending from Berwickshire to Donegal. Max. 3·00 in., or 8·1 per cent. at Mungo's Walls, Dunse, Berwickshire.

AUGUST 31st.

The **M** at 16 stations, chiefly in North Wales. Max. amount 2·37 in., or 5·5 per cent., at Dyffryn Aled, Denbigh.

SEPTEMBER 5th.

The **M** at 33 stations, chiefly in Hertfordshire and adjoining counties, but the amounts all under 2 in.

SEPTEMBER 28th.

The **M** at most of the Northamptonshire stations, and at a few in adjoining counties. Max. amount, 2·35 in., or 7·6 per cent. at The Hollies, Northampton.

SEPTEMBER 30th.

The **M** at 57 stations, chiefly in Herefordshire, Somerset, and North East Devon, but with a few in surrounding counties. Max. at Cothelston House, Taunton, 3·10 in., or 7·2 per cent. ; there were, however, very few stations with more than 2 in.

OCTOBER 8th.

The **M** at 95 stations between Leominster, in Herefordshire, and Pocklington, in Yorkshire, and between lines running west from those stations to the Irish Channel. The amounts were mostly about

1½ in. ; the max. was 3·00 in., or 4·5 per cent. at Lliw Reservoir, Glamorganshire ; the max. percentage was 6·0 (2·22 in.) at Larden Hall, Shropshire.

NOVEMBER 14th.

The **M** at 13 stations in the North East of Scotland. Max. amount 2·45 in., or 4·8 per cent. at Craigton, Forfar.

NOVEMBER 24th.

The **M** at 6 stations near Southampton, but unimportant.

NOVEMBER 26th.

The **M** at 10 stations near the junction of Hampshire and Berkshire but all the amounts were small.

DECEMBER 2nd.

The **M** at 23 stations, nearly all in Ireland, and almost wholly upon the east coast. Max. amount 3·08 in., or 5·8 per cent. at Hilltown, County Down ; the per-centage was, however, slightly greater (6·0 per cent.) at Rathfriland, in the same county.

DECEMBER 20th.

The **M** at 24 stations rather scattered, but chiefly in the north-east of England or the south-east of Scotland. Max. amount 3·70 in., or 8·4 per cent. at Cragside, Rothbury, Northumberland, but except in that immediate neighbourhood, the amounts were generally under 2 in.

DECEMBER 23rd.

The **M** at 58 stations, most of them in the vicinity of London, but including stations in Middlesex, Surrey, Kent, Sussex, Essex and Suffolk. The amounts average about 1½ in., and the absolute max. amount was 1·98 in., or 7·7 per cent. at Eltham, Kent.

DECEMBER 26th.

This was principally a Devon and Cornwall rain, but it prevailed also over the Lake District and part of Ireland. The **M** occurred at 64 stations. The fall exceeded 3 in. at Holne Vicarage, Ashburton, Devon (3·38 in., or 3·9 per cent.), and at Bryn Gwynant, Beddgelert, Carnarvon (3·76 in., or 3·5 per cent.), and must have averaged nearly 2 in. over the whole of Devon and Cornwall.

PART II.—ABSTRACT.

IN order to compile the previous section of this article, the heaviest fall on any one day during 1876, together with certain other particulars, has been extracted from upwards of one thousand registers. The same data are re-discussed in the following tables, and afford the best indication of the character of the rainfall of the year which we believe it possible to obtain.

Table I. contains the usual number (16) of stations heading the list of heavy daily falls of rain, and Table II. the mean result for 1876, and a comparison of it with the similar values for eleven previous years. From it we learn (1) that the absolute maximum, $4\frac{1}{2}$ inches, on the 2nd of August, at Foffanny, in the Mourne Mountains, in the N.E. of Ireland, is much below the usual absolute maximum, which is $5\frac{1}{2}$ inches. (2) That the average of these sixteen extreme maxima is also lower than usual.

Table III. contains the sixteen per-centages which are above all others, and Table IV. contains an abstract of the same compared with previous records.

These per-centages show, of course, the cases in which the fall on any one day was the greatest per-centage of the total fall in the year, and therefore indicate very clearly the prevalence or absence of torrential or thunderstorm rains. Table IV. shows that the mean per-centage is not only much less than the average, but also less than in any of the eleven previous years, and that the same is true of the absolute maximum per-centage of the year.

Hence, we learn very decisively that the special characteristic of the rainfall of 1876 was the absence of heavy individual rains.

In Table V. the whole 1,112 records are summed-up, and compared with the gross results, and thence also we obtain evidence that the heavy falls were rather less than usual, though very near the average.

Taking all the evidence together, and coupling it with that afforded on pages 140 and 141 we arrive at the conclusion that—

Excessively heavy local rains were very rare in 1876, but uniform rains of $1\frac{1}{2}$ to 2 inches prevailed over large areas several times during the year.

TABLE I.—*Maximum Falls in 1876.*

Date.	Div.	Stations.	Depth.	Per cent.	Fall in year.
Aug. 2 ...	XXIII.	Castlewellan (Foffanny)	4·50in.	5·5	82·68 in.
Dec. 27 ...	XI.	Bryn Gwynant	3·76 „	3·5	107·55 „
„ 20 ...	X.	Rothbury (Crag-side)	3·70 „	8·5	43·51 „
„ „ ...	X.	„ (Whitton Tower) ..	3·60 „	8·2	43·63 „
Aug. 19 ...	VI.	Bristol (Ashleydown)	3·57 „	8·1	44·17 „
Dec. 26 ...	V.	Dartmoor (Holne Vicarage) ..	3·38 „	3·9	86·15 „
Aug. 2 ...	X.	Seathwaite	3·36 „	3·0	114·03 „
„ „ ...	X.	Little Langdale	3·35 „	3·8	88·56 „
„ 19 ...	XI.	Caerleon (Lansoar)	3·15 „	6·8	46·50 „
„ 2 ...	XXIII.	Castlewellan (Woodlawn) ...	3·15 „	5·9	53·28 „
Sept. 30 ...	V.	Taunton (Cothelstone House)	3·10 „	7·2	43·26 „
Aug. 2 ...	XXII.	Spencer Harbour Collieries ..	3·10 „	5·9	52·97 „
Dec. 2 ...	XXIII.	Hilltown	3·08 „	5·8	53·16 „
Aug. 19 ...	XI.	Llanfrechfa	3·06 „	5·0	60·79 „
Oct. 8 ...	XI.	Felindre (Lliw Reservoir) ...	3·00 „	4·5	67·34 „
Aug. 31 ...	XIII.	Mungo's Walls	3·00 „	8·1	37·11 „

TABLE II.—*Comparison of Maximum Falls with those in previous years.*

MEAN.				ABSOLUTE.			
Years.	Depth.	Per Cent.	Mean total fall at these stations.	Depth.	Per Cent.	Station.	Division.
	in.		in.	in.			
1865 ...	3·67	6·4	61·8	6·41	5·5	Seathwaite	X.
1866 ...	3·40	4·4	86·2	6·38	3·6	Seathwaite	„
1867 ...	3·17	9·0	42·5	4·78	17·7	Hartlip	II.
1868 ...	3·32	6·1	65·9	5·60	4·8	Canusinas	XV.
1869 ...	3·68	5·0	77·7	6·70	4·5	Seathwaite	X.
1870 ...	3·20	7·5	43·8	6·00	17·1	Tongue	XIX.
1871 ...	3·08	5·7	61·6	4·24	9·6	Melbury	V.
1872 ...	4·10	6·6	73·1	5·82	3·2	Seathwaite	X.
1873 ...	2·97	6·2	60·7	4·20	2·9	Seathwaite	„
1874 ...	3·96	4·6	86·5	5·32	4·4	Bryn Gwynant ..	XI.
1875 ...	4·52	7·8	63·9	5·33	9·7	Newport W. W. ..	„
Mean ...	3·55	6·3	65·8	5·53	7·5	.....	...
1876 ...	3·37	5·9	57·6	4·50	5·5	Foffanny	XXIII.
Diff. ...	—·18	—·4	—8·2	—1·03	—2·0	.....	...

TABLE III.—*Maximum Per-Centages in 1876.*

Date.	Div.	Stations.	Per Cent.	Depth.	Fall in year
Dec. 20 ...	X.	Rothbury (Crag-side).....	8·5	3·70in.	43·51 in.
" " ...	"	(Whitton Tower)...	8·2	3·60 "	43·63 "
Aug. 19 ...	VI.	Bristol (Ashleydown)	8·1	3·57 "	44·17 "
" 31 ...	XIII.	Dunse (Mungo's Walls)	8·1	3·00 "	37·11 "
Dec. 23 ...	II.	Eltham Green	7·7	1·98 "	25·81 "
Sept. 28 ...	III.	Northampton (The Hollies)..	7·6	2·35 "	30·66 "
" 13 ...	VIII.	Neston (Hinderton).....	7·6	2·50 "	32·74 "
" 30 ...	V.	Taunton (Cothelston House)	7·2	3·10 "	43·26 "
Dec. 23 ...	II.	Wimbledon	7·2	1·70 "	23·72 "
May 24 ...	"	Selling (Harefield)	7·1	2·25 "	31·83 "
" " ...	"	(Gosmere)	7·1	2·09 "	29·62 "
Dec. 23 ...	"	Richmond (Halford House)...	7·0	1·76 "	25·27 "
Aug. 19 ...	XI.	Caerleon (Lansoar)	6·8	3·15 "	46·50 "
April 13 ...	III.	Peterborough (Westgate)	6·8	2·05 "	30·38 "
Dec. 23 ...	IV.	East Tilbury	6·8	1·43 "	21·02 "
" 23 ...	II.	Surbiton (Secthing Wells) ...	6·8	1·65 "	24·10 "

TABLE IV.—*Comparison of Maximum Per-Centages with those in previous years.*

MEAN.				ABSOLUTE.			
Years.	Per Cent.	Depth.	Mean total fall at these stations.	Per Cent.	Depth.	Station.	Division.
		in.	in.		in.		
1865 ...	9·9	2·62	28·4	13·0	4·40	Fleckney	VII.
1866 ...	8·1	2·31	29·3	10·0	2·48	Burton	VI.
1867 ...	11·0	2·85	25·3	17·7	4·78	Hartlip	II.
1868 ...	8·6	2·55	30·1	11·0	4·00	Tongue	XIX.
1869 ...	7·9	2·17	27·9	10·0	3·40	Tillydesk	XVII.
1870 ...	10·0	2·34	22·9	17·1	6·00	Tongue	XIX.
1871 ...	9·0	2·43	26·8	11·5	3·62	Warter	IX.
1872 ...	8·1	3·43	42·5	10·0	3·70	Hillington Hall	IV.
1873 ...	9·7	2·39	24·7	11·8	2·77	Oscott.....	VI.
1874 ...	9·2	2·16	23·7	11·9	3·95	Welwyn.. [Hall	III.
1875 ...	10·2	3·76	37·5	13·2	2·50	Letheringsett	IV.
Mean...	9·2	2·64	29·0	12·3	3·78	.....	...
1876 ...	7·4	2·49	33·7	8·5	3·70	Crag-side.....	X.
Diff. ...	—1·8	—·15	+ 4·7	—3·8	—·08	.....	...

TABLE V.—*Comparison of the Mean of all the Maximum Falls in 1876 with similar data for previous years.*

Year.	Number of Returns.	Mean Percentage.	Mean Amount.	Mean Total Fall in year.	1867 being assumed =100.	Ratio of Rainfall to the Mean.	Total Fall being assumed =34 in. Mean Max. =
1865	481	5.1	1.70 in.	33 in.	106	102	5.00 per cent.
1866	590	3.7	1.48 „	40 „	129	119	4.36 „
1867	584	4.6	1.44 „	31 „	100	100	4.24 „
1868	676	4.3	1.43 „	33 „	106	106	4.21 „
1869	637	4.2	1.42 „	34 „	108	101	4.18 „
1870	687	4.9	1.30 „	27 „	81	82	3.82 „
1871	752	4.9	1.49 „	30 „	98	97	4.38 „
1872	743	3.4	1.59 „	47 „	151	136	4.68 „
1873	809	4.6	1.35 „	29 „	94	95	3.97 „
1874	1010	4.4	1.41 „	32 „	103	96	4.14 „
1875	1081	5.0	1.83 „	37 „	119	108	5.37 „
Mean ...	732	4.5	1.49	34	109	104	4.40 „
1876	1112	3.9	1.49	38	123		4.40 „
Diff.....	+380	— .6	.00	+ 4	+ 14		.00 „

MONTHLY FALL OF RAIN IN 1876.

WE have again the pleasure of giving monthly values from two hundred and forty-five stations, selected principally on account of their geographical distribution. The order agrees exactly with that of the General Tables, and therefore if there should be any difficulty in identifying the stations by the names given on the following pages, it will immediately be removed by turning to the county in the General Tables. As regards the distribution of the stations, we will only say that we hope it will be examined, because although as regards county boundaries there may seem to be imperfections, yet if the stations are plotted on a map, we think most persons will admit that they are remarkably well distributed. Of course this quality arises solely from the abundant materials at our command.

As the number of returns printed is very large, and as we have already given 28 pages (*see ante* 93 to 121) of remarks upon the months by many of our most experienced observers, it is only necessary for us to sum up the matter very briefly. This we have done in the following notes.

JANUARY.

A dry month in all parts of the British Isles, except the extreme west of Galway and in the Hebrides. The fall may perhaps be taken generally as half the average. Along the east coast of England, Scotland and Ireland totals of less than an inch were frequent. On the other hand, the fall at Portree was 11·87 in., and at Sligachan 15·00 in.

FEBRUARY.

No station with less than one inch, and very few with less than two inches. The fall generally about twice the average, and equally so in all parts of the British Isles.

MARCH.

Another wet month ; the few stations which had only their average, or less, were mostly on the East coast. Only two or three stations where the fall was less than 2 inches, and many where it reached or

exceeded 10 inches, *e.g.*, Seathwaite 16·21 in., Pen-y-gwryd 10·25 in., Arddarroch 11·78 in., Dalmally 11·03 in., Inverie 10·00 in., and Achumore 10·20 in.

APRIL.

Rainfall generally above the average, but not so much so as in February and March. No station with less than an inch, and very few with large amounts. The rainfall was very evenly distributed over the country.

MAY.

Excessively dry. The average fall, even including Seathwaite, is scarcely more than half an inch, and at several stations it was less than a tenth of an inch. A few thunderstorms occurred on the 22nd and 24th, but even they only raised the total above two inches at Hythe and at Seathwaite. At the extreme north-western out-post stations the fall was not deficient; it was 4·10 in. at Bernera Island, which is west of the Isle of Lewis; and 4·20 in. at Achumore, Assynt, Sutherland.

JUNE.

Another dry month, except in the vicinity of the Wash, and also in Invernesshire.* The principal drought was between Clifton and Oswestry. The aggregate for May and June was 1·16 in. at Clifton, 1·71 in. at Ross, 0·91 in. at Oswestry, and 1·53 in. at Malvern.

JULY.

Total fall of rain generally deficient, especially so in the south of England; slight excess in Lancashire, and at the few detached stations where heavy thunderstorm-rains fell.

AUGUST.

Rainfall irregular in England, but on the whole about the average amount fell, though the first half of the month was almost rainless. The fall in Scotland and Ireland was rather below the average.

SEPTEMBER.

A wet month, except in the Lake District and at a few stations in Scotland. Upwards of 12 in. fell on Dartmoor, $6\frac{1}{2}$ in. in West Berkshire, and 4 or 5 in. over the greater part of England.

* In the latter county and in Argyllshire the fall exceeded 6 inches at several stations.

OCTOBER.

Dry generally, but the fall above the average in South Wales, the west of Scotland and the south of Ireland. In the east of England the fall was remarkably small, less than an inch, and not one-third of the average.

NOVEMBER.

Total rainfall above the average generally, but much below it in the English Lake District and in the North of Scotland. At Seathwaite the fall was less than half the average, and at the following wet stations in the north of Scotland it was less than two inches: Loch Broom, Ross 1·58 in., Inverie, Inverness 1·70 in., Glenstrathfarrer, Inverness 1·51 in.

DECEMBER.

Excessively wet, except in the Lake District and the north-west of Scotland. Over all the southern half of England the fall was more than twice the average; and over a roughly parallelogrammatic area extending about 80 miles west of London, and 40 miles wide, it was more than three times the average. At Weymouth the fall in this month was more than a quarter of the entire yearly fall. Upwards of 21 inches fell on Dartmoor, and 19 inches at Foffanny, in the Mourne Mountains, in County Down. The fall exceeded 10 inches at many places.

Monthly Rainfall at 245 stations in the British Isles during 1876.

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
I.	Middlesex	Camden Square.....	.94	1.97	2.96	1.90	.94	1.27	.81	1.79	2.86	1.40	3.07	6.25	26.16
II.	"	Uxbridge (Harefield).....	1.25	2.17	3.40	2.29	.65	1.59	1.28	2.30	4.15	1.75	3.39	5.49	29.71
"	Surrey	Guildford (Guildown).....	.85	2.24	2.56	1.65	.65	1.86	.44	2.46	2.68	1.25	2.65	6.13	25.42
"	Kent	Tenterden	1.21	2.60	3.10	2.09	1.13	1.52	.40	3.19	3.10	1.83	3.09	6.58	29.84
"	"	Hythe	1.42	3.77	3.87	1.19	2.26	1.55	.69	3.56	4.72	1.59	3.88	8.77	37.27
"	"	Seven Oaks (Riverhead) ...	1.63	3.81	3.92	2.62	.97	1.10	.57	3.59	4.20	1.75	3.27	8.80	36.23
"	"	Sittingbourne	1.05	2.21	2.63	2.20	1.43	1.25	1.19	2.30	2.91	1.39	2.40	5.00	25.96
"	Sussex	Worthing .....	.64	3.18	2.92	1.97	.68	1.46	.41	4.45	3.86	.68	3.57	6.32	30.14
"	"	Maresfield (Forest Lodge)...	1.17	3.32	3.27	2.53	1.20	1.95	.66	3.95	4.39	.98	3.31	7.99	34.72
"	Hants	I. of Wight (St. Lawrence)	.73	3.54	3.82	1.69	.27	.88	.93	4.66	4.39	1.75	4.43	8.21	35.30
"	"	Droxford	1.21	3.76	3.26	2.35	.39	1.67	1.06	3.35	4.63	1.83	4.53	7.47	35.51
"	"	Basingstoke (The Vyne) ...	.94	2.43	4.02	1.83	.40	2.48	1.12	2.24	3.70	1.56	4.29	5.90	30.91
"	Berks	Newbury (Welford).....	1.94	3.02	4.33	4.17	1.08	2.24	.73	2.89	6.55	1.39	3.52	5.71	37.57
III.	Herts	St. Albans (Bayfordbury)...	1.28	2.59	2.80	2.96	.79	1.20	1.07	2.38	4.34	1.42	3.60	6.07	30.50
"	"	Royston	1.90	2.14	2.37	2.37	.60	1.64	.86	1.45	4.43	.85	2.86	5.31	26.78
"	Bucks	High Wycombe	1.18	2.41	2.63	2.75	.80	1.88	.88	1.82	4.57	1.14	3.41	5.30	28.77
"	"	Buckingham (Castle Fields)	2.06	2.43	3.46	3.23	.40	1.68	.80	2.14	5.36	1.12	3.69	5.10	31.47
"	Oxford	Oxford	1.68	2.81	3.27	2.78	.75	1.96	.63	2.58	5.60	1.02	3.07	4.87	31.02
"	Northampton ..	Wellington	2.58	2.39	3.43	5.36	.52	1.01	1.44	1.65	5.28	1.27	3.10	5.28	33.31
"	Bedford	Bedford	1.83	2.20	2.43	3.70	.47	1.39	2.57	1.82	5.08	.76	3.60	4.87	30.72
"	Cambridge	Ely (Stretham)	1.87	1.98	2.39	3.14	.59	1.68	2.09	1.99	3.76	.94	1.98	3.37	25.78
IV.	"	Wisbech.....	2.19	2.47	2.84	4.85	1.10	2.80	1.71	1.82	3.64	.80	2.99	3.99	31.20
"	Essex	Epping .....	.87	2.07	3.42	2.32	.76	1.77	.53	2.34	5.40	1.50	4.50	7.46	32.94
"	"	Chelmsford .....	.88	2.22	2.79	1.37	1.04	1.59	1.12	1.48	2.94	.91	3.17	5.51	25.02
"	"	Colchester .....	.97	2.19	3.18	1.85	1.13	1.85	.73	1.22	3.49	.87	3.19	5.19	25.86
"	Suffolk	Sudbury.....	1.14	2.47	3.08	1.73	.67	1.61	1.49	1.48	3.86	.92	2.58	5.31	26.34
"	"	Ipswich	1.11	2.38	2.75	1.61	.92	1.68	.83	1.22	3.57	1.15	3.50	3.87	24.59
"	"	Saxmundham	1.60	2.42	2.79	1.18	1.13	1.76	1.27	.94	3.92	1.30	3.54	3.52	25.37
"	Norfolk	Yarmouth	1.81	2.46	2.64	2.07	.79	1.65	1.17	2.31	5.29	1.22	2.44	3.09	26.94
"	"	Swaffham	1.85	3.48	2.70	3.44	1.24	2.16	2.72	2.25	4.28	.84	2.84	3.46	31.26
"	"	Holt	2.01	2.48	3.10	3.50	1.04	1.34	2.14	2.80	5.93	.85	3.06	3.37	31.62
V.	Wilts	Salisbury	1.58	2.62	3.16	2.57	.46	1.32	.47	4.32	4.51	1.75	3.42	8.16	34.34
"	"	Ludgershall	2.32	2.95	4.20	2.73	.64	1.86	.60	3.16	5.31	1.68	3.60	7.08	36.13
"	"	Trowbridge (Steeple Ashton)	1.63	2.70	3.78	3.30	.70	1.41	.80	3.90	6.06	1.24	3.85	5.85	35.22
"	Dorset	Weymouth (Osmington)...	1.36	3.87	3.02	2.75	.12	1.55	.57	4.22	5.59	2.46	4.66	10.44	40.61

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
V.	Dorset	Wimborne (Chalbury).....	1.38	2.98	3.72	2.98	.24	1.53	.69	3.47	5.11	2.61	5.13	9.24	39.08
"	"	Shaftesbury	1.35	3.60	4.21	2.50	.32	1.68	1.18	2.66	3.64	2.91	3.87	6.48	34.40
"	Devon	Kingsbridge	1.64	5.30	5.30	3.44	.31	1.69	.96	6.10	5.52	4.83	6.76	10.99	52.84
"	"	Dartmoor Prison	3.91	11.82	7.52	6.98	.41	3.86	4.19	7.95	12.96	7.22	8.72	21.38	96.92
"	"	Bovey Tracey	1.25	5.14	4.99	4.47	.58	1.67	.95	3.19	7.48	4.97	6.91	12.77	54.37
"	"	Cullompton (Clyst Hydon).....	.84	3.58	3.76	2.80	.28	1.04	.70	3.62	6.22	3.68	4.53	8.11	39.16
"	"	S. Molton (Rose Ash)	1.47	5.53	6.18	4.06	.22	1.47	1.52	3.87	7.98	2.81	4.37	8.50	48.15
"	Cornwall	Penzance	1.16	3.85	3.53	2.46	.12	1.46	.78	4.42	3.41	4.09	4.38	10.18	43.59
"	"	St. Agnes	1.93	4.80	5.06	3.73	.56	2.41	1.67	4.09	7.24	5.05	4.44	10.15	41.79
"	"	Stratton (Jacobstow) .....	.98	3.67	4.04	3.43	.35	1.20	.56	2.45	6.07	2.27	4.80	11.68	52.66
"	Somerset	Ilminster	1.40	3.31	4.04	3.02	.36	1.01	1.26	3.07	7.09	2.71	4.19	7.32	40.56
"	"	Glastonbury (Street)	1.62	3.71	5.48	2.56	.13	1.03	.66	3.35	8.46	3.14	4.51	7.23	38.78
"	"	Dunster	2.62	4.87	4.05	3.07	.23	.93	1.64	4.72	5.35	3.40	4.58	6.96	42.42
VI.	Gloucester	Clifton	2.27	2.40	3.20	2.86	.87	1.34	.82	3.20	5.19	1.80	4.01	7.15	35.11
"	"	Stroud (Upfield)	2.48	3.81	3.76	3.49	.56	1.80	.85	3.15	5.30	1.77	3.83	6.88	37.68
"	"	Fairford (Hatherop Rec.).....	2.30	2.75	4.07	2.37	.89	2.15	.79	3.77	5.16	2.27	3.67	6.31	36.80
"	"	Moreton-in-Marsh	2.31	2.85	4.29	3.17	.88	.83	1.02	4.33	7.00	2.90	5.53	8.67	43.78
"	Hereford	Ross (Rocklands)	1.68	2.98	3.72	3.16	.68	1.93	2.45	3.60	4.87	3.42	3.87	5.82	33.18
"	Salop	Ch. Stretton (Woolstaston).....	1.40	2.46	2.33	3.02	.63	2.59	3.11	2.99	4.33	2.54	3.35	4.09	32.84
"	"	Wellington	1.70	4.47	3.28	3.90	.08	.83	1.95	3.68	4.97	3.60	5.52	7.90	41.88
"	"	Oswestry	2.08	2.93	2.60	3.19	.70	3.44	1.35	1.97	3.97	1.51	3.48	4.90	32.12
"	Stafford	Tamworth	1.53	3.10	3.21	2.43	.69	2.28	2.12	1.49	4.25	1.45	3.48	4.44	30.47
"	"	Burton (Horningslow)	1.93	3.36	3.52	4.02	.87	2.46	3.34	2.62	4.79	1.85	3.80	4.44	37.00
"	"	Stoke (Barlaston).....	2.35	2.39	2.88	2.88	.61	.92	1.04	2.10	5.04	2.29	4.15	7.23	33.88
"	Worcester	Malvern.....	2.34	2.90	3.32	3.07	.67	1.35	1.74	1.99	5.51	2.29	4.12	6.85	36.15
"	"	Tenbury (Orleton)	2.09	2.97	3.22	2.68	1.23	2.01	1.60	2.38	4.37	1.69	3.87	5.93	33.28
"	"	Stourbridge (Hagley)	2.35	3.29	2.46	3.22	.41	2.16	1.27	1.83	5.45	1.53	3.70	5.21	33.10
"	Warwick	Leamington (Blackdown).....	1.50	2.64	2.49	2.87	.63	2.52	1.41	2.67	5.18	1.42	3.27	4.85	31.45
"	"	Nuneaton	1.84	2.84	3.09	3.32	.68	2.52	1.35	1.82	5.26	1.39	4.03	5.42	32.64
VII.	Leicester	Loughborough	2.65	2.42	2.98	3.72	.62	2.31	1.33	1.30	4.85	2.43	3.26	6.00	33.87
"	"	Harston [Gantham]	1.94	2.62	2.93	3.72	1.06	2.37	.51	2.19	5.95	2.87	3.11	6.42	37.31
"	Rutland.....	Oakham (Burleigh)	1.94	2.28	2.90	3.68	.83	2.58	2.30	1.34	3.66	1.20	3.57	5.37	31.75
"	Lincoln	Horncastle.....	1.30	2.57	2.90	2.00	.83	2.75	3.53	2.17	2.77	2.08	3.12	5.72	31.74
"	"	Brigg (Appleby Vic.)	1.33	3.03	3.04	2.68	1.02	2.55	1.95	1.48	4.49	2.28	3.91	7.47	35.23
"	Notts	Mansfield													

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
VII.	Derby.....	Buxton	1.84	6.18	5.87	4.24	1.35	4.52	2.62	4.01	6.79	3.40	5.90	8.45	55.17
VIII.	Cheshire.....	Congleton	1.33	3.03	3.48	2.84	.77	2.29	2.71	2.63	3.99	2.13	4.06	4.61	33.87
"	Lancashire.....	Heaton Chapel	2.09	4.04	4.08	3.83	1.50	3.50	2.78	3.55	3.43	2.51	3.13	3.85	38.29
"	"	Ormskirk (Rufford)	1.38	3.11	2.54	2.66	.58	3.05	3.19	3.46	4.99	2.49	4.21	4.91	36.57
"	"	Burnley (Brierfield)	2.25	4.28	4.38	2.13	.58	4.00	3.30	3.65	3.90	2.70	3.30	4.48	38.95
"	"	Garstang Parsonage.....	2.09	4.47	2.89	3.21	.34	4.38	2.86	3.95	4.31	2.63	3.44	5.10	39.67
IX.	"	Ulverston	2.76	5.19	4.30	3.30	.33	4.30	4.01	4.07	5.27	3.90	3.65	8.05	49.13
"	York, W.R.	Rotherham	1.30	2.29	3.33	1.61	.60	3.23	1.37	1.37	4.02	2.25	3.73	6.10	31.20
"	"	Goole	1.02	1.99	1.61	1.87	.55	2.20	2.37	1.52	2.70	2.51	1.92	5.00	25.26
"	"	Huddersfield (Dalton) .....	.95	3.01	4.11	2.14	1.05	2.97	2.09	2.09	4.73	2.84	3.31	7.09	36.38
"	"	Leeds (Methley Park).....	.75	2.28	3.80	2.50	.93	2.29	1.15	1.75	3.03	3.32	3.67	6.42	31.89
"	"	Pateley Bridge (Fog Close)	1.39	4.92	5.41	2.80	.88	2.57	2.27	2.69	4.81	2.74	4.55	9.47	44.50
"	"	Malham Tarn	2.62	6.52	7.52	4.01	1.07	2.72	4.61	4.61	5.98	3.92	4.88	10.66	59.12
"	York, E.R.	Pattingham.....	1.61	2.34	2.47	2.86	1.05	1.74	2.20	1.62	3.18	2.01	3.79	5.78	30.65
"	"	Pocklington (Warter)	1.39	3.22	3.18	2.65	1.40	2.29	3.46	2.17	4.64	3.04	4.16	6.32	37.82
"	York, N.R.	Ganton .....	.81	2.75	3.44	2.40	.78	2.72	2.69	2.63	3.42	2.67	4.09	7.13	35.53
"	"	Northallerton .....	.55	1.87	2.78	2.78	.93	2.15	2.89	2.09	4.67	1.51	2.25	4.25	28.72
"	"	Lockwood Beck .....	.90	2.59	2.39	2.82	1.54	1.41	4.15	2.69	4.28	1.68	3.40	6.15	34.00
X.	Durham.....	Gainford .....	.30	1.89	3.18	2.69	.73	2.42	2.13	2.21	3.77	1.69	3.10	6.94	31.05
"	"	Hartlepool (Hart Res.) .....	.74	2.16	2.34	2.51	1.37	2.12	2.74	2.45	3.70	1.61	2.34	5.49	29.57
"	"	Wolsingham .....	.97	3.41	3.69	3.24	1.19	3.42	1.48	2.14	3.87	1.86	3.62	10.01	38.90
"	Northumberland	Haltwhistle .....	.84	3.85	5.14	2.65	1.00	2.04	1.34	3.26	2.83	2.99	3.19	7.28	36.41
"	"	Stamfordham .....	.80	2.44	2.47	3.78	1.25	2.40	1.08	1.84	4.54	1.70	3.59	7.50	33.39
"	"	Otterburn	1.74	3.60	3.50	3.40	1.45	2.55	.95	2.55	3.55	2.30	3.55	9.90	39.04
"	"	Howick .....	.67	4.14	2.69	3.66	1.34	3.02	1.53	2.41	3.32	1.65	4.55	8.13	37.11
"	Cumberland	Braystones	1.70	2.84	2.49	1.71	.35	4.71	2.41	3.69	4.39	3.57	3.63	6.32	37.81
"	"	Scauby Hall	1.36	3.86	3.78	2.97	1.11	3.93	2.62	2.27	3.35	2.80	2.13	4.74	34.92
"	Westmoreland	Kendal	3.73	6.75	4.80	2.95	.98	3.94	3.42	3.95	4.95	4.15	3.23	9.01	51.86
"	"	Kirkby Stephen	2.35	4.71	4.68	1.95	1.10	3.18	2.41	3.04	4.56	2.93	3.34	7.26	41.51
"	"	Brougham Hall	1.12	2.64	3.73	2.11	.99	2.40	1.70	4.99	1.18	4.30	3.95	5.42	34.53
XI.	Monmouth.....	Dingestow.....	1.68	3.41	3.68	2.77	.52	1.09	.69	2.81	6.22	3.30	3.47	7.66	37.30
"	"	Abergavenny.....	2.49	3.51	3.44	3.32	.46	1.10	.50	3.78	8.95	4.38	6.23	11.23	49.39
"	Glamorgan.....	Cardiff	3.59	7.80	5.36	3.38	.16	2.01	1.74	6.74	7.59	4.23	5.53	8.91	57.04
"	"	Ystalyfera	4.86	9.80	5.40	4.46	.84	4.24	3.75	7.63	7.25	8.18	6.00	12.16	74.57
"	Carmarthen	Carmarthen Asylum	3.11	5.69	3.50	3.60	.25	2.51	3.28	5.33	6.98	7.47	5.62	9.28	56.62

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.	
XI.	Pembroke	Stackpole Court	2.16	4.32	3.54	2.32	.60	1.76	2.69	3.96	5.24	6.24	5.00	7.01	44.84	
	"	Solva	1.38	3.01	2.32	2.06	.17	.97	2.14	2.14	3.49	5.58	4.01	5.13	32.40	
	"	Lampeter	2.90	4.23	3.98	2.82	.68	1.06	2.42	4.31	6.29	6.82	4.17	8.42	48.10	
	"	Aberystwith (Gogerddan).	2.60	4.84	3.03	2.95	.62	2.49	4.02	3.48	3.83	4.60	3.96	5.29	41.71	
	"	Brecknock	1.98	5.38	5.20	3.18	1.00	2.58	.89	4.16	6.56	6.82	4.29	10.52	52.56	
	"	Radnor	1.89	5.45	4.59	3.72	.52	1.82	2.38	3.45	6.12	5.57	4.40	7.19	47.10	
	"	Montgomery	3.16	4.80	5.21	3.52	.81	1.58	2.22	2.99	5.70	5.26	5.07	9.17	49.49	
	"	Flint	.72	1.87	2.44	2.54	.27	1.08	1.80	3.38	5.10	2.93	2.93	4.42	3.53	30.08
	"	Denbigh	1.18	2.98	2.18	2.74	.25	1.35	1.76	2.97	4.44	2.49	2.49	3.92	4.41	30.67
	"	Merioneth	2.97	8.76	5.70	3.68	.96	2.99	4.48	5.64	6.11	6.08	6.17	6.17	11.91	65.45
	"	"	Bala	2.19	7.92	6.04	3.59	.68	2.44	2.86	4.92	4.57	5.92	3.82	7.74	52.69
	"	"	Port Madoc	2.47	5.57	3.52	4.40	.68	2.54	4.24	3.92	4.23	6.05	5.32	5.71	48.65
XII.	Anglesey	Bodevryd	2.25	4.29	2.35	2.60	.45	2.09	3.20	3.44	2.79	4.77	4.71	7.06	40.00	
	"	Isle of Man	2.33	2.94	3.34	1.77	.56	2.57	2.90	5.54	3.26	4.72	3.10	7.74	40.77	
	"	Jersey	.86	3.89	5.07	2.57	.87	.71	.57	2.80	6.08	1.72	4.19	7.71	37.04	
	"	Guernsey	1.67	3.63	5.12	2.16	.39	1.03	.63	3.91	4.03	3.50	5.67	10.92	42.66	
	"	Sark	.94	3.14	4.02	2.13	.34	.60	.66	2.71	3.49	2.52	4.62	9.09	34.26	
	"	Wigtown	2.17	5.53	3.56	2.84	.19	3.92	2.09	4.45	4.62	6.60	3.21	7.85	47.03	
	"	Kirkcudbright	3.02	5.80	3.46	2.45	.88	4.68	2.39	3.99	4.32	5.50	3.82	9.17	49.48	
	"	"	4.09	6.94	6.06	2.61	.96	5.84	2.80	4.07	3.75	9.86	4.15	9.44	60.57	
	"	"	2.17	6.19	3.71	3.35	.59	3.28	1.94	3.92	3.62	3.50	3.50	3.03	7.47	42.77
	"	"	3.90	6.90	7.50	3.70	.90	3.70	1.00	5.10	2.80	6.10	4.40	4.40	11.30	57.30
	"	"	3.40	7.30	5.50	3.50	.20	4.10	1.90	3.60	3.60	4.00	2.70	2.70	8.30	48.10
	"	"	.64	3.68	2.42	1.70	.69	3.37	1.19	3.14	3.65	2.06	2.06	2.67	6.31	31.52
XIII.	"	Wooplaw [Galashiels]	.95	3.65	4.10	4.30	.70	3.00	1.25	4.50	3.80	2.70	3.95	7.00	39.90	
	"	"	4.50	4.30	5.70	4.70	1.00	2.90	1.70	5.00	3.10	4.20	3.80	8.20	49.10	
	"	"	2.03	5.07	2.99	4.61	1.17	2.44	1.87	4.79	2.78	4.57	3.43	9.17	44.92	
	"	"	2.25	3.25	6.05	2.60	1.00	3.10	2.50	5.70	3.80	3.25	3.00	7.20	43.70	
	"	"	1.15	3.57	2.72	3.41	1.17	2.53	.81	4.29	4.12	2.14	4.42	6.78	37.11	
	"	"	.80	2.77	2.33	4.04	.79	2.28	1.74	3.94	5.40	2.22	3.70	8.63	38.64	
	"	"	.80	3.42	3.08	3.41	1.01	2.60	1.22	3.40	4.02	4.37	3.64	6.73	35.65	
	"	"	2.09	3.74	5.86	2.02	1.30	3.56	3.39	5.38	2.05	4.32	4.37	1.99	5.00	40.75
	"	"	1.60	4.15	4.12	1.65	.50	2.80	2.01	4.03	2.23	4.92	4.92	2.82	5.00	35.83
	"	"	2.52	5.53	5.06	1.76	.81	3.25	3.16	5.95	3.03	8.29	3.79	7.97	49.92	
	"	"	1.92	3.86	4.69	2.30	1.03	3.21	2.44	4.64	1.51	3.78	1.62	6.14	37.14	

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
XIV.	Ayr.....	Kilmarnock	1.70	3.96	5.12	1.10	.72	3.60	3.24	4.82	2.56	6.70	2.60	6.14	42.26
	Renfrew.....	Stanely Reservoir.....	3.61	5.98	6.75	2.23	.79	5.41	3.17	5.01	3.25	7.50	3.57	7.69	54.96
	Dumbarton	Arddarroch	9.75	7.30	11.78	3.75	.96	6.01	4.76	7.38	3.42	9.50	5.32	12.85	82.78
	Stirling	Falkirk	2.40	4.40	4.60	2.60	.90	2.60	1.70	3.20	3.70	4.50	2.70	6.70	40.00
XV.	"	Ben Lomond.....	10.00	7.10	6.70	4.60	1.40	7.50	6.50	5.50	6.10	12.40	6.10	9.90	83.80
	Bute	Pladda	2.41	4.50	5.92	2.28	.68	2.64	2.58	3.74	3.00	5.64	2.77	5.73	41.89
	Argyll	Loch Gilphead	5.70	5.20	8.60	1.90	.60	4.80	4.40	6.50	3.60	8.50	2.30	6.90	59.00
	"	Dalmally	7.96	4.78	11.03	2.69	2.01	6.34	5.67	5.12	3.58	8.94	2.96	6.46	67.54
XVI.	"	Airds	7.20	4.90	7.10	1.80	1.00	6.50	4.30	4.10	2.60	7.60	3.00	5.20	55.30
	"	Glenborrodale	4.50	3.61	6.22	1.02	1.27	5.16	5.26	5.35	2.28	7.89	3.31	5.52	51.39
	"	Devaar	2.47	5.82	5.29	2.08	.38	3.46	3.51	3.88	2.38	5.60	2.55	7.66	45.08
	"	Islay (Ballabus)	3.94	5.53	4.20	2.37	1.17	4.34	3.46	5.92	3.35	5.78	3.28	8.67	52.01
XVII.	"	Jura	4.29	4.25	5.49	1.11	.61	6.61	6.27	6.98	3.40	9.19	3.19	6.80	58.19
	"	Tyre (Hynish)	6.68	6.94	7.39	2.98	.75	3.34	3.71	4.74	1.32	4.80	2.39	4.02	49.06
	Fife	Crail (Cambo House)	1.53	5.68	2.72	4.15	.55	2.46	1.85	3.19	4.90	3.46	5.70	8.39	44.58
	"	Auchtermuchty	2.45	4.50	3.45	3.48	.36	3.06	2.81	3.82	3.68	4.35	4.63	10.02	46.61
XVIII.	"	Callander (Lenny)	6.80	5.80	9.60	2.60	.05	5.50	2.50	4.60	3.60	9.40	4.60	10.20	65.25
	"	Auchterarder.....	2.42	4.14	3.71	1.83	1.85	1.82	1.15	1.17	4.38	4.95	2.82	7.54	37.78
	"	Grandtully	2.09	3.46	4.57	2.25	.63	3.36	1.67	2.74	2.72	5.19	2.74	7.70	39.12
	"	Dalnaspidal	5.91	4.75	9.18	2.83	1.65	4.48	2.87	2.88	4.18	8.44	2.90	7.43	57.50
XIX.	Forfar.....	Dundee	1.63	3.34	2.35	4.19	.30	3.10	1.76	1.57	3.63	4.43	6.01	10.81	43.12
	Kincardine	The Burn	1.90	4.60	2.70	3.10	.60	2.80	.90	1.80	3.70	4.80	5.70	9.00	41.60
	Aberdeen	Braemar.....	1.61	2.49	4.31	2.52	1.22	3.14	1.67	2.43	2.55	3.53	2.86	8.70	37.03
	"	Coldstone (Manse) .....	.92	3.56	3.33	2.55	1.32	1.94	1.12	1.55	3.07	3.22	3.10	10.20	35.88
XX.	"	Inverury	1.00	6.25	7.88	3.88	.75	1.50	2.00	1.38	3.25	3.00	4.69	10.00	45.58
	"	New Byth	1.19	5.73	4.19	2.62	2.02	1.20	3.30	2.92	5.85	3.29	4.99	5.94	43.24
	Banff	Gordon Castle .....	.77	3.38	4.99	1.96	1.23	1.40	2.07	1.99	5.39	2.96	2.63	7.18	35.95
	Moray	Elgin (Ashgrove) .....	.84	3.17	4.99	2.32	1.17	1.87	1.12	1.74	3.60	2.67	2.02	3.61	29.12
XXI.	Nairn.....	Nairn .....	.65	2.74	3.38	1.95	.71	2.21	1.53	1.30	3.26	2.52	1.79	3.00	25.04
	Ross	Applecross	5.50	4.07	8.18	3.26	2.29	4.61	4.59	3.24	1.80	2.49	3.19	3.00	46.22
	"	Gairloch	3.11	4.02	5.40	2.62	2.18	3.69	3.59	2.44	3.31	5.10	2.94	2.55	40.95
	"	Lochbroom	4.46	4.58	6.75	3.07	2.16	2.76	2.53	2.63	3.17	3.70	1.58	5.07	42.46
XXII.	"	Bernera	6.20	7.10	6.30	4.40	4.10	2.20	2.15	2.75	3.90	3.15	5.25	6.20	53.70
	"	Invergordon .....	.99	3.11	3.16	2.12	1.07	1.56	1.51	2.75	3.10	2.50	2.81	4.38	27.60
	"	Inverie	6.50	4.60	10.00	3.30	3.00	5.80	4.60	5.70	3.90	5.40	1.70	4.90	59.40

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.	
XVIII.	Inverness	Skye (Sligachan)	15.00	6.75	8.75	5.00	.75	8.50	4.50	3.25	4.38	8.25	2.75	4.75	72.63	
	"	Dunvegan	13.55	4.59	6.63	5.72	.87	8.97	5.25	5.13	3.51	9.29	3.06	6.03	72.60	
	"	Aviemore	1.53	2.25	4.01	2.06	.87	2.29	1.69	1.39	3.27	2.46	1.41	2.70	25.93	
	"	Farraline	3.00	4.10	7.90	2.50	2.10	1.70	1.70	1.60	2.50	3.00	2.90	2.50	36.40	
XIX.	"	Glenstrathfarrer	6.41	4.52	9.01	1.73	2.19	3.13	1.71	3.19	1.26	3.28	1.51	4.97	42.91	
	Sutherland	Laigh H. R. S.	2.10	5.34	6.47	4.06	1.64	2.32	3.02	1.97	4.46	3.12	3.82	6.09	44.41	
	"	Helmisdale	1.39	4.49	7.32	2.98	1.40	2.03	3.30	5.70	6.00	6.00	4.50	7.00	8.90	73.90
	"	Assynt (Achumore)	4.40	8.90	10.20	4.80	4.20	3.30	3.30	5.70	6.00	6.00	4.50	7.00	8.90	73.90
XX.	"	Wick	2.15	4.98	5.43	3.15	.96	1.47	2.89	2.36	3.56	4.21	4.49	6.08	41.73	
	Caithness	Balfour	2.50	2.20	4.60	2.10	1.20	1.00	2.10	2.00	2.60	5.10	6.00	4.30	35.70	
	Orkney	East Yell	5.18	2.93	7.97	3.20	2.27	2.30	2.69	4.97	7.26	4.84	5.34	6.24	2.34	47.76
	Shetland	Skilboreen	2.61	5.21	2.59	4.75	.10	1.17	2.55	2.26	7.26	4.39	6.24	6.27	45.40	
XX.	Cork	Cork, (Royal Institution)	2.15	3.46	2.78	2.77	.10	.80	.74	2.30	3.82	5.99	4.87	6.95	36.73	
	"	Fermoy (Glenville)	3.44	5.41	4.99	3.86	.39	1.27	1.77	4.11	6.14	6.34	7.76	9.31	54.79	
	"	Darynane	3.33	6.70	4.48	4.80	.83	2.56	2.56	2.35	5.64	7.11	5.35	6.19	8.90	53.24
	"	Dromore Castle.	3.93	7.89	7.50	5.16	1.29	2.48	2.48	2.75	5.23	6.07	6.14	7.32	10.39	66.15
XX.	"	Cara, Lake Side	4.05	5.72	4.94	3.17	.76	2.55	2.29	3.35	5.14	5.10	5.85	7.35	50.27	
	"	Tralee, (Godfrey Place)	3.03	4.99	4.72	2.89	1.11	2.88	2.88	1.75	3.60	3.98	4.15	4.07	8.05	45.22
	Waterford	Cappoquin	2.07	5.53	4.68	3.65	.42	1.58	1.89	4.07	6.10	6.08	5.67	8.72	50.46	
	"	Roanmore Lodge	2.00	5.32	3.48	2.32	.50	1.04	1.99	3.29	4.76	4.76	6.39	5.19	8.51	44.79
XX.	Tipperary	Clonmel	2.37	5.57	4.10	3.65	.54	1.42	1.72	3.68	4.46	6.21	4.86	8.50	47.08	
	"	Tipperary, Henry Street	1.28	4.11	4.83	3.23	.73	1.34	1.32	2.91	4.25	3.72	4.55	7.90	40.17	
	"	Gurteen	1.08	4.38	4.75	2.20	.98	1.60	1.45	3.90	5.03	3.27	2.71	5.15	36.50	
	"	Newcastle West	1.13	4.39	4.82	2.49	.78	1.46	1.38	3.82	4.49	3.38	3.57	4.52	36.59	
XX.	Clare	Nenagh (Castle Lough)	2.02	4.76	4.70	2.82	.78	2.41	1.50	4.06	4.81	4.08	3.71	5.22	40.87	
	"	Ennis	1.42	5.12	4.77	3.47	.55	2.03	1.36	3.97	5.02	4.73	3.95	6.06	42.45	
	"	Miltown Malbay	2.36	4.50	3.87	3.26	.93	2.56	3.10	4.47	5.91	4.48	4.99	5.62	46.05	
	Wexford	Wexford (Reclaimed Lands)	1.30	5.25	2.12	2.25	.18	1.30	2.60	4.15	4.56	5.20	5.40	9.86	44.17	
XXI.	"	Ballyhyland	2.04	6.69	3.37	3.19	.74	1.48	2.54	4.67	5.31	5.08	5.49	8.52	50.12	
	"	Gorey (Courtown)	1.79	5.32	2.31	2.56	.42	1.28	1.99	2.54	5.23	5.39	6.57	8.64	44.04	
	"	Tullagher	3.37	6.83	4.19	3.00	.91	1.24	1.19	3.94	6.84	8.72	6.94	13.63	60.80	
	"	Kilkenny (Butler House)	.93	4.63	3.18	2.24	.61	1.11	1.26	3.73	3.98	4.82	3.79	8.05	38.33	
XXI.	Carlow	Brown's Hill.	1.15	4.78	2.77	2.56	.58	1.12	1.27	3.52	3.26	4.96	4.56	8.26	38.79	
	Queen's Co.	Abbey Leix, Blandsford	.77	4.45	3.44	2.15	.43	1.51	1.25	4.21	2.87	3.79	3.06	7.40	35.33	
	"	King's Co.	1.00	3.62	3.21	2.11	.38	1.67	.86	3.90	3.55	3.17	3.41	6.29	33.17	

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.	
XXI.	King's Co.	Tullamore .....	.95	4.24	3.17	2.77	.59	1.37	1.37	3.70	3.70	2.54	3.31	5.76	33.47
	Kildare	Naas, (Ballymore Eustace) ..	1.53	3.98	3.52	2.43	.85	2.12	1.61	4.42	3.59	4.87	2.60	7.52	39.04	
	Dublin	Glasnevin Botanic Gardens ..	.34	3.17	2.18	2.38	1.09	1.57	1.49	2.39	3.57	4.23	3.68	6.21	32.30	
	"	Balbriggan .....	.70	4.07	2.55	1.75	.46	1.85	1.21	3.78	3.75	5.72	5.39	8.61	39.84
	Meath	Trim	1.04	3.76	3.20	2.39	1.10	1.61	1.26	3.21	3.85	3.57	3.62	7.96	36.57	
	Westmeath	Athlone	1.68	4.45	4.07	2.59	.58	1.69	1.55	4.56	6.07	5.27	4.29	7.19	43.99	
	"	Mullingar (Belvedere)	1.57	5.54	3.59	2.95	.85	1.68	1.49	4.64	4.59	3.22	3.58	7.25	40.95	
	"	Castle Bellingham	1.68	4.61	2.99	2.02	.88	1.46	1.21	3.84	4.03	3.91	5.22	8.43	40.28	
	Louth.....	Stephenstown	1.48	3.60	2.70	2.01	.54	1.44	1.12	2.88	3.81	3.42	4.02	7.73	34.75	
	"	Queen's College	2.95	5.31	4.78	3.74	.85	2.27	3.39	3.07	5.61	4.63	4.58	5.85	47.03	
XXII.	Galway	Ballinasloe	1.77	3.81	3.68	2.48	.67	1.54	1.57	4.33	5.23	4.33	3.07	5.35	37.83	
	"	Clifden Kylemore.....	9.66	9.85	8.24	6.85	2.10	6.11	4.36	7.45	6.15	9.66	10.84	14.06	95.33	
	"	Tuam	2.35	4.62	3.44	2.98	.64	1.85	1.76	4.00	4.75	4.10	4.30	6.13	40.92	
	"	Holywell	2.10	4.70	2.70	1.80	1.60	1.50	3.00	5.20	3.40	4.70	4.50	6.70	41.90	
	Roscommon	Westport	3.35	5.34	5.22	2.79	.54	2.55	2.35	3.92	4.16	4.74	5.66	7.02	47.44	
	Mayo	Crosmolina, Enniscoe	4.91	7.02	7.15	3.84	.72	3.32	3.32	1.96	4.08	4.63	4.58	5.52	7.19	54.92
	"	Collooney, Markree	2.10	5.52	5.10	2.81	.49	1.60	1.90	3.84	3.13	4.29	3.53	6.66	40.97	
	Sligo	Ballinful	1.24	4.47	3.80	2.55	.52	1.35	1.11	2.11	3.36	1.44	1.00	2.49	25.44	
	"	Carrick-on-Shannon	2.19	5.52	4.13	2.63	.61	1.83	1.24	1.74	3.70	6.45	4.38	3.61	5.76	42.05
	"	Cavan	2.91	3.57	2.95	1.39	.36	1.17	1.79	2.48	2.48	2.36	2.57	4.45	6.79	32.79
XXIII.	Fermanagh	Enniskillen, Lisbellaw ..	2.43	4.24	4.89	2.74	.76	1.95	1.69	3.35	5.43	4.35	3.01	6.74	41.58	
	Monaghan.....	Rockcorry	1.65	4.48	3.87	2.18	.59	1.41	2.00	3.42	4.15	3.67	2.81	7.31	37.54	
	Armagh.....	Armagh.....	1.40	3.61	3.19	1.49	.42	1.43	2.05	2.22	2.36	3.22	2.51	6.77	30.67	
	Down.....	Castlewellan, Foffany	5.00	7.50	2.63	5.20	.60	3.90	1.74	7.82	8.72	9.15	11.37	19.05	82.68	
	"	Newtownards	1.34	3.55	2.47	1.56	.44	2.69	1.69	3.08	3.08	5.03	6.06	7.58	39.77	
	"	Belfast, Elmgrove House....	1.48	4.31	3.10	1.78	.70	2.96	1.98	1.98	2.80	3.74	4.34	4.69	40.79	
	"	Carnlough	2.14	6.14	6.32	2.58	.92	2.81	2.96	3.83	4.25	5.50	4.78	9.69	51.72	
	"	Bushmills	1.67	3.47	4.49	2.03	.57	2.97	2.78	3.77	3.66	4.44	4.44	3.05	6.06	38.96
	"	Newtown Limavady	1.83	3.69	5.21	2.25	.46	2.38	2.31	3.82	3.81	3.74	2.77	6.55	38.82	
	"	Pomeroy.....	2.18	5.89	4.62	1.52	.62	2.56	2.56	3.13	4.46	5.41	3.89	9.08	44.94	
Donegal.....	Ballyshannon	1.85	4.60	3.16	2.03	.97	2.08	2.08	2.44	3.63	3.70	3.86	3.67	5.21	37.20	
	"	Inver Glebe	2.78	5.39	7.02	4.38	1.27	3.21	2.54	4.34	4.42	4.41	4.62	5.88	49.06	
	"	Ramelton	2.48	4.18	5.94	3.21	.65	2.56	1.76	2.66	4.03	5.18	3.47	5.58	42.90	
	"	Dunfanaghy	2.24	4.29	4.84	3.87	.96	2.90	2.67	2.81	3.10	4.71	3.25	6.13	41.77	
	"	"	3.03	5.79	4.73	2.81	.64	2.93	2.45	4.00	4.04	4.23	4.61	8.07	47.33	

COMPARISON OF THE RAINFALL IN 1876 WITH THE AVERAGE OF PREVIOUS YEARS.

ENGLAND AND WALES.

Div.	STATION.	COUNTY.	Average			Depth in 1876.	Difference from Average, 1860-5	
			1850-9.	1860-9.	1860-5.		Per Amount. cent	
			in.	in.	in.	in.	in.	
I.	Camden Square	Middlesex ...	(24·30)	25·68	25·01	26·16	1·15	+ 5
II.	Chichester (Shopwyke)...	Sussex	26·25	29·19	28·41	31·61	3·20	+ 11
"	" (Chilgrove) ...	"	32·23	33·22	32·77	35·31	2·54	+ 8
"	" (W. Dean) ...	"	35·30	37·08	37·02	39·79	2·97	+ 5
"	Ventnor, Isle of Wight...	Hants	28·46	(29·07)	29·26	33·99	4·73	+ 16
III.	Hemel Hempstead	Herts	26·43	26·39	25·47	33·15	7·68	+ 31
"	Berkhempstead	"	28·05	29·28	28·02	34·10	6·08	+ 22
"	Hitchin	"	24·72	23·92	23·25	30·26	7·01	+ 30
"	High Wycombe	Bucks	23·20	25·71	24·29	28·77	4·48	+ 18
"	Althorp	Northants ...	20·34	23·35	21·77	29·37	7·60	+ 35
"	Cardington (8 in. gauge)..	Bedford	21·60	22·49	21·87	29·52	7·65	+ 35
IV.	Norwich (Honingham) ...	Norfolk	25·99	23·98	23·28	31·18	7·90	+ 34
"	Holkham	"	26·13	23·88	23·10	33·45	10·35	+ 45
V.	Plymouth (Ham)	Devon	44·70	42·89	42·17	52·13	9·96	+ 24
"	Exeter Institution	"	26·91	31·76	30·17	40·30	10·13	+ 33
"	Bodmin	Cornwall	43·48	47·71	46·12	52·89	6·77	+ 15
VI.	Burford	Shropshire ...	25·52	26·74	26·25	29·99	3·74	+ 14
"	Shiffnal (Haughton Hall)	"	24·02	24·87	23·74	35·13	11·37	+ 48
"	Orleton	Worcester ...	28·82	30·90	30·06	36·15	6·09	+ 20
VII.	Spalding, (Pode Hole) ...	Lincoln	23·38	25·34	25·11	31·00	5·89	+ 23
"	Welbeck	Notts	23·29	24·64	24·02	32·14	8·12	+ 34
VIII.	Bolton (The Folds)	Lancashire ...	44·01	48·98	48·33	46·10	2·23	— 5
"	" (Belmont)	"	51·19	56·61	55·70	61·40	5·70	+ 10
"	Ormskirk (Rufford)	"	33·24	35·00	34·81	36·57	1·76	+ 5
"	Stonyhurst	"	43·40	48·56	49·08	47·25	1·83	— 4
"	Holker	"	39·17	45·63	44·98	43·84	1·14	— 3
IX.	Redmires	York, W.R. ...	37·86	39·68	37·89	46·54	8·65	+ 23
"	Standedge	"	49·58	53·70	52·17	53·75	1·58	+ 3
"	Leeds (Holbeck, M. & Co.)	"	20·91	22·85	21·98	27·68	5·70	+ 26
"	York	"	22·02	24·48	23·38	31·43	8·05	+ 34
X.	Seathwaite	Cumberland..	126·98	154·05	153·47	114·03	39·44	— 26
"	Keswick (Post Office) ...	"	55·01	62·40	60·56	51·51	6·05	— 10
XI.	Holywell (Maes-y-dre) ...	Flint	24·25	24·43	23·58	26·94	3·36	+ 14
"	Guernsey	Channel Isds.	34·46	37·18	37·09	41·71	4·62	+ 12

COMPARISON OF THE RAINFALL IN 1876 WITH THE AVERAGE OF PREVIOUS YEARS.

SCOTLAND.

Div.	STATION.	COUNTY.	Average			Depth in 1876.	Difference from Average, 1860-5	
			1850-9.	1860-9.	1860-65.		Per Amount.	cent
			in.	in.	in.	in.	in.	
XII.	Mull of Galloway ... L.H.	Wigtown.....	22·52	27·66	28·31	30·81	2·50	+ 9
„	Little Ross ... L.H.	Kirk'udbright	25·27	26·98	27·35	49·85	22·50	+ 82
XIII.	Glencorse	Edinburgh ...	36·96	37·45	36·77	45·00	8·23	+ 22
„	Inveresk	„	24·72	29·02	30·05	38·70	8·65	+ 29
XIV.	Bothwell Castle	Lanark.....	27·76	28·89	28·33	34·84	6·51	+ 23
„	Cessnock Park	„	34·01	37·96	37·98	47·29	9·31	+ 24
„	Waulk Glen	Renfrew	43·94	49·85	48·96	50·85	1·89	+ 4
XV.	Arddaroch	Dumbarton..	66·55	78·32	75·83	82·78	6·95	+ 9
„	Pladda	L.H. Bute	35·23	40·14	38·12	41·89	3·77	+ 10
„	Mull of Cantyre	L.H. Argyll	41·19	44·17	44·61	50·62	6·01	+ 13
„	Rhinns of Islay	L.H. „	30·58	33·43	32·66	39·16	6·50	+ 20
„	Castle Toward.....	„	47·88	54·55	53·80	49·20	4·60	— 9
„	Tyree (Hynish)	L.H. „	73·90	79·99	84·77	49·06	35·71	— 42
„	Lismore	L.H. „	38·44	46·22	46·95	36·41	10·54	— 22
„	Ardnamurchan	L.H. „	38·50	45·59	47·94	48·46	·52	+ 1
XVI.	Dundee (Hill Head)	Forfar	31·06	35·19	35·59	50·64	15·05	+ 42
„	„ (Craigton)	„	31·87	34·88	35·64	50·94	15·30	+ 43
„	Arbroath	„	25·08	29·05	29·71	37·87	8·16	+ 27
XVII.	Girdleness[Aberdeen] L.H.	Kincardine ...	19·71	22·72	22·13	21·49	·64	— 29
„	Buchanness... ..	L.H. Aberdeen.....	23·40	25·59	22·51	19·13	3·38	— 15
XVIII.	Cromarty.....	L.H. Cromarty ...	23·67	25·94	27·80	23·59	4·21	— 15
„	Barrahead	L.H. Inverness W.	32·67	31·73	32·62	30·97	1·65	— 5
„	Culloden	Inverness, E.	22·70	27·08	26·86	25·66	1·20	— 4
XIX.	Cape Wrath	L.H. Sutherland...	36·94	39·37	39·59	34·86	4·73	— 12
„	Noss Head	L.H. Caithness ...	25·57	24·70	23·57	37·02	13·45	+ 57
„	Pentland Skerries ... L.H.	„	24·12	28·76	28·92	32·75	3·83	+ 13
„	Sandwick	Orkney	36·14	38·85	36·79	39·12	2·33	+ 6

IRELAND.

XX.	Cork	Cork	34·23	34·77	34·41	36·73	2·32	+ 7
XXI.	Portarlington	King'sCounty	26·94	36·86	41·38	32·65	8·73	— 21
„	Tullamore	„	24·37	27·94	28·09	33·47	5·38	+ 19
„	Woodstock	Kilkenny.....	36·35	39·38	38·83	53·68	14·85	+ 38
XXIII.	Armagh	Armagh	(28·20)	32·01	32·40	30·67	1·73	— 5
„	Belfast (Linen Hall) ...	Antrim	30·01	36·77	37·12	38·95	1·83	+ 5

ABSTRACT.

England	34·27	37·11	36·30	39·95	3·65	+ 18
Scotland	34·09	37·93	37·93	40·70	2·77	+ 10
Ireland.....	30·02	34·62	35·37	37·69	2·32	+ 7
Mean of the whole	32·79	36·55	36·53	39·45	2·91	+ 12

COMPARISON OF THE RAINFALL OF 1876, WITH THE AVERAGE FOR
THE SIX YEARS 1860-5.

ENGLAND AND WALES.

There are in the foregoing table only five stations at which the fall in 1876 was below the average, and they are all between Bolton, in Lancashire, and Carlisle, in Cumberland.

At the rest of the stations it averaged 22 per cent. in excess, the greatest excess being in Norfolk, and at one of the Shropshire stations.

For the whole of England and Wales the average was 18 per cent. in excess.

SCOTLAND.

Here we have a series of extremely large per-centages, some of them extraordinary if not incredible. For instance, at Little Ross, Kirkcudbright, the average for three distinct periods has been between 25 and 27 in., and yet for 1876 the report is nearly double: there is, in fact, an excess of 82 per cent. On the other hand, one would doubt the deficiency of 42 per cent. at Hynish; but the deficiencies at Castle Toward and Lismore support it. We do not presume to decide whether the Lighthouse records should be worked in or not; we have this year marked L.H. against them for the convenience of investigators, and we have only to add that the mean excess including them is 10 per cent., and excluding them it is 18 per cent.

IRELAND.

The few old established stations show an average excess of 7 per cent., but they are insufficient to show the general distribution.

BRITISH ISLES.

Excluding the Light Houses, the above gives the mean result for the whole of the British Isles as an excess of 14 per cent.; including them as has been done in previous years it is 12 per cent.

COMPARISON OF THE RAINFALL OF 1876 WITH THE AVERAGE FOR
TEN YEARS, 1860—69.

ENGLAND AND WALES.

THE fall in 1876 was *below* the average only in West Derbyshire, East Cheshire, West Lancashire and the English Lake District.

It was near the average in the south-east and extreme south-west of England, and in Cheshire, Lancashire and Yorkshire.

In other parts it was from 20 to 40 per cent. in excess. The following are some of the largest excesses, and they are generally supported by adjacent stations :—

						Excess above 1860-9 average.
Div. II.	Englefield, Reading, Berks	...	...	...	...	38 per cent.
„ III.	Harecroft House, Wisbeach, Cambridgeshire	...	...	...	...	31 „
„ IV.	Cossey, Norwich, Norfolk	...	...	...	...	31 „
„ „	Holkham, Norfolk	...	...	...	...	40 „
„ VI.	Rocklands, Ross, Herefordshire	...	...	...	...	30 „
„ VII.	Belvoir Castle, Leicestershire	...	...	...	...	33 „
„ „	Grantham, Lincolnshire	...	...	...	...	34 „

The gauges of the M. S. and L. R. Co. having been repaired, &c., in 1875 (*British Rainfall*, 1875, p. 158), we have not quoted them in the above list, although they show an even greater excess than Grantham. They give an excess of 43 per cent. at Lincoln and 47 per cent. at Market Rasen, but this excess may be real, or it may be due to more accurate measurement.

Taking the whole of England and Wales, there are 160 stations of which the records are perfect for the ten years, 1860—9, and also perfect for 1876, and the result of their comparison is to show that the fall in 1876 was 14 per cent. greater than the 1860—9 average.

SCOTLAND.

The features seem more clearly marked, and more accordant than is usual, in Scotland. There is a large excess in the east, and especially in the south-east, where there is an *average* excess of 30 per cent. Argyllshire and the northern counties have about the average, and the north-western counties appear to have had a deficiency.

There are 79 perfect records, but 33 are from lighthouses; they have not been used for the foregoing remarks, nor in deducing the mean for the whole country, which, according to the 46 ordinary stations, is 13 per cent. greater than the 1860—9 average.

IRELAND.

There is great difficulty in speaking positively as to the relation of the rainfall of recent to past years in this country, owing to great scarcity of old registers, and even of registers extending back to 1860 there are but 8 available. They show an average excess of 12 per cent., but we do not know that that value is correct.

BRITISH ISLES.

We have seen that in England and Wales the excess averaged 14 per cent., in Scotland 13 per cent., and in Ireland 12 per cent. above the mean of 1860—9. In *British Rainfall*, 1871, p. 67, we showed that the decade 1860—9 was about 1 per cent. above the mean of a long series of years (1810—69), hence we finally arrive at the conclusion that, according to the above data, the average fall over the British Isles in 1876 was 14 per cent. greater than the average of sixty years, 1810—69.

COMPARISON OF THE RAINFALL IN 1875 AND 1876.

One process to which every entry in the general tables is submitted is the comparison of the fall in each year with that in the previous one. These values are the best guide to the changes which occur from year to year.

Their results may be briefly summed up.

The fall in 1876 was less than that in 1875 in Middlesex, the South Midland Counties, the West Midland Counties, and in South Wales.

The two years had within an inch or so the same fall in both years, in Surrey, Berks, the Eastern Counties, Somerset, the Lake District, the North-Western Counties of Scotland, and in Munster.

The fall in 1876 was greater than that in 1875 in Sussex, Devon, the North Midland, and all North-Eastern Counties in North Wales and throughout Scotland and Ireland, except the two districts previously noticed.

EXTREMES OF RAINFALL IN 1876.

Largest Rainfall at Pen-y-gwyrdd, near Beddgelert, North Wales..... 121·99 in.
 Least Rainfall at Horseway Lock, Chatteris, Cambridgeshire 19·26 in.

ENGLAND.

GREATEST.		LEAST.	
Div.	in.	Div.	in.
+ X. Seathwaite	114·58	III. Chatteris (Horseway Lock) ..	19·26
„ Helvellyn (Birkside) ..	109·75	IV. Ash Bocking	20·01
V. Dartmoor (Med. Off. Lawn) ..	96·92	VII. Crowle (Keadby)	20·53
X. Easedale Tarn ..	91·50	IV. Tilbury Vicarage ..	21·02
„ Kirkstone Pass	90·76	II. Canterbury (Harbledon)	22·61
„ Wythburn	89·00	„ Stourmouth	22·72

WALES.

GREATEST.		LEAST.	
Div.	in.	Div.	in.
+ XI. Pen-y-gwryd	121·99	XI. Llandudno (Gt. Orme's Head) ..	27·76
„ Aberdare (Treherbert)	107·78	„ Rhyl	28·84
„ Beddgelert (Bryn Gwynant) ..	107·55	„ Prestatyn (Nant)	29·84
„ Pontypridd (Treorchy)	104·65	„ Llanerch Park (St. Asaph) ..	29·99
„ Rhiwbrifdir	98·64	„ St. Asaph (Nantllys)	30·08
„ Neath (Glyncorrwg)	93·25	„ Denbigh (Glan-y-Wern)	30·88

SCOTLAND.

GREATEST.		LEAST.	
Div.	in.	Div.	in.
XVIII. Glenquoich	97·03	XVII. Nairn (Acharéidh)	23·52
XV. Loch Lomond (Firkin)	96·80	XVIII. Dalwhinnie	24·64
XVI. Glen Gyle	93·70	XVII. Nairn B. L. Bank	25·04
XVIII. Loch Shiel (Glenfinnan) ..	89·12	„ Forres	25·51
XV. Ben Lomond W.W.	83·80	XVIII. Culloden	25·66
„ Strontain (Lendale)	83·12	„ Aviemore	25·93

IRELAND.

GREATEST.		LEAST.	
Div.	in.	Div.	in.
XXII. Clifden (Kylemore)	95·33	XXII. Ardtarmon Cottage	25·44
XXIII. Castlewellan (Foffany)	82·68	XXIII. Armagh Obs.	30·67
XX. Dromore Castle	66·15	XXI. Dublin (Glesnevin)	32·30
„ Waterford (Curraghmore) ..	63·90	„ Rush	32·31
XXI. New Ross (Tullogher) ..	60·80	„ Portarlinton	32·65
XXIII. Enniskillen (Florence Court) ..	58·60	„ Dublin (Fitz William Square) ..	32·66

BRITISH RAINFALL IN MILLIMETRES.

As this publication circulates abroad somewhat largely, it has occurred to us that a short table of the rainfall at places marked upon all maps, and given on the metric system, would be useful. The stations are arranged strictly according to latitude.

Total Rainfall in 1876 in Millimetres.

ENGLAND.		ENGLAND.		SCOTLAND.	
Guernsey	1067	Manchester	940	Aberdeen.....	990
Penzance	1168	Hull.....	762	Isle of Skye.....	1854
Plymouth	1270	York.....	787	Inverness.....	686
Brighton	890	Durham	1016	Elgin	762
Southampton ...	915	Kendal.....	1346	Orkney	940
Dover	788			Shetland	1100
Bath.....	889	WALES.			
London	661	Carmarthen.....	1448	IRELAND.	
Oxford	787	Carnarvon	940	Cork.....	1194
Ipswich	635			Waterford	1168
Hereford	813	SCOTLAND.		Galway.....	1190
Cambridge	635	Dumfries	1092	Dublin.....	838
Birmingham ...	813	Lanark.....	838	Dundalk	1340
Norwich	762	Edinburgh	914	Sligo.....	1042
Leicester	787	Glasgow	1194	Armagh	787
Shrewsbury	762	Greenock	1550	Belfast	1016
Lincoln	737	Perth	1118		
Liverpool	863	Dundee	1120		

EXTREMES.

Greatest at Pen-y-gwyrd, near Snowdon (Lat. $53^{\circ}4'$ N., Lon. $4^{\circ}0'$ W.) = 3100 mm.

Least at Chatteris, Cambridgeshire (Lat. $52^{\circ}28'$ N., Lon. $0^{\circ}6'$ E.) = 489 „

GENERAL TABLES
OF
TOTAL RAINFALL IN 1876,
AT ABOUT
2000 STATIONS
IN THE
BRITISH ISLES.

SUGGESTIONS
FOR SECURING UNIFORMITY OF PRACTICE AMONG
RAINFALL OBSERVERS.

I.—SITE. —A rain gauge should not be set on a slope or terrace, but on a level piece of ground, at a distance from shrubs, trees, walls, and buildings—at the very least, as many feet from their base as they are in height. Tall-growing flowers, vegetables, and bushes must be kept away from the gauge. If a thoroughly clear site cannot be obtained, shelter is most endurable from N.W., N., and E., less so from S., S.E., and W., and not at all from S.W. or N.E.

II.—OLD GAUGES.—Old established gauges should not be moved, nor their registration discontinued until, at least, two years after a new one has been in operation, otherwise the continuity of the register will be irreparably destroyed. Both the old and the new ones must be registered at the same time and the results recorded for comparison.

III.—LEVEL AND FIXING.—The funnel of a rain gauge must be set quite level, and so firmly fixed, that it will remain so in spite of any gale of wind or ordinary circumstance. Its correctness in this respect should be tested from time to time.

IV.—HEIGHT.—The funnel of gauges newly placed should be 1 ft. above grass. Information respecting height above sea level may be obtained from the Editor.

V.—RUST.—If the funnel of a japanned gauge becomes so oxidised as to retain the rain in its pores, or threatens to become rusty, it should have a coat of gas tar, or japan black, or a fresh funnel of zinc or copper should be provided.

VI.—FLOAT GAUGES.—If the measuring rod is detached from the float, it should never be left in the gauge. If it is attached to the float, it should be pegged or tied down, and only allowed to rise to its proper position at the time of reading. To allow for the weight of the float and rod, these gauges are generally so constructed as to show 0 only when a small amount of water is left in them. Care must always be taken to set the rod to the zero or 0.

VII.—CAN AND BOTTLE GAUGES.—The measuring glass should always be held upright ; the reading is to be taken midway between the two apparent surfaces of the water.

VIII.—TIME OF READING.—Nine a.m. daily ; if taken only monthly, then 9 a.m. on the 1st.

IX.—DATE OF ENTRY.—The amount measured at 9 a.m. on any day is to be set against the previous one ; because the amount registered at 9 a.m. of, say, 17th contains the fall during 15 hours of the 16th, and only 9 hours of the 17th. (*This rule has been approved by the Meteorological Societies of England and Scotland, cannot be altered, and is particularly commended to the notice of observers.*)

X.—MODE OF ENTRY.—If less than one-tenth ($\cdot 10$) has fallen, the cypher must *always* be prefixed ; thus, if the measure is full up to the seventh line, it must be entered as $\cdot 07$, that is, no inches, no tenths, and seven hundredths. For the sake of clearness, it has been found necessary to lay down an invariable rule that there shall always be two figures to the right of the decimal point. If there be only one figure, as in the case of one-tenth of an inch (usually written $\cdot 1$) a cypher must be added, making it $\cdot 10$. Neglect of this rule causes much inconvenience. All columns should be cast *twice*—once up and once down, so as to avoid the same error being made twice. When there is no rain, a line should be drawn rather than cyphers inserted.

XI.—CAUTION.—The amount should always be written down before the water is thrown away.

XII.—SMALL QUANTITIES.—The unit of measurement being $\cdot 01$, observers whose gauges are sufficiently delicate to show less than that, are, if the amount is under $\cdot 005$, to throw it away, if it is $\cdot 005$ to $\cdot 010$ inclusive, they are to enter it as $\cdot 01$.

XII.—ABSENCE.—Every observer should train some one as an assistant ; but where this is not possible, instructions should be given that the gauge should be emptied at 9 a.m. on the 1st of the month, and the water bottled, labelled, and tightly corked, to await the observer's return.

XIV.—HEAVY RAINS.—When very heavy rains occur, it is desirable to measure immediately on their termination, and it will be found a safe plan after measuring to return the water to the gauge, so that the morning registration will not be interfered with. Of course if there is the slightest doubt as to the gauge holding all that falls, it must be emptied, the amount being *previously* written down.

XV.—SNOW.—In snow three methods may be adopted—it is well to try them all. (1) Melt what is caught in the funnel by adding to the snow a previously ascertained quantity of warm water, and then deducting this quantity from the total measurement, enter the residue as rain. (2) Select a place where the snow has not drifted, invert the funnel, and turning it round, lift and melt what is enclosed. (3) Measure with a rule the average depth of snow, and take one twelfth as the equivalent of water. This being a very rough method, is not to be adopted if it can be avoided. Some observers use in snowy weather a cylinder of the same diameter as the rain gauge, and of considerable depth. If the wind is at all rough, all the snow is blown out of a flat-funnelled rain gauge. Snowdon pattern gauges are much the best.

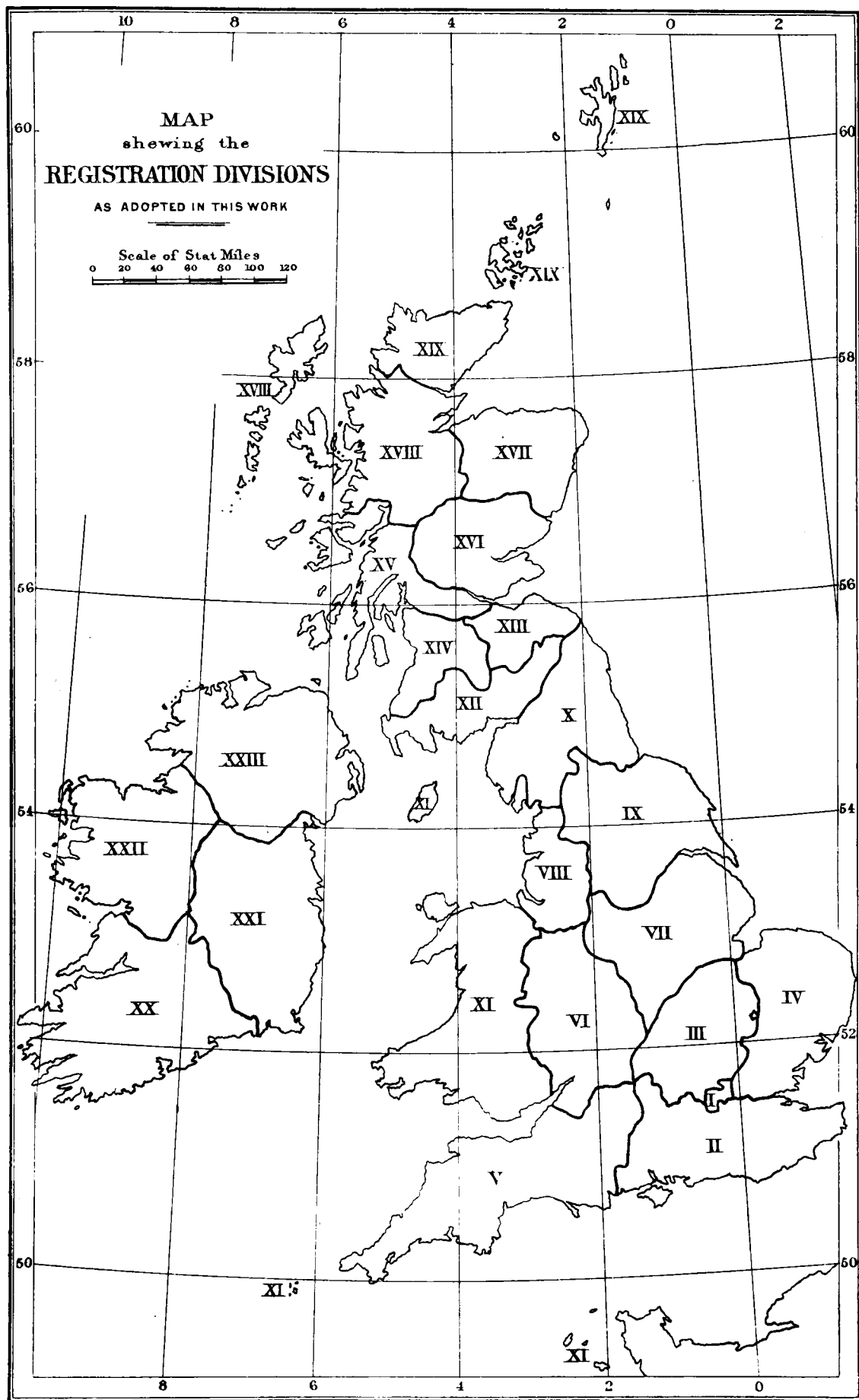
XVI.—OVERFLOW.—It would seem needless to caution observers on this head, but as a recent foreign table contains *six instances on one day* in which gauges were allowed to run over, it is evidently necessary that British observers should be on the alert. It is not desirable to purchase any new gauge of which the capacity is less than four inches.

XVII. SECOND GAUGES.—It is desirable that observers should have two gauges, and that one of them should be capable of holding eight inches of rain. One of the gauges should be registered daily, the other weekly or monthly as preferred, but always on the 1st of each month. By this means a thorough check is kept on accidental errors in the entries, which is not the case if *both* are read daily.

XVIII.—DEW AND FOG.—Small amounts of water are at times deposited in rain gauges by fog and dew, they should be added to the amount of rainfall, because (1) they “tend to water the earth and nourish the streams; and not for that reason only, but (2) because in many cases the rain gauges can only be visited monthly, and it would then obviously be impossible to separate the yield of snow, rain, &c.; therefore, for the sake of uniformity, all must be taken together.”

XIX.—DOUBTFUL ENTRIES.—Whenever there is the least doubt respecting the accuracy of any observation, the entry should be marked with a ?, and the reason stated for its being placed there.

XX.—BREAKAGE.—The Editor has no desire to supply rain gauges or glasses, or in any way to undertake, or interfere with, that which is the business of Opticians; but the continuity and permanent accuracy of the records of his correspondents is to him of such importance, that he deems it advisable to announce that any assistance in his power is always at their service.



ARRANGEMENT AND EXPLANATION OF THE GENERAL TABLES.

The divisions are the same as those adopted by the Registrars General of England and Scotland. Their boundaries are shown on the accompanying map.

The counties follow the same order as in the reports of the beforementioned officers ; but an alphabetical list of the counties is given, with the page or pages on which all returns from each will be found.

The stations in each county are arranged nearly in the order of their latitude from South to North.

In order to facilitate finding the fall in any part of the country, the first name is almost always that of a place given in *Bradshaw*, the *British Postal Guide*, or the *Clergy List* ; the second name is generally added to fix accurately the site of Observation ; but in a very few instances, this second name is in [] instead of () ; it then shows that the nearest town is in an adjoining county. For instance, "Lowestoft (Gisleham)" means Gisleham, near Lowestoft, both being in one county, but "Geldeston [Beccles]" means Geldeston, Norfolk, near Beccles, in another county—Suffolk.

The contents of the columns are sufficiently explained by the headings, except that in the column headed "diameter" figures will occasionally be noticed of a different type from the rest of the tables ; these figures indicate the length of the sides of rectangular mouthed gauges. These measurements are all in inches.

The letter D denotes that a copy of the daily record has been received, that it is perfect throughout the year, and that the printed amount is the correct total of these daily entries.

An asterisk * denotes that the gauge was tested before erection, and a † that it has been visited and examined since. A note of interrogation (?) implies doubt, not necessarily error. ... indicates the absence of information.

BA is employed to indicate gauges originally provided out of the funds of the British Association.

In the column of altitudes several symbols are used, their meaning is as follows:—A, that a series of levels have been taken from the gauge to an Ordnance bench mark ; T, that the height is estimated or ascertained approximately from the same source ; L, that levels have been taken from the gauge to the sea, or to some datum other than Ordnance mean sea level ; B, that the altitude has been taken by the barometer ; and ?, that the height is uncertain.

COUNTY INDEX TO GENERAL TABLES.

E N G L A N D.

Bedford	180	Hereford	188	Oxford	179
Berks	178	Hertford	178	Rutland	191
Buckingham	179	Huntingdon	180	Shropshire	189
Cambridge	181	Kent	175	Somerset	187
Cheshire	193	Lancashire	194	Stafford	189
Cornwall	186	Leicester	191	Suffolk	182
Cumberland	202	Lincoln	191	Surrey	174
Derby	193	Middlesex	173	Sussex	176
Devon	185	Monmouth	204	Warwick	190
Dorset	184	Norfolk	183	Westmoreland	203
Durham	200	Northampton	180	Wiltshire	184
Essex	182	Northumberland	201	Worcester	190
Gloucester	188	Nottingham	192	Yorkshire	196
Hampshire	177				

W A L E S.

Anglesea	206	Carnarvon	206	Merioneth	205
Brecknock	205	Denbigh	205	Montgomery	205
Cardigan	204	Flint	205	Pembroke	204
Carmarthen	204	Glamorgan	204	Radnor	205

I S L A N D S.

Isles of Scilly .....	...	Guernsey	206	Isle of Man	206
Alderney .....	...	Jersey	206	Sark	206

S C O T L A N D.

Aberdeen	213	Elgin (or Moray) ..	214	Orkney	216
Argyll	210	Fife	211	Peebles	208
Ayr	209	Forfar	213	Perth	212
Banff	214	Haddington	208	Renfrew	210
Berwick	208	Inverness	215	Ross	214
Bute	210	Kincardine	213	Roxburgh	207
Caithness	216	Kinross	211	Selkirk	208
Clackmannan	211	Kircudbright	207	Shetland	216
Cromarty	214	Lanark	209	Stirling	210
Dumbarton	210	Linlithgow	209	Sutherland	215
Dumfries	207	Nairn	214	Wigtown	207
Edinburgh	208				

I R E L A N D.

Antrim	221	Kerry	218	Monaghan	221
Armagh	221	Kildare	219	Queen's County ..	219
Carlow	219	Kilkenny	219	Roscommon	220
Cavan	221	King's County	219	Sligo	220
Clare	218	Leitrim	220	Tipperary	218
Cork	218	Limerick	218	Tyrone	222
Donegal	222	Londonderry	222	Waterford	218
Down	221	Longford .....	...	Westmeath	220
Dublin	219	Louth	220	Wexford	219
Fermanagh	221	Mayo	220	Wicklow .....	...
Galway	220	Meath	219		

ENGLAND AND WALES.

DIVISION I.—MIDDLESEX.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter.	Height Above Ground	Height Above Sea Level	1876	
			ft. in.	feet.	inches.	
MIDDLESEX.						
Hampton Wick (The Grove) ...	T. J. Nelson, Esq.	5	1 1	27 ∇	25·42	196
Teddington (Gomer House)	R. D. Blackmore, Esq. ...	5	0 10	26 ∇	24·53	173
Ealing (Clare Lodge).....	H. Doxat, Esq.	5	0 10	200 ?	25·25	..
D Hanworth (Riversdale).....	G. Anderson, Esq.	5	1 4	40	24·55	114
D Chiswick (Roy. Hort. Soc.)	Mr. Sim	8	0 9	25 ∇	24·30	145
D Westminster (Spring Grdns), S.W.	Sir J. W. Bazalgette, CE	8	6 0	35 ∇	23·56	142
" { " " }	" " " ..	12	65 11	95 ∇	23·01	142
" { " " }	" " " ..	8	66 4	95 ∇	21·90	142
London (Guildhall, E.C.)	W. Haywood, Esq. C.E.	8	51 0	98 ∇	21·66	174
" { " " }	" " " ..	8	2 6	49 ∇	22·57	174
D " { Warrington Cres., W. }	K. J. Marks, Esq.	5	0 6	78 ∇	25·86	181
" { " " }	" " " ..	5	0 10	80 ∇	25·08	...
" (Regent's Pk. Roy. Bot. Soc)	W. Sowerby, Esq.	8	1 0	126 ∇	25·43	190
" (Hamilton Terrace, N.W.)..	Miss Cobb	5	0 11	120 ∇	25·20	175
" (Springfield Rd., N.W.) ...	Mr. H. S. Wallis	6	6 0	123 ∇	25·72	...
" (Rochester Square) N.W. ...	J. Nickolls, Esq.	5	1 0	100 ∇	25·45	...
D† " (Camden Square), N.W. ...	G. J. Symons, Esq. ...	8	0 6	111 ∇	26·16	173
" { " " } ... monthly	" " " ..	8	0 8	111 ∇	26·41	...
" (Haverstock Hill)	Mr. W. Smith .....	...	...	...	20·64	...
* Upper Clapton (Hadham Ho.) ...	J. Parnell, Esq.	5	1 1	98 ∇	25·07	182
Hampstead (Roslyn House)	C. H. L. Woodd, Esq. ...	8	1 6	307 ∇	25·76	...
D† " (Branch Hill Lodge). ...	B. Wood Smith, Esq. ...	8	0 10	380 ∇	28·11	165
† " (Squire's Mount)	Rogers Field, Esq. C.E.	5	1 0	388 ∇	26·47	169
" (The Pryors)	" " " ..	5	1 0	327 ∇	25·96	172
* Kentish Town Reservoir Bank...	G. J. Symons, Esq. ...	5	0 10	200 ∇	26·45	...
† Highgate Nurseries	J. Cutbush, Esq.	5	1 0	394 ∇	28·45	161

DIVISION I.—MIDDLESEX—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1876.	
			ft. in.	feet.	inches.	
MIDDLESEX—(con.)						
Child's Hill (Helenslea)	A. J. Woodhouse, Esq.	10	1 0	250	27·94	179
D Harrow (Northwick House)	H. St. J. Joyner, Esq.	5	0 6	200 N	30·16	175
Harrow Weald (The Vicarage)...	Rev. P. J. Knight ...	5	1 1	300 T	30·60	138
D Hornsey	The New River Co. ...	...	3 0	111 T	26·27	179
D† Tottenham (Grove Ho.)	C. Ashford, Esq.	5	1 0	55 T	25·27	145
D† Muswell Hill	J. W. Scott, Esq.	5	0 9	310 T	29·55	193
D Pinner Hill	W. A. Tooke, Esq. ...	5	3 6	410 T	30·39	190
Uxbridge (Harefield Park)	W. F. Vernon, Esq. ...	8	0 8	296 N	29·71	182
D Enfield (Nag's Head Lane)	J. Muir, Esq., C.E. ...	...	3 0	108 T	29·26	200
„ Chase	T. Paulin, Esq.	5	1 0	...	30·57	179
D „ „	„ „ „	8	1 0	...	30·52	179
„ „	„ „ „	5	5 0	...	29·56	179

DIVISION II.—SOUTH-EASTERN COUNTIES.

SURREY.

D Haslemere	J. W. Penfold, Esq. ...	8	4 0	481 N	39·21	187
Godalming (Dunsfold)	Mr. W. Underwood ...	5	2 6	166	25·17	...
Haslemere (Weycombe)	G. B. Buckton, Esq. FRS	5	4 0	583 N	37·58	...
D Dorking (Holmwood)	A. Sconce, Esq.	5	1 2	320 T	36·38	135
Chilworth (Postford House)	J. Pares, Esq.	5	1 6	200 N	30·77	...
Earlswood	G. Grabham, Esq., M.D.	5	1 2	...	31·42	...
Guildford (Guildown)	Miss J. P. Hadden ...	5	0 11	220 T	25·42	146
D Dorking (Horsham Road)	Miss Wilkinson	5	1 0	234 N	35·78	199
D „ (West Street)	Mrs. W. A. Marsh ...	10	35 0	234 T	32·11	182
„ (Brookmead)	T. L. M. Winter, Esq.	4	1 0	200 N	29·77	...
„ (The Denbies) (Foot) ..	G. Cubitt, Esq., M.P. ...	...	...	266 T	32·98	...
„ „ „ (Top) ..	„ „ „ „ „	5	1 0	610 T	34·22	...
† Redhill (Oxford Road)	W. H. Tyndall, Esq. ..	8	1 0	300 N	32·35	188
„ (Thornielee)	Mrs. Southall .....	...	...	295 P	29·83	...
Reigate (Wray Park)	Mr. A. Rosling	5	1 0	330 T	34·36	188
† Weybridge Heath	W. F. Harrison, Esq. ...	8	0 6	150 N	26·69	...
Walton-on-Thames (Hersham)...	G. Dines, Esq.	8	3 0	55 N	24·23	...
D Croydon (Wandle Road)	G. Corden, Esq.	5	1 0	152 N	26·82	171
D „ (Tanfield Lodge)	J. Weston, Esq.	5	0 6	155 N	27·54	176
D „ (Bramley Hill, Beechholme)	W. T. Reynolds, Esq.	5	1 0	...	28·43	185
„ (Waddon House)	P. Crowley, Esq.	8	1 3	...	26·43	173
D*† „ (Addiscombe)	E. Mawley, Esq.	8	0 9	202 N	26·30	184
*† „ „ „ monthly	„ „ „ „	8	0 9	202 N	27·09	...
Surbiton (Grove Road)	C. Mostyn, Esq.	8	1 0	21	23·07	...
„ (Seething Wells)	G. Lott, Esq.	10	0 2	25	24·10	176
Norwood (Beulah Hill)	S. R. Scott, Esq.	5	1 0	...	24·22	...
Wimbledon	T. Devas, Esq.	12	3 0	160 T	23·72	168
D Richmond (Halford House)	J. Billett, Junr., Esq.	5	0 9	50 N	25·27	186
D Kew Observatory	The Kew Committee ...	11	1 9	19 N	24·97	174
D Brixton (Vaughan Road)	Sir J. W. Bazalgette...	5	1 0	41 N	25·09	179
D Peckham (Asylum Road)	„ „ „	5	0 6	15 N	26·15	116

DIVISION II.—SOUTH-EASTERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which 0.1 or more fell
		Diameter.	Height Above Ground.	Height above Sea Level.	1876	
			ft. in.	feet.	inches.	
KENT.						
D Dymchurch	H. D. Good, Esq., C.E.	8	1 0	12 π	28.15	149
D Tenterden	J. Ellis Mace, Jr., Esq.	8	1 5	190 π	29.84	188
" <i>new gauge</i>	" " "	8	1 5	190 π	28.88	181
Benenden (East End)	" " "	8	1 9	193 π	31.43	185
† Cranbrook (Hartley)	G. Pile, Jun. Esq.	5	4 0	405 π	33.58	210
" (Swattenden)	R. Appach, Esq.	8	1 2	350 π	29.40	186
D † Hythe	H. B. Mackeson, Esq.	8	0 6	12 π	37.27	207
Folkestone (Priory Leas)	R. B. Johnstone, Esq.	5	4 3	100 π	27.81	...
D Gowdhurst Vicarage	Rev. J. S. Clarke	5	1 0	412 π	29.54	185
D † Tunbridge Wells (Culverden Grv)	Mr. Townhend	8	0 2	403 π	35.03	193
D " " (Pembury)	W. Brentnall, Esq.	8	1 8	181 π	29.83	154
D † Dover (Russell Street)	H. J. Poulter, Esq.	5	1 0	30 π	31.52	148
" (Buckland)	Mr. J. Donaldson	5	1 4	50 π	30.98	...
D Acrise	G. C. Woollett, Esq.	8	0 6	484 π	35.74	198
D Ashford (Beaver Green)	T. Nickalls, Esq.	5	1 0	155 π	30.17	195
D " (East Hill)	J. S. Burra, Esq.	8	1 0	126 π	28.93	153
D " (High Street)	T. Thurston, Esq.	6	6 0	176 π	37.36	168
Tunbridge (Southborough)	Mr. W. Page	5	1 2	377 π	28.35	...
D " (St. Mary's)	W. C. Punnett, Esq.	5	2 0	96 π	28.77	163
D Staplehurst Park	Mr. W. Wilson	5	1 0	73 π	31.79	187
Edenbridge (Falconhurst Court).	J. G. Talbot, Esq., M.P.	5	1 0	400 π	32.74	181
Deal (Northbourne)	H. J. Hannam, Esq.	5	1 2	...	29.51	...
D † Maidstone (Linton Park)	Mr. J. Robson	8	0 6	296 π	26.10	190
† " (East Sutton Park)	Mr. T. Skinner	8	1 2	387 π	27.21	...
D † " (Hunton Court)	Mr. P. Goddard	8	0 6	80 π	26.08	147
D " (East Farleigh)	J. Case, Esq.	5	1 6	120 π	26.65	173
Charing (Otterden)	Rev. W. A. Paxton	5	1 0	507 π	30.31	...
† Sandwich (Walton House Eastry)	Colonel Rae	5	1 0	53 π	25.26	...
D Canterbury (Chilham)	J. Marten, Esq.	5	1 0	330 π	29.64	176
Faversham (Throwley Parsonage)	Rev. F. Neame, Junr.	5	1 0	275 π	30.23	...
D Selling (Gosmere)	W. Butcher, Esq.	5	1 0	255 π	29.62	150
D Canterbury (Bridge Street)	Mr. J. Reid	5	1 6	52 π	26.40	182
" (Harbledown)	Miss Metcalfe	...	14 0	...	22.61	149
D Aylesford (Preston Hall)	Mr. Bradley	8	1 0	65	29.68	153
† Faversham (Brogdale)	W. C. Stunt, Esq.	5	4 0	140 π	24.49	154
D Seven Oaks (River Hill)	J. T. Rogers, Esq.	8	4 0	535 π	28.85	143
D " (Riverhead Vic.)	Rev. J. B. Murdoch	5	0 6	300 π	36.23	174
D East Malling (Clare House)	J. M. Clabon, Esq.	5	3 4	130 π	26.58	172
† Selling (Harefield)	E. Neame, Esq.	5	1 0	217 π	31.83	215
† Sheldwich	Rev. B. S. Malden	5	1 0	259 π	30.28	146
D Stourmouth	Rev. R. Drake	5	1 0	12 π	22.72	110
Ramsgate	The Meteorological Soc	...	...	...	24.21	141
" (The Vale)	M. Jackson, Esq.	5	1 0	90	23.68	132
D † Margate (Acol)	E. S. Lendon, Esq.	5	1 0	60 π	25.28	125
D Sittingbourne	G. Payne, Junr., Esq.	5	1 1	38	25.96	...
D † Bromley Common, S.E.	Rev. A. Rawson	8	1 0	250 π	29.89	180
† Foot's Cray (Sidcup)	Miss Berens	5	0 8	231 π	25.44	...
D † Beckenham (Foxgrove)	Percy Bicknell, Esq.	5	0 5	141 π	24.07	169

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which .01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level.		
			ft. in.	feet	inches.	
KENT—(con.)						
D† Beckenham (Foxgrove)	Percy Bicknell, Esq....	5	4 0	145 T	23·36	163
D† Dartford (The Downs).....	R. F. Jarvis, Esq.....	5	2 4	162 T	23·77	143
D† Eltham Green (Garden)	E. J. C. Smith, Esq....	5	1 0	80 T	25·81	162
D Lee (Blessington Road).....	J. Grant, Esq., C.E. ...	10	4 9	49 T	28·15	170
Blackheath	J. Glaisher, Esq., F.R.S.	8	0 5	160	25·90	170
Greenwich (Royal Observatory)..	Sir G. B. Airy, F.R.S..	8	0 5	155 T	24·09	167
D Deptford (Pumping Station).....	Mr. W. Jeffree	10	0 4	18 T	28·28	177
D Erith (Crossness)	Mr. F. E. Houghton...	11	0 6	16 T	28·22	168
" "	" " "	10	0 6	24 T	30·01	166
" "	" " "	11	0 6	6	28·48	166
WEST SUSSEX.						
† Bognor (Aldwick)	H. Upton, Esq.	5	1 0	12	28·71	...
D† Worthing (Bedford Row)	W. J. Harris, Esq. ...	8	1 0	18 T	30·14	160
" " ")monthly	" " "	5	1 0	18 T	29·47	...
Chichester (Museum)	Mr. W. Hayden	8	0 6	50 P	31·76	...
† " (Westgate)	Dr. Tyacke	5	0 6	40 T	32·20	...
† " (Shopwyke)	Rev. G. H. Woods ...	8	1 2	61 T	31·61	...
Arundel (Patching)	J. Drewitt, jun., Esq..	...	1 0	180	35·40	125
D† Steyning	Col. Ingram	5	1 0	80 T	37·39	133
† Chichester (West Dean)	H. Paxton, Esq.	8	1 6	209 T	39·79	200
† " (Chilgrove).....	John W. Woods, Esq..	5	0 6	284 T	35·31	...
† Petworth Rectory	Rev. C. Holland	5	1 6	190 T	37·72	146
Cowfold (Woldingfold)	R. Ramsden, Esq.....	...	...	...	29·45	...
† Horsham (Leonardslee).....	Mr. Ford	5	1 6	273 T	33·52	...
D " (Albion Terrace)	R. Sheppard, Esq.....	6	5 0	150 T	29·70	161
Midhurst (Lynch)	J. Eames, Esq.	6	0 6	160 P	42·61	...
D† Fernhurst [Haslemere]	Miss E. A. Salvin	8	0 10	301	33·48	...
Milland House [Liphook]	Rev. J. M. Heath	18	30 0	350	37·01	...
D Horsham (Swallowfield)	Capt. Bigg	5	1 1	...	30·77	168
Shillinglee Park [Haslemere] ...	Lady Jane Turnour ...	5	1 1	253 T	31·94	174
EAST SUSSEX.						
Beachy Head	Miss W. L. Hall	5	1 0	515 T	29·50	...
" "	" " "	5	1 0	495 T	33·74	...
† Eastbourne (Pevensey Road).....	" " "	5	4 0	12 L	37·29	170
† " (Cemetery)	" " "	5	4 0	160 T	37·07	178
" (Manor House)	Russell Scott, Esq. ...	7	0 10	120 P	37·23	...
Pevensey (Walls End Cott.)	M. Vidler, Esq., C.E... H. B. Peake, Esq. ...	8 5	1 3 1 0	4 T 111 T	32·73 32·75	168 ...
D† Brighton (Cambridge Rd.Hove)..	Dr. R. P. B. Taaffe.....	5	1 0	39	34·64	160
D " (Buckingham Place) ...	F. E. Sawyer, Esq. ...	5	5 0	206 T	31·87	160
+ " (St. James' St.)	E. Rowley, Esq.....	5	1 0	37 T	37·59	179
D† " (W. W. Lewes Road)..	Brighton Water Works	5	3 8	90 T	36·73	180
† " (Goldstone Bottom) ...	" " "	5	0 10	140 T	32·24	...
† Hastings (Bleak House)	Mr. J. Banks	8	1 0	89 T	29·62	141
D† " (The Hollies).....	A. H. Wood, Esq.....	8	3 0	100 T	32·43	188
D† " (Cemetery)	Mr. Field	5	1 0	500 T	32·53	156

DIVISION II.—SOUTH-EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which ·01 or more fell.
		Diameter	Height Above Ground.		Height Above Sea Level	
			ft.	in.	feet.	inches.
EAST SUSSEX—(<i>con.</i>)						
D Hastings (Manor House)	A. E. Murray, Esq. ...	8	1	0	173 A	32·12 188
† „ (Hollington)	Capt. Lewis	5	1	0	315 B	31·40 183
D „ (The Firs, Ore)	C. M. Murray, Esq. ...	8	1	0	378 B	32·38 187
D† Falmer	R. R. Verrall, Esq.	5	4	0	312 A	36·75 119
† Lewes (Glynde Place)	Mr. J. McLeod	5	2	9	50 T	38·28 159
„ (Stanmer Park)	Mr. W. Holman	5	1	0	280	37·15 148
BA Hailsham	Rev. J. Clyde Harvey..	5	1	0	105	33·06 144
BA† Poyning (Dyke House)	Mr. W. Thacker	5	1	6	680	39·53 196
BA „ (Fulking)	Mr. J. Thacker	5	1	0	100	38·83 179
D Winchelsea	Mr. Budden	5	1	0	110 T	31·20 196
D „ (The Friars)	Miss Stileman	5	1	1	115 T	30·34 195
† Framfield (The Grange)	Capt. T. G. Drake, R.N.	8	1	0	156 B	35·25 160
† Newick (Ketches)	Miss I. Shiffner	8	0	5	192 T	34·10 165
D Salehurst Vicarage	Rev. A. Orr	5	2	6	120	36·54 165
D† Buxted Park	Col. Harcourt	8	0	10	193 T	34·41 177
D† Maresfield (Forest Lodge)	Captain W. Noble	8	1	2	247 A	34·72 201
D† Hayward's Heath (Asylum) ..	Rev. T. E. Crallan ...	5	1	0	281 T	31·94 188
D Ticehurst	F. Wilton, Esq.	8	4	0	380 T	33·95 205
D Balcombe Place	J. A. Hankey, Esq. ...	8	1	8	300 B	34·61 168
Forest Row (Ashdown Cottage) ..	H. J. Slack, Esq.	8	3	7	386 T	30·76 ..
East Grinstead	W. V. K. Stenning, Esq.	5	1	3	356 A	33·86 173
HAMPSHIRE.						
ISLE OF WIGHT.						
Ventnor (Roy. N. Con. Hosp.) ..	Dr. Williamson	8	3	3	150 T	32·27 164
D† St. Lawrence	Rev. C. Malden	5	1	0	75 A	35·30 168
† Ventnor (Belgrave House)	Dr. Martin	12	3	0	150 A	33·99 172
D Newport	E. G. Aldridge, Esq.	5	12	9	57 A	36·42 173
D† Ryde	R. Taylor, Esq.	5	1	2	13	32·83 137
D† Osborne	J. R. Mann, Esq.	8	0	8	172 A	30·88 168
Christchurch (Carbery)	F. Moser, Esq.	8	0	9	98 A	35·25 145
Lymington (Wainsford)	H. Fawcett, Esq.	5	1	0	58 A	31·99 155
Southampton (Cadland)	J. Laurie, Esq.	8	4	6	52 T	36·63 183
„ Ordnance Survey }	Maj.-Gen. Cameron, }	5	0	4	74 A	36·04 175
„ Office	R. E.	14	18	6	92 A	32·55 171
D „ (Woolston Lodge) ..	F. Ekless, Esq.	5	1	0	75	34·84 ...
„ (Eling House)	W. C. Spooner, Esq.	5	1	2	20	36·40 ...
„ (Millbrook)	Rev. C. Parkin	5	1	0	22 P	35·92 179
D† „ (Red Lodge)	R. C. Hankinson, Esq.	5	0	6	200	34·39 186
„ { „ „ }	„ „ „ „ „ „ „ „ „	5	0	6	200	37·80 ...
D Botley (Moorhill, Shedfield)	Adl. Sir T. S. Pasley, Bt.	8	2	0	160 A	36·92 195
D Bishop's Waltham (Swanmore Ho)	B. P. Shearer, Esq. ...	5	0	4	390 T	33·55 185
D Droxford Rectory	Rev. S. Bridge	5	0	8	180	35·51 183
Fordingbridge (Wood Green) ...	H. Hinxman, Esq. ...	5	1	2	140 A	35·77 ...
D† Winchester (Otterbourne)	J. B. Yonge, Esq.	5	1	3	115 A	32·66 160
D Romsey (Michelmersh Rectory) ...	Rev. H. G. Merriman	5	1	6	273 A	33·56 159

DIVISION II.—SOUTH-EASTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which -01 or more fell.
		Diameter.	Height Above Ground.		Height Above sea Level	
			ft.	in.	feet.	inches.
HAMPSHIRE—(con.)						
Petersfield (Liss Place)	G. E. Coryton, Esq. ...	7	0	7	250 ∇	39.79 ...
† Alresford (Arlie Bury)	Capt. G. F. Marx	4	1	6	238 ∇	37.51 164
† Alton (East Tisted Rectory).....	Rev. F. Howlett	5	1	1	420 ∇	40.63 178
Winchester (Warren House) ...	J. A. H. Caird, Esq....	5	1	1	270 ?	39.67 ...
D† Selborne (The Wakes)	T. Bell, Esq., F.R.S...	6	4	0	400 ∇	41.57 190
Alresford (Swarraton Rectory) ..	Rev. W. L. W. Eyre..	5	1	0	310	33.12 ...
Alton (East Worldham)	Rev. G. H. Fell, D.D..	5	1	6	499 ∇	35.84 223
D† „ (Ashdell)	F. Crowley, Esq.	8	3	6	396 ∇	38.14 ...
D Andover (The Vicarage)	Rev. H. B. Bousfield...	5	0	8	245 ∇	31.73 154
Dogmersfield Park	Sir H. B. Mildmay, Bt	5	2	6	...	30.47 ...
D Basingstoke (Chapel Hill).....	G. Stephens, Esq.....	5	1	0	328 ∇	33.71 191
Rotherwick (Tyney Hall)	C. E. Harris, Esq.....	5	0	8	330 ∇	28.82 ...
D† Basingstoke (Sherborne St. John)	Rev. D. W. Chute ...	5	1	2	276 ∇	32.99 191
D† „ (The Vyne)	W. Wiggett Chute, Esq.	8	1	2	236 ∇	30.91 175
† „ („ „)	„ „ „ „ „ „	3	1	2	236 ∇	31.54 175
Hartley Grange	W. Walkinshaw, Esq.	5	0	6	220 ∇	30.04 ...
„ Westpall	Rev. J. Keate, M.A....	8	0	9	233 ∇	29.65 ...
D Blackwater (Hurstleigh)	Miss Gibson	5	1	0	220 ∇	31.18 205
D† Strathfield Turgiss	Rev. C. H. Griffith ...	5	3	0	200 ∇	29.85 164
„ „ „ „ „ „	„ „ „ „ „ „	5	1	0	200 ∇	29.22 160
† Heckfield (Park Corner)	J. Martineau, Esq.....	5	1	3	258 ∇	30.20 ...
† Strathfieldsaye	Mr. J. Bell	8	1	0	160 ∇	31.32 144
BERKS.						
D Swallowfield (Beech Hill Vic.)...	Rev. C. S. Turner	5	1	0	226 ∇	30.37 177
D Sunningdale (Lynwood).....	Admiral Sir F. W. Grey	8	0	8	264 ∇	31.72 177
Reading (Englefield)	Mr. J. Coombes.....	5	1	1	...	35.54 141
D† „ (Russell Street)	Dr. Workman	5	2	0	154 ∇	31.87 182
„ (The Acacias)	A. Palmer, Esq.	5	3	0	146 ∇	30.25 159
Newbury (Greenham)	Capt. J. Ward, R.N....	5	1	0	260 ∇	28.27 185
D „ (Welford Park).....	Mr. C. Ross	5	0	11	335 ∇	37.57 214
Reading (Purley)	Hon. R. Boyle	5	1	0	40 ?	34.09 151
Maidenhead (Kimber Cottage)...	Mr. J. Silver	8	1	2	93 ∇	28.81 ...
D Streatley Vicarage	Rev J. Slatter	10	0	4	150 ∇	34.26 171
D Maidenhead (Cookham Vic.).....	Rev. R. W. Rogers ...	5	1	3	90 ∇	29.50 186
„ (The Halls, Cookham)	F. W. E. Jowers, Esq.	5	1	6	108	30.84 ...
D Shrivenham (Ashbury Vic.)	Rev. H. Miller	5	1	0	479 ∇	30.12 134
D*† Wantage	E. C. Davey, Esq.....	5	12	8	320 ∇	30.90 143
Wallingford (The Castle)	J. Kirby Hedges, Esq.	5	0	8	175 ∇	27.63 127
D† Long Wittenham	Rev. J. C. Clutterbuck	12	1	0	170 ∇	34.19 164

DIVISION III.—SOUTH MIDLAND COUNTIES.

HERTS.

Southgate (The Lawns)	H. P. Church, Esq. ...	6	1	0	240	32.68	...
Watford (Moor Park)	Lord Ebury .....	...	...	...	...	31.57	144
„ (Bushy Station)	R. Savill, Esq.	5	0	8	...	29.54	...

DIVISION III.—SOUTH MIDLAND COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1876	
			ft. in.	feet.	inches.	
HERTS.—(con.)						
Watford (Watford House)	Dr. A. F. Brett	8	1 3	250	28·80	...
D " (Holly Bank)	J. Hopkinson, Esq. ...	5	1 0	270 T	30·05	195
" (Harwood's Farm)	Mr. W. Swanston .....	...	1 3	...	28·48	...
D " (Oaklands)	E. Harrison, Esq.	5	5 6	273 T	30·42	188
Hatfield (North Mimms)	Rev. A. S. Latter	5	1 0	256 A	28·38	131
Hoddesdon (Field's Weir)	Beardmore & Barnes	20	3 0	82 A	26·60	146
Hertford (Bayfordbury)	W. C. Baker, Esq.	8	0 4	250	30·50	178
St. Albans (Gorhambury)	Mr. J. Thompson	6	2 9	...	32·32	154
D Hemelhempstead (Nash Mills) ...	Messrs J Dickinson & Co	12	3 9	237 T	33·15	190
Gt. Berkhamstead (Ashlyns) ...	W. Longman, Esq. ...	5	0 11	550 B	35·44	141
D " " (High Street)	W. Squire, Esq.	8	1 6	370 B	34·10	182
Hemel Hempstead (Gt. Gaddesden)	Rev. Tyrwhitt Drake ..	8	1 0	...	30·34	...
Tring (Cowroast)	H. Thomas, Esq.	10	4 2	345 L	33·80	153
D Ware	The New River Co. ....	...	3 0	114 T	32·68	156
Harpenden (Rothamstead)	Messrs. Lawes & Gilbert	5	2 0	420 T	32·14	204
" " " } new g.	" " "	72x87	0 9	420 T	34·41	203
D Welwyn Rectory	Rev. C. L. Wingfield ..	5	0 4	...	30·27	192
Kensworth [Dunstable]	Miss Jones	5	1 0	902 A	33·12	...
D Ware (Much Hadham)	Rev. H. S. Mott	5	1 0	222 B	28·85	156
Stevenage (Knebworth Rectory) ..	Rev. F. G. Jenyns ...	5	1 0	407	30·04	...
" " "	Rev. J. O. Seager	8	2 0	319 L	28·93	179
D Buntingford (Aspenden Rectory)	Rev. A. P. Sanderson ..	5	1 1	329 T	29·36	143
D Hitchin	W. Lucas, Esq.	8	1 0	238 A	30·26	199
D Royston	H. Wortham, Esq. ...	8	0 6	269 A	26·78	...
BUCKINGHAMSHIRE.						
Datchet (Riding Court)	C. S. Cantrell, Esq. ...	5	1 0	61 T	28·80	...
D Slough (Stoke)	Mr. W. Hatfield	5	1 0	206	28·00	107
Greenlands [Henley-on-Thames]	W. H. Smith, Esq., M.P.	...	...	100 P	34·77	...
High Wycombe	H. S. Wheeler, Esq.	8	0 9	225 A	28·77	...
Aylesbury (Serena Terrace)	J. Copcutt, Esq., C.E. ...	12	1 0	...	35·05	121
Mentmore [Leighton Buzzard] ...	J. Smith, Esq.	5	1 6	...	29·47	114
D Winslow (Addington Manor) ...	E. Hubbard, Esq., M.P.	8	1 0	309 A	32·24	188
D Buckingham (Adstock)	J. E. S. Weston, Esq. ...	5	0 9	...	31·69	170
" " (Castle Fields)	E. Parrott, Esq.	5	1 1	318 P	31·47	160
" " (School Lane)	Mr. W. Walker	8	1 3	269 A	32·36	171
Stony Stratford (Thornton)	Mr. W. Sturdy	5	1 6	...	33·15	...
D Newport Pagnell	R. Littleboy, Esq.	5	2 0	...	29·81	...
Olney (Filgrave Rectory)	Rev. J. Tarver	8	0 6	...	30·29	...
OXFORD.						
Henley-on-Thames (Greys)	Rev. N. Pinder	5	1 8	370 T	33·53	...
Watlington (Swyncombe Ho.) ...	Mrs. Ruck Keen	5	4 0	700 P	31·44	...
Burcote [Abingdon]	H. J. Hannam, Esq.	5	1 3	...	32·12	...
Baldon ["]	G. Thompson, Esq. ...	8	1 11	...	30·77	...
Thame (Aston Rowant)	T. Taylor, Esq.	8	1 0	395 B	30·31	...
D Oxford (Magd. Col. Laboratory)	E. Chapman, Esq., M.A.	5	1 0	185 A	31·02	184
D " (Radcliffe Observatory)	Rev. R. Main, F.R.S. ...	10	0 11	208 A	32·42	179

DIVISION III.—SOUTH-MIDLAND COUNTIES—(continued.)

STATIONS	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which of or more fell	
		Diameter.	Height Above Ground.		Height Above Sea Level		1876
			ft.	in.	feet.	inches.	
OXFORD—(con.)							
Oxford (Radcliffe Observatory) ..	Rev. R. Main, F.R.S....	10	22	0	229 ∇	30·86	178
" { " " } ..	" " " ..	12	24	0	231	27·55	165
" { " " } ..	" " " ..	10	112	0	320	20·74	...
Enstone (Chadlington)	W. Searle, Esq.....	5	5	0	800	31·77	157
D Upper Heyford	Rev. C. B. Mount.....	9	1	3	324 ∇	32·96	181
37 *Bicester (Stratton Audley Pk) ..	G. Glen, Esq.....	5	2	5	381 ∇	28·97	...
Chipping Norton (Kingham).....	Rev. J. W. Lockwood..	5	3	6	442 ∇	35·02	...
D Banbury (Cotefield Bodicote) ...	T. E. Cobb, Esq. ....	...	1	0	...	34·38	191
D " (Broughton Lodge) ...	E. C. Morrell, Esq. ...	5	0	9	442	32·42	202
D† " (High Street).....	T. Beesley, Esq.....	6	7	0	350 ∇	32·97	206
" (Wroxton)	A. R. Tawney, Esq....	5	3	0	500 ∇	33·11	201
NORTHAMPTON.							
D Kings Sutton	Mr. E. Good	5	1	0	400 ∇	33·10	179
Thorpe Mandeville	Rev. W. L. Browning	5	1	0	580	34·37	171
D Towcester	Mr. J. Webb	5	1	0	...	32·34	163
" (Easton Neston)	Mr. E. Slarke	8	1	0	...	31·56	167
D Daventry (Helidon Vicarage) ...	Rev. C. S. Holthouse..	5	1	0	600 ∇	35·38	198
† Weedon Beck	R. Capell, Esq.	5	4	0	265 ∇	32·47	164
D Castle Ashby	R. Scriven, Esq.	5	1	0	...	31·74	184
D Northampton (St. Giles's Street)	H. Terry, Esq.	5	5	0	253 ∇	30·35	170
" (The Holly's)	Alderman Macquire...	8	1	6	232	30·66	173
D " (Gold Street)	Mr. S. Law	5	6	6	230 ∇	28·94	181
" (Sedgebrooke).....	C. Markham, Esq.....	5	1	0	...	33·58	215
D " (Althorp House)...	Mr. W. F. Jakeman...	8	3	10	310 ∇	29·37	175
Chapel Brampton	E. Dowdall, Esq.....	5	...	...	...	32·19	...
D Wellingboro' (Croyland Abbey) ..	E. Sharman, Esq.	5	0	2	...	33·31	196
Kettering	J. Wallis, Esq.	8	1	3	300 ∇	31·24	187
Rothwell (Braybrooke)	J. Marriott, Jun., Esq.	5	4	3	...	30·70	...
Oundle (Pilton Rectory)	Rev. F. G. Hodgson...	5	1	0	...	31·89	...
Rockingham Castle	Mr. J. Brown	5	1	0	400 ∇	32·55	173
D Peterborough (Springfield Ho.)..	H. Whitwell, Esq. ...	8	1	10	25	30·94	169
" (Westgate).....	Dr. W. Thomson	5	1	0	32 ∇	30·38	190
D Easton [Stamford]	C. Day, Esq.	5	1	0	220 ∇	30·47	210
HUNTS.							
D St. Neots (Tetworth Hall)	Miss Kaye	5	0	8	114 ∇	28·00	188
D " (Waresley)	Rev. W. M. H. Elwyn..	8	1	0	193 ∇	26·42	168
Godmanchester (Farm Hall)	G. I. Bevan, Esq.....	8	0	8	30 ∇	27·18	163
Huntingdon	Mrs. C. Margetts	5	0	4	52 ∇	30·26	146
D* " (Wistow)	Rev. T. Woodruff	5	1	2	...	31·61	143
Whittlesea Mere	R. Lunn, Esq.	8	1	0	...	28·65	...
BEDFORD.							
Leighton Buzzard (The Cedars). ..	Mr. W. Abrahams ...	6	1	0	300 ∇	33·75	105
D† Aspley Guise (Oaklands).....	E. E. Dymond, Esq....	5	1	1	433 ∇	28·67	181
D† " { " " }	" " " ..	5	1	1	433 ∇	30·31	184

DIVISION III.—SOUTH MIDLAND COUNTIES.—(continued).

STATIONS	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1876	
			ft. in.	feet.	inches.	
BEDFORD—(con.)						
D Aspley Guise (Hayfield House) ..	S. Douglas, Esq.	5	1 1	...	30·16	163
Silsoe	H. Trethewy Esq. ...	5	1 2	...	28·14	...
" (Wrest Park)	Mr. G. Ford .....	...	...	...	28·96	...
D Woburn (Hulcote Rectory)	Rev B Chernocke Smith	5	1 0	310 T	28·51	185
D Stotfold [Baldock]	Dr. Swaine	5	0 9	220	26·29	186
Biggleswade	C. T. Newbery, Esq ...	5	28 0	...	25·20	...
D Potton (Wrestlingworth)	H. J. King, Esq.	5	1 0	...	27·87	188
D Sandy Rectory	Rev. J. Richardson ...	5	0 7	...	27·82	163
" (The Lodge)	A. W. Peel, Esq., M.P.	5	1 0	...	25·98	189
Cardington	Mr. J. McLaren	8	0 0	106	29·52	...
D " (Staff gauge)	" " "	12	3 6	109	27·70	175
"	" " "	8	36 0	142	23·32	...
Bedford	D. Robie, Esq.	5	0 4	115 T	30·72	153
" (Clapham Park)	Miss Howard	8	1 0	200?	26·90	...
Tempsford Hall	Col. W. Stuart	5	0 9	140 B	27·36	...
CAMBRIDGE.						
D Guilden Morden [Royston]	J. G. Johnson, Esq. ...	5	1 2	106 A	26·80	166
Abington Pigotts ["]	G. Pigott, Esq.	8	0 6	130 B	26·89	171
D Pampisford Hall	Mr. Morley	5	1 0	113 A	24·80	210
D Granchester Mill	J. Nutter, Esq.	5	5 0	31 A	24·98	196
Cambridge (W.W. Cherryhinton)	H. Tomlison, Esq., C.E.	5	1 0	35 A	23·59	184
D " (Fulbourn Asylum) ..	Dr. Bacon	5	1 0	68 A	26·11	198
D " (Beech House)	J. Nutter, Esq.	8	4 0	40 A	24·63	192
D " (Merton Villa)	G. Warren, Esq.	5	1 0	30 A	25·20	202
D " (Sidney Street)	Mr. W. E. Paine	8	51 0	83 A	23·39	175
" (Trinity College) ...	J. W. Gaisker, Esq FRS	8	0 5	25	24·50	197
D†* " (Observatory)	Professor Adams, F.R.S.	5	1 0	85 A	26·19	210
D Caxton (Papworth Everard). ..	B. Ding, Esq.	5	1 0	127 A	27·94	...
D Ely (Stretham)	Mr. Edwin Stanley ...	9	4 9	...	25·78	164
" (Littleport)	C. T. Ennals, Esq. ...	5	1 0	...	27·66	159
D Chatteris (Aylesby House)	A. S. Ruston, Esq. ...	8	0 6	...	28·03	187
" (Horseway Lock)	R. Lunn, Esq.	8	1 0	...	19·26	...
March	R. Dawbarn, Junr. Esq.	5	1 0	...	29·72	162
* " (Stags Holt)	W. C. Little, Esq. ...	5	1 0	15?	30·96	...
Stanground Sluice	R. Lunn, Esq.	8	1 0	...	28·15	...
Elm (Coldham Hall)	H. J. Little, Esq.	5	1 0	15	31·66	167
Upwell (Marmont Priory Lock) ..	R. Lunn, Esq.	8	1 0	...	28·10	...
Wisbech (Euximoor House)	H. West, Esq.	5	0 8	...	31·30	183
D " (Harecroft Ho.)	A. Peckover, Esq.	8	0 8	11 T	31·56	198
D† " (Observatory)	S. H. Miller, Esq.	8	0 6	10 T	31·20	189
† " " (monthly)	" " "	5	0 6	10 T	29·80	...
† " "	" " "	8	8 0	18 A	29·82	189
† " "	" " "	20x10	35 0	45 T	24·64	189

DIVISION IV.—EASTERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge,			Depth of Rain	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1876	
ESSEX.						
East Tilbury Vicarage	Rev. R. Tyas, LL.D...	8	0 5	25 π	21·02	156
D Shoburyness	Capt. Fairford Ellis, RA	5	4 7	18	23·81	...
Barking (Loxford Hall)	Mr. J. Douglas	5	1 0	...	25·15	128
Brentwood (Sawyer's Hall Farm)	Rogers Field, Esq., C.E.	5	1 0	270 \uparrow	25·85	127
D Waltham Abbey (Gunpdr. Factory)	The Superintendent ...	8	4 0	82 \downarrow	27·16	97
Epping (The Hemnalls)	J. Nicholl, Esq.	8	0 8	345 \uparrow	32·94	140
Chelmsford (Great Baddow) ...	C. B. Fox, Esq., M.D..	...	...	...	25·31	...
"	F. Chancellor, Esq.	8	1 0	86 π	25·02	166
D Harlow (Sheering)	Rev. E. Hill	5	1 0	214 π	26·62	197
D " (Moor Hall)	Mr. Huntley	8	1 6	273 π	26·44	180
D Dunmow (High Roding)	Rev. E. Maxwell	5	1 0	252 \uparrow	27·60	182
D "	H. E. Cockayne, Esq. ...	12	0 0	250 π	24·72	152
D * Colchester (Birch Hall)	The late Mr. W. Ingle..	5	1 0	80	25·86	167
D Stanstead [Bishops Stortford] ...	Harford Green, Esq. ...	5	1 0	275 \uparrow	28·29	...
Braintree (Bocking)	S. Tabor, Esq.	12	2 0	200 \uparrow	27·43	168
" (" Place)	S. Courtauld, Esq.	5	2 0	...	28·98	218
Manningtree (Wix)	Rogers Field, Esq., C.E.	5	1 0	90 \uparrow	24·99	118
D Dedham (Lower Park)	W. H. Penrose, Esq. ...	8	0 10	49 π	25·81	176
Hedingham Castle	L A Majendie Esq, M.P.	8	1 0	...	26·08	139
D † Saffron Waldon (Audley End)	Mr. J. Bryan	5	1 0	155 π	26·55	186
† " " (" River Bank)	" "	5	1 0	151 π	25·58	...
D " "	J. G. Bellingham, Esq.	5	1 0	180 π	27·67	187
" " (Ashdon)	Rev. J. T. Walker	8	1 6	300 π	29·14	...
SUFFOLK.						
Nayland (Tendring Hall)	Mr. G. L. Rushmore ...	8	0 8	135 π	25·34	126
D Stutton (Alton Hall)	J. South, Esq.	4	...	...	23·60	112
D Hadleigh (Boxford)	Rev. J. Byng	8	0 11	...	24·36	175
" (")	" "	8	0 11	...	25·04	...
D "	J. T. Muriel, Esq.	5	6 6	40	24·53	206
D Sudbury	J. Alexander, Esq. ...	5	4 6	116 π	26·34	186
D Ipswich (Bishop's Hill)	G. A. Biddell, Esq. ...	5	1 0	104 π	24·59	181
D " (Woodbridge Road)	S. Alexander, Esq.	5	1 0	90 \uparrow	26·11	170
D Hadleigh (Aldham)	T. F. Lloyd, Esq.	5	2 6	...	27·21	185
D Woodbridge (Grundisburgh) ...	P. Harris, Esq.	5	3 9	...	25·41	189
Ash Bocking Vicarage	Rev. M. B. Cowell ...	5	7 3	231 \uparrow	20·01	117
Saxmundham (Carlton Hall) ...	Mr. Knights	8	5 0	...	25·37	180
D Bury St. Edmunds (Drinkstone Pk)	Mr. Nichol	8	1 2	250	27·88	147
D † " " (Abbeygate St.)	T. C. Hinnell, Esq. ...	5	45 0	...	26·04	162
D Stowmarket (Wetherden Rec.) ...	Rev. C. J. Goodhart ...	8	0 6	185 \uparrow	24·51	177
† Bury St. Edmunds (Westley) ...	R. Burrell, Esq.	5	1 0	...	27·16	...
D † " " (Barton Hall)	Mr. W. Allan	5	1 0	...	27·65	185
D † " " (Culford)	Mr. P. Grieve	5	1 6	...	27·16	180
† Ixworth	Rev. W. Steggall	5	1 10	...	28·14	204
D † " (Walsham-le-Willows) ..	Miss Martineau	5	1 0	...	29·14	181
Botesdale (Upper Rickinghall Rec)	Rev. W. H. Partridge.	5	1 2	...	29·79	186
† Ixworth (Barningham)	J. Fison, Esq.	8	0 10	125 ?	24·90	...
D Halesworth	Miss Burleigh	5	1 0	60 \downarrow	27·43	147

DIVISION IV.—EASTERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which 01 or more fell	
		Diameter.	Height Above Ground.		Height Above Sea Level		1876
			ft.	in.	feet.	inches.	
SUFFOLK—(con.)							
† Lowestoft (Gisleham).....	Rev. H. Jodrell.....	5	1	4	36 T	26·63	...
† „ (Carlton Colville).....	G. Edwards, Esq. C.E.	8	0	9	6 T	26·37	...
D† „ (Somerleyton Hall) ...	Mr. Rix	8	0	9	60	25·84	174
NORFOLK.							
D Diss	T. E. Amyot, Esq.....	5	1	0	96	28·19	190
Harleston (Rushall Vicarage) ...	Rev. C. Gape	5	1	1	123	26·58	192
D† Geldeston [Beccles]	E. T. Dowson, Esq. ...	5	1	0	40 B	27·00	190
D „ Rectory [Beccles] ...	Rev. D. Gillett	5	1	0	55	28·21	186
D† West Tofts [Brandon]	Mr. R. Martin	5	1	6	91 T	28·82	188
Wymondham (Mulbarton)	Rev. J. M. Du Port ...	...	...	...	...	29·31	...
Hingham ..	„ „ „ .....	...	...	...	...	29·39	202
D† Downham Market (W. Dereham)	Mr. C. Blanchfield ...	5	0	11	20	28·64	204
Thetford (Ovington)	Rev. C. J. Evans	5	1	9	...	29·42	186
† Stoke Ferry (Wereham)	Rev. J. M. Du Port... 5	6	0	66 T	26·77	...	...
Outwell Sluice	R. Lunn, Esq.	9	...	...	...	24·87	...
† Downham Market (Fincham)...	Rev. W. Blyth	3	4	0	50 T	30·59	...
Barnham Broom	Rev. J. M. Du Port ...	8	1	0	160 ?	30·73	...
Swaffham (Pickenham Hall).....	E. A. Applewhaite, Esq	5	1	0	160 T	29·05	184
Yarmouth (Halvergate Hall) ...	Miss Gillett	5	3	3	48 T	26·94	...
Norwich (Eaton)	J. Pymar, Esq.	6	1	0	...	30·10	...
„ (Postwick)	Rev. J. M. Du Port ...	...	...	...	...	30·64	225
„ (St. Catherine's Close)...	Mrs. Evans	5	2	3	120	29·97	...
D „ (Literary Institution)...	The Secretary	12	30	0	53 T	27·50	181
„ (St. Clement's Hill) ...	P. E. Sewell, Esq. ...	...	0	9	90 ?	29·64	...
† „ (Thorpe St. Andrews)...	W. Birkbeck, Esq.....	5	1	0	137 T	32·64	191
† Acle (Rectory)	Rev. R. W. Kennion... 8	0	9	40 T	27·19	149	...
D† Filby	Mr. Crisp	5	2	4	11	27·47	160
D Sprowston (Oak Lodge)	T. C. Hardy, Esq.....	5	1	0	...	29·15	204
D Norwich (Cossey)	H. Culley, Esq.	5	1	0	...	31·38	211
D† „ (Honingham Hall).....	Lady Bayning	5	0	6	88 T	31·18	213
„ (Honingham)	Rev. J. M. Du Port ... 12	1	3	90	31·25	205	...
† Mattishall	„ „ „	8	1	2	165 T	29·06	211
† Hockering	„ „ „	8	1	2	140 ?	29·02	...
BA* Swaffham (Grammar School)	C. J. Drury, Esq.	5	1	10	239 T	31·26	195
„	Rev. J. M. Du Port ...	...	...	...	...	30·42	...
Watlington	F. W. Johnson, Esq... 8	3	0	7	23·84	190	...
St. Germans (Outlet Syphons)...	R. Lunn, Esq.	8	...	...	...	31·76	...
Swaffham (Dunham)	Rev. J. M. Du Port ...	...	...	...	...	32·11	199
Drayton	„ „ „	5	1	2	...	32·52	208
D Terrington	J. T. Seccombe, Esq, MD	5	1	0	13 T	30·14	188
D Reepham (Hackford).....	W. D. Bircham, Esq... 5	1	0	...	32·56	215	...
Cawston	Rev. T. H. Marsh.....	5	1	0	120 T	32·39	206
North Walsham (Worstead)	Mrs. Cooke.....	5	0	9	...	31·45	175
Lynn (Austin Street).....	E. L. King, Esq.	5	1	6	...	29·55	209
D „ (North Wootton)	Rev. W. W. Clarke ...	5	1	2	35 T	29·59	174
† „ (Hillington Rectory)	Rev. H. Ffolkes	8	1	0	90 T	32·44	193
D† „ („ School)	„ „ „	5	3	6	94 T	31·74	193

DIVISION IV.—EASTERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which -01 or more fell
		Diameter.	Height Above Ground.		Height Above Sea Level	
			ft.	in.	feet.	inches.
NORFOLK—(con.)						
Lynn (Hillington Hall).....	Mr. Platt	5	1	0	74	33·26
Colkirk	Rev. J. M. DuPort ...	5	1	2	200 ?	28·96
Hindringham	Mr. S. Cushing	5	1	0	...	29·85
Holt (Letheringsett Hall)	W. H. C. Hardy, Esq.	8	1	0	...	31·62
Cromer (Colne Lodge)	J. Cooper, Esq., M.D...	5	1	0	100 ?	28·14
D Burnham (Westgate)	W. H. Spencer, Esq...	3	5	10	13	33·14
"	H. E. Blyth, Esq.....	3	3	6	10	33·77
Holkham	J. Davidson, Esq. ...	8	0	0	39 L	33·45
D "	" " "	12	4	0	43 L	31·25
D Wells	H. R. Rump, Esq.....	5	1	0	16 T	31·52
D Hunstanton	Mr. Nisbet	11	3	8	60 T	27·41

DIVISION V.—SOUTH-WESTERN COUNTIES.

WILTS.

D Landford	J. R. Wigram, Esq....	5	1	10	160 T	33·39	198
D† Salisbury (Alderbury)	Rev. R. S. Hutchings..	8	1	0	263	34·34	185
D† " (West Dean)	Rev. W. L. W. Eyre...	5	1	0	137 B	31·76	144
" (Wilton House).....	Mr. Challis.....	8	0	5	180 T	35·58	174
D Salisbury Plain (Chiltern Ho.)...	R. Hayward, Jun., Esq.	11	4	0	380 ?	33·28	191
Warminster (Downside)	W. J. Stent, Esq.	8	1	0	...	38·41	171
Ludgershall [Andover]	Rev. W. H. Awdry ...	8	0	8	422 T	36·13	175
D Trowbridge (Steeple Ashton Vic.)	Rev. A. O. Hartley ...	5	1	0	240	35·22	188
D Pewsey.....	Mr. J. P. Robins	5	1	0	...	38·12	170
D Devizes (Bishops Cannings)	Rev. C. W. Hony	5	1	0	500	36·97	162
D† Marlborough (The Green)	Rev. T. A. Preston ...	5	1	0	472 T	41·89	182
" (Kingsbury St.)...	W. C. Merriman, Esq.	5	1	0	500	39·07	...
D " (Mildenhall)	Rev. C. Soames	5	1	0	467 T	39·04	175
D Corsham	C. T. Mayo, Esq.	5	1	0	350	38·05	172
D Calne (Compton Bassett)	Mr. J. Allen	8	1	0	400 T	37·97	205
D Swindon (Penhill)	T. Arkell, Esq.	5	0	10	400 ?	33·81	189
D Thames' Head [Cirencester].....	J. H. Taunton, Esq., C.E.	8	4	0	350 T	37·19	177

DORSET.

D† Weymouth (Osmington Lodge)..	Major Hall	5	1	0	225 ?	40·61	185
† Abbotsbury	Mr. A. Dight.....	5	3	6	150	36·99	...
Bridport	G. M. Evans, Esq. ...	8	1	3	...	40·85	170
D Blandford (Longthorns).....	J. Mansel-Pleydell, Esq	5	0	4	340 B	40·25	141
D " (Whatcombe)	" " "	5	0	4	270	45·36	136
D " (Bingham's Melcombe)	Rev. C. W. Bingham...	5	1	3	300 ?	47·33	194
Wimborne (West Borough)	W. Wyke Smith, Esq.	5	1	6	66 T	39·53	146
Cerne Abbas (Melbury).....	Mr. T. C. Elliott	12	2	9	...	45·49	164
D * Wimborne Minster (Chalbury).	Rev. G. H. Billington.	5	2	0	338 T	39·08	188
Sherborne School	W. L. Hetherington Esq	5	1	0	200 T	37·14	187
D Shaftesbury	T. Ackland, Esq.	5	1	3	722 T	34·40	157

NOTE.—The numbers in parentheses on this and the two following pages refer to a Map inserted between pages 148 & 149 of *British Rainfall*, 1872.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ".01 or more fell.
		Diameter	Height Above Ground.	Height Above Sea Level	1876	
			ft. in.	feet.	inches.	
DEVON—(con.)						
Exeter (The Quarries)	E. N. Snow, Esq.	5	1 0	250	48·46	152
D Honiton (Gittisham)	C. Hardy, Esq.	5	1 0	...	47·64	184
+ B A Okehampton (Oaklands) (19)	W. H. Holley, Esq. ...	5	1 0	521 T	52·11	195
D B A Holsworthy (Clawton)... (16)	W. W. Melhuish, Esq.	5	1 1	400 P	41·71	185
D † Exeter (Brampford Speke)... (13)	W. H. Gamlen, Esq....	5	1 0	140 T	43·40	202
" " " " " " " " " " " "	" " " " " " " " " " " "	8	0 3	140 T	? 43·00	202
D Zeal Monachorum	(63) Rev. H. J. A. Fothergill	5	0 9	600	45·38	165
Cullompton (Clyst Hydon)	Rev. J. Huyshe.....	...	1 0	200 A	39·16	...
D " (Strath Culm)	C. R. Collins, Esq.....	8	0 6	159 A	40·95	148
D Chulmleigh (Eggesford)	(73) Mr. W. A. Spreadbury	8	1 0	400 T	45·62	201
Tiverton (Exe Villa)	H. S. Gill, Esq.....	5	1 0	230 L	45·21	202
" (Rose Bank)	H. B. Sharland, Esq...	5	1 0	280	45·30	204
+ Torrington (Langtree Wick) (72)	Miss Nunes	5	1 0	451 T	48·54	210
+ " (" ") monthly	" " " " " " " " " " " "	5	1 0	451 T	48·02	...
+ " " " " " " " " " " " "	(61) Rev. S. Buckland	5	1 0	323	44·77	195
Tiverton (Cove)	(9) W. N. Row, Esq.	11	0 4	450 P	52·07	...
D S. Molton (Meshaw)	(62) Rev. W. H. Karslake	8	0 6	472 L	45·30	195
" (Rose Ash)	(60) Lieut.-Col. Davy	8	0 6	650 T	48·15	191
D Bampton (Huntsham)	C. A. W. Troyte, Esq.	8	0 6	600 B	54·99	197
Bideford (Littleham Heale Ho.)..	R. Sanders, Esq. ....	...	...	...	39·83	...
+ " (Horwood)	(71) Rev. J. Dene	5	1 0	288 T	35·54	192
+ * " (Northam)	(5) Rev. M.D. Churchward	5	1 0	173 A	38·46	190
D South Molton (East Street) (59)	NCHatherly, Esq M.D.	5	1 0	430 B	49·60	207
D " " (Castle Hill) ... (4)	Mr. D. Wilson	12	3 1	300	51·35	159
+ Barnstaple	(3) Mr. Knill	8	1 0	31 A	39·95	...
" (Bratton Fleming) (2)	Rev. P. J. Wodehouse	5	2 0	700	54·11	194
D " (Arlington Court) ...	Sir Bruce Chichester Bt.	5	1 1	613	56·35	222
D † Ilfracombe Hotel	(1) Rev. W. Tattam	12	9 0	34	33·08	174
D † Martinhoe..... (70)	Rev. C. Scriven	5	1 0	825	51·51	204
Lynton (Lee Abbey)	C. F. Bailey, Esq.....	5	0 6	320	42·32	...
D Lynmouth (Glenthorne)	Mr. T. Willcocks .....	...	0 9	80	51·72	178
CORNWALL.						
+ Penzance (South Parade)	W. H. Richards, Esq.	12	3 0	94 T	43·59	...
D " (St. Clare)	Rev Preben. Hedgeland	5	1 0	218	45·54	226
D " (Poltair).....	Col. Trelawny	5	0 6	243 B	49·11	243
Falmouth (Penmorva)	W. P. Dymond, Esq....	5	1 0	244 A	47·41	...
D Camborne (Crowan)	Mr. J. T. Rodda.....	5	0 6	419 L	50·01	189
D " " " " " " " " " " " "	" " " " " " " " " " " "	11	1 4	230 L	45·57	168
Falmouth (Carclew)	Mr. G. Palmer	5	0 6	...	49·92	211
Redruth (Tehidy Park).....	Mr. Mill.....	5	0 6	100 T	44·72	...
D † Truro (Royal Institution)	Mr. Newcombe	5	40 0	56 A	46·02	210
D B A Probus (Lamellyn)	H. Tresawna, Esq. ...	5	0 6	...	50·36	182
B A St. Agnes	Mr. Opie.....	5	1 3	278 B	41·79	179
St. Austell (St. Mewan)	Rev. G. L. Woolcombe	5	1 0	275	54·32	193
* " (Cosgarne)	C. Truscott, Junr., Esq.	5	1 0	194 A	52·83	207
D † * " (Trevarna)	W. Coode, Esq.	5	0 6	300 A	54·38	224
* " (Trevarrick)	C. Truscott, Jun., Esq.	5	1 0	169 A	53·01	207

DIVISION V.—SOUTH-WESTERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level.	1876	
			ft. in.	feet.	inches.	
CORNWALL—(con.)						
D St. Austell (Polcarne)	J. Coode, Esq.	5	1 0	206 T	62·11	186
Par Station (Penellick)	W. E. Geach, Esq. ...	5	0 9	240 B	40·50	...
D Maker Vicarage [Devonport] ...	Rev. P. H. Newnham.	5	1 0	290	44·85	212
D St. Johns [Devonport]	Rev. J. H. Kirwan ...	5	1 0	20	47·64	186
D St. Enoder (Retyn)	J. K. Martyn, Esq. ...	8	2 6	150 ?	46·02	200
D† Newquay	(64) Mr. W. H. Tregidgo...	6	1 9	90 B	39·65	188
D† Liskeard (Dean Terrace) ...	(47) S. W. Jenkin, Esq. C.E.	5	1 1	375 A	60·44	219
" (St. Cleer)	(68) " " " "	5	1 1	620 A	61·62	...
D† Saltash (Pentillie Castle) ...	(46) Mr. C. Edwards	5	1 3	150 B	61·62	200
D† Callington (Hingston Down) ...	(39) Captain Richards	5	3 0	850 T	63·40	221
† Bodmin (Castle Street)	Capt. Liddell, R.N. ...	8	2 4	338 T	52·89	217
D† " (" ")	" " " "	5	1 0	338 T	56·10	217
† " (" ") (weekly)	" " " "	5	0 1	338 T	57·98	...
D† " (Fore Street)	A. Hambly, Esq.	8	2 6	336 T	55·86	218
† " (Warleggan)	Rev. D. Clements	8	2 6	650	64·16	...
D† Wadebridge (Treglines S Minver)	Mr. T. Liddell, Jun. ...	5	1 8	140 T	36·35	195
D† Launceston (Altarnun)	(28) C. U. Tripp, Esq.	5	1 0	570 B	65·34	205
D " (South Petherwyn Vic.)	Rev. C. G. May	5	0 4	470 B	56·61	209
† " (Hexworthy) ...	(27) H. M. Harvey, Esq. ...	5	4 7	410 T	49·51	194
324 Jacobstow	(64) Rev. F. T. Batchelor..	5	1 0	200	52·66	193
SOMERSET.						
Crewkerne (Seaborough)	J. T. Stevens, Esq. ...	5	1 0	250 ?	44·84	163
Chard (Cricket St. Thomas)	Viscount Bridport	5	1 0	400 B	50·04	213
D Crewkerne (Bincombe House) ...	F. J. Sparks, Esq. ...	5	1 2	250 T	43·55	163
Yeovil (West Coker)	Mr. A. Spurr	5	1 0	236 A	37·97	179
"	T. D. Manning, Esq. ...	5	1 0	173 A	39·09	187
D Ilminster (White Lackington) ...	Rev. G. T. Gowring ...	5	1 0	136 A	40·56	185
D " (South Petherton)	W. Blake, Esq.	8	0 8	150 ?	36·81	182
Ilebrewers (Walrond Park)	J. Ostler, Esq.	5	0 8	116 T	36·97	161
Langport (Long Sutton)	R. W. Fry, Esq.	5	1 0	60	32·28	136
* Wellington (Sunnyside)	W. Elworthy, Esq. ...	5	1 0	...	38·62	174
D * Taunton (Fullands School)	W. Reed, Esq.	5	1 4	...	35·39	168
D " (College School)	Rev. W. Tuckwell	5	1 0	80	34·85	168
D " (Hovelands Terrace) ...	G. Gillett, Esq.	8	1 6	120 T	39·10	195
D " (Lydeard House)	C. Smith, Esq.	5	1 0	...	40·14	188
Wiveliscombe	Mrs. Boucher	5	1 2	...	42·38	...
Cothelston House	C. Esdaile, Esq.	5	1 6	500	43·26	168
D Glastonbury (Street)	W. S. Clark, Esq.	8	1 0	70	38·78	193
D Exford Rectory	Rev. J. G. Howes	5	1 0	930	61·01	230
D Dunster (The Priory)	Rev. J. Utten Todd ...	5	1 0	150 B	41·88	138
Wells (Dinder)	Rev. T. J. Bumpsted ..	8	2 6	140 B	45·45	173
D Burnham	Captain Estlin	5	1 0	18 A	37·55	202
D Frome (Mells Rectory)	Mrs. Horner	5	1 0	342 A	47·10	204
E. Harptree (Sherborne Reservoir)	Bristol Water Works	5	1 0	338	54·29	195
Chew Magna	" " " "	5	1 0	160	47·32	181
D† Bath (Royal Literary Institute)	C. P. Russell, Esq.	6	8 0	75 A	35·25	168
D " (Weston) .....	.....	5	10 0	190 L	36·53	194

DIVISION V.—SOUTH-WESTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which. -01 or more fell
		Diameter.	Height Above Ground.	Height Above SeaLevel	1876	
					inches.	
SOMERSET—(con.)						
D Batheaston Reservoir.....	A. Mitchell, Esq.	12	2 0	226 T	38·06	151
Backwell	T. W. Huthwaite, Esq.	5	1 3	200 B	46·20	177
Barrow Gurney Reservoir.....	Bristol Water Works	5	1 0	320	47·29	177

DIVISION VI.—WEST MIDLAND COUNTIES.

GLOUCESTER.

D Bristol (Canon's Marsh)	A. S. Nash, Esq.	5	12 6	21 A	40·85	170
„ (Small St.)	Bristol Water Works	12	25 0	49	37·52	162
† Clifton (South Parade)	Dr. G. F. Burder	8	0 6	192 A	42·42	179
Bristol (Ashleydown)	W. F. Denning, Esq. ..	5	0 8	200 P	44·17	211
„ (Cote House)	H. St. V. Ames, Esq. ..	12	3 0	200 P	39·01	...
D Fairford (Kempsford)	R. A. Iles, Esq.	5	0 9	...	32·15	168
D Nailsworth (Spring Hill)	E. P. Westley, Esq. ...	8	2 0	160 P	44·26	196
D Berkeley (Salter-street).....	J. H. Cooke, Esq.	5	8 0	60	31·17	175
D Minchinhampton (The Coigne)..	Hon. R. Henley Eden	8	1 6	640	46·06	205
D Cirencester (The Firs) ..	J. Bravender, Esq. ...	5	0 8	352 A	38·90	...
D Stroud (Brimscombe Port)	J. H. Taunton, Esq., C.E.	8	10 0	200 A	39·26	175
„ (Cains Cross)	Mr. W. B. Baker	5	1 0	120 T	38·03	159
D „ (Upfield)	Miss Stanton	5	1 0	226 A	35·11	187
D Fairford (Hatherop Rectory) ..	Rev. R. P. Davies.....	8	1 4	412 A	37·68	169
„ (The Dean)	H. Arkell, Esq.	5	...	...	35·15	...
D Frampton-on-Severn (Saul Lodge)	W. B. Clegram, Esq. C.E.	5	3 6	42 A	33·05	200
Northleach (Yanworth)	T. Arkell, Esq.	5	1 0	...	33·73	...
„ (Sherborne Park) ..	Hon. R. Henley Eden	4	0 8	445	43·61	...
Gloucester (Witcomb Court).....	A. Bubb, Esq.	8	2 0	250	33·22	...
D „ („ Water Works)	T. Small, Esq.	8	3 0	297 A	32·11	140
D „ (Co. Asylum, Wotton)	E. Toller, Esq., M.D. ..	6	0 6	100	29·03	147
Huntly (Rectory)	Rev. H. Miles	5	0 8	210 B	37·24	...
D Cheltenham (Battledown)	Sir Brook Kay, Bt. ...	5	0 9	420	31·42	186
„ (Montpellier Lodge)	Rev. H. Kynaston.....	5	1 0	200	28·61	...
„ (Prestbury).....	G. Makgill, Esq.	5	1 0	271 A	33·80	191
„ (Hewletts Res.).....	W. McLandsboro', Esq.	8	0 6	422 L	32·90	134
„ (Keynsham Bank)...	D. J. Humphries, Esq.	8	6 6	232 A	33·87	170
D Moreton-in-Marsh (Frogmore)...	W. Arkell, Jun., Esq. ...	5	1 0	...	36·80	171

HEREFORD.

D Ross (Rocklands)	J. M. Herbert, Esq. ...	8	1 10	97 B	43·78	182
D† „ (The Graig)	H. Southall, Esq.	5	1 0	200 B	36·30	194
D* „ (Sellack Vicarage).....	Rev. W. C. Ley.....	5	0 6	...	33·36	182
Longtown Vic. [Abergavenny]...	Rev. C. L. Eagles.....	5	0 8	...	53·79	166
Bryngwyn	J. Rankin, Esq.	5	0 10	420 B	37·94	171
D Much Marcle (Caerswall)	T. Charles, Esq.	5	2 0	423 B	33·36	184
Hereford (Whitfield)	Mr. W. Wheatley	5	0 6	427	39·14	192
D Ledbury (West Bank)	T. E. Wheatley, Esq. ...	5	1 0	350	32·60	157
D Hereford (Fownhope Vicarage)...	Rev. T. West.....	5	1 0	192 B	32·04	175

DIVISION VI.—WEST MIDLAND COUNTIES.—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which -01 or more fell.
		Diameter	Height Above Ground.		Height Above Sea level	
			ft.	in.	feet.	inches.
HEREFORD—(con.)						
D† Hereford (Richmond Place) ...	E. J. Isbell, Esq.	8	5	8	188 A	32·88 195
„ (Davison's Nursery) ...	Mr. J. Davison	8	1	0	203 A	34·41 117
„ (Hagley Park)	A. Hutchinson, Esq. ...	5	0	6	300 B	30·47 ...
„ (Tupsley)	P. Ballard, Esq.	5	1	1	242	30·55 ...
D „ (Stretton)	Rev. H. C. Key	5	1	0	198 T	34·58 162
„ (Credenhill Court).....	F. W. Herbert, Esq.	5	1	6	250	32·87 159
„ (Burghill)	T. A. Chapman, Esq. MD	5	1	4	275	30·75 ...
D Staunton-on-Wye	Rev. H. W. Phillott ...	5	1	1	255 B	38·08 188
Leominster (Hampton Court) ...	J. H. Arkwright, Esq. ...	8	1	4	...	30·79 148
D Kington (Lynhales)	S. Robinson, Esq.	8	1	0	...	39·94 145
Bromyard (Brockhampton)	Mr. J. Eling ...	8	0	8	...	35·60 ...
D Leominster (West Lodge)	E. P. Southall, Esq.	5	1	0	260 T	30·96 174
„ (Leysters Vicarage) ..	Rev. T. S. Hewitt	5	0	3	600	34·56 ...
D Stoke Bliss	Rev. G. E. Alexander..	5	1	2	400 B	36·16 184
D Wigmore	Rev. E. Barton	5	1	6	...	32·57 173
SHROPSHIRE.						
Burford [Tenbury].....	Lord Northwick	5	1	2	193 A	29·99 ...
D Wenlock (Staunton Long Vic.)..	Rev. M. Hopton	8	1	2	524 B	38·89 189
D Bishop's Castle (Welsh Street) ...	E. Griffiths, Esq.	5	1	3	700 B	37·57 183
D „ (More Rectory).....	Rev. A. S. Male	5	1	0	640 T	37·13 193
„ Church Stretton (Cardington) ...	Rev. W. Elliot	5	1	0	700	34·57 172
„ „ (Preen Manor) ..	A. Sparrow, Esq. ....	...	...	...	...	30·61 181
D „ „ (Woolstaston) ..	Rev. E. D. Carr	5	1	0	807 A	38·18 209
D Much Wenlock (Larden Hall) ...	Miss F. Rouse Boughton	8	1	3	658 A	37·30 ...
Coalbrookdale (Horsehay)	G. Room, Esq.	5	3	0	...	29·97 ...
D Shifnal (Haughton Hall)	Rev. J. Brooke	5	3	6	353 A	35·13 182
Wellington (Old Hall School) ...	Dr. J. E. Cranage	5	1	6	...	32·84 193
Shrewsbury	Marshall & Co.	10	5	6	240	25·50 127
D „	H. Johnson, M.D. ...	6	3	9	230 ?	49·08 162
„ (Fitz Manor)	R. Middleton, Esq.	5	2	6	287 B	29·83 ...
„ (Leaton Vicarage) ..	Rev. E. V. Pigott	5	1	0	280 ?	32·86 193
D Wem (Sansaw Hall)	F. G. Tippinge, Esq.	5	1	0	310 T	32·75 188
Oswestry (Hengoed)	Rev. A. R. Lloyd	5	6	0	470 A	41·88 ...
Market Drayton (Buntingsdale). ..	Mrs. Tayleur	5	1	0	...	32·94 ...
„ (Nort'n-in-Hales) ..	Rev. F. Silver	8	1	0	335 A	36·90 131
D „ (Adderley)	Rev. Athelstan Corbet	5	0	6	245 ?	35·84 203
W A Whitchurch	A. B. George, Esq. M.D.	5	3	0	...	39·61 150
STAFFORD.						
Stourbridge (Amblecote)	E. B. Marten, Esq., C.E.	8	0	6	347 A	31·14 185
Dudley (Sedgley)	„ „ „	8	3	0	740 A	28·82 192
Walsall	„ „ „	8	...	...	...	32·06 202
D Wolverhampton (Merridale Road)	J. Thrustans, Esq.	5	1	0	428 A	34·39 200
„ (Town Hall) ...	A. Morgan, Esq., C.E.	5	15	6	482 A	30·41 194
„ (Thorganby Villa) ..	G. C. Broom, Esq., C.E.	8	3	4	459 A	32·35 201
D „ (Wrottesley) ...	Mr. E. Simpson	8	1	0	500	32·94 177
D Patshull Gardens	Mr. T. W. Dell	8	1	5	400	33·86 174

DIVISION VI.—WEST MIDLAND COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876.	Days on which "1 or more fell.
		Diameter.	Height Above Ground.		Height Above Sea Level	
			ft	in.	feet.	inches.
STAFFORD—(con.)						
D Tamworth (Lichfield Street).....	W. Arnold, Esq.	5	1	0	160 ?	32·12 193
Lichfield (St. Michael's)	Rev. J. J. Serjeantson..	5	0	6	325 A	34·03 ...
D Weston-under-Lyziard [Shiffnal]	Hon. Rev. J. Bridgeman	3	0	10	...	35·40 226
D Penkridge (Rodbaston)	H. Ward, Esq. ...	5	0	10	260 ?	34·57 209
D Shushions Manor	T. James, Esq.	5	1	0	325 L	35·67 211
D Burton-on-Trent (Grammar Schl.)	C. U. Tripp, Esq.	5	1	0	160	31·96 212
„ (Shobnall Maltings)	R. W. Abbotts, Esq...	5	6	0	150	28·67 178
D „ „ (Horninglow) ...	„ „ „ „	5	4	0	150	30·47 205
D Stoke (Barlaston)	W. Scott, Esq.	5	0	6	500 T	37·00 170
D† Cheadle (The Heath House) ...	J. C. Philips, Esq.....	5	1	0	647 A	41·49 219
D† „ (Tean Vicarage).....	Rev. G. T. Ryves	5	1	0	470 T	42·02 217
Stoke (Stanley Reservoir)	†Trent & Mersey Navga.	5	3	1	550 T	31·86 147
„ (Etruria)	„ „ „	5	4	2	440	39·14 195
Alstonfield Vicarage	Rev. W. H. Purchas...	5	1	0	904 A	47·91 181
Leek (Rudyard)	Trent & Mersey Navga	5	12	7	500 T	38·08 132
Knypersley [Congleton]	„ „ „	5	14	0	500 T	31·38 171
WORCESTER.						
D Blockley	R. B. Belcher, Esq. ...	5	1	0	...	39·16 197
Northwick Park.....	Lord Northwick	8	1	6	...	35·95 ...
D Evesham (Lansdowne)	R. Burlingham, Esq...	6	5	6	124 B	31·66 121
West Malvern.....	A. H. Hartland, Esq.	8	1	6	850 B	34·91 183
D Great Malvern (Wells Road) ...	W. Sandoe, Esq.	5	0	7	650 L	33·88 172
Worcester (St. John's)	G. B. Wetherall, Esq..	5	...	...	...	31·08 ...
D „ (Sebright Lawn)	Mrs. Burgess.....	5	0	8	112 T	31·32 165
D Tenbury (Orleton)	T. H. Davis, Esq.	5	0	9	200 T	36·15 206
Bromsgrove (Stoke Reformatory)	Mr. J. Macpherson ...	...	...	...	225	31·59 216
D „ (Tardebigge Res.)..	WBClegram, Esq. C.E.	...	3	0	433	36·16 209
D „ (Upper Bittal Res.)	„ „ „	...	3	0	518	36·30 190
Kidderminster (Winterfold).....	J. Harward, Esq.	10	5	6	327 A	28·00 185
D Stourbridge (Hagley Rectory) ...	Hon. Mrs. Lyttleton...	8	0	5	636 A	33·28 202
D „ (Pedmore)	E. B. Marten, Esq., C.E.	8	0	11	350 A	34·96 171
WARWICK.						
Radway (Ivy Lodge).....	Rev. G. Miller	5	1	1	530 T	35·09 185
Stratford-on-Avon.....	C. Lucy, Esq.	8	0	7	123	29·14 ...
Stirch Farm [Daventry]	Mr. W. Russell	16	3	6	...	35·83 ...
Henley-in-Arden (Barralls Park)	T. H. G. Newton, Esq.	5	1	0	300 A	38·57 185
Leamington (Upper Parade) ...	S. U. Jones, Esq.	5	0	8	195 A	31·07 187
D „ (Blackdown Hill) ...	A. S. Field, Esq.	5	0	9	270 T	33·10 188
D Rugby School.....	A. Sidgwick, Esq.....	5	0	11	383 T	30·58 182
D Coventry (Priory Row).....	J. Gulson, Esq.	8	1	0	279 A	34·16 185
D „ (Coundon)	Colonel Caldicott	5	1	0	350 T	35·69 199
D Bickenhill Vicarage	Rev. W. R. Capel	5	1	2	371 A	34·03 198
Wiley Rect. [Lutterworth].....	B. P. M. Payler, Esq...	8	1	0	350 T	32·94 208
D Birmingham (Botanic Gardens)..	Mr. Latham	5	5	2	...	31·83 196

† Returns supplied by T. W. Horn, Esq., C.E.

DIVISION VI.—WEST MIDLAND COUNTIES—(continued).

STATION.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter	Height Above Ground.	Height Above Sea level	1876	
			ft. in.	feet.	inches.	
WARWICK—(con.)						
†Birmingham (Bloomsbury Street)	D. Smith, Esq.	8	0 8	340 T	32·89	169
D Nuneaton (Stretton House)	T. J. Scott, Esq.....	5	0 6	...	31·45	171
D†Oscott (St. Mary's College) ...	Rev. S. Whitty.....	5	0 6	461 T	30·24	200

DIVISION VII.—NORTH MIDLAND COUNTIES.

LEICESTER.

Market Harboro' (Fairfield Rd.)	S. Watson Cox, Esq.	5	2	6	...	31·69	141
Bruntingthorpe	Rev. F. H. Bridges ...	5	1	0	...	31·99	...
Ashby Magna	Rev. E. Willes	5	1	0	380 ?	31·59	...
Arnesby Vicarage	Rev. W. P. Orton	8	1	2	400 ?	31·37	138
†Fleckney	J. B. Putt, Esq.	5	0	10	411 T	33·92	...
Kibworth	T. Macaulay, Esq. ...	5	2	0	355 T	35·47	...
Kibworth-Harcourt	J. Marriott, Esq.	5	3	8	350 ?	31·99	...
D†Leicester (Town Museum)	W. J. Harrison, Esq.	5	1	0	238 T	30·46	202
" (Belmont Villas)	H. Billson, Esq.	8	1	3	240	30·61	197
D†Thornton Reservoir	C. Tebbutt, Esq.	10	2	8	420 ?	30·87	158
D Thurcaston (Cropston)	" "	8	1	0	...	32·51	196
Syston (Grove House)	J. Hames, Junr., Esq. ...	5	5	0	...	28·70	231
D Melton Mowbray (Dalby Hall)...	Mr. G. Jones	8	2	6	480 B	28·96	189
" " (Thorpe Arnold)	Rev. J. S. Swift	8	2	3	320 ?	31·00	...
Loughborough (Cedar Cottage)...	J. Giles, Esq.	5	0	9	400 ?	32·64	...
D Melton Mowbray (Coston Rect.)	Rev. A. M. Rendell ...	5	1	0	300 ?	31·07	207
D Waltham-le-Wolds	Mr. E. Ball	5	1	6	500 T	33·63	202
Melton Mowbray (Eaton)	G. Gillett, Esq.	5	1	1	370 B	32·68	208
D Harston [Grantham]	F. Beasley, Esq. ....	...	1	3	...	33·87	225
†Belvoir Castle	W. Ingram, Esq.	8	1	0	237 T	32·56	197

RUTLAND.

Ayston Hall	Rev. J. H. Fludyer ...	5	1	0	...	38·46	...
Oakham (Greetham)	Rev. C. A. Holmes ...	5	0	8	...	34·24	180
D Tickencote	W. Hayes, Esq.	5	1	0	166 T	32·11	183
D Toilethorpe Hall [Stamford]	C. O. Eaton, Esq.	8	0	8	100 ?	32·75	181
Burley-on-the-Hill	Mr. W. Temple	8	1	0	...	37·31	187
Ryhall	Rev. C. Potchett	5	1	2	...	33·13	130
D Market Overton	Miss H. E. G. Wingfield	8	0	11	...	35·31	225

LINCOLN.

Stamford (Barn Hill Ho.)	Dr. Newman	5	1	0	116 T	27·73	...
*Bourne (Wytham-on-the-Hill) ...	A. C. Johnson, Esq. ...	5	1	0	167 ?	27·72	156
Long Sutton (Tydd Gote)	Mr. J. Tilson	5	4	0	...	30·25	213
Spalding (Pode Hole)	Mr. A. Harrison	12	0	3	20 T	31·00	...
†Grantham	J. W. Jeans, Esq.	8	0	6	179 T	29·93	181
D Boston	W. H. Wheeler, Esq. C E	5	5	0	24 T	31·46	183
" (Grand Sluice)	Mr. J. Porter	8	6	0	22	29·51	...
" (Churchyard)	Mr. E. C. Hackford ...	5	3	0	22	30·73	...

DIVISION VII.—NORTH MIDLAND COUNTIES—(continued).

STATION.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which "01 or more fell.
		Diameter.	Height Above Ground.		Height Above Sea level	
			ft.	in.	feet.	inches.
LINCOLN—(con.)						
D Stubton [Newark]	G. Nevile, Esq.	5	4	6	...	31·29 187
Sleaford (Bloxholm)	Mr. D. Lumsden	5	1	0	20	32·92 177
D Lincoln (Navenby)	Rev. J. Hays	8	0	6	...	30·83 178
Horncastle (Miningsby)	W. H. Wheeler, Esq. C.E.	5	5	0	131 7	28·70 165
D Lincoln (Longhills)	A. S. Leslie Melville, Esq.	5	0	6	110 ?	32·65 175
D " (Branston Hall)	Mr. W. Wright	5	1	0	136 7	28·95 145
" (Boultham)	J. H. Teague, Esq. ...	5	1	3	18 7	28·09 168
" (Doddington)	Rev. R. E. Cole	5	1	4	...	27·28 184
"	M. S. & L. R. Co. † ...	9	3	6	26	29·79 150
D 32 A Horncastle (Bucknall)	W. Carter, Esq.	5	1	2	...	29·25 174
" (Queen Street) ...	H. George, Esq., M.D.	5	1	0	100	31·75 ...
D Spilsby (Partney)	Rev. T. Owston	5	1	0	...	31·18 219
" (Langton)	R. Mackinder, Esq. ...	5	1	2	100 B	33·13 ...
Lincoln (Water Works)	J. H. Teague, Esq. ...	5	1	3	25 7	28·23 163
D Louth (Cawkwell)	Mr. G. Wilson	5	1	0	290	37·28 204
Gate Burton	M. S. & L. R. Co.	9	3	6	96	27·03 160
† Louth	T. W. Wallis, Esq. ...	5	6	0	111 7	30·70 195
" (Westgate)	Dr. F. Fawcett	5	0	9	110 7	32·54 198
" (The Cedars)	J. Bennett, Esq.	5	5	6	120	32·78 201
D † " (Calceatorpe)	D. Grant Briggs, Esq.	8	0	10	380 7	34·15 215
† " (")	" " " " " " " " " "	5	0	10	380 7	33·31 ...
Market Rasen	M. S. & L. R. Co.	9	3	6	100 7	34·32 130
Gainsborough .....	" " " " " " " " " "	...	...	...	76	24·11 124
Stockwith	" " " " " " " " " "	9	3	6	21	26·43 123
Caistor	Rev. R. Thomas	5	0	10	...	32·48 189
Brigg	M. S. & L. R. Co. ...	9	3	6	16	25·51 131
Grimsby	" " " " " " " " " "	9	15	0	42	24·52 169
Barnetby	" " " " " " " " " "	9	3	6	51	26·77 146
Crowle (Keadby) .....	" " " " " " " " " "	...	...	...	10	20·53 185
D Ulceby (Killingholme)	Rev. J. Byron	5	1	4	60 7	31·81 207
Appleby	Rev. J. E. Cross	5	0	9	60 1	31·74 ...
Ferriby Sluice	" " " " " " " " " "	5	0	9	10	28·58 ...
New Holland	M. S. & L. R. Co.	9	3	6	18	32·10 183
NOTTS.						
D Nottingham (Highfield House) ..	E. J. Lowe, Esq., F.R.S.	8	0	6	162 7	30·36 197
" (The Park)	M. O. Tarbotton, Esq..	8	1	6	183 7	29·31 179
" (Gedling)	Hn & Rv O. W. Forrester	5	3	0	130 ?	28·82 175
Southwell (Oxton)	H. Sherbrooke, Esq. ...	2	2	0	...	31·69 ...
D "	Miss Gaster	5	0	6	200 7	32·19 180
D 32 A Mansfield (Grove House) ...	R. Tyrer, Esq.	5	0	9	350 7	35·23 216
Ollerton (Whitemoor Ho.)	H. Horncastle, Esq. ...	5	0	9	175 ?	28·61 155
D Welbeck Abbey	Mr. W. Tillery	5	4	0	88 7	32·14 144
Worksop	M. S. & L. R. Co. ...	9	3	6	127	29·57 162
Retford	" " " " " " " " " "	9	3	6	52	27·40 156
" (Babworth)	Mr. J. Douglas	5	1	0	...	28·94 170

† Kept for the Canals Department of the Manchester, Sheffield, and Lincolnshire Railway Company.
Returns supplied by R. D. Heathcott, Esq.

DIVISION VII.—NORTH-MIDLAND COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1876	
<hr/>						
NOTTS.—(con.)			ft. in	feet.	inches	
D Worksop (Hodsock Priory)	H. Mellish, Esq.	5	1 0	64 ∇	29·36	193
Hesley Hall [Tickhill]	B. J. Whitaker, Esq....	8	0 11	60	29·56	153
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DERBY.						
Bretby Park [Burton]	Mr. W. Brown	5	4 6	340	31·40	183
Winshill [„]	J. Matthews, Esq.....	5	1 0	272	31·96	188
Melbourne	R. T. Tasker, Esq.....	5	0 6	...	34·22	189
Derby (Findern).....	Rev. B. W. Spilsbury.	5	0 9	188 ∇	30·95	...
„ (Mickleover Manor)	Mr. J. Campbell ...	5	2 0	280	32·89	143
„ (Christ Church Vic.)	Rev. W. H. Askwith..	5	1 0	265 ∇	35·02	166
„ (Spondon)	J. T. Barber, Esq.....	5	0 7	262 ∇	31·29	...
„ (Duffield).....	Mr. W. Bland	5	0 6	200 ∇	34·94	181
Milford	B. Cooper, Esq.....	...	6 0	210 ∇	37·60	205
D Belper (Fernslope)	J. G. Jackson, Esq. ...	5	0 8	353 ∇	36·01	188
† Matlock (Willersley Gardens) ..	Mr. J. Tissington	6	1 3	440 ∇	41·93	...
† „ Bath	R. Chadwick, Esq.....	5	1 6	500 ∇	41·90	...
D Stuffynwood Hall [Mansfield] ...	J. Paget, Esq.	8	1 0	...	33·06	201
Chesterfield (Hardwick Hall) ...	R. G. Coke, Esq.	8	1 6	594	34·52	...
Chatsworth Gardens	T. Speed, Esq.	12	0 7	...	38·24	...
Chesterfield	M. S. & L. R. Co.	9	3 6	248	36·69	124
D „ (Grassmore Colliery)	E. Bromley, Esq.	5	19 10	...	27·73	191
D „ (Linacre Reservoir)	C. E. Jones, Esq., C.E.	8	5 6	490 ∇	32·24	161
Brampton (St. Thomas' Rect.)...	Rev. J. M. Mello	5	3 0	314 ∇	32·05	121
Chesterfield (Tapton Grove)	R. G. Coke, Esq.	8	0 9	336	33·04	...
„ (Barlow Reservoir) ..	„ „ „	5	4 3	612	26·67	...
† Buxton (Axe Edge)	E. J. Sykes, Esq.	8	1 0	1620 ∇	44·39	...
† „ (Devonshire Hospital)...	„ „ „	8	5 0	989 ∇	55·17	209
„ „ „	„ „ „	5	1 0	995 ∇	55·05	209
† Stony Middleton	Rev. U. Smith	5	4 0	692 ∇	38·56	141
Kilnarsh (Norwood)	M. S. & L. R. Co.....	9	3 6	238 ∇	30·83	159
Comb's Moss	„ „ „	9	3 6	1669 ∇	43·28	...
„ Reservoir	„ „ „	9	3 6	710 ∇	44·54	199
† Chapel-en-le-Frith	„ „ „	9	3 6	965 ∇	43·07	182
BA Burbage House	Mr. J. Farrar.....	5	2 10	1277 ∇	39·41	...
BA Castleton	Miss Hall	5	1 0	700	45·80	...
† Woodhead	M. S. & L. R. Co.....	9	3 6	878 ∇	53·78	203

DIVISION VIII.—NORTH-WESTERN COUNTIES.

CHESHIRE.

D Nantwich (Cholmondeley Cas.) ...	Mr. J. Malcolm	8	1 6	42	39.49	195
Crewe (Gatefield House)	R. Lord, Esq., M.D.	5	1 0	150	31.03	202
Chester (Pulford Hall)	R. Massie, Esq.	5	3 0	60 ∇	30.79	198
D Congleton (Buglawton Vic.)	Rev. W. Besant	8	5 0	347 ∇	33.87	193
Bosley Minns	M. S. & L. R. Co. ...	9	3 6	1210 ∇	33.99	143
„ Reservoir	„ „ „	9	3 6	590 ∇	36.98	159

DIVISION VIII.—NORTH WESTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which .01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1876	
			ft. in.	feet.	inches.	
CHESHIRE—(con.)						
Macclesfield (Wincle)	T. W. Horn, Esq.....	...	...	...	49.02	162
Chester (Lead Works)	A. O. Walker, Esq. ...	5	1 6	30 ?	29.68	185
D " (Curzon Park)	F. F. Brown, Esq. ...	5	1 0	74 ∇	28.07	179
D " (Newton Nurseries)	J. Dickson & Sons.....	8	0 6	62 ∇	31.87	204
D Middlewich (Bostock Hall)	Col. France Hayhurst..	5	2 9	157 ∇	33.23	142
D Siddington (Thornycroft Hall)...	Mr. Povey	5	3 0	377 ∇	32.20	165
Macclesfield	M. S. & L. R. Co.....	9	3 6	539 ∇	30.13	138
" (Park Green).....	Mr. J. Dale	8	2 1	449 ∇	42.05	200
Northwich (Winnington)	H. Neumann, Esq. ...	8	2 0	56	34.08	176
D Frodsham (Foxhill)	J. Reynolds, Esq.....	5	0 10	230 ∇	30.46	202
D Neston (Hinderton)	Reginald Bushell, Esq.	5	1 0	215 ∇	32.74	163
" " ".....monthly	M. " " " " " "	8	1 0	215 ∇	32.81	...
Bollington (Spond's Hill)	M. S. & L. R. Co.....	9	3 6	1279 ∇	35.93	...
Whaley	" " " " " "	9	3 6	602 ∇	44.95	215
Lyme Park	J. F. Bateman, Esq. F.R.S.	...	...	680	56.10	...
Altrincham (Barrington House)..	J. Newton, Esq., C.E..	5	1 0	105	40.30	...
D Thelwall (Highfields).....	T. G. Rylands, Esq. ...	5	1 0	118 ∇	34.38	174
† Birkenhead (Bidstone Obs.)	J. Hartnup, Esq.	8	0 6	182	30.23	177
Marple Aqueduct	M. S. & L. R. Co.....	9	3 6	321 ∇	39.67	193
" Top Lock	" " " " " "	9	3 6	543 ∇	38.21	191
Godley Reservoir.....	J. F. Bateman, Esq. FRS	...	...	500	37.85	...
Mottram Hill End	M. S. & L. R. Co.....	9	3 6	680 ∇	40.84	174
" Matley's Field.....	" " " " " "	9	3 6	399 ∇	37.64	159
Newton	" " " " " "	9	3 6	396 ∇	25.81	183
Arnfield Reservoir	J. F. Bateman, Esq. FRS	...	...	575	44.84	...
" Tintwistle	J. Baxendell, Esq.....	5	2 0	540	48.54	224
D Staleybridge (Swineshaw).....	Mr. C. Beaver	8	3 0	884 ∇	50.08	167
† Rhodes Wood Reservoir	J. F. Bateman, Esq. FRS	12	1 0	520	46.85	...
† Woodhead " " ".....	" " " " " "	12	0 10	680	51.61	...
" " " " " " ".....	J. Baxendell, Esq.....	5	1 0	780	56.85	217
† Torrside Reservoir	J. F. Bateman, Esq. FRS	12	1 6	600	49.18	...
LANCASHIRE.						
D Warrington (Bewsey Street).....	L. W. Reynolds, Esq...	5	1 0	49 ∇	34.41	184
D " (Arpley).....	R. Vawser, Esq., C.E..	10	10 0	33 ∇	34.61	193
" (Cemetery)	" " " " " "	10	1 0	32 ∇	36.48	...
D Liverpool (Allerton Greenhill)...	G. H. Sing, Esq.	5	1 2	125 ∇	35.30	200
" (Grove Park).....	J. R. Darsie, Esq.	3	6 0	170	32.81	159
D " (Walton-on-the-hill)...	A. R. Andersson, Esq.	5	1 11	119 ∇	33.96	187
D Heaton Chapel (Roseleigh)	J. Curtis, Esq.	8	2 3	235 ∇	38.29	197
Denton Reservoir	J. F. Bateman, Esq. FRS	...	...	324	35.32	...
Gorton " " ".....	" " " " " "	...	...	263	35.42	...
D Manchester (Withington)	J. King, Junr., Esq. ...	5	1 0	110 ∇	35.03	189
D " " " " " " ".....	" " " " " "	5	1 0	110 ∇	35.19	190
† " (Old Trafford)	G. Y. Vernon, Esq. ...	8	2 7	106 ∇	36.96	198
D " (Plymouth Grove)...	J. F. Roberts, Esq.....	5	3 9	150 ∇	37.86	205
" (Eccles)	T. Mackereth, Esq.....	10	3 5	136 ∇	38.36	203
" " " " " " ".....	" " " " " "	5	34 0	170 ∇	32.40	203
D " (Ardwick)	J. Casartelli, Esq.....	9	3 0	140 ∇	37.49	174

DIVISION VIII.—NORTH-WESTERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which "01 or more fell.
		Diameter.	Height Above Ground.		Height Above Sea Level.	
			ft.	in.	feet.	inches.
LANCASHIRE—(con.)						
† Manchester (Piccadilly)	M. S. & L. R. Co.....	9	40	0	194 T	34·75
Fairfield	" " " " " "	9	6	0	312 T	37·29
D Blundellsands (Heath House) ...	T. M. Reade, Esq., C.E.	5	1	0	36 T	33·25
Manchester (Prestwich Res.) ..	J. F. Bateman, Esq. FRS	...	...	...	347	40·20
Oldham (Waterhouses)	M. S. & L. R. Co.	9	3	6	345 T	38·81
" (Gas Works)	J. F. Bateman, Esq. FRS	5	4	0	600 T	42·45
" (Brushes Clough).....	" " " " " "	5	4	0	950 T	51·66
" (Piethorne)	" " " " " "	5	4	0	800 T	40·63
Bolton-le-Moors (The Folds).....	H. H. Watson, Esq.	10	3	6	286 T	46·10
D " (The Freehold)	W. Musgrave, Esq.	9	6	6	352 T	48·17
" (Heaton)	R. H. Swindlehurst, Esq.	6	1	3	500	44·10
D " (")	J. S. Holdsworth, Esq.	10	3	6	497 T	46·98
" (Hurst Bank).....	J. Watkins, Esq.	5	3	1	442 T	46·81
" (Moss Bank)	R. H. Ainsworth, Esq.	8	1	2	570	50·10
" (Halliwell New Road)	W. Tyson, Esq.	5	1	4	549	49·81
" (Smithill's Hall)	R. H. Ainsworth, Esq.	8	1	2	...	46·74
" (Belmont)	R. H. Swindlehurst, Esq.	6	0	9	800	61·40
Entwistle.....	" " " " " "	6	1	0	700	55·20
Bury (Gin Hall)	T. Rigby, Esq.	8	1	0	475	39·26
D Rochdale (Drake Street)	T. H. Hayle, Esq.	4	3	7	473 T	44·14
" (Nayden Dane)	C. E. Cawley, Esq. M.P.	5	1	6	900 T	48·50
D Ormskirk (Rufford)	J. Porter, Esq.	5	0	8	38 T	36·57
Southport.....	J. Baxendell, Esq. ...	5	2	8	23 T	35·36
D Chorley (Whittle-le-Woods)	Theodore Hare, Esq.	5	2	6	...	38·43
" (Withnell Hall)	J. Shackleton, Esq. ...	5	0	6	545	43·31
D Over Darwen (St. James Vic.)...	Rev. W. H. Blamire...	5	1	0	600 T	50·33
D Haslingden (Holden Wood).....	T. Rigby, Esq.	8	1	0	653	66·46
D Lytham (Whalley House).....	S. Stott, Esq. ....	...	2	1	...	35·37
Rawtenstall (Clough Bridge Res.)	T. Rigby, Esq.	8	1	0	900 T	50·44
Blackburn (W. Works Office)....	J. F. Bateman, Esq. FRS	...	...	...	400	45·47
"	W. B. Bryan, Esq., C.E.	5	12	0	360 T	40·29
" (Pickup Reservoir) ...	J. F. Bateman, Esq. FRS	...	...	...	720	47·60
" (Guide Reservoir) ...	" " " " " "	...	...	...	650	42·50
D Preston	R. N. Hunter, Esq., C.E.	8	1	6	100	37·15
Huncoat (Burnley Road Res.) ...	T. Duxbury, Esq.	9	1	6	611 T	41·47
Great Harwood (Dean Clough) ..	" " " " " "	8	3	6	592 T	35·99
D Burnley (Rosegrove Cemetery)...	W. B. Bryan, Esq., C.E.	8	1	0	493 T	42·00
D " (Corporation Offices) ...	" " " " " "	8	29	9	379 T	39·60
" (Palace House).....	" " " " " "	8	1	0	450 T	38·86
D " (Greenhill)	" " " " " "	8	4	0	583 T	38·23
" (Brierfield)	" " " " " "	8	1	0	402 T	38·95
" (Swindon)	J. Emmett, Esq.	18	18	0	750 T	44·48
" (Yorkshire Street)	" " " " " "	...	20	0	420 T	42·99
D " (Padiham).....	W. B. Bryan, Esq., C.E.	5	1	0	352 T	38·25
Kirkham (Weeton Reservoir) ...	J. Bradley, Esq.	10	1	0	150	25·89
Blackpool (South Shore)	G. Sharples, Esq.	10	1	8	29	32·77
D Ecclestone (Elswick Lodge)	S. King, Esq.	10	1	4	55 T	35·85
D Stonyhurst College	Rev. S. J. Perry, F.R.S	11	1	3	376 T	47·25

DIVISION VIII.—NORTH-WESTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which '01 or more fell.
		Diameter.	Height Above Ground.		Height Above Sea Level	1876
			ft.	in.	feet.	inches.
LANCASHIRE—(con.)						
Preston W. Works.	Alston	R. N. Hunter, Esq., C.E.	8	1 2	320 ∇	42.92 ...
	Knowl Green	" "	8	1 2	400 ∇	43.09 ...
	Jeffrey Hill	" "	8	1 2	900 ∇	50.50 ...
	Loud-scales	" "	8	1 2	400 ∇	44.65 ...
	Spade Mill	" "	8	1 2	400 ∇	41.93 ...
	Clitheroe (Downham Hall)	R. Assheton, Esq. M.P.	10	1 6	464 ∇	44.95 ...
	Garstang (The Parsonage)	Rev. T. B. Armitstead	5	1 0	71 ∇	39.67 178
D "	(Calder Mount)	C. Wilson, Esq.	5	10 0	100 ∇	40.59 170
D "	(Vale House)	J. Jackson, Junr., Esq.	6	4 3	455 ∇	44.71 194
	(Grizedale)	J. Bradley, Esq.	10	1 0	480 ∇	44.67 ...
	Lancaster (Lee Fell)	W. Roper, Esq.	8	1 0	1080	51.20 ...
	(Tarnbrook Fell)	" "	8	1 0	1500	51.40 ...
D "	(South Road)	" "	12	3 6	114 ∇	38.87 167
	Arkholme (Storr's Hall)	F. F. Pearson, Esq. ...	5	1 0	220 ∇	41.40 ...
D Barrow	.....	F. Slade, Esq., C.E. ...	8	2 0	60 ∇	36.29 193
	Cartmel (Flookburgh)	T. R. Croasdale, Esq. ...	5	2 4	70 ∇	42.31 146
D † "	(Allithwaite)	Mr. W. R. Nash	5	1 0	90 ∇	41.08 182
† "	(Holker)	Mr. W. Fox	8	4 8	155 ∇	43.84 197
	Grange (Bay Villa)	Amos Beardsley, Esq. ..	8	3 0	25 ∇	44.69 170
	(Nutwood)	Rev. E. Massie	5	2 6	100	40.52 198
* Ulverston	.....	J. H. Matthews, Esq. ...	5	5 6	131	49.13 194
D Powka Beck	.....	J. Lewis, Esq.	12	1 6	500 ∇	53.10 190
D Cartmel (Broughton Hall)	.....	Col. Ainsworth	5	2 8	230	49.23 195
	Ulverston (Colton)	Rev. A. Christopherson	5	1 0	216 ∇	52.53 ...
	Broughton-in-Furness	Rev. F. A. Malleon ...	5	1 3	40 ∇	58.49 146
D "	(Woodland Rectory)	Rev. E. C. Shawfield ..	5	3 9	100 ∇	55.75 177
	Coniston (Torver Rectory)	Rev. T. Ellwood	5	1 0	400 ∇	70.74 ...
† "	(Lanehead)	Mrs. Bywater	5	1 0	287 ∇	72.57 215
† Monk Coniston Park	.....	V. Marshall, Esq.	10	4 11	150 ∇	72.80 ...
D "	" " "	" " "	5	1 0	305	83.61 215
	Hawkshead	W. Lane, Esq.	5	1 2	280 ∇	67.95 195
	Low Wray	Rev. W. R. Morris ...	5	1 0	220 ∇	64.20 189
	Brathay Hall [Ambleside]	G. Redmayne, Esq. ...	5	1 6	140	71.72 181

DIVISION IX.—YORKSHIRE.

WEST RIDING.

D Sheffield (Richmond Hill)	W. D. Gainsford, Esq.	5	2 10	460 ∇	33.66	153
D " (Ranmoor)	J. Dixon, Esq.	10	3 6	600	44.85	185
" (Brincliffe Rise)	A. Chadburn, Esq. ...	5	1 0	500 ∇	41.09	175
" (Edge)	M. S. & L. R. Co.	9	3 6	336 ∇	38.99	190
D " (Broomhall Park)	D. Doncaster, Jun. Esq.	10	2 0	330 ∇	38.66	204
D † Redmires	J. Gunson, Esq.	10	5 0	1100 ∇	46.54	207
"	" "	8	4 0	1100 ∇	47.06	...
D Rivelin	" "	10	4 0	564 ∇	41.47	197
"	" "	8	4 0	564 ∇	42.08	...

DIVISION IX.—YORKSHIRE—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which .01 or more fell.
		Diameter	Height Above Ground.	Height Above Sea Level	1876	
			ft. in.	feet.	inches.	
WEST RIDING—(con.)						
D Crookes	J. Gunson, Esq.	10	2 0	629 ∇	36.29	189
"	"	8	2 0	629 ∇	36.33	...
Sheffield Station	M. S. & L. R. Co. ....	...	...	188	29.41	170
(Tinsley Locks) .....	" .....	...	...	143 ∇	36.79	182
D Tickhill	G. G. Phillips, Esq.	8	1 0	61 ∇	29.35	171
D Rotherham (Ulley Reservoirs)...	Mr. L. Berry	5	1 0	184 ∇	28.66	166
† " (Moorgate Grove)...	R. Chrimes, Esq.	5	1 0	262 ∇	31.20	186
D " (Wath-upon-Deerne)	W. M. Burman, Esq.	8	1 0	185 ∇	29.93	190
" (West Melton)	Rev. J. Boyd	6	0 10	172 ∇	30.28	166
Elsecar	M. S. & L. R. Co.	9	...	175 ∇	31.78	177
Doncaster	"	9	...	35 ∇	25.61	174
D " (Magdalens)	Mr. J. Howorth	5	4 9	46 ∇	28.78	170
Worsborough	M. S. & L. R. Co.	9	...	225 ∇	31.55	171
† Dunford Bridge Station	"	9	3 6	954 ∇	48.36	177
D† " (Reservoir)	Mr. G. Whitfield	12	2 0	1100 ∇	55.48	222
Penistone	M. S. & L. R. Co.	9	3 6	717 ∇	37.68	146
" (Hazlehead) .....	" .....	...	...	868	35.07	178
† Carlcotes	"	9	3 6	1075 ∇	49.60	187
Barnsley	"	9	...	175 ∇	29.04	168
"	W. Greenwood, Esq.	8	15 4	352 ∇	30.47	173
D " (Church Street)	Dr. Sadler	5	3 10	350 ∇	32.61	200
Penistone (Ingbirchworth Res.)	W. Greenwood, Esq.	8	1 4	853 ∇	45.79	217
† Saddleworth Station	E. Greenwood, Esq.	10	5 0	640 ∇	41.18	...
Denshaw	J. F. Bateman, Esq. FRS	5	4 0	1050 ∇	48.33	...
Strines Dale [Oldham]	"	5	4 0	800 ∇	40.02	...
† Marsden (Standedge)	E. Greenwood, Esq.	8	1 0	1150 ∇	53.75	...
D Ackworth School	W. B. Fletcher, Esq.	5	1 6	135 ∇	28.39	178
Goole	Mr. R. G. Boyd	11	3 4	21	25.26	187
† Meltham (Harden Moss)	J. B. Abbey, Esq.	8	1 2	1200 ∇	52.52	...
† " Grange	"	8	1 2	925 ∇	44.56	...
D Slaithwaite (Blackmoorfoot)	J. Stanway, Esq.	8	1 0	800	42.26	195
Golcar (Bank Field)	J. E. Ramsden, Esq.	5	0 8	400 ∇	45.22	193
Longwood (Bilberry Edge)	J. B. Abbey, Esq.	8	1 2	1100	43.89	...
D† Huddersfield (Dalton)	J. W. Robson, Esq.	8	0 6	350 ∇	36.33	201
D " () new gauge	"	8	1 0	350 ∇	36.38	201
D Mirfield (Cote Wall)	E. B. W. Balme, Esq. ....	...	0 9	200	36.44	160
D Rastrick	A. Clay, Esq.	5	1 3	410 ∇	39.44	203
D Wakefield (Borough Cemetery) ..	E. Lynam, Esq.	5	0 10	89 ∇	30.09	181
† Halifax (Victoria)	J. E. Lambert, Esq.	5	1 0	795	44.99	...
† " (Gibbett)	"	5	5 0	568	44.48	...
† " (Ramsden Wood)	"	8	1 2	816	56.02	...
" (Bermerside Observatory)	J. Gledhill, Esq. FRAS	8	0 6	490	46.69	...
† " (Midgley Moor)	J. E. Lambert, Esq.	7	0 6	1350	51.20	...
† " (Warley Moor)	"	7	0 6	1425	48.60	...
† " (Ogden)	"	8	1 3	990	43.53	...
† " (Ovenden Moor)	"	7	0 6	1375	48.70	...
† " (Walshaw Dean)	"	8	0 3	1380	53.20	...
Batley (Corporation W. W.) upr. g.	J. F. Bateman Esq F.R.S.	...	...	1488	62.80	...

The figures in this type 26 refer to the Map facing page 50.

DIVISION IX.—YORKSHIRE—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level		
			ft. in.	feet.	Inches	
WEST RIDING—(con.)						
Batley (Corporation W.W.) <i>lwr.g.</i>	J.F. Bateman, Esq. FRS	...	...	917	56·50	...
D Wakefield (Stanley Vic.)	Rev. R. Burrell	5	1 0	100 T	29·26	186
Methley Park	J. Richardson, Esq. C.E.	5	0 9	98 T	31·89	138
D South Milford Rectory	Rev. F. J. Young	5	1 4	60 T	29·79	188
Bradford (Queensbury)	W. Foster, Esq.	5	5 4	1050 T	41·50	184
" (Brayshaw Reservoir) 2	A. R. Binnie, Esq., C.E.	5	1 0	982 T	39·23	184
D " (Mechanics' Institute) 33	J. Holbrey, Esq.	5	75 0	400 T	32·59	179
" (The Exchange) 34	J. McLandsborough Esq	8	65 6	395 T	35·27	212
" (Westgate Hill)	E. Mirfield, Esq.	5	2 6	725 T	37·48	...
" (Thornton Moor) 10	A. R. Binnie, Esq. C.E.	5	1 0	1401 T	54·12	...
" (" " Res.) 8	" " " "	5	1 0	1176 T	50·82	212
" (Stubden) <i>old gauge</i> 8	" " " "	8	1 0	1075 T	50·90	210
" (Nan's Scar, Oxenhope) 11	" " " "	5	1 0	1101 T	44·08	149
" (Shay Gr, Thornton Moor) 3	" " " "	5	1 0	1201 T	48·61	214
" (Stairs, Oxenhope) 14	" " " "	5	1 0	1401 T	46·21	...
" (Leeming Reservoir) 12	" " " "	5	1 0	850 T	45·61	211
" (Doe Park) <i>old gauge</i> 7	" " " "	8	1 0	810 T	46·63	210
" (" ") 7	" " " "	5	1 0	811 T	46·04	211
" (Chellow Dean) <i>old g.</i> 4	" " " "	10	5 0	650 T	35·84	165
" (" ") 4	" " " "	5	1 0	645 T	36·99	167
" (Leeshaw Reservoir) 13	" " " "	5	1 0	875 T	48·29	212
" (Hewenden Reservoir) 6	" " " "	5	1 0	701 T	39·62	200
" (Heaton Res.) <i>old gauge</i> 5	" " " "	8	1 0	530 T	36·09	162
" (" ") 5	" " " "	5	1 0	531 T	36·24	162
Leeds (Leventhorpe Hall)	J. T. Leather, Esq. C.E.	10	3 6	92 T	28·38	...
† " (Holbeck)	Messrs. Marshall & Co.	10	32 0	127 T	27·68	148
D " (")	" " " "	5	1 8	95 T	31·49	178
" (" W. Works Depot)	E. Filliter, Esq. C.E.	8	0 9	93 T	31·95	191
" (Woodhouse Moor)	" " " "	8	0 9	307 T	33·68	206
" (Roundhay Elmete Hall)	J. Kitson, Esq.	5	1 0	400 T	35·20	180
D " (Weetwood Hall)	H. C. Marshall, Esq.	5	0 7	400 T	34·94	222
" (" Reservoir)	E. Filliter, Esq., C.E.	8	0 9	328 T	32·43	197
D " (Allerton Hill)	T. Fenwick, Esq., C.E.	5	0 7	418 T	33·59	171
D " (Crag Wood, Horsforth) 36	James Fox, Esq., C.E.	5	1 0	350 T	34·93	219
Shipley (Victoria Park) 35	J. McLandsborough Esq	5	1 0	360	30·23	...
Leeds (Eccup)	E. Filliter, Esq., C.E.	8	0 9	343 T	34·94	200
D Bashall Lodge [Clitheroe]	W. Garnett, Esq.	5	1 10	217 T	51·74	180
Harewood (Arthington)	E. Filliter, Esq., C.E.	8	0 9	139 T	34·26	203
Crosshills (Rye Croft) 42	G. Parkinson, Esq.	8	1 0	405 T	42·78	191
Skipton (Gill Grange, Holden) 15	A. R. Binnie, Esq., C.E.	5	1 0	883 T	34·65	...
" (Silsden Reservoir) 16	" " " "	5	1 0	560 T	36·12	173
D Thornton-in-Craven	T. Wilson, Esq.	5	5 4	456 T	42·17	223
D Ilkley (Ashburn) 37	J. I. Dymond, Esq.	8	0 5	400 T	41·08	205
Slaidburn (Whiteholme)	Mrs. Birchall	5	1 3	475 T	59·19	172
Skipton (Chelker Reservoir) 19	A. R. Binnie, Esq. C.E.	5	1 0	730 T	38·09	...
D York (Phil. Soc. Gardens)	C. Wakefield, Esq.	8	1 9	53 T	31·80	194
† " (Cherry Hill)	H. Richardson, Esq.	5	1 6	60	30·72	...
D " (Bootham)	J. F. Fryer, Esq.	5	0 6	50 T	31·43	164

DIVISION IX.—YORKSHIRE—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which .01 or more fell.	
		Diameter.	Height Above Ground.		Height Above Sea Level		1876
			ft.	in.	feet.	inches.	
WEST RIDING—(con.)							
Wetherby (Ribston)	Mr. Jones	5	1	2	...	31.62	137
Bell Busk (Coniston Cold Vic.)...	Rev. J. Stansfeld	6	2	3	474	42.49	...
Harrogate	J. Coupland, Esq.	8	0	6	380 T	36.44	173
Otterburn-in-Craven	W. Gomersall, Esq. ...	5	1	0	510 T	47.54	145
Skipton (Barden Res.) <i>old g.</i> ... 20	A. R. Binnie, Esq. C.E.	8	1	2	746 T	47.17	194
" { " ")	" " "	5	1	0	746 T	43.06	191
" { " Upper Res.)... 21	" " "	5	1	0	1250 T	42.79	193
" { " Thorp Fell)... 22	" " "	5	1	0	1661 T	41.60	...
" { " Sandbed Beck) 23	" " "	5	1	0	676 T	43.05	...
D Nun Monkton (Rectory)	Rev. S. J. Crawhall ...	8	1	0	46	29.93	186
D † Settle (Langcliffe).....	Rev. T. McIntire	8	2	0	623 T	47.19	221
Pateley Bdg (Grimwith Res) <i>old g.</i> 24	A. R. Binnie, Esq. C.E.	8	1	0	890 T	50.81	199
" " { " ")	" " "	5	1	0	893 T	48.95	199
" " { " " Trunla) 25	" " "	5	1	0	1201 T	48.08	...
D " " (Fog Close Ho.)... 38	E. Warburton, Esq. ...	5	2	4	431 T	44.50	203
D † " " (Castle Stead)..... 39	Mr. A. C. Young	5	1	0	410 T	45.47	198
D † Malham Tarn	Mr. Coulthard	5	1	0	1250	59.12	197
D Arncliffe	Rev. W. Boyd	8	2	6	750 T	61.20	231
Ingleborough	J. Farrer, Esq.	10	6	2	...	40.02	...
Ripon (North Lodge).....	F. D. Wise, Esq.	5	1	0	120	33.15	...
" (Borrage House)	Rev. S. Joy	9	1	6	...	26.66	...
D Hubberholme (Buckden)	Rev. W. R. Metcalfe... 10	2	7	800 T	67.85	217	
Ribblesdale (Cam Fell).....	C. H. L. Woodd, Esq. ...	4	1	0	2050	51.13	...
Wharfedale (Swarthghyll)	" " "	8	1	6	1350 T	68.10	179
Dent (Stone House)	Mrs. Nixon.....	5	1	0	800 T	64.98	206
Sedbergh (Thorne Hall).....	Miss Elam	5	1	6	400 T	51.36	202
EAST RIDING.							
D Patrington	W. B. Pugh, Esq.	5	0	3	10 T	30.65	211
D † Hull (York Parade, Beverley Rd.)	H. Smith, Esq.	8	4	8	12 T	30.77	192
D " (People's Park)	Mr. E. Peak	5	1	0	6	33.41	185
D " (Derringham)	W. Lawton, Esq.	5	2	2	10 T	29.24	181
D Cottingham	J. H. Hill, Esq.	8	1	3	26 T	28.68	201
D Beverley (Alexandra Terrace) ...	T. Dyson, Esq.	12	8	0	64 T	28.67	166
D Hornsea (East Gate House)	J. A. Wade, Esq.	5	3	0	40 ?	30.28	145
D Market Weighton (Holm-on-the-Wolds)	Mrs. Harland.....	5	4	0	154 T	29.88	...
" " (Middleton).....	Rev. H. D. Blanchard.	5	1	0	150 T	34.38	182
D Pocklington (Warter).....	J. Coxon, Esq.	5	1	10	230 T	37.82	192
" (Gt. Givendale).....	Miss Singleton	5	4	3	473 T	39.52	...
Lowthorpe (The Elms)	H. Onslow Piercy, Esq.	5	1	0	63 T	36.96	183
D Langton [Malton] ..	Rev. A. Shadwell	10	1	0	150 T	32.06	174
Hunmanby (Foxholes Rectory)..	Rev. R. H. Foord ..	5	1	0	234 T	37.36	191
" (Wold Newton Vic.)	Rev. T. S. Ackland ...	5	1	9	195 T	51.21	192
Ganton Hall [Scarborough]	Mr. Greasley	5	1	0	250 B	35.53	179
NORTH RIDING.							
Flaxton Grange	H. Richardson, Esq....	5	1	0	90	29.47	...
† Malton	H. Hurtle, Esq.	10	1	0	75 T	29.74	...

DIVISION IX.—YORKSHIRE—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which gt or more fell.
		Diameter.	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
NORTH RIDING—(con.)						
Aysgarth (Nell Bank, Walden) ..	Rev. F. W. Stow	3	1 0	...	45·07	...
Bishopdale (Kidstones)	" " "	3	1 0	990	60·61	...
" (The Rookery)	" " "	5	1 0	...	54·94	224
D Bedale (Thorpe Perrow)	Mr. W. Culverwell	5	1 6	170	30·89	174
Aysgarth Vicarage	Rev. F. W. Stow	5	1 0	650	41·73	...
† Wensleydale (Hestholme)	" " "	8	1 0	465 N	40·33	...
D " (Carperby)	J. Willis, Esq.	6	1 0	720 T	42·74	180
Leyburn (Wensley)	G. W. Wray, Esq.	7	1 0	650 N	38·56	...
D † Hawes (The Vicarage)	Rev. Dr. Parker	5	1 0	801 N	57·50	235
Askrigg	Rev. C. Whaley	5	1 0	700 ?	45·56	214
D † Hawes (Hardrow Vicarage) ...	Rev. B. Pink	5	1 0	790 N	52·51	227
D " (Lunds Church)	" " "	5	1 0	1100	62·57	202
Swaledale (Summer Lodge) ...[2]	Rev. F. W. Stow	5	1 0	1075	63·24	213
W * Northallerton	Dr. Hodgson	5	1 3	133 N	28·72	...
Catterick (Tunstall)	H. C. Marshall, Esq. ...	5	1 0	350	32·93	...
D Richmond (The Grove)	G. Roper, Esq.	5	1 3	...	36·74	145
Reeth (Eskeleth House)	W. Whitwell, Esq. ...	8	1 0	947 T	50·66	144
D Richmond (Middleton Tyas)	J. E. Backhouse, Esq. ...	8	1 0	350 N	32·07	118
D Lockwood Beck Res.	W. I'Anson, Esq.	8	1 0	632 N	34·00	180
Whitby (Ruswarp)	C. S. Wake, Esq.	5	1 6	7 T	31·35	...
D W * „ (Guisbro' Road)	M. Simpson, Esq.	5	2 0	184 N	29·67	196
W „ (Port Mulgrave)	J. Hodgson, Esq.	5	4 6	350 T	26·42	163
† Bowes (Sleightholme)	Mr. T. Bousfield	8	1 0	1340 T	48·10	...
Darlington (East Layton)	Mrs. Maynard	5	1 0	575	36·59	194
† Brignall Mill [Barnard Castle] [5]	Mr. T. Tennett	5	1 0	660 T	34·09	...
† Romalldkirk (Mile Rigg) ...[12]	Mr. J. Dent	8	1 0	1400 T	48·15	...
† " (Balder Head) [11]	" " "	8	1 0	1100 T	49·70	...
D Middlesboro' (Grey Towers)	W. R. J. Hopkins, Esq. ...	8	1 6	317 N	28·84	177
" (Marton Hall)	H. W. Bolckow, Esq. M.P.	8	1 8	125 T	30·96	188
Guisborough (Hutton Hall)	J. W. Pease, Esq. M.P. ...	5	1 0	400	33·93	154
D Middlesboro' (Southfield Villas) ..	W. Fallows, Esq.	5	1 6	21 T	27·60	168
† Lune Head [Brough]	Mr. G. Wade	8	1 0	1779 T	53·00	...
† Mickleton [Middleton]	" "	8	1 0	775 T	49·36	...

DIVISION X.—NORTHERN COUNTIES.

DURHAM.

D † Eaglescliffe [Yarm]	Rev. J. Hull	5	1 0	80 N	30·60	184
Darlington (Dinsdale Rect.)	Rev. J. W. Smith	5	2 0	54 T	29·91	163
D " (South End)	Mr. N. Black	8	0 10	140	28·67	192
" (Flora Gardens)	Mr. W. Wrather	8	2 0	147	29·36	155
D " (Cleveland Parade)	S. Hare, Esq.	5	3 6	160 T	29·19	181
D " (Brinkburn)	Mr. H. Ward	8	1 6	170	30·63	121
† Gainford	A. Atkinson, Esq.	5	1 1	250 N	31·05	198
† "	" "	5	1 0	252 N	31·56	198

Numbers printed thus [1] refer to the Map facing page 52.

DIVISION X.—NORTHERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level		
			ft. in.	feet.	inches.	
DURHAM—(con.)						
†Staindrop (Raby Castle).....	Mr. R. Westcott	8	1 0	460 T	34·57	...
†Widdy Bank [Brough].....[17]	Mr. A. Hood	8	1 0	1550 T	52·00	...
†Middleton (Pike Law Hush)[18]	„ „	8	1 0	1540 T	52·00	...
†„ (Langdon Beck)[19]	„ „	8	1 0	1600 T	55·30	...
Hartlepool (Hurworth Burn) ...	T. Fenwick, Esq., C.E.	5	0 7	360	31·52	151
„ (Hart Reservoir).....	„ „	8	0 9	164	29·57	160
D „ (Heugh Lt. House)...	J. „ Howkins, Esq., C.E.	5	0 6	34 T	32·90	220
D†Wolsingham	A. Mitchell, Esq.	5	1 0	464 T	38·90	184
D Durham Observatory.....	G. A. Goldney, Esq....	12	4 8	340 T	40·28	182
D Seaham Hall	Mr. R. Draper	5	1 0	100 T	28·95	...
„ (Vicarage)	Rev. A. Bethune	5	0 4	80 T	30·48	128
Sunderland (W. Hendon House).	T. W. Backhouse, Esq.	5	1 0	132 T	28·70	...
„ „ „ „ Newgauge)	„ „ „ „	5	1 0	132 T	29·03	...
D Chester-le-Street (Birtley)	R. C. Clephan, Esq....	5	0 9	205 T	27·41	210
D Gateshead (Eighton Cottage) ...	T. M. Favell, Esq., C.E.	5	0 10	515 T	32·49	180
NORTHUMBERLAND.						
†Allenheads	T. Kidd, Esq.....	8	0 4	1353 T	54·09	230
D Bywell	Mr. J. Dawson	8	0 6	87 T	35·63	222
Haltwhistle (Unthank Hall).....	Rev. Dixon Brown ...	5	0 9	380 T	36·41	160
D Newcastle (Rye Hill).....	Robert Foster, Esq. ...	8	1 2	220 T	28·59	...
„ (Philos. Soc.).....	W. Lyall, Esq.	8	1 5	105 T	32·27	130
„ (Crawhall Terrace) ...	W. Smurthwaite, Esq.	2	6 0	82 T	32·37	143
D „ (Town Moor).....	Mr. W. Neill.....	5	0 6	201 T	31·47	207
North Shields (Wallsend)	J. W. Dees, Esq.	10	0 6	100 T	30·20	...
D† „ (Rosella Place) ...	R. Spence, Esq.....	8	1 0	126 T	29·01	192
„ (Low Lights)	J. R. Procter, Esq. ...	8	3 4	22 T	29·46	194
„ (Tynemouth)	P. J. Messent, Esq. ...	5	2 8	65 T	26·45	186
D „ (Clementhorpe) ..	J. R. Procter, Esq. ...	5	1 0	150 T	28·91	195
„ (Billy Mill Res.)...	T. Milnes Favell, Esq.	5	0 6	197 T	25·35	...
* „ (Whitley)	Rev. R. F. Wheeler...	5	2 0	82 T	25·09	...
D „ („ Convalescent Ho)	C. Roope, Esq.	5	1 0	38	28·10	123
D „ (Earsdon)	John Taylor, Esq.....	5	2 10	185 T	27·71	166
D Humshaugh.....	Rev. H. Taylor	5	1 0	286 T	35·15	181
„ .....	„ „ .....	...	...	...	33·76	...
D Bingfield House	J. Coppin, Esq.	5	1 0	445 T	35·38	187
Stamfordham	Rev. J. F. Bigge	8	1 0	400 T	33·39	...
Whittle Dean	D. D. Main, Esq.	10	...	...	30·36	...
Hallington	„ „ „	10	0 6	469 T	37·68	...
„ (Fawcett)	„ „ „	10	0 6	563 T	34·27	...
North Tyne (Green Crag) ...	„ „ „	10	0 6	800 T	36·55	...
„ (Valley)	„ „ „	10	0 6	300	33·60	...
Gunnerton Burn (Camphill)..	„ „ „	10	0 6	676 T	35·34	...
Swinburn (Woodford)	„ „ „	10	0 6	500 T	34·09	...
Bellingham (Hesleyside)	W. H. Charlton, Esq..	5	0 8	373 T	40·63	189
D Morpeth (Meldon Park).....	Mr. J. Finlay.....	5	1 0	...	38·73	191
„ (Cresswell)	Rev. J. E. Leeffe.....	5	1 0	90 T	27·04	...
Bellingham (Otterburn)	Rev. T. Wearing	10	1 0	500	39·04	...

DIVISION X.—NORTHERN COUNTIES—(continued)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which "01 or more fell.
		Diameter.	Height Above Ground.		Height Above Sea Level	
			ft.	in.	feet.	inches.
NORTHUMBERLAND—(con.)						
Byrness	Rev. J. Nicholson.....	5	1	0	700	42·43
Rothbury (Whitton Tower)	Rev. Dr. Ainger	5	1	0	410 T	43·63
" (Craggside)	Mr. W. Bertram	8	1	0	400 T	43·51
Deadwater	Mr. Scott	3	1	6	2000 T	62·60
Alwinton (Harbottle).....	T. Thompson, Esq.....	5	1	0	500 T	41·27
D Howick Hall	Earl Grey, K.G.	8	0	10	121 T	37·11
Cheviot (Broadstruther).....	G. P. Hughes, Esq. ...	8	4	0	1692 T	79·00
Ilderton (Lilburn Tower)	E. J. Collingwood, Esq	10	6	0	300 T	36·35
Wooler (Middleton Hall) ...	G. P. Hughes, Esq. ...	5	1	0	510	37·12
Paston [Coldstream]	B. P. Selby, Esq.	8	3	4	327	32·45
Belford (Middleton Hall)	J. T. Leather, Esq.C.E.	10	3	0	240 T	33·59
* Wooler (Milfield)	G. A. Grey, Esq.	5	0	6	200 T	34·06
CUMBERLAND.						
Bootle Rectory	Rev. A. Wilkin.....	12	1	0	87 T	44·04
Whitehaven (Braystones)	J. D. Watson, Esq ...	10	3	8	36 T	37·81
† Seathwaite	Mr. Birkett	4	0	6	422 T	114·58
D† "	" "	5	1	0	422 T	114·03
† "	" "	8	1	0	422 T	113·50
* "	H. C. Marshall, Esq...	5	1	0	420 ?	104·25
† Wythburn Vicarage...monthly	Rev. Basil Lawson ..	8	1	0	574 T	89·00
† Helvellyn (Birkside)	G. J. Symons, Esq. ...	8	1	0	1800 T	109·75
† Watendlan	" " "	8	1	0	867 T	69·75
D† Keswick (Barrow House) ...	S. Z. Langton, Esq. ...	8	0	6	282 T	62·60
D† Whitehaven (Irish Street)	Major Fawcett	5	1	1	21 T	40·80
D Loweswater (Waterend)	Mrs. Jackson	5	1	0	432 T	46·98
† Hallsteads.....	A. Marshall, Esq.....	10	4	0	490 T	43·40
D† Keswick (Deer Close)	H. C. Marshall, Esq...	7	1	9	300 T	51·25
D† " (Derwent Island)..	" " "	5	0	7	280 T	47·20
D† " (Post Office)	Mr. Crosthwaite	8	6	4	270 T	54·51
GA* " (")	" "	5	1	0	270 T	51·13
† Bassenthwaite (Mirehouse).....	Mrs. Spedding	5	0	6	310 T	45·53
D Cocker mouth (Whinfell Hall) ...	W. Robinson, Esq. ...	5	2	0	265 T	45·07
Workington (Stainburn)	C. Litt, Esq.	8	0	6	101 T	35·74
D Cocker mouth (Derwent House)..	Dr. Dodgson	5	0	6	144 T	38·96
D " (Higham).....	T. A. Hoskins, Esq....	6	0	6	478 T	38·72
D " (Broughton Grange)	G. S. Wilson, Esq. ...	5	1	6	209 T	40·65
D Penrith (Sandath House)	Miss Crone.....	...	1	0	580	33·01
" (Fell Lane)	T. Lester, Esq.	5	5	0	525 T	28·29
D " (The Luham, Edenhall)	G. Varty Smith, Esq.	5	1	1	300 T	29·89
D Blencowe School.....	T. Fawcett, Esq. ...	8	0	9	601 T	38·26
D Maryport (Wyndham Row).....	G. S. Wilson, Esq. ...	5	1	0	350 T	38·22
" (Risehow)	" " "	5	1	0	50 T	34·78
D " (Netherhall)	H. P. Senhouse, Esq...	8	0	6	27 T	33·87
D Wigton (Brookfield)	M. Lidbetter, Esq. ...	5	0	9	124 T	33·11
D Alston (Love Lady Shield) ...	T. W. Dickinson, Esq.	5	1	0	1145 T	49·03

NOTE.—The numbers marked thus (11) on this and the next page refer to the Map inserted between pages 148 and 149 of *British Rainfall, 1872*.

DIVISION X.—NORTHERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth o. Rain.	Days on which ·01 or more fell.	
		Diameter	Height Above Ground.		Height Above Sea Level		1876
			ft.	in.	feet.			inches.
CUMBERLAND—(con.)							
D Silloth (The Rectory).....	Rev. F. Redford.....	8	3	0	28 A	34·96	179
Carlisle (Wreay Vicarage)	Rev. T. Lees	5	2	0	310 P	30·65	193
D† „ (Cemetery).....	Mr. T. Bell.....	8	0	8	114 A	31·70	187
D† „ (Scotby)	A. Sutton, Esq.....	8	5	0	140 T	30·15	145
D „ (Kirkandrews-on-Eden).....	Miss M. E. Creighton.....	5	...	...	...	34·22	190
D† „ (Scaleby Hall)	R. A. Allison, Esq. ...	5	1	0	112 A	34·92	154
Kirkandrews-on-Esk Rectory ..	Rev. F. Taylor	5	0	6	100 A	38·48	...
WESTMORELAND.							
D Kirkby Lonsdale (Casterton).....	R. A. Clarke, Esq. ...	8	1	0	305 A	49·16	202
„ „ (Biggins House).....	Miss Tomlinson	12	3	6	400 T	43·57	...
„ „ (Whelprigg) ...	Mrs. Gibson	5	2	0	475 A	48·75	193
„ „	Mr. W. Harrison	5	1	6	209	45·08	...
D Kendal (Kent Terrace)	R. J. Nelson, Esq.....	5	1	6	146 T	51·86	191
„ (Highgate).....	E. Hayton, Esq.	8	5	0	180 A	53·44	199
D „ (Underfell)	F. Wilson, Esq.	8	4	0	300 T	52·35	187
„ „	„ „	8	1	0	300 B	55·00	187
D „ (Hawesmead)	G. Braithwaite, jn., Esq.....	8	0	6	175 A	54·74	211
D Stavely (Reston Hall)	T. K. Atkinson, Esq....	10	3	0	...	56·28	197
Bowness (Matson's Grounds).....	G. Healey, Esq.....	12	0	8	451 A	63·78	210
D Windermere (The Wood)	Rev. G. Crewdson.....	8	3	2	322 A	64·51	138
D Ambleside (Brathay Vic.)	Rev. H. S. Callender...	5	1	3	150 A	71·07	203
D Ravenstonedale (Brownber).....	J. Fothergill, Esq. ...	5	3	0	835 T	43·21	191
D Little Langdale (Bridgend).....(49)	E. B. W. Balme, Esq....	...	0	9	385	88·56	193
D Elterwater (Woodlands).....(50)	E. Tucker, Junr., Esq.	5	0	9	244 A	83·88	213
D Ambleside	Mr. E. Hird	5	1	0	229 T	71·71	219
„ (Lesketh Howe).....(26)	F. M. T. Jones, Esq....	5	2	6	175 T	72·01	...
D† Grasmere (High Close).....(22)	E. B. W. Balme, Esq....	8	0	9	553	77·25	210
† „ (Easdale Tarn).....(47)	Mr. R. Hayton	8	1	0	1175 T	91·50	...
D*† Kirkby Stephen	T. Mason, Esq.	5	1	0	574 T	41·51	181
Kirkstone Pass.....(34)	G. J. Symons, Esq. ...	5	1	0	1500 T	90·76	218
† Haweswater (Mardale Green).....(40)	„ „ „	8	1	0	800 T	78·50	...
† Brough (Summit).....[7]	Mr. T. Sanderson	8	1	0	1410 T	55·60	...
D Shap (Copy Hill).....	Mr. W. Hoggarth.....	5	1	0	874	55·21	232
† Crosby Ravensworth.....(55)	Rev. G. F. Weston ...	8	1	0	600 T	45·14	158
D† „ „ (Reagill).....(54)	Mr. W. Wilkinson ...	8	0	6	890 T	41·30	168
† Haweswater (Measandbecks).....(41)	G. J. Symons, Esq. ...	8	1	0	1200 T	50·50	...
† Patterdale Hall	Mr. Rae	7	1	6	490 T	75·37	...
† „ (Greenside Mine).....	T. Taylor, Esq.	7	1	6	1000 T	84·55	183
† Ullswater (Swarth Fell).....(39)	G. J. Symons, Esq. ...	8	1	0	1000 T	48·50	...
„ (Sharrow Bay) <i>monthly</i>.....(38)	A. Parkin, Esq.....	5	0	7	500 T	44·38	...
„ „ „	„ „ „	8	1	6	500 T	39·50	...
† Great Strickland [Penrith]	H. Plumer, Esq.....	5	1	0	650 T	39·40	...
† Lowther Castle [Penrith] ...	Mr. W. Shand	8	3	6	750 T	38·09	165
Brougham Hall [Penrith] ...	Mr. G. Campbell	5	4	0	470 T	34·53	133
† Appleby (Risp Hill, Dufton) [16]	Mr. W. Pratt.....	8	1	0	1940 T	58·75	...
† Hurth Syke [Alston]	Mr. T. Todd	8	1	0	2000 T	59·90	...

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS.

ATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.	
		Diameter.	Height Above Ground.		Height Above Sea Level		1876
			ft.	in.	feet.	inches.	
MONMOUTH.							
D Newport (Springfield)	G. B. Getling, Esq. ...	5	1	0	180 T	52·42	187
„ (The Grove, Malpas)...	T. D. Roberts, Esq. ...	8	1	6	55	51·89	...
Caerleon (Lansoar)	Rev. J. James	5	1	10	...	46·50	151
D Llanfrechfa Grange	F. J. Mitchell, Esq. ...	5	4	0	326 A	60·79	172
D Chepstow (Piercefield Park)	H. Clay, Esq.	5	1	0	300 ?	51·52	181
D Newport (Llangibby Castle)	D. Lawrence, Esq. ...	8	2	10	...	48·85	171
D Tintern Abbey	Mr. W. Bowen	5	1	0	16	53·19	173
Monmouth (Dingestow Court)...	S. R. Bosanquet, Esq.	5	1	0	250 ?	37·30	...
D Abergavenny (Larchfield)	Dr. McCullough	5	1	0	220 B	49·39	185
GLAMORGAN.							
*Cowbridge (The Ham)	G. W. Nicholl, Esq. ...	8	1	3	50 ?	44·39	...
D „ (Ash Hall)	D. Owen, Esq.	8	1	0	160 ?	54·65	199
D Cardiff Castle	Mr. A. Pettigrew	5	1	0	...	50·64	174
„ (Ely)	T. G. South, Esq. C.E.	5	3	0	45	51·35	166
† „ (Crockherbtown)	W. Adams, Esq., C.E.	5	1	0	35 A	46·62	184
D† „ (Penttyrch)	F. G. Evans, Esq.	5	1	1	100 T	57·04	186
„ (Lisvane)	T. G. South, Esq. C.E.	5	2	0	142	48·91	175
D Pontypridd (Glyntaf Vic.)	Rev. W. Watkins	5	0	9	230 A	71·36	176
„ (Treorchy)	W. T. Lewis, Esq. ...	5	1	0	554 A	104·65	193
D Neath (Glyncorwg)	D. Brown, Esq.	5	4	6	730	93·25	210
D Felindre (Lliw Reservoir)	E. Cousins, Esq.	8	3	0	420	67·34	180
Aberdare (Treherbert)	W. T. Lewis, Esq. C.E.	5	1	0	640 A	107·78	...
„ (Mardy)	„ „ „	5	1	0	431 A	82·32	165
„ (Abernant)	E. Jones, Esq.	5	1	0	425 T	84·95	167
Merthyr Tydfil (Thomas Town)...	T. J. Dyke, Esq.	6	4	0	550 A	62·98	175
D Ystalyfera	Dr. D. Thomas	8	1	2	250	74·57	144
CARMARTHEN.							
† Carmarthen (Gaol)	G. Stephens, Esq.	8	0	6	92 A	58·47	203
D† „ (Joint Co. Asylum) ..	Dr. Hearder	8	1	0	189	56·62	195
Llandilo (Golden Grove)	Rt. Hon. Viscount Emlyn	6	0	6	...	65·87	201
D Dynevor Castle	Rt. Hon. Lord Dynevor	8	1	0	236 T	59·62	201
Narberth (Tegfynydd)	H. S. Morgan, Esq. ...	5	1	0	158	59·39	142
PEMBROKE.							
Pembroke (Stackpole Court)	Rt. Hon. Earl of Cawdor	5	0	6	60 T	44·84	133
D* Haverfordwest (High Street) ...	E. P. Phillips, Esq. ...	5	1	0	95 T	53·49	161
D Solva	E. Robinson, Esq.	5	1	0	90 B	32·40	171
Bla Llechryd (Castle Malgwyn) ..	Mr. W. Hutchison	5	...	...	...	45·61	160
CARDIGAN.							
D Lampeter (St. David's College) (63)	Prof. Scott	8	5	0	420	48·10	...
D Aberystwith (Goginan)	H. Trenwith, Esq.	5	2	6	290	44·13	201
D† „ (Gogerddan) ... (93)	Sir Pryse Pryse, Bt.	5	1	0	80 B	41·71	193

The numbers in parenthesis refer to the Map facing page 196 of British Rainfall, 1875.

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which 1/2 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level.	1876	
			ft. in.	feet.	inches.	
BRECKNOCK.						
Crickhowell (Glanusk Park).....	Mr. Ireland	8	0 6	300 ?	56·02	...
D Brecknock	J. Kirk, Esq.....	5	2 0	437 ∇	52·56	177
D „ (Watton Mount).....	G. Overton, Esq.	5	4 6	450 ∇	52·20	131
RADNOR.						
D Rhayader (Nantgwillt) .....(70)	R. L. Lloyd, Esq.	5	1 0	767 ∇	69·03	210
D† BA Heyope Rectory	Rev. W. W. Griffith ...	5	1 0	690 ∇	47·10	197
MONTGOMERY.						
† Llanidloes (Ystrad-olwyn-fawr) 59	Mr. J. Jones	8	1 0	950	64·80	...
† „ (Dolenog) .....(69)	T. F. Roberts, Esq. ...	5	2 0	550 ∇	49·19	172
Newtown (Dolfor) .....(92)	W. B. Pugh, Esq.....	5	0 3	1027	49·49	199
D Churchstoke (Mellington Hall)...	P. Wright, Esq., F.C.S	5	1 6	550 ∇	31·64	178
Newtown (Caersws)	W. Parry, Esq.	5	0 8	...	44·84	...
D Carno (Post Office) .....(90)	Mr. Thomas	5	1 0	...	46·89	139
D† Machynlleth (Plas) .....(67)	Mr. Johnstone	5	1 0	44 ∇	61·25	...
† Garthbibio (Lluest fawr).....(49)	Mr. J. Jones	8	1 0	990 ∇	64·90	...
FLINT						
Treiddyn (Nant-y-ffrith)	R. V. Kyrke, Esq.....	5	1 0	850	44·34	...
Mold (Bryn Alyn)	Rev. R. B. Cooke	5	1 2	483 ∇	37·67	...
D Hawarden [Chester]	Dr. Moffat	8	0 6	270	34·12	162
Holywell (Maes y dre)	J. Williams, Esq.	10	5 0	335 ∇	26·94	...
St. Asaph (Nantllys) .....(33)	P. P. Pennant, Esq. ...	5	1 0	173 ∇	30·08	...
D Rhyl	W. T. Girdlestone, Esq	5	2 0	21 ∇	28·84	165
† Prestatyn (Nant) .....(77)	T. G. Dixon, Esq.....	5	1 2	30 ?	29·84	182
DENBIGH.						
† Ruabon (Wynnstay) ... <i>new gauge</i>	Mr. Middleton	12	3 0	484 ∇	39·86	209
Llangollen (Plasberwyn)	Lt.-Col. Tottenham ...	...	...	...	48·77	178
Wrexham (Plas Power).....	Mr. J. Clark	5	1 0	472 ∇	41·93	179
„ (Brymbo)	C. E. Darby, Esq.....	6	6 3	632 ∇	38·27	...
D Rosset (Trevalyn Hall)	Capt. Griffith Boscawen	5	1 0	58 ∇	30·67	191
Denbigh (Glan-y-Wern) ... (84)	Lt.-Col. Humberston...	5	1 0	...	30·88	143
D „ (Dyffryn Aled).....(82)	P. W. Yorke, Esq. ...	5	1 0	650 ∇	42·62	167
„ (Gwyn Fryn)	Miss Gold Edwards ...	...	...	240 ?	31·20	...
D Llannerch Park [St. Asaph] (44)	Whitehall Dod, Esq....	5	1 0	107 ∇	29·99	193
„ „ [„] <i>monthly</i>	„ „ „	5	...	...	28·28	...
„ Gardens [„] (44)	Mr. Cartwright.....	5	1 0	130 ?	32·14	...
D Llanfair (Garthewin) .....(81)	B. W. Wynne, Esq. ...	5	1 0	300 ?	39·06	182
„ (Nant-y-Glyn)	A. O. Walker, Esq. ...	5	1 0	150 ?	34·77	153
D „ (Bryn Euryrn) .....(76)	Mr. T. Hutchings.....	5	1 0	125	32·13	169
MERIONETH.						
Aberdovey	Rev. D. Charles	5	12 0	48 ∇	41·06	131
† Towyn (Peniarth).....(89)	W. W. E. Wynne, Esq.	4	2 0	6 ?	41·44	...
D† *Dolgelly (National School)(21)	Mr. Williams.....	5	1 0	43 ∇	65·45	195
† BA * „ (Brithdir) .....(28)	J. Hill, Esq.	5	1 6	465 ∇	65·53	...

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of R ain.	Days on which "01 or more fell.
		Diameter.	Height Above Ground.		Height Above Sea Level	
			ft.	in.	feet.	inches.
MERIONETH—(con.)						
†‡‡*Dolgelly (Brithdir) on bank (28)	J. Hill, Esq.	5	5	3	474	49·82 ...
Bala (20)	Major Mathew 5	5	1	0	544	52·69 171
Trawsfynydd ... (4)	" " 5	5	0	7	700	66·54 191
D Llanderfell (Palé Gardens) ... (88)	Mr. T. Ruddy 8	8	1	0	606 A	52·70 207
‡‡‡ Penrhyndeudreath (87)	E. Mathews, Esq. 5	5	...	...	85	54·19 169
†*Rhiw brifdir (15)	Major Mathew 5	5	10	0	1100	98·64 211
D Corwen (Rhug Gardens)	Mr. J. Bennett 5	5	...	...	...	42·99 165
CARNARVON.						
*Llanystumdwy (Talarvor) ... (16)	Major Mathew 5	5	3	0	50	42·86 167
*Llangybi (Cefn) (6)	" " 5	5	1	1	200	53·32 165
†*Port Madoc (1)	" " 5	5	3	0	10	48·65 151
Beddgelert (Bryn Gwynant) (66)	J. Wyatt, Esq. 9	9	3	0	264 B	107·55 192
‡‡‡ Pen-y-gwryd (85)	Mr. H. Owen 8	8	...	...	860	121·99 179
Carnarvon (Cocksidia) (39)	Major Mathew 5	5	1	1	150	37·05 196
† Llanfairfechan (26)	R. Luck, Esq. 5	5	0	8	150 B	39·61 124
D † Llandudno (Warwick House) (29)	Dr. Nicol 8	8	0	8	99 A	34·41 174
" (Great Orme's Head) (64)	R. Price, Esq. 12	12	6	0	230	27·76 ...
ANGLESEA						
D Llangadwaladr (Bodorgan)	Mr. J. Ellam 8	8	4	0	...	35·60 197
D Rhianva [Bangor] ..	Capt. E. H. Verney, R.N. 8	8	1	5	24 L	35·01 186
D Amlwch (Bodewryd) (75)	Rev. W. W. Williams 5	5	1	6	170 B	40·00 234
ISLE OF MAN.						
D Douglas (Derby Square)	P. Killey, Esq. 5	5	1	1	98	39·40 185
" ..	H. Story, Esq. 8	8	1	0	120 L	40·77 172
Point of Ayre ..	Bd. of Northern Lights ...	...	...	...	...	30·23 136
JERSEY.						
D St. Aubins 8	J. E. Vibert, Esq. 8	8	1	0	140 B	33·67 193
D " Bay (Millbrook)	P. Langlois, Esq. 5	5	1	0	50 L	37·04 197
Rozel Manor ..	R. R. Lempriere, Esq. ...	...	...	...	...	43·27 139
GUERNSEY.						
D Guernsey (York Place)	Dr. Hoskins, F.R.S. ... 12	12	12	0	204 B	41·71 188
D " (Grange Road)	Dr. Mansell 5	5	1	0	174 B	42·66 204
SARK.						
Sark Vicarage	Rev. T. L. V. Cachemaille 5	5	1	0	340 L	34·26 188

SCOTLAND.

DIVISION XII.—SOUTHERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which -01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea level.		
			ft. in.	feet.	inches.	
WIGTOWN.						
Mull of Galloway	Bd. of Northern Lights	...	...	...	30·81	96
D 3A*Wigton (N. Balfarn)	T. MacLelland, Esq.	5	1 0	100 T	47·03	176
Kirkcowan	A. Buchan, Esq.	5	0 0	200	62·01	...
Corsewall.....	Bd. of Northern Lights	...	3 4	22 P	40·65	157
KIRKCUDBRIGHT.						
Little Ross	Bd. of Northern Lights	...	3 3	130 P	49·85	145
Dalbeattie (Colvend Manse)	Rev. J. Fraser	5	1 6	120	40·27	...
Twynholm (Cally)	A. Buchan, Esq.	5	1 0	87	53·72	...
Kirkbean (Woodside Cott.)	Mr. J. Foulds	5	3 0	30 P	48·24	182
D 3A*Dalbeattie	The late J. Grieve, Esq.	5	0 8	50 P	49·48	184
Castle Douglas (Slogarie)	T. R. Bruce, Esq.	8	6 0	300	56·59	...
D New Abbey (St. Mary's)	Rev. W. Downie	3	0 4	54 T	48·36	120
D Cargen [Dumfries].....	P. Dudgeon, Esq.	3	0 4	80 T	48·32	167
Irongray (Drum Park)	D. J. Kay, Esq.	3	0 6	230	58·15	...
D New Galloway.....	R. McKay, Esq.	8	20 0	220 T	50·38	198
D 3A,, , (Waterside)	J. Dalziel, Esq.	5	0 6	215 T	57·66	185
D 3A*Carsphairn	J. Hannah, Esq.	5	3 10	574 T	60·57	143
DUMFRIES.						
D Annan (Warmanbie)	Mr. Elliot	8	3 0	100 T	42·77	167
D Dumfries (Crichton Asylum).....	Dr. Gilchrist	8	0 6	159 T	43·29	168
,, (Ashbank)	T. Corrie, Esq.	3	0 6	...	43·50	...
Closeburn (Wallace Hall)	C. T. Ramage, Esq.	3	0 10	207 T	39·60	...
Thornhill (Capenoch).....	T. S. Gladstone, Esq.	5	1 0	300	50·56	175
Kirkpatrick Juxta (Broomlands)	A. Buchan, Esq.	3	0 3	346	57·22	...
Durrisdeer (Drumlanrig Castle)	,,	3	0 6	191	63·70	...
Moffat (Ericstane)	Mr. Welsh	...	...	550	57·30	...
Sanquhar (Wanlockhead)	Mr. G. Dawson	3	0 5	1330 T	64·24	...
ROXBURGH.						
New Castleton (The Flatt).....	J. Elliot, Esq.	3	0 6	350 T	48·10	...
,, (Kirndeane).....	Miss Elliot	3	0 9	400 T	49·00	...
Riccarton Junction.....	Rev. W. Smith	6	1 3	853 T	46·46	...
D Saughtree	Mr. J. J. Bell	5	4 6	760 T	43·13	164
Hawick (Wolfelee).....	A. Buchan, Esq.	5	0 3	608	43·00	...
,, (Goldielands)	Prof. Elliot	3	0 8	530 T	41·27	...

DIVISION XII.—SOUTHERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876	Days on which "01 or more fell
		Diameter	Height Above Ground.		Height Above Sea level	
			ft.	in.	feet.	inches.
ROXBURGH—(con.)						
Hawick (Kirkton)	Mr. J. Welsh	3	0	6	759 ∇	41·40 ...
D* „ (Silverbut Hall)	Mr. D. Elder	5	4	0	512 ∇	37·82 165
*Jedburgh (Sunnyside)	G. Hilson, Jun., Esq... ..	5	10	0	360 ∇	31·52 168
St. Boswell's (Ellistoun)	The Hon. G. Dalrymple ..	5	1	0	350	35·90 179
D Kelso (Springwood Park)	Sir G. Douglas, Bt	10	1	0	130 ∇	35·51 191
D Melrose (Dingleton Mains)	Miss Turnbull	5	5	0	500 ?	42·42 182
„ (Abbey Gate)	Mr. A. Dodds	5	0	6	280 ∇	41·76 222
D Wooplaw [Galashiels]	J. Murray, Esq.	5	1	0	880 ∇	41·07 221
„ „	„ „	3	1	0	880 ∇	39·90 221

DIVISION XIII.—SOUTH-EASTERN COUNTIES.

SELKIRK.						
Borthwickbrae [Hawick]	W. E. Lockhart, Esq.. ..	8	0	2	800 ∇	49·10 ...
Bowhill	Mr. Mathison	9	11	0	537 ∇	41·62 186
Galashiels (Abbotsford Rd.)	Dr. Somerville	5	0	6	410 ∇	45·11 212
PEEBLES.						
D 33 Glenrath (Manor)	Mr. S. Linton	5	1	2	764 ∇	44·92 152
Peebles (The Glen)	A. Buchan, Esq.	8	0	6	735	31·90 ...
Cairnmuir	„ „ „	12	0	5	1150	44·63 ...
D Penicuik (N. Esk Reservoir) ..	Mr. J. Garnock	11	0	6	1150 ∇	43·70 172
BERWICK.						
Coldstream (Milne Graden)	A. Buchan, Esq.	8	0	8	103	30·50 ...
„ (Swinton Manse) ..	Rev. R. Home	5	1	0	200 ∇	42·56 157
D Marchmont House	Mr. P. Loney	5	1	0	500 ∇	48·98 208
Lauder (Thirlestane Castle)	A. Buchan, Esq.	3	0	3	558 ∇	42·10 ...
Dunse (Mungo's Walls)	Mr. J. Thomson	3	0	6	267	37·11 196
„ (Teindhill)	A. Buchan, Esq.	9	0	0	500	55·15 ...
St. Abb's Head	Bd. of Northern Lights ..	...	0	4	211 ?	33·13 127
HADDINGTON.						
Yester	A. Buchan, Esq.	12	1	0	425	40·11 ...
Haddington Asylum	„ „	5	1	0	235	35·30 ...
„ (Millfield)	Mr. T. Dods	6	4	0	140	36·62 ...
Tranent (Tyneholme)	A. Buchan, Esq.	5	1	6	284	32·23 ...
Dunbar (Thurston)	„ „	6	0	4	327	35·84 ...
D East Linton	Mr. J. Storie	3	0	3	90 ∇	38·64 189
North Berwick (Seacliffe)	A. Buchan, Esq.	8	5	0	80	33·12 ...
EDINBURGH.						
Cobbinshaw Reservoir	A. Buchan, Esq.	6	0	7	863	34·70 ...
Rosewell Asylum	„ „	5	0	6	695	36·27 ...
D Glencorse	W. H. Cameron, Esq....	...	0	6	787	45·00 ...
Harlaw .....	„ „ „ .....	...	...	...	...	45·20 ...

DIVISION XIV.—SOUTH-WESTERN COUNTIES.

Biggar (Wiston).....	Mr. W. Core	3	0	0	860 T	38-90	...
D „ (Cambus Wallace).....	Captain Paul	6	0	6	748 T	31-79	197
D Douglas (Newmains)	Mr. J. Russell	3	0	4	783 T	40-75	182
Lanark (Garrion Tower)	J. M. Mackenzie, Esq.	5	0	9	120	33-62	...
D „ (Ridge Park)	C. Lindsay, Esq.	5	0	4	634 T	31-90	179
D „ (Baronald)	Capt. Thornton	5	1	0	505 T	37-23	190
Hamilton (Auchinraith)	R. Ker, Esq.	10	4	9	150 ?	35-83	...
„ (Bothwell Castle)	Mr. A. Turnbull	10	18	0	146 T	34-84	166
† Cambuslang (Bushy Hill)	Dr. Muirhead	6	0	10	147 T	40-79	179
D Glasgow (Cessnock Park)	R. Hart, Esq.	10	4	4	29 T	47-29	...
„ (Observatory)	Professor Grant, F.R.S.	5	0	1	180 T	47-36	209
D Airdrie (Hillend House)	Mr. W. Ritchie	6	4	8	620 T	40-50	105

Ayr.									
D	Girvan (Pinnore)	Hugh Hamilton, Esq..	5	1	0	187	49-92	178	
	„ (Glendoune)	A. Buchan, Esq.	5	1	1	136	48-87	...	
	„ (Turnberry)	Bd. of Northern Lights	48-87	153	
D	New Cumnock (Whitehill)	W. Lennox, Esq.	5	1	0	860	37-14	176	
	Ayr (Auchinlee)	J. Drennan, Esq.	4	0	36	40-49	...	
D	Ma Muirkirk (Ironedale House)	J. Wilson, Esq.	5	1	0	745	46-17	187	
	Kilmarnock (North Craig)	J. M. Gale, Esq., C.E.	12	0	6	310	41-41	...	
†	„ (Annanhill)	W. H. Dunlop, Esq..	10	0	10	165	42-26	196	

DIVISION XIV.—SOUTH-WESTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which 1/10 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1876.	
			ft. in.	feet.	inches.	
RENFREW.						
Mearns (Newton)	P. R. Murdoch, Esq....	5	1 0	350	54·11	...
Ryat Lyon	† Glasgow Water Works	8	0 5	310	53·30	...
Waulk Glen	" " "	12	0 5	280	50·85	...
Middleton	" " "	12	0 5	550	60·10	...
Nither Cairn .....	" " "	...	...	700	59·70	...
Stanely Reservoir	Robert Sharp, Esq. ...	12	1 0	190	54·96	...
Back Thornlymuir	" " "	12	1 0	646	56·43	...
Muirhead	" " "	11	1 0	482 ∇	56·38	...
Springside	" " "	11	1 0	532	61·51	...
Paisley (Ferguslie House).....	Mr. A. Leishman	3	0 3	85	43·99	122
Shaws W. Wks (Compensation Res)	J. Wilson, Esq., C.E....	6	0 9	600	63·40	...
" " (Lock Thom)	" " "	5	1 0	643	60·35	235
" " (Shiel Hill)	" " "	6	0 9	962 ∇	60·80	...
" " (Mansfield)	" " "	5	1 0	580 ?	67·41	235
" " (Spango Burn)	" " "	6	0 9	757 ∇	59·60	...
Greenock (Hole Glen)	" " "	5	1 0	603 ∇	60·82	210
" (Glenbrae)	" " "	6	0 9	574 ∇	66·20	...

DIVISION XV.—WEST MIDLAND COUNTIES.

DUMBARTON.						
Cardross (Kilmahew Castle)	J. W. Burns, Esq.....	9	0 6	96 ∇	48·23	171
Auchendennan	A. Buchan, Esq.	6	0 9	...	56·80	...
Helensburgh Water Works	J. M. Gale, Esq., C.E.	6	0 3	296 ∇	55·47	146
Dumbarton (Cameron House) ...	A. Buchan, Esq. ...	7	0 9	40	65·50	...
Loch Lomond (Balloch Castle)...	A. J. D. Brown, Esq....	7	0 4	91 ∇	54·84	194
" " (Firkin)	A. McDowall, Esq. ...	...	...	...	96·80	...
Loch Long (Arddaroch)	J. White, Esq.	5	0 9	80	82·78	190
" (Arrochar)	Rev. J. Dewar	5	0 9	10	81·16	...
STIRLING.						
Strathblane (Mugdock Reservoir)	Glasgow Water Works	8	0 6	320	51·40	...
Falkirk (Kerse)	Earl Zetland	8	1 0	...	40·00	...
" (Arnott Hill)	A. Buchan, Esq.....	5	1 6	135	41·15	...
Killearn (Old Ballikinrain)	Miss Anstruther	5	0 8	200	57·51	192
Stirling (Polmaise Gardens)	Mr. W. Ritchie.....	6	0 9	12	45·50	...
Ben Lomond	Glasgow Water Works	...	...	1800	83·80	...
BUTE.						
Arran (Pladda)	Bd. of Northern Lights	...	3 3	55 ?	41·89	132
ARGYLL—(MAINLAND.)						
Castle Toward	Mr. Colquhoun	6	4 0	65	49·20	184
Lochgilthead (Kilmory) <i>Thom's g.</i>	Sir J. P. Orde, Bart ...	6	0 4	92	59·00	...

† Information supplied by J. M. Gale, Esq., C.E.

DIVISION XVI.—EAST MIDLAND COUNTIES.

DOLLAR.							
Dollar	S. Cooke, Esq.	174	56·00	...	
KINROSS.							
Loch Leven Sluice	W. Tullis, Esq.	0 6	360	49·80	148	
FIFE.							
Dunfermline (Craigluscar).....	W. Chisholm, Esq.	10	0 10	460	42·00	...	
„ (Outh)	L. Dalgleish, Esq.	5	0 2	890	53·19	183	

DIVISION XVI.—EAST MIDLAND COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
FIFE—(con.)						
Isle of May	Bd. of Northern Lights ...	...	...	...	19·84	71
Falkland (Lothrie Reservoir) ...	A. Buchan, Esq.	5	0 1	700	52·63	...
St. Andrews (Cambo House).....	Sir T. Erskine, Bt.....	3	0 8	50 1	37·72	...
132 Auchtermuchty	Dr. Troup	5	1 0	179 1	46·61	194
Cupar Asylum	A. Buchan, Esq.	5	0 3	204	41·20	...
St. Andrews	" "	5	0 6	57	41·58	...
Kilmany (Mountquhannie House) ..	D. Gillespie, Esq. ....	...	...	...	42·20	...
Leuchars (Ballmullo).....	A. Buchan, Esq.	5	0 9	100	40·94	...
PERTH.						
D Culross (West Grange)	J. J. Dalgleish, Esq....	5	0 2	116 1	52·19	220
Bridge of Allan [Stirling]	A. Buchan, Esq.	5	0 6	...	45·74	...
Menteith (Cardross Ho.)	H. D. Erskine, Esq....	8	1 3	120 1	43·50	...
Aberfoyle	Glasgow Water Works	8	0 6	60	56·90	...
Ledard .....	" " " .....	...	...	1500	73·00	...
Dunblane (Kippenross)	J. Stirling, Esq.	6	0 4	150	44·20	...
Loch Dhu	Glasgow Water Works	8	0 6	325	82·30	...
" Drunkie	" " "	8	0 6	420	69·00	...
" Vennachar	" " "	8	0 6	275	62·00	...
Lanrick Castle	A. Glover, Esq.	3	0 9	...	52·10	165
Bridge of Turk	Glasgow Water Works	8	0 6	270	74·30	...
Loch Katrine (Tunnel Hill Top) ..	" " "	8	0 6	830	81·80	...
Auchterarder (Glensherup)	W. Chisholm, Esq. ...	11	0 11	900 1	63·03	...
Callander (Leny)	J. B. Hamilton, Esq....	3	0 4	340 1	65·25	...
" (The Gart)	A. Buchan, Esq.	6	0 4	242	62·46	...
Between Glen Finlas & Ben Ledi ..	Glasgow Water Works	8	0 6	1800	66·60	...
Glen Gyle .....	" " " .....	...	...	380	93·70	...
Muthill (Orchil)	A. Buchan, Esq.	3	0 10	470	51·00	...
Auchterarder House	Mr. Maclean	8	2 3	172 1	37·78	...
D " (Colquhalzie) ...	Mr. R. Morton	8	0 5	150 ?	45·92	129
Stronvar (Balquhadder)	Mr. P. Colquhoun .....	...	...	...	74·20	...
" (Lochearnhead)	A. Buchan, Esq.	5	1 0	...	64·80	...
Crieff (Ochertyre)	" " "	3	0 9	325	49·90	...
Tyndrum (Ewick)	Mr. A. Stewart	5	1 0	571	81·51	200
Perth Academy	Dr. Miller, F.R.S.E....	15	64 5	83 1	28·13	...
" (Inchbank)	" " "	10	1 6	24 1	38·79	...
" (Prison)	A. Buchan, Esq.	5	0 3	38	44·01	...
Scone Palace	Mr. J. Halliday	6	2 6	80 1	36·58	125
D 132 Dunkeld (H.R.S.)	The Station Agent ...	5	1 0	225	51·84	124
Meigle (Belmont Castle)	P. Murray, Esq.	8	37 0	237	39·00	...
" (Arthurstone)	P. Carmichael, Esq. ...	5	2 3	187 1	38·88	...
" (") new gauge	" " "	5	2 3	196 1	38·30	...
D 132 Aberfeldy (Grandtully H.R.S.) ..	The Station Agent	5	...	...	39·12	144
Pitlochrie (Bonskeid)	A. Buchan, Esq.	6	0 6	600	35·78	...
D 132 Dalnaspidal (H.R.S.)	The Station Agent	5	1 6	1450	57·50	218

DIVISION XVI.—EAST MIDLAND COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1876	
FORFAR.						
D †Dundee (Westfield Cottage) ...	Charles Clark, Esq.	5	5 6	50 T	43·12	230
D † „ (Eastern Necropolis)...	Mr. W. R. McKelvie...	3	0 5	167 T	44·55	161
D Broughty Ferry (Douglas Ho.)...	Mr. K. Graham.....	5	5 6	60 T	44·24	201
D †Craigton .....(daily)	†Dundee Water Works	5	0 3	481	50·94	138
† „(monthly)	„ „ „ ...	11	0 3	481	50·46	...
†Crombie Reservoir(„)	„ „ „ ...	11	0 3	522 T	50·80	...
†Hill Head	„ „ „ ...	11	0 3	570 T	50·64	...
D Arbroath	A. Brown, Esq., LL.D.	8	2 0	60 T	37·87	172
Montroseness	Bd. of Northern Lights	...	...	...	36·85	96
Montrose (Sunnyside Asylum)...	A. Buchan, Esq.	5	0 5	200	32·73	...

DIVISION XVII.—NORTH EASTERN COUNTIES.

KINCARDINE.

Lawrencekirk (Johnstone Lodge)	A. Buchan, Esq.....	5	0 11	370	47·09	...
The Burn [Brechin]	Col. McInroy	6	0 4	250	41·60	...
Fettercairn	A. C. Cameron, Esq....	4	0 3	230 T	43·43	196
„ (Arnhall)	J. Vallentine, Esq.....	6	0 3	240	43·30	146
Girdleness [Aberdeen]	Bd. of Northern Lights	...	4 7	86	21·49	78

ABERDEEN.

D Braemar	Mr. J. Aitken	8	0 9	1114 T	37·03	207
Drumoak (Drum Castle) <i>monthly</i>	Mr. G. Gammie.....	5	1 8	275 T	44·33	...
D Cromar (Logie Coldstone Manse)	Rev. G. Davidson	5	1 0	694 T	35·88	209
D „ („ „ Loanhead)	A. Farquharson, Esq..	5	1 0	743 T	35·15	203
„ (Tillypronie)	Mr. R. Littlejohn	5	1 0	1120 T	35·24	219
Aberdeen (Rose Street) <i>new gauge</i>	A. Cruickshank, Esq...	5	0 5	95 T	36·44	...
* „ (Grammar School) ...	Rev. A. Beverley	5	4 8	98 T	39·47	...
„ (Skene Street)	„ „ „	5	2 0	95 T	38·34	...
D Midmar (Blackstock).....	Mr. J. Barron	5	0 8	570 T	43·46	192
Lumphanan (Corse House)	Mr. J. Berry	5	3 0	833 T	45·47	...
Monymusk (Cluny Castle)	Mr. McDonald	5	0 1	280 T	39·58	192
Inverury (Kenmay)	Rev. G. Peter.....	8	0 10	300 T	44·10	...
„ („)	„ „ „	8	0 6	300 T	42·85	...
„ (Manse)	Rev. J. Davidson	9	0 0	220 T	45·58	...
Ellon (Tillydesk)	W. Hay, Esq.....	11	0 4	349 T	39·01	...
Peterhead (Buchanness)	Bd. of Northern Lights	...	...	...	19·13	73
„	A. Buchan, Esq.	5	0 6	20	34·44	...
D Old Deer	J. Walker, Esq.....	5	2 0	135 T	40·47	238
„ „ (Manse)	Rev. J. Peter	8	0 6	146 T	41·17	...
Turriff (New Byth).....	A. Henderson, Esq. ...	5	0 5	391 T	43·24	...
Kinnairdhead	Bd. of Northern Lights	...	3 4	64 T	30·20	105

† Information supplied by J. Watson, Esq.

DIVISION XVII.—NORTH EASTERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which "01 or more fall.	
		Diameter.	Height Above Ground.		Height Above Sea Level		1876
			ft.	in.	feet.	inches	
BANFF.							
D B A Keith (H.R.S.)	The Station Agent.....	5	1	0	364	39·23	193
Gordon Castle.....	Mr. Webster	8	1	6	70	35·95	...
ELGIN OR MORAY.							
Grantown	Mr. W. Duncan.....	5	1	1	712 A	31·64	182
D B A Forres (H.R.S.)	The Station Agent.....	5	1	0	20	25·51	151
Elgin (Ashgrove)	W. Topp, Esq.	8	0	3	33	29·12	172
„ (Institution).....	Mr. J. Martin	6	0	6	50 T	34·83	...
D „ (Highfield)	A. Cameron, Esq.	5	0	11	80 T	28·73	185
D B A Burghead (H.R.S.).....	The Station Agent.....	5	1	1	18	27·49	165
Covesea Skerries.....	Bd. of Northern Lights	...	...	...	...	19·47	135
NAIRN.							
B A Nairn (H.R.S.).....	The Station Agent.....	5	1	0	60	26·17	193
D „ (Brit. Linen Bank) ...	J. H. Brown, Esq.....	5	2	0	47	25·04	181
D „ (Acharéidh)	A. Clarke, Esq.....	8	1	0	60 T	23·52	180

DIVISION XVIII.—NORTH-WESTERN COUNTIES.

WEST ROSS.‡							
D * Loch Alsh (Inverinate House)...	Mrs. Matheson	5	3	0	150	58·28	167
D B A Strome Ferry (H.R.S.)	The Station Agent.....	5	1	0	40	56·68	239
D „ „ (Duncraig) ..	Mr. Lorraine	5	1	0	124 L	42·36	...
D B A Applecross Gardens.....	Mr. D. McCowan	5	1	0	70 A	46·22	244
B A Gairloch (Achtercairn)	Mr. M. Lamont.....	5	6	6	13 A	40·95	206
Loch Vraon	J. D. Baldry, Esq., C.E.	8	0	7	750	48·68	...
Lochbroom (Loch Drome).....	„ „ „	8	0	7	850	52·18	...
Braemore House.....	„ „ „	8	0	7	750	47·89	...
„ Lodge.....	„ „ „	8	0	7	100	45·32	...
D B A * Lochbroom	Mr. M. Macleay	5	0	8	48	42·46	...
Isle of Lewis (Stornoway)	Bd. of Northern Lights	...	3	4	31 P	25·38	132
D „ („ Lewis Castle) ..	Mr. Smith	5	1	0	90	49·17	281
„ (Bernera).....	Mr. J. Macdonald	6	1	0	200	53·70	...
„ (Butt of Lewis) ...	Bd. of Northern Lights	...	3	6	...	36·58	212
EAST ROSS.‡							
D B A Dingwall (H.R.S.)	The Station Agent.....	5	1	1	3	28·02	147
Cromarty	Bd. of Northern Lights	...	3	4	28 P	23·59	87
* Invergordon Castle	B. B. Æ. McLeod, Esq.	5	1	6	25 P	27·60	155
D Alness (Ardross Castle).....	Mrs. Matheson	5	1	0	450 A	40·05	203
D B A * Tain (Fearn)	R. Gordon, Esq.....	5	1	0	58 A	29·52	174
D B A „ (Springfield)	Mr. McLardy.....	5	3	6	80 A	30·41	160
Tarbetness	Bd. of Northern Lights	...	3	4	61 P	21·83	103

‡ Including Cromarty.

DIVISION XVIII.—NORTH-WESTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which .01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1876	
			ft. in.	feet.	inches.	
WEST INVERNESS.						
Kinlochmoidart	W. Robertson, Esq. ...	6	0 6	20	59.20	164
Fort William (Public School) ...	C. Livingstone, Esq. ...	5	0 3	30	69.95	215
D Loch Sheil (Glenfinnan)	Major Macdonald	5	1 0	35 ?	89.12	249
Loch Nevis (Inverie)	Mr. N. McDonald	6	2 6	14 L	59.40	123
D Glenquoich	Mr. J. Dawson	8	2 0	660	97.03	265
Isle of Skye (Oronsay)	Bd. of Northern Lights	...	0 6	15 ?	45.32	140
„ (Broadford)	Mr. Logan	5	1 0	45	72.08	220
„ (Kyle Akin)	Bd. of Northern Lights	...	0 2	3 ?	69.97	189
BA „ (Sligachan) <i>monthly</i>	Mr. Butters	8	1 4	...	72.63	...
D BA* „ (Portree)	Mr. J. Grant	5	1 3	165 W	69.79	261
„ (Dunvegan)	Mr. R. Mackintosh ...	5	1 0	24	72.60	194
Rona	Bd. of Northern Lights	...	...	...	45.00	150
Barrahead	„ „ „	...	3 0	640 ?	30.97	181
S. Uist (Ushenish)	„ „ „	...	0 4	157 ?	40.05	180
N. Uist (Monach) .....	„ „ „	...	...	...	45.20	151
„ (Spanish, Loch Maddy) ...	C. Shaw, Esq.	5	1 0	30	94.71	294
Harris (Island Glass)	Bd. of Northern Lights	...	3 4	50 ?	41.99	172
EAST INVERNESS.						
Roy Bridge (Kinchillie)	J. Hutton, Esq.	5	1 2	407 T	41.30	229
„ „ (Brae Lochaber)	Sergt. A. Fraser	5	1 0	306	47.25	223
BA Dalwhinnie (H.R.S.)	The Station Agent	5	2 0	1450	24.64	133
BA* Laggan	Mr. A. McIntosh	5	0 9	821 W	41.07	193
D BA Aviemore (H.R.S.)	The Station Agent	5	1 1	710	25.93	216
D Strath Errick (Farraline House)	Capt. Fraser	3	1 0	700 T	36.40	...
Glen Urquhart (Corrimony)	T. Ogilvy, Esq.	3	0 4	537 W	37.20	158
Glen Strathfarrer	Mr. D. Fraser	5	1 0	461 T	42.91	...
Beaully (Belladrum)	Mr. C. Grierson	6	0 9	...	31.80	149
D BA Dava (H.R.S.)	The Station Agent	5	1 2	1000	31.09	234
D BA Inverness (H.R.S.)	„ „ „	5	...	...	26.94	159
D† „ (Culloden House)	A. Forbes, Esq.	7	3 0	82 T	25.66	...
D BA Cawdor [Nairn]	J. Joss, Esq.	5	1 0	260	29.68	186

DIVISION XIX.—NORTHERN COUNTIES.

SUTHERLAND.						
Dornoch (Ospisdale House)	W. E. Cattley, Esq. ...	5	0 9	30 ?	33.36	216
^{BA} * Invershin	Mr. G. Young	5	4 0	20	41.03	...
Golspie (Dunrobin Castle)	Mr. D. Melville	5	3 0	9 L	32.24	209
„ „ „ <i>monthly</i>	„ „ „	3	0 3	6 L	34.62	...
^D ^{BA} „ (H.R.S.)	The Station Agent	5	0 9	27	33.63	112
Laing	A. Buchan, Esq.	3	3 4	451	44.41	...
^{BA} * Helmsdale	Mr. J. Campbell	5	1 0	34	38.99	226
Assynt (Achumore)	J. Elliot, Esq.	3	0 6	150 ?	73.90	...
Scourie	J. Simpson, Esq.	3	0 4	26 L	39.90	...
Cape Wrath	Bd. of Northern Lights ...		3 6	355 ?	34.86	174

DIVISION XIX.—NORTHERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1876	
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CAITHNESS.						
D Wick (Pulteney House).....	Rear Adml. Rutherford	5	0 11	70	41·73	224
„ (Nosshead).....	Bd. of Northern Lights	...	3 4	127 ?	37·02	201
Thurso (Holburnhead)	„ „ „	...	0 4	60 ?	29·90	99
Dunnethead	„ „ „	38·89	152
Pentland Skerries	„ „ „	...	3 3	72 ?	32·75	172
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ORKNEY.						
D S. Ronaldshay (Roeberry).....	J. W. Gray, Esq.	5	1 2	101 ½	37·41	235
Hoy (Cantickhead)	Bd. of Northern Lights	43·70	110
„ (Graemsay Sound, East) ...	„ „ „	...	3 4	27 ?	35·15	116
„ („ „ West) ...	„ „ „	...	...	...	40·68	211
Pomona (Tankerness)	S. Leitch, Esq.	5	0 9	...	37·77	242
„ (Deerness)	Rev. C. Clouston LL.D.	5	...	...	40·40	...
Shapinsay (Balfour Castle)	Col. Balfour	4	0 6	50	35·70	...
D † Pomona (Sandwick)	Rev. C. Clouston, LL.D.	11	2 0	78	39·12	...
Stronsay (Auskerry)	Bd. of Northern Lights	36·55	119
Sanda (Start Point)	„ „ „	11	0 6	29 ?	33·57	101
North Ronaldsay	„ „ „	...	3 4	21 ?	35·72	193
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SHETLAND.						
Sumburghead	Bd. of Northern Lights	16·50	149
Bressay Lighthouse	„ „ „	5	0 4	60	40·48	128
Stourhead.....	„ „ „	...	...	...	67·80	179
D † East Yell	Mr. A. D. Mathewson..	5	1 0	178	47·76	302

I R E L A N D.

DIVISION XX.—MUNSTER.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1876.	Days on which -01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
CORK.						
BA Skibbereen	F. P. E. Potter, Esq....	5	...	...	45·40	253
Cork (Blackrock)	J. B. Binyon, Esq. ...	10	6 0	30	47·22	203
D „ (Queen's College) <i>new gauge</i>	Professor England ...	8	0 5	59	46·88	174
D „ (Royal Institution)	Dr. Caulfield	10	50 0	70	36·73	188
Fermoy (Glenville)	H. Hudson, Esq., M.D.	8	2 0	514 A	54·79	208
„ (Gas Works).....	G. Anderson, Esq.....	5	1 1	...	42·46	157
D „ (St. James' Place).....	A. Campbell, Esq.....	5	1 0	114 A	42·41	231
KERRY.						
D BA Caherciveen(DarrynaneAby.)	D. O'Connell, Esq. ...	5	1 1	12 A	58·24	226
Dromore Castle	R. J. Mahony, Esq. ...	5	1 2	100	66·15	239
Cara (Lake side).....	J. B. Kennedy, Esq....	5	0 4	125 A	50·27	...
BA Tralee (Godfrey Place)	H. Stokes, Esq., C.E.	5	30 0	50 T	45·22	232
WATERFORD.						
D Cappelquin	Sir J. Keane, Bt.	5	1 0	253 A	50·46	196
D Waterford(Brook Lodge)	C.Perceval Bolton, Esq.	5	3 2	175 T	49·75	202
„ (Roanmore Lodge) ...	H. A. Nevins, Esq. ...	5	1 0	79 T	44·79	194
D „ (Portlaw)	S. B. Pim, Esq.	24	20 0	50	47·65	166
„ (Curraghmore)	Mr. G. Fairbairn	5	4 0	...	63·90	181
„ (Gas Works)	G. Anderson, Esq.....	5	...	...	48·78	148
TIPPERARY.						
D Clonmel (Glenam)	Miss Grubb	5	1 10	80 T	47·08	211
D Cahir (Tubrid)	T. Palmer, Esq., M.D.	5	1 0	280	42·45	208
D BA Tipperary (Henry Street) ...	J. Dowling, Esq. M.D.	5	1 0	...	40·17	208
Nenagh (Carobane)	Heber Koe, Esq.	5	1 1	150 ?	38·79	205
„ (Castle Lough).....	A. Parker, Esq.....	5	1 3	120 ?	40·87	214
„ (Luska Lodge) ...	G. A. Waller, Esq. ...	5	1 0	116	33·40	154
D Gurteen [Shinrone]	Miss Smith	5	1 0	267 A	36·50	210
LIMERICK.						
BA Jane Ville	R. Harding, Esq.	5	1 0	504	48·87	...
BA Newcastle West	Rev. J. T. Hayes	5	3 0	219	36·59	224
D Limerick (Kilcornan)	Mr. P. Sweeny	5	1 0	...	34·90	199
CLARE.						
D Ennis	J. Hill, Esq.	10	3 2	21 L	42·45	186
D BA Miltown Malbay	M. Molohan, Esq.....	5	1 0	400 ?	46·05	236
Corofin	J. W. Macnamara, Esq.	5	1 0	...	43·03	204

DIVISION XXI.—LEINSTER.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which -01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1876.	
WEXFORD.						
Wexford (Reclaimed Lands).....	C. W. Palliser, Esq.	10	1 0	1 ∇	44·17	131
D New Ross (Longraigue)	J. W. Deane, Esq. ...	5	1 1	210	49·17	204
Enniscorthy (Castle Boro')	T. L. Bashford, Esq. ....	...	...	...	53·12	...
D " (Ballyhyland)	J. Moffat, Esq.	5	1 0	420 B	50·12	222
Gorey (Courtown)	Earl of Courtown	5	3 0	80 ?	44·04	186
KILKENNY.						
Piltown (Bessborough Park) ...	Mr. I. Laidley	8	3 8	...	44·40	203
D Rosbercon Castle [New Ross] ...	A. E. Graves, Esq. ...	...	2 6	60 ∇	52·85	149
Tullagher [" "] ...	D. A. Milward, Esq. ...	5	1 6	500 ∇	60·80	184
Inistioge (Woodstock)	Rt. Hon. W. F. Tighe	5	4 6	400 ∇	53·68	195
B *Stoneyford (Inisnag) ...	Rev. J. Graves	5	1 6	223 ∇	37·22	...
D " (") <i>Snowdon g.</i> .....	" " .....	...	...	220	37·22	205
D B Kilkenny (Butler House) ...	C. E. James, Esq, M.D.)	5	1 0	200 ∇	38·33	...
CARLOW.						
D Bagnalstown (Fenagh)	D. W. P. Beresford, Esq.	5	1 0	340 ∇	40·05	185
D Carlow (Browne's Hill)	R. C. Browne, Jun., Esq.	5	1 0	291 ∇	38·79	189
QUEEN'S COUNTY.						
Abbey Leix (Blandsfort)	J. L. Bland, Esq.	5	2 6	590 ∇	35·33	198
D Mountmellick (Tinnahinch)	Mr. J. Conroy	5	1 0	356	44·46	225
KING'S COUNTY.						
D Birr Castle	Earl of Rosse, F.R.S. ...	8	0 8	180 ∇	34·38	235
D Portarlinton	Dr. Hanlon	5	1 2	240 ∇	32·65	249
Banagher	F. A. Waller, Esq. ...	5	...	180	38·95	117
D Rathangan (Clonbrin)	Mrs. W. Gresson	5	1 4	224 ∇	33·17	185
Tullamore	H. J. B. Kane, Esq. ...	10	3 0	235	33·47	193
KILDARE.						
Naas (Ballymore Eustace)	Mr. P. Homan	5	1 9	...	39·04	196
DUBLIN.						
Black Rock (Rockville).....	W. Bewley, Esq.	12	29 0	95 ∇	42·47	130
Monkstown (Easton Lodge).....	Greenwood Pim, Esq. ...	...	0 8	90	35·75	...
† Dublin (Fitz William Square) ...	Dr. J. W. Moore	5	3 4	54 ∇	32·66	195
D " (Eccles St.)	H. A. Cosgrave, Esq. ...	5	3 4	70	32·67	197
D " (O. S. O. Phoenix Park)	Major Wilson RE., FRS	31	10 0	170 ∇	31·45	176
Glasnevin (Botanic Gardens) ...	D. Moore, Esq.	8	0 11	56 ∇	32·30	165
D Kilsallaghan (Corrstown House)	H. A. Cosgrave, Esq. ...	5	3 4	280	38·70	207
D Rush	Miss Fleming	5	1 1	57	32·31	154
D Balbriggan	Rev. S. P. Warren ...	5	1 0	57 ∇	39·84	201
" (monthly)	" " "	5	1 0	57 ∇	39·28	...
MEATH.						
D Clonee (Williamstown)	W. Johnston, Esq. ...	5	0 10	200	34·37	202
D Trim	P. Malone, Esq., C.E.	10	4 2	180	36·57	196

DIVISION XXI.—LEINSTER—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1876.	
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MEATH—(con.)						
Navan (Balrath)	R. W. Walsh, Esq., C.E.	5	ft. in.	feet.	inches.	
		33·51	162
WESTMEATH.						
d Athlone (Twyford)	J. Hodson, Esq.	5	4 0	179	43·99	231
d Belvedere (The Gardens)	C. Brinslay Marlay, Esq.	5	1 0	367 T	40·95	201
Rathowen (Streete)	W. E. Wilson, Esq. ....	...	...	...	38·33	...
LOUTH.						
d Castle Bellingham (Drumcashel)	Mrs. Macan	8	1 3	225 T	40·28	233
d Stephenstown	Col. Fortescue	5	0 11	75 A	34·75	212
Dundalk (Ravensdale Park)	Rt. Hon. Lord Clermont	8	1 0	360 T	52·54	212
d Greenore	T. Chambers, Esq.	5	1 0	4 P	38·57	176

DIVISION XXII.—CONNAUGHT.

GALWAY.						
d Gort (Cregg Park)	R. J. Lattey, Esq.	5	3 0	130 A	42·66	200
d Galway (Queen's Coll.)	Prof. Curtis	16	9 0	30	47·03	230
d Ballinasloe (Kilconnell)	Rev. H. E. Muriel ...	5	0 10	320 P	42·44	209
d " "	W. H. Kempster, Esq.	5	0 6	150 A	37·83	212
d Ahascragh (Clonbrock)	Rt. Hon. Lord Clonbrock	10	4 6	200	45·43	185
Clifden (Kylemore)	A. Armstrong, Esq. ...	5	0 1	105 T	95·33	267
Tuam (Gardenfield)	H. Kirwan, Esq.	5	6 3	136 T	40·92	...
ROSCOMMON.						
d * Holywell	H. Smyth, Esq.	5	5 6	250 P	41·90	...
MAYO.						
Hollymount (Cloona Castle) ...	J. Simson, Esq.	3	2 0	80 P	44·90	...
d Westport (Rossbeg)	W. H. Deane, Esq. C.E.	5	1 0	25	47·44	232
Doo Castle [Tobercurry]	Mr. D. O'Dowd	5	1 0	...	44·47	...
d Crossmolina (Enniscoe)	J. Pratt, Esq.	5	0 11	50 P	54·92	246
SLIGO.						
Collooney (Markree Observatory)	Miss A. Doberck	5	0 5	134	40·97	...
d " " " " " " " " " " " "	" " " " " " " " " " " "	31	16 7	148	38·62	218
d Sligo (Mount Shannon)	F. M. Olpherts, Esq.	5	4 5	70 B	40·85	196
d Ballinful (Ardtarmon Cottage)	C. J. Henry, Esq.	5	1 1	...	25·44	116
LEITRIM.						
Mohill	H. Ross, Esq.	5	...	...	39·70	206
d Carrick-on-Shannon (Drumsna) ..	J. B. Pratt, Esq. C.E. ..	5	1 2	170 A	42·56	109
d " " " " " " " " " " " "	R. Bradshaw, Esq. M.D.	5	1 0	150 P	42·05	201
" " " " " " " " " " " "	Mr. J. Cox	5	0 9	150	39·07	153
Drumkeeran (Spencer Harbour) ..	Messrs. H. Fawcett & Co	5	1 0	166	53·95	175
" " " " " " " " " " " "	" " " " " " " " " " " "	5	1 0	1100 P	52·97	191

DIVISION XXIII.—ULSTER.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.	
		Diameter.	Height Above Ground.		Height Above Sea Level		1876
			ft.	in.	feet.	inches.	
CAVAN.							
D Killeshandra (Drummany)	H M Anketell Jones Esq	10	32	6.	292 π	32·79	193
D * Belturbet (Red Hills)	Rev. E. Whyte Venables	5	0	9	208 π	36·96	198
FERMANAGH.							
Enniskillen (Florence Court) ...	Earl of Enniskillen FRS	8	1	9	250	58·60	179
„ (Lisbellaw)	R. Eadie, Esq.	5	1	0	200 ?	41·58	179
MONAGHAN.							
π Rockcorry	Mr. W. R. Loudon	5	1	0	290 π	37·54	201
ARMAGH.							
Jonesborough (Flurrybridge) ...	Rt. Hon. Lord Clermont	8	1	0	340 π	49·37	214
D Edward St. Station [Newry] ...	J. L. D. Meares, Esq. .	5	1	0	22 π	44·75	184
Newtownhamilton	W. W. Anderson, M.D. .	5	2	6	680 π	50·42	199
Armagh Observatory	Rev. Dr. Robinson F.R.S	10	1	7	208 π	30·67	187
DOWN.							
Kilkeel	Rev. E. O. B. Pratt ...	5				38·61	199
Rostrevor Quay	Messrs. Norton & Shaw	8	1	2	18	49·40	129
π Warrenpoint (Summer Hill)	Mr. B. M. Kernan ...	5	1	0	30	51·84	...
D Hilltown	Mr. H. Hall	5	1	0	430	53·16	180
D Rathfriland	Dr. May	5	1	0	500	42·50	116
D † Castlewellan (Bann Res)	J. Smyth, jun. Esq., C.E.	8	1	0	440 π	52·90	...
D „ (Foffany)	„ „ „	8	3	0	920	82·68	124
D „ (Woodlawn)	S. Murland, Esq.	5	0	6	290	53·28	159
Banbridge (Katesbridge)	A. Mulligan, Esq. ...	5	1	0	230	37·09	172
D Seaforde	Colonel Forde	8	0	5	180 π	50·26	200
D † Banbridge (Milltown)	J. Smyth, jun. Esq. C.E	8	0	8	200 π	35·94	202
† „ „ (monthly)	„ „ „	10	40	0	220 π	30·60	...
D † Waringstown	Major Waring	8	0	4	191 π	36·44	221
π Hillsboro' (Anahilt)	Mr. A. Clements ...	5	1	0		41·55	179
π Newtownards	Mr. M. Harbison	5	1	7	10	39·77	153
D Sydenham (Alma House)	R. Reade, Esq.	5	1	0	60	49·49	218
ANTRIM.							
D Aghalee [Lurgan]	Lancelot Turtle, Esq. .	5	1	0	105 π	38·33	174
D † Belfast (Queen's College)	Mr. W. Taylor	11	7	4	68 π	39·89	176
† „ (Linen Hall)	Mr. F. A. Maitland ...	11	4	0	12	38·95	...
„ (Elmgrove House)	J. Barbour, Esq.	5	1	0	16 ?	40·79	207
D „ (New Barnsley)	J. Firth, Esq.	5	1	0	200 π	44·96	206
† „ (Old Park)	W. Girdwood, Esq.	5	4	0	224 π	47·36	190
D † „ (Antrim Rd.)	G. Thompson, Esq. ...	7	7	0	144 π	38·85	181
π Crumlin	Mr. G. Dixon	5	1	0		38·14	209
White Abbey (Abbeyville)	Rev. R. W. Bland ...	8	2	0	64 π	41·93	168
† Antrim (The Manse)	Rev. J. H. Orr	5	1	0	150	33·94	176
D Larne (Carnlough)	J. Reside, Esq.	5	1	0	8 π	51·72	185
π Ballymoney (Church Street)	Mr. J. Craig	5	1	0	150 π	36·72	121
D π Bushmills	Mr. D. Elliott	5	1	0	33 π	38·96	210

DIVISION XXIII.—ULSTER—(continued.)

STATIONS.	AUTHORITIES,	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1876	
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LONDONDERRY.						
D*Garvagh (Moneydig)	H. R. Morrison, Esq...	5	1 0	121 T	41·57	178
D Londonderry (Knockan)	H. F. Stevenson, Esq...	5	1 0	300 T	47·14	...
Newtown Limavady (Drenagh)..	C. T. McCausland, Esq.	5	1 0	80	38·82	232
Bellarena	Sir F. Heygate, Bt. ...	5	1 0	12 T	38·36	210
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TYRONE.						
D Caledon Glebe.....	Rev. W. B. Armstrong	5	1 0	125	35·46	234
D Aughnacloy Archdeaconry	Rev. T. G. Stokes.....	5	4 6	255 T	40·43	177
W Moy (Benburb).....	Mr. S. Robinson	5	1 0	...	34·42	173
D Dungannon (Donaghmore)	J. Brown, Esq.	5	1 0	300	38·42	198
„ (Pomeroy)	Rev. St. A. Brenan ...	5	1 0	400 T	44·94	236
D W Stewartstown (The Square)...	A. Johnston, Esq.....	5	1 4	350	42·73	...
Dungannon (Rockdale).....	Capt. Lowry	5	1 0	300	48·59	208
D Cookstown (Ballymully Glebe)...	Rev. T. H. Porter, D.D.	5	1 0	200	42·88	198
D Omagh (Edenfell)	Major Buchanan	8	1 0	275	39·19	225
Cookstown (Lissan)	Sir N. A. Staples, Bart.	...	0 4	300 T	48·26	251
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DONEGAL.						
D W Ballyshannon	H. Allingham, Esq. ...	5	1 1	7	37·20	192
Inver	Rev. F. Carre	5	1 0	200	49·96	223
Raphoe (Convoy)	Major Montgomery ...	5	1 0	110	45·41	210
„ „	„ „	5	4 0	109	44·69	210
W Ramelton	J. A. Mahony, Esq. ...	5	1 2	21	42·00	208
„ (Ballyare)	G. M. W. Hill, Esq.	5	1 0	60	44·38	149
D „ (Killygarvan)	Rev. C. H. Cochrane...	5	0 6	14	46·06	194
Buncrana (Rockfort)	T. Colquhoun, Esq.....	5	1 0	15	41·45	216
Dunfanaghy (St. Helen's).....	C. B. Wolseley Esq M.D.	5	3 0	38 T	41·77	245
D Moville	The Met. Committee...	8	1 4	78	46·89	229
D Carndonagh.....	Rev. A. Pinkerton ...	5	1 0	255	47·33	209

G. J. S.

SUPPLEMENTARY TABLE OF IMPERFECT RETURNS,

AND OF THOSE WHICH FOR VARIOUS REASONS ARE NOT INSERTED IN THE
GENERAL TABLES.

DIV.	COUNTY.	STATION.	OBSERVER.	Rain Gauge.			Depth of Rain.
				Diameter.	Height Above Ground	Height Above Sea Level.	
							1876
II.	Sussex	West Thorney.....	F. Padwick, Esq. ...	5	ft. 1 0	feet. 10	28·4
"	"	Warbledon	Rev. G. E. Haviland {	5	1 1	282 }	37·1
"	Hampshire	Isle of Wight (New- town Vicarage).....	Rev. H. Stokes	5	1 0	50	34·9
III.	Buckingham ...	Aylesbury (Peverel Ct.)	J. E. Bartlett, Esq. ....	...	2 0	290	24·7
"	Northampton ...	Rothwell	J. Moore, Esq., M.D.	8	1 0	300	30·1
"	Cambridge	Caxton (Hardwicke) ...	Rev. J. S. Brown ...	...	...	...	24·6
IV.	Essex.....	Maldon (Cold Norton).	C. Clarke, Esq.	5	1 2	130	24·9
"	Norfolk.....	Long Stratton	Rev. J. M. DuPort...	5	0 6	...	28·5
V.	Wilts.....	Trowbridge (Sunnyside)	W. J. Mann, Esq. {	5	1 0	190 }	35·9
"	"	" (Rodney Ho.)	{	5	1 0	170 }	
"	Dorset	Lyme Regis.....	H. Tucker, Esq.	5	4 6	146 }	46·8
"	"	" (Uplyme).	{	5	1 0	120 }	
"	Devon	Widdecombe Vicarage.	Rev. J. Williams ...	5	8 0	810	56·0
VI.	Hereford	Ross (Goodrich).....	Mr. A. Martin.....	8	1 0	188	38·9
VII.	Derby.....	Trent College	C. U. Tripp, Esq. ...	5	1 0	120	26·2
VIII.	Lancashire	Rivington.....	G. F. Deacon, Esq. C. E.	...	...	...	42·9
IX.	York, N.R.	River Balder (Hury Mill)	Mr. J. Robinson	8	1 0	775	41·4
X.	Durham	Sunderland (St. Bede's)	J. W. Mounsey, Esq. {	5	0 6	105 }	30·9
"	"	" (The Limes)	{	5	0 6	105 }	
"	Cumberland	Gowbarrow Park	G. J. Symons, Esq.	8	1 0	1100	51·3
"	"	Matterdale Common ...	"	8	1 0	...	56·8
"	"	Kirkoswald (Renwick).	Mr. T. J. Dryden ...	5	0 9	700	39·5
"	Westmoreland {	Appleby	Dr. Armstrong ... {	8	1 0	442 }	34·9
"	"	Milburn (Howgill Cas.)	J. Mitchell, Esq.	5	1 0	442 }	
XI.	Cardigan	Aberystwith (Warne Hill)	Sir Pryse Pryse, Bt. ....	...	0 9	700	32·8
"	Denbigh	Denbigh (Vale Street).	J. Lloyd Roberts, Esq.	8	1 0	1380	57·0
"	"	Abergele (Kinmel Pk.)	Ldy. Florencia Hughes	5	1 0	230	32·2
XIV.	Ayr	Patna (Hole House) ...	Mr. P. Murdoch	4	0 5	250?	36·6
"	"	Old Cumnock	Mr. J. Kay	5	1 0	446	43·3
XV.	Bute	Rothsay (Barone Cot.)	J. Ballantine, Esq.	5	1 3	380	41·4
"	Argyll	Lochgilphhead (Kilmory)	Mr. J. Kay	5	1 0	116	52·4
XVI.	Perth.....	Glenalmond (Trin. Col.)	Sir J. P. Orde, Bart.	5	4 0	...	58·0
XVII.	Aberdeen	New Pitsligo	Rev. Dr. Robinson...	8	1 0	530	52·7
"	Moray	Wester Elchies	Mr. D. Sturrock	3	0 3	522	49·2
XVIII.	East Ross.....	Invergordon, H.R.S....	Mrs. Gavin	8	1 4	607	30·0
XXI.	Wicklow	Bray (Fassaroe)	The Station Agent...	5	1 0	18	35·2
XXIII.	Down.....	Newry (Newcastle) ...	R. M. Barrington, Esq.	10	5 0	250	45·6
"	Tyrone	Stewartstown (Ardrea)	Rev. J. H. Seymour.	5	1 5	...	68·7
"	"	"	J. M. Churchill, Esq.	5	0 11	190	38·8

List of Stations of which the Records were quoted in 1875, but are not in 1876, with the reasons for their omission.

EXPLANATION.—The Stations are quoted in the order of their sequence in the printed tables, and the causes of omission are indicated as follows:—

NR—No reply; NO—Not observed; T—Terminated; RI—Return imperfect.

Ealing	NR	Springfield	NR	Easington Rectory	NR
Sandy Cross	T	Wetheridge	T	Whorlton	T
Nutfield Priory	NR	Mayen House	T	Sedgefield	NR
Caterham	NR	Strangways Ter.	RI	Sunderland, St. Bede's...	T
Ewell Road	T	Penarth	NR	Shotley Hall	RI
Balham	RI	Lanteglos Rect.	T	Croft Hill	T
Kennington Road	T	Barn Park	T	Brow Top	NO
Cecil Square	NO	Ilchester	T	The Friarage	NR
Beckenham, The Hall ...	T	The Mount, Taunton ...	T	Brayton Hall	NR
Forest Hill	T	Gay Street	T	Croft House	T
Yapton	T	Castle Villa	NR	Appleby	RI
West Thorney	RI	Quedgeley	NR	Newport W. W.	NR
Dale Park	NR	Chelt Sew. Wks.	NR	Rhymny House	NR
West Pier End	RI	Goodrich	RI	Cardiff Cemetery	NR
Uckfield Observatory ...	NR	Bromyard	T	Swansea	NR
Northiam	T	Knowbury	T	Neath	T
Crowborough	NR	Cheswell Grange	NR	Tenby	T
Netley	NR	Burton-on-Trent	T	Kinmel Park	RI
Aldershot	NR	Moseley	T	Bodfaen	NO
Bourley	NR	Henley-in-Arden	T	Caif of Man	NO
Litchfield	T	Brereton Villa	T	Westerkirk School	NR
Gt. Missenden	RI	Ashby-de-la-Zouch	T	Carlesgill	NR
Weedon Beck Vic.	T	Heydour	NO	Timpendean	NR
Hargrave	NR	Skellingthorpe Hall	NR	Bordlands	T
Barton Seagrave	NR	Faldingworth	T	Carnwath	NR
Woolleys	NR	The Mount, Worksoy ...	T	Hole House	T
Rothwell	RI	Trent College	RI	Old Cumnock	RI
Wadenhoe	NR	West Hallam	T	Mansfield	RI
Conington Castle	NR	Poole's Cavern	RI	Oban	T
Amptill	T	Bamford	NR	Beach	T
Lidlington	T	Chelford	T	Nookton	T
Walthamstow	NR	Highfield	RI	Montrose	NR
Cold Norton	RI	Salford	NO	Cuparstone Road	T
Purleigh	T	Rainford Hall	NR	Bogside	T
Dorwards Hall	T	Wigan W. W.	NR	New Pitsligo	RI
Beech Hill	T	Haslingden	NR	Wester Elchies	RI
Somerleyton Rect.	NR	Oswaldtwistle	NR	Strathconan	NO
Long Stratton	RI	Burnley Gas Works	NO	Moy House	T
Dereham	RI	Caton	T	Tain, H.R.S.	RI
"	RI	Hest Bank	NR	Papa Westray	NO
Roche Court	T	Hornby Castle	T	Dromore	T
Orcheston	T	Silverdale	T	Newtown	RI
Imber	T	Coniston Parsonage	T	Kilrush	RI
Sunnyside	RI	Stansfield Hall	NR	Killaloe	RI
Tytherton	T	Moorside	T	Fassaroe	RI
Draycot Folliatt	NR	Drax	NR	Glenturk Lodge	T
Lyme Regis	RI	Settle	NO	Monaghan	NO
Beaminster	RI	Filey Res.	T	Newcastle P. O.	T
Ashmore Rectory	T	Grosmont	T	Drumquin	T
Stonehouse	T	North Lighthouse	NR	Templecrone	T
Widdecombe	NR	Barningham Park	NR	Moville	T

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