

From the Author

BRITISH RAINFALL.

ON

THE DISTRIBUTION OF RAIN

OVER THE

BRITISH ISLES,

DURING THE YEAR

1862,

AS OBSERVED AT ABOUT 600 STATIONS IN GREAT BRITAIN
AND IRELAND,

WITH TABLES OF THE MONTHLY, AND AVERAGE YEARLY FALL AT
SEVERAL STATIONS.

COMPILED BY

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1863.

NOTE.

THE Author being very anxious to make these tables as complete as possible, will be obliged by information of, or from, any persons who record the fall of rain in the British Isles, but who have not hitherto communicated their observations to him. He also desires to be informed of any registers of the fall in previous years, however remote the place or period of observation, or however long discontinued.

The compilation of these tables being but the employment of his leisure hours, his acknowledgment of the receipt of such favors may be somewhat tardy, but will assuredly be sincere.

BRITISH RAINFALL.

THE success which attended the issue of the tables of *British Rainfall during 1860 and 1861*, has induced the publication of a similar, but extended, collection for 1862.

No effort has been spared to ensure equal accuracy on the present occasion; and it is hoped the introduction of tables showing the monthly fall at twenty stations, widely spread, but nearly equidistant, and the relation of the fall during the last three years to the mean of the ten preceding years, will be accepted as indicative of the writer's oft-expressed and earnest wish—to make our knowledge of the distribution of rain equal, both in accuracy and extent, to the importance of the subject.

Particulars of some other efforts in this direction are given in the following Report.

G. J. SYMONS.

Camden Road Villas, N.W.

February 7, 1863.

REPORT.

THIS publication being based entirely on the returns supplied by the numerous Observers, it is but courteous to them, and may perchance be interesting to others, to state briefly the progress which has been made during the past year; hence the heading, hence the nature of these remarks.

The issue of these Annual Summaries was, as stated last year, but an offshoot of the primary object—the collection of all obtainable records of the Rainfall in the British Isles; towards which there has already been collected the monthly depth of rain as observed at nearly a thousand stations, for various periods from A.D. 1677 to the present time; the total number of years copied and tabulated ready for discussion being rather more than 7000. Progress in this portion of the inquiry has not been so rapid as in former years, all that has been effected being due to the aid of one to whom no further reference can be made—the writer himself having been too much occupied by other duties, and by correspondence connected with the development of the Annual Summaries to enable him to touch this branch of the work.

It is with great pleasure that the returns from the Lighthouses round the coast of Scotland, nearly fifty in number, are now (for the first time) inserted, copies of the records having been supplied through the kindness of the Board of Northern Lighthouses. An extract from the Secretary's letter transmitting these returns to the compiler is subjoined:—

“ I cannot without writing to each station give the height of the gauges above ground, as some are in the old form, some in the new on the ground. I may also caution you against implicit reliance on the quantities returned. In many instances, where there have been gales of wind or continued bad weather, the return of the gauge is necessarily swollen by sea spray drawn into it. Lighthouse stations, from this cause, are not the most favourable for indicating the *precise* quantity of rain.”

The truthfulness and importance of these remarks is indisputable, but it must not, therefore, be inferred that *all* Lighthouse records are unreliable. The accordance between Corsewall and Dumfries, Inchkeith and Pittenweem, Hoy and Sandwick, &c., appears at first sight very satisfactory, though others seem quite the reverse.

In order thoroughly to guard against all possibility of publishing as certain, doubtful results, the ϕ , which in these tables is the symbol of uncertainty *not* inaccuracy, has been prefixed to all these observations.

More than one hundred additional Observers so extend the following tables that the few whom death has removed will scarcely be missed except by their friends and the compiler, to whom their uniform courtesy renders each loss a source of personal regret.

Two subsidiary undertakings have been organized during the past year, both of which have received the warm approval of the Observers.

The first is a rigorous examination of the rain gauges in use throughout the country, with a view to determine their accuracy, suitable position, height above ground and above sea level, &c. This must be a work of time, for the gauges are (fortunately) many of them in the remotest parts of the country, and the author has only his vacation in which to visit them. In the Autumn of 1862 he was, however, favoured with the assistance of his friend, G. Harvey Simmonds, Esq., in whose accuracy he has every confidence, and who visited and examined thirteen gauges in North Lancashire, Westmoreland, and Cumberland, amongst them those marked with an asterisk in the following tables, as are also about forty others in various parts of the country, which were visited by the writer. The majority of the gauges examined proved accurate, and well situated; but the returns have been suppressed from Empingham, in Rutland, and Huggate, in Yorkshire, in both of which cases the position of the gauge was extremely objectionable. This is the more to be regretted as the observations at both stations have been made for a long series of years. The position of the gauge at Scarborough is unsatisfactory; good observations both there and at Whitby would be very valuable. Additional records are also desirable from Wales, Ireland (especially among the mountains of Kerry), and the northern parts of Scotland.

The second is the monthly issue at the cost of paper, printing, and postage, of a circular giving for each of twenty selected stations, various particulars respecting the fall in the month immediately after the close of which it is issued. Those who are interested in this matter are requested to communicate with the writer who will supply full particulars of the arrangements.

For the convenience of those who desire to study the monthly rainfall during 1860 and 1861, it may be mentioned that tables containing the *monthly* fall at more than 500 stations during those two years, and accompanied by a map and explanatory remarks, were presented by the writer to the British Association, and by them will be printed in extenso in their next volume of reports.

It only remains, in conclusion, for the writer once more to express his sincere thanks to the Observers for their reports, whence alone these tables could be compiled.

ON THE FALL OF RAIN DURING THE YEARS 1860-1-2.

DURING each of the last three years the fall of rain in the United Kingdom has been nearly identical, and about six inches above the average of the ten preceeding years. The following table which proves this, shows also that notwithstanding this general result, very different conditions have prevailed locally, and even over considerable tracts of country. In England, for instance, the fall in 1861 was nine inches *less* than in 1860, while in Scotland it was nearly four inches *more*. To take a few variations of a more local nature—from North Lancashire northwards, along the whole of the Western and Central Districts of Scotland the fall in 1861 was largely in excess of that in 1860; but the farther we recede from the coast the more did the two years become equalized, till on reaching the Eastern Coast the fall in 1861 was less than 1860, as was the case in the counties of Berwick, Forfar, and Aberdeen. Again, in England generally the fall in 1862 was about three inches *greater* than in 1861; but it was *less* at several stations in the South Eastern Counties—at Dover, Hastings, and St. Leonards—and also at almost every English station north of 54° latitude, and on the western side of the Pennine chain.

The table of monthly fall requires little comment; the selection of the stations having been made with care, it is believed that the Monthly fall over the United Kingdom is very fairly represented. October (as usual) and March were generally the months of heaviest fall, and February almost everywhere that of least. It is difficult to understand the origin of the expression “February fill dyke” when that month is almost always the driest month in the year.

The number of rainy days at about a hundred stations has been stated by the Observers, but as it is still evident that no uniform system is adopted, the results must not be published. The *best* plan would undoubtedly be to record, however approximately, the number of *hours* during which rain fell; but failing this, it would probably accord best with the usage of the majority of Observers to consider a “rainy day” each day on which a measurable amount of rain fell. No measurement of less than 0·01 in. to be taken account of.

Several of the Observers having appended most interesting notes to their returns, a few of them are subjoined. It need hardly be said that the compiler has pleasure in so doing, and regrets that he cannot insert more of them.

OBSERVERS' NOTES.†

II. *The Holmes, Betchworth.*—Chalk hills 715 ft. high immediately behind my house. I generally have considerably more rain than at any other station that I know of in the neighbourhood.

II. *Linton Park.*—I have for many years been noticing the winds, and find that those from the N.E. are less frequent for the last seven years, while those from the S. have been increasing. The number of frosty days have been fewer than I have ever recorded; but the temperature has not been above the average.

II. *Crawley.*—Weather milder than usual, with the exception of one week, from the 9th November, when the ground was too hard for ploughing;

† The Roman Numerals denote the division of the general tables in which each station is included.

on the 5th November many swallows were flying about. Wettest October ever remembered.

II. *Selborne*.—Although we have had less sunshine than in any year I remember, and much damp weather, the rainfall, properly so called, is not above the average.

IV. *Bocking*.—A daily fall of 0·50 in. for four consecutive days in the second week in August greatly injured the quality of the wheat.

V. *Calne*.—Maximum fall in twenty-four hours, 1·28 in., 6th May. On 2nd September, 0·39 in. fell in six minutes; it was at the time the storm was raging at Market Lavington, ten miles distant.

V. *Ham, near Plymouth*.—31st August, 1·56 in. fell in less than five hours during a thunderstorm.

V. *Meshaw Rectory*.—Maximum fall in 24 hours, 1·16 in. 10th October.

V. *Barnstaple*.—Maximum fall in 24 hours, 0·90 in., 30th May.

V. *Treharrock*.—Average fall (11 years) 37·11 in. Greatest, 46·14 in. in 1860; least, 30·95 in. in 1854.

V. *Rosecarrock*.—Maximum fall in 24 hours, 1·14 in., 21st September.

V. *Bristolington, Bristol*.—Average (14 years) to January, 1862, 29·13 in., 1862 has therefore been much in excess.

VI. *Leek, Staffordshire*.—We have an excellent system of public drainage in this town, and I have observed that the greater the number of days upon which the rainfall furnishes the sewers with a quantity of water equal to thirty gallons per head on the population, the lower is the number of deaths that occur from Zymotic disease,—this rule has held good for three years. Our artificial supply of water is nine gallons per head per day. At the end of any quarter I am able by the Rain Gauge to inform the Registrar, with tolerable accuracy, the number of deaths he has registered from diseases of the above-named class. Observation warrants me in concluding that forty gallons of water per head per day is the amount required. If any of your correspondents have any similar observations, I should be glad to know the results; it might, perhaps, afford some important sanatory information on the subject of water supply to towns. On the 7th of August 0·80 in. fell in eighteen minutes.

VI. *Orleton*.—The rainfall much in excess of the average, and only exceeded by that in 1848, 1852, and 1860, in the last thirty-two years.

VII. *Southwell, Notts*.—Average (15 years) 25·50 in.

VII. *Welbeck, Notts*.—Average (25 years) 24·50 in.

VII. *Derby*.—Maximum fall in 24 hours, 1·06 in., 7th May.

VIII. *Manchester*.—The fall in May, 4·47 in., was the largest in that month since 1847, when it was 5·26 in. The maximum in 24 hours was 1·56 in. on 3rd September.

IX. *Ackworth*.—1·73 in. fell on 9th February.

IX. *Arncliffe*.—12·50 in. fell in October.

X. *N. Shields*.—Maximum in 24 hours, 3·45 in., on 7th August.

XI. *Ystalyfera*.—Cold and wet; the crops below the average both in quality and quantity, and as a natural consequence more disease among the cattle and sheep than usual.

XIV. *Kilbarchan*.—The coldest and wettest summer in remembrance; the last sheaves not carried till November; the straw rotted and the grain sprouted.

XVI. *Leny, Callander*.—Corn out in November when the snow was fifteen inches deep. On the whole, the worst harvest for weather, and difficulty of saving an indifferent crop, ever remembered.

XVI. *Montrose*.—Only one week in April and two in August without rain.

XIX. *Sandwich*.—The wettest May since 1841.

ERRATUM.—In the tables for last year, the fall at Torosay (XV.) should have been 69·70 in 1860, and 96·00 in 1861.

COMPARISON OF THE RAINFALL

IN THE

THREE YEARS 1860-1-2,

WITH THE

AVERAGE OF THE TEN YEARS 1850—9.

ENGLAND.

Division.	STATION.	COUNTY.	Average Fall during 10 yrs, 1850—9.	EXCESS IN		
				1860	1861	1862
			inches.	inches.	inches.	inches.
I.	Enfield	Middlesex	22.67	+11.90	— 2.65	+ 3.74
II.	Chichester	Sussex	26.67	+10.77	— 1.52	+ 0.80
II.	Abbott's Ann.....	Hants	25.10.	+ 5.07	— 2.60	+ 0.32
III.	Banbury	Oxford	24.73	+ 6.83	— 2.64	+ 1.54
IV.	Epping	Essex	23.18	+13.85	— 2.76	+ 2.68
IV.	Dorward's Hall ...	"	20.55	+ 5.53	— 1.72	+ 1.23
IV.	Burnham	Norfolk	26.86	+ 7.79	— 2.08	— 0.15
IV.	Holkham	"	26.13	+ 8.56	— 4.33	— 3.41
V.	Baverstock	Wilts	28.69	+ 8.76	— 1.94	+ 1.61
V.	Goodamoor.....	Devon	54.12	+17.90	— 0.46	+ 9.02
V.	Tavistock	"	35.66	+12.33	— 1.21	+ 2.19
V.	Exeter Institution	"	26.91	+ 9.17	— 1.11	+ 2.67
V.	Clyst Hydon	"	30.74	+10.79	— 5.53	+ 0.19
V.	Helstone.....	Cornwall.....	36.22	+ 6.74	+ 1.40	+ 2.21
V.	Bodmin	"	43.48	+12.85	+ 1.08	+ 3.88
VI.	Cirencester.....	Gloucester	29.60	+ 7.34	— 2.21	+ 2.86
VI.	Shiffnall	Salop	24.02	+ 7.21	— 0.22	+ 1.68
VI.	Orleton	Worcester	28.82	+ 8.07	+ 0.99	+ 5.49
VII.	Wigston	Leicester	26.39	+ 5.08	— 3.19	— 0.26
VII.	Derby	Derby	23.98	+ 8.79	— 1.97	+ 2.30
VIII.	Liverpool	Lancashire	24.34	+ 0.19	— 1.19	+ 3.32
VIII.	Bolton-le-Moors...	"	44.01	+13.65	+ 0.90	+ 9.42
VIII.	Preston	"	34.28	+ 5.48	+ 2.31	+10.05
VIII.	Stonyhurst	"	45.37	+ 5.23	+ 3.63	+ 9.03
VIII.	Coniston	"	71.40	+18.10	+30.80	+25.00
IX.	Standedge	York, W. Riding	49.58	+ 7.17	+ 0.17	+ 3.67
IX.	Well Head, Halifax	"	30.71	+ 3.62	+ 0.08	+ 1.51
IX.	Leeds	"	20.91	+ 7.69	+ 2.39	+ 0.34
IX.	Settle	"	35.55	+ 6.23	+ 6.24	+ 7.22
IX.	Pattingham	York, E. Riding	20.65	+ 7.93	— 2.03	— 1.93
IX.	Middleton	"	25.88	+10.90	+ 0.54	+ 0.91
IX.	York	"	22.02	+ 8.35	— 1.75	+ 1.09
X.	Bishopwearmouth.	Durham	16.91	+ 7.80	+ 2.39	+ 4.06
X.	Seathwaite	Cumberland ...	126.98	+15.22	+55.60	+43.05

SCOTLAND.

Division.	STATION.	COUNTY.	Average Fall during 10 yrs, 1850—9.	EXCESS IN		
				1860	1861	1862
			inches.	inches.	inches.	inches.
XIII.	Thurston, Dunbar	Haddington ...	26·96	+ 7·14	— 1·16	+ 3·44
XIII.	Inveresk	Edinburgh	24·72	+ 7·25	+ 3·89	+ 8·17
XIV.	Largs	Ayr	43·06	+ 1·54	+ 12·74	+ 11·64
XV.	Castle Toward.....	Argyll	47·88	— 0·70	+ 17·46	+ 14·39
XV.	Torosay, Mull.....	„	74·64	— 4·94	+ 21·36	+ 19·36
XVI.	Pittenweem	Fife	24·38	+ 2·98	+ 4·07	+ 1·59
XVI.	Deanston, Stirling	Perth	39·21	— 1·91	+ 5·84	+ 12·34
XVI.	Early Bank, Perth	„	29·39	+ 8·49	+ 6·69	+ 16·52
XVI.	Stanley	„	29·05	+ 2·06	+ 5·53	+ 5·02
XVI.	Craigton	Forfar	31·87	+ 5·70	+ 3·06	+ 6·37
XVI.	Hill Head, Dundee	„	31·06	+ 6·37	+ 4·49	+ 6·27
XVI.	Seichen	„	32·07	+ 6·73	+ 4·81	+ 6·39
XVII.	Castle Newe	Aberdeen	32·99	+ 7·50	+ 6·07	— 3·58
XIX.	Sandwick	Orkney	36·14	+ 1·82	+ 5·04	— 1·76
XIX.	Bressay	Shetland.....	36·22	+ 0·58	+ 4·93	+ 9·73

IRELAND.

XX.	Portlaw	Waterford	39·49	+ 7·22	+ 9·82	+ 10·61
XX.	Killaloe	Clare	38·35	+ 10·41	+ 13·49	+ 9·02
XX.	Black Rock.....	Dublin	21·78	+ 4·92	+ 2·89	+ 3·20
XX.	Markree Castle ...	Sligo	36·35	+ 7·39	+ 10·81	+ 3·56

ABSTRACT.

England*	29·84	+ 8·42	— 0·66	+ 2·79
Scotland	35·98	+ 3·37	+ 6·99	+ 7·72
Ireland	33·99	+ 7·48	+ 9·25	+ 6·60
United Kingdom	33·27	+ 6·42	+ 5·19	+ 5·70

* Seathwaite and Coniston are not included in these calculations; if they were, the figures would be 33·92, +8·91, +1·92, +4·63.

MONTHLY FALL OF RAIN DURING 1862.

1862.	ENGLAND AND WALES.									
	Bodmin. V.	Alderbury, Salisbury. V.	Camden Town. I.	Ystalyfera, Swansea. XI.	Wigston, Leicester. VII.	Holkham. IV.	Hengoed, Oswestry. VI.	Retford. VII.	Malton, Yorks. IX.	Seathwaite, Cumberland X.
January	inches. 5.52	inches. 2.40	inches. 1.92	inches. 6.21	inches. 2.27	inches. 1.14	inches. 2.67	inches. 0.67	inches. 1.64	inches. 16.78
February	—1.86	—0.49	—0.31	—1.38	—0.53	—0.50	—0.38	—0.64	1.21	5.50
March	5.63	4.61	+3.69	6.84	+3.31	+3.28	3.76	3.45	+3.85	10.30
April	2.65	2.18	2.30	6.83	1.90	1.37	2.92	1.45	1.77	17.26
May	2.73	2.85	3.06	4.36	3.30	2.50	+4.43	2.58	2.08	8.28
June	4.59	1.98	2.43	5.81	1.95	2.05	2.86	1.68	2.76	15.62
July	3.34	1.90	2.61	7.54	1.98	1.75	2.52	2.04	3.01	13.67
August	2.38	1.67	2.73	4.23	2.49	3.25	2.78	2.06	1.92	12.81
September	4.45	1.26	2.19	3.91	2.94	1.60	3.45	+4.14	2.80	6.38
October	+6.88	+4.86	3.50	+10.30	2.91	2.08	4.40	2.15	2.33	+32.13
November	2.13	0.80	1.13	2.06	0.90	1.50	1.43	0.85	—1.18	—5.14
December	5.20	1.80	1.70	7.60	1.65	1.70	3.08	0.98	1.74	26.16
Total	47.36	26.80	27.57	67.07	26.13	22.72	34.68	22.69	26.29	170.03

NOTE.—The Roman Numerals denote the division of the general tables in which each station is included, and where the height of each gauge above the ground and above sea level is given.

MONTHLY FALL OF RAIN DURING 1862.

1862.	SCOTLAND.					IRELAND.				
	Deanston, Perth. XVI.	Torosay, I. of Mull. XV.	Banchory, Aberdeen. XVII.	Loch Maddy, North Uist. XVIII.	Sandwick, Orkney. XIX.	Valentia, Kerry. XX.	Waterford. XX.	Galway. XX.	Glasnevin, Dublin. XX.	Leekpatrick Strabane. XX.
January	inches. 6·30	inches. 12·60	inches. +4·10	inches. +11·30	inches. 4·02	inches. 8·22	inches. 7·34	inches. 7·31	inches. 3·03	inches. 4·88
February	—1·35	—3·30	1·50	—2·05	—1·42	—2·11	—1·42	2·36	—0·57	—1·46
March	3·80	4·40	2·50	2·80	1·85	4·86	4·35	3·94	2·99	3·86
April	3·60	7·00	—0·80	4·35	2·27	5·14	4·86	4·02	3·31	3·81
May	3·90	7·00	3·50	2·85	2·86	4·15	2·37	3·34	2·42	2·73
June	3·60	5·50	2·50	4·30	2·33	4·70	3·48	2·72	2·24	2·67
July	5·20	8·60	1·80	6·40	2·52	3·06	3·48	4·20	+3·38	4·00
August	3·50	5·10	1·90	5·00	2·25	3·57	2·63	3·54	1·84	2·48
September	2·50	4·20	1·30	3·30	3·01	3·33	3·24	2·68	2·24	2·26
October	+7·70	+16·40	2·70	9·90	+5·69	+10·03	4·32	6·68	2·71	+6·68
November	3·00	4·70	1·10	7·80	2·38	6·02	2·70	—2·20	1·44	2·69
December	7·10	15·20	2·80	9·40	3·78	7·00	+5·04	+8·62	1·87	4·93
Total	51·55	94·00	26·50	69·45	34·38	62·19	45·23	51·61	28·04	42·45

The signs + and — mark the months of maximum and minimum fall respectively.

ENGLAND AND WALES.

†DIVISION I.—MIDDLESEX.

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain. 1862
		Above Ground.	Above Sea Level	
		ft. in.	feet.	inches.
MIDDLESEX—Staines	W. Menzies, Esq.	6 0	...	22·79
Hammersmith	F. J. Burge, Esq.	1 0	12 ?	26·64
Guildhall	W. Haywood, Esq. ...	0 0	46	25·24
"	"	77 0	123	24·04
Bryanstone Square	C. O. F. Cator, Esq. ...	4 6	...	27·34
Chiswell Street	W. Fletcher, Esq.	50 0	...	25·74
Mile End	F. Charrington, Esq. ...	4 0	...	25·50
Gray's Inn Road	Mr. R. Strachan	2 2	55	25·67
St. John's Wood	Mr. A. H. Carter	1 0	151	28·84
*Camden Town	G. J. Symons, Esq. ...	0 4	100	27·57
Hackney	Dr. Tripe	0 6	40	29·82
Tottenham	W. D. Howard, Esq. ...	0 3	60	26·48
Colney Hatch Asylum	Mr. R. G. Rose	40 0	...	26·97
Enfield	Rev. J. M. Heath	25 0	130	26·41

DIVISION II.—SOUTH-EASTERN COUNTIES.

SURREY—Dunsfold, Godalming ...	W. L. Woods, Esq. ...	0 6	...	25·10
Kitlands, Dorking	D. D. Heath, Esq.	4 8	580	32·22
Red Hill	J. G. Marriage, Esq. ...	3 0	...	29·84
Dorking (Deepdene)	Mr. J. B. Whiting ...	2 9	...	29·95
Betchworth (Brockham)	W. Bennett, Esq.	0 6	130	29·48
" (The Holmes)	E. T. Bennett, Esq. ...	0 6	300	32·10
Cobham Lodge	Miss Molesworth	0 6	100 ?	26·26
Weybridge Heath	W. F. Harrison, Esq. ...	0 6	120	27·29
Wandsworth (South Fields)	R. Coleman, Esq.	1 0	...	28·48
" (St. Ann's Hill) ...	G. Dines, Esq.	5 0	57	29·03
Clapham	H. Doxat, Esq.	0 11	...	26·32
Kew Observatory	B. Stewart, Esq.	0 0	18	28·29
Battersea	Rev. S. Clark	0 0	13	27·89
KENT—Dover	H. J. Poulter, Esq.	1 0	16	24·93
Tunbridge	Dr. Fielding	0 0	125	27·62
Linton Park, Staplehurst	Mr. J. Robson	0 6	200 ?	26·93
Hunton Court	Mr. P. Goddard	0 6	...	26·05
Maidstone	J. H. Baverstock, Esq. ...	6 0	60	26·16
River Hill, Seven Oaks	J. Rogers, Esq.	9 0	520	29·31
West Wickham	Rev. J. T. Austen	1 0	...	30·41
Welling, Bexley Heath	H. S. H. Wollaston, Esq. ...	6 0	150 ?	26·08

† The divisions are the same as those adopted by the Registrars-General of England and Scotland. The stations in each county are arranged in the order of their latitude from South to North.

DIVISION II.—SOUTH-EASTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above Ground.	Above Sea Level	1862
		ft. in.	feet.	inches.
SUSSEX—Aldwick, Bognor	H. Upton, Esq.	0 6	12 ?	25·48
Brighton	Dr. Kebbell	4 0	50 ?	28·80
West Thorney	F. Padwick, Esq.	0 10	10	24·72
Chichester Museum.....	W. Hills, Esq.	0 6	20	27·47
Shopwyke, Chichester	Rev. G. H. Woods ...	1 3	61	27·15
Hastings (High Wickham)	E. Field, Esq.	1 2	212	22·82
" (Cemetery)	J. C. Savery, Esq.....	0 5	450	30·11
St. Leonard's (Marina)	"	0 0	10	22·96
Fairlight	J. Rock, Jun., Esq. ...	0 6	500	27·18
Funtington, Chichester	G. M. Fort, Esq.	1 0	...	26·76
Slindon	Rev. M. A. Smelt	1 0	185	32·07
Dale Park, Arundel	J. C. Fletcher, Esq. ...	4 0	316	34·20
West Dean	H. Paxton, Esq.	0 6	250	36·11
Chilgrove	W. L. Woods, Esq. ...	0 6	284	32·35
Batle	F. Webster, Esq.	1 3	...	32·47
Hurstpierpoint.....	Rev. J. Gorham.....	0 0	120 ?	28·74
Uckfield	C. L. Prince, Esq.....	6 0	200	30·01
Beechland, Newick .....	" " "	...	...	30·31
Buxted Park .....	" " "	...	...	29·84
Maresfield (Rectory)	" " "	1 0	250	30·59
" (Forest Lodge).....	Captain W. Noble.....	1 2	301	31·05
Fair Oak, Rogate	W. L. Woods, Esq. ...	0 6	...	34·91
Petworth .....	" " "	...	...	29·31
Balcombe Place, Cuckfield.....	J. A. Hankey, Esq. ...	0 6 ?	340	34·12
Crawley	E. S. Bigg, Esq.	2 0	400	38·13
HAMPSHIRE—Osborne, I. of Wight	J. R. Mann, Esq.	0 8	172	30·65
Bournemouth	Dr. Falls.....	1 0	30	27·99
Fareham	H. Sharland, Esq.....	0 0	26	32·40
"	R. Porter, Jun., Esq....	1 0	8	28·02
Lyndhurst	C. L. Prince, Esq.....	...	...	30·28
Southampton Ordnance Survey }	Col. Sir H. James, R.E.	0 0	74	34·01
Office	W. " " "	18 6	92	26·68
Eling House, Southampton	W. C. Spooner, Esq....	1 0	...	27·17
Petersfield	Dr. Peskett .....	...	...	38·13
"	Rev. M. A. Smelt	0 0	210	35·77
Arle Bury, New Alresford.....	F. Marx, Esq.....	1 3	...	32·46
Itchen Abbas	Rev. W. W. Spicer ...	3 4	...	27·70
The Wakes, Selborne	T. Bell, Esq.	4 0	500 ?	33·12
Abbott's Ann, Andover	Rev. F. H. White.....	1 4	177	25·42
Aldershott	J. Arnold, Esq.	4 0	325	25·88
BERKS—Sandhurst College	Dr. Collins	5 0	246	25·74
Windsor	Hon. Maj.-Gen. Hood	1 3	...	25·66
Moulsford	Mr. J. B. Spearing ...	0 0	200	27·60
Long Wittenham.....	Rev. J. C. Clutterbuck	1 0	170	29·79

DIVISION III.—SOUTH MIDLAND COUNTIES.

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain. 1862
		Above Ground.	Above Sea Level	
HERTS—Watford	R. Littleboy, Esq.....	ft. in.	feet.	inches.
Watford House	R. Clutterbuck, Esq....	5 6	200 ?	26·79
Eastbury, Watford	D. Carnegie, Esq.	1 6	...	27·52
Field's Weir, Hoddesdon	N. Beardmore, Esq. ...	0 3	...	27·30
Gorhambury.....	Mr. G. Bogue	2 0	82	25·72
Hemel Hempstead	J. Dickinson & Co. ...	2 9	...	29·16
Berkhampstead	W. Squire, Esq.	3 0	250	27·44
Hitchin	W. Lucas, Esq.	1 6	370	29·50
Royston	H. Wortham, Esq. ...	2 0	...	22·52
BUCKS—Hartwell House	Mr. Horton	0 6	266	23·93
Hartwell Rectory	Rev. C. Lowndes	1 0	250	25·29
OXFORD—Radcliffe Observatory ...	Rev. R. Main.....	4 0	290	21·58
" "	" "	0 10	210	27·42
Banbury (High Street)	T. Beesley, Esq.....	24 0	234	23·39
"	J. Jarvis, Esq.	7 0	345	27·51
"	W. Johnson, Esq.	4 9	340	26·27
Neithrop, Banbury	T. Beesley, Esq.	4 0	...	23·65
NORTHAMPTON—Althorp House ...	Mr. W. F. Jakeman ...	0 6	470 ?	28·76
Wellingborough	Mr. M. Sharman	3 10	310	24·21
Oundle	G. Ellick, Esq.	0 2	...	27·00
HUNTS—Tetworth Hall	H. M. Kaye, Esq.....	20 0	124	22·43
Earith	Mr. J. Brown, Jun. ...	...	...	21·89
BEDFORD—Aspley, Woburn	Rev. G. W. Mahon ...	2 2	...	17·21
Cardington	Mr. J. B. McLaren ...	0 8	460	26·52
" " "	Dr. " " "	0 0	100	22·02
Bedford	Rev. J. H. Usill.....	36 0	136	17·64
CAMBRIDGE—Fulbourne	J. Nutter, Esq.	3 6	104	20·95
Cambridge	Mr. A. Peckover	0 0	...	24·10
Wisbech	Mr. S. H. Miller	4 0	50	23·86
" Observatory	Mr. A. Peckover	0 8	11	20·73
Mid-Level Sluice.....	Mr. A. Peckover	0 6	10	21·30
		...	...	23·26

DIVISION IV.—EASTERN COUNTIES.

ESSEX—Epping	H. Doubleday, Esq. ...	6 0	360	25·86
Dorward's Hall, Witham	H. Dixon, Esq.	2 0	20	21·78
Dunmow	H. E. Cockayne, Esq...	0 0	200 ?	22·81
Bocking, Braintree.....	S. Tabor, Esq.	3 0	200	24·14
Ashdon, Linton	Rev. J. T. Walker.....	1 0	300	22·53
SUFFOLK—Grundisburgh	P. Harris, Esq.	4 1	...	24·61
*Bury St. Edmunds	E. Skepper, Esq.	45 0	...	23·48
* " " (Beech Hill)	H. Turner, Esq.....	0 9	...	26·35
* " " (Botanic Gardens)	E. Skepper, Esq.	1 0	...	26·13
*Westley	R. Burrell, Esq.	1 6	...	24·83
*Thurston Lodge	Rev. W. Steggall	3 0	...	24·81
Thwaite	Mr. O. Whistlecraft ...	3 0	150	28·84
*Nether Hall, Thurston	W. C. Bassett, Esq. ...	2 6	...	24·04
*Barton Hall	Mr. W. Allan.....	1 0	...	23·87
*Culford	Mr. P. Grieve	1 2	...	23·78

DIVISION IV.—EASTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above Ground.	Above Sea Level	1862
		ft. in.	feet.	inches.
NORFOLK—Diss	Dr. Stewart	0 6	110	23·25
Thetford	Dr. Bailey	4 0	75	16·78
Cossey, Norwich	H. Culley, Esq.	1 0	...	22·26
Egmere	R. Overman, Esq.	4 0	150	23·92
Burnham	H. E. Blyth, Esq.	4 6	102	26·71
Holkham	S. Shellabear, Esq. ...	0 0	39	22·72
" " "	" " "	4 0	43	22·87

DIVISION V.—SOUTH-WESTERN COUNTIES.

WILTS—Alderbury, Salisbury	G. Fort, Esq.	1 0	...	26·80
Baverstock	Archdeacon Hony	3 0	...	30·30
Longbridge Deverill, Warminster	Rev. W. Slatter	0 0	300	38·69
Marlborough	W. C. Merriman, Esq.	4 0	...	31·22
Castle House, Calne	Major Ward	0 11	321	33·27
" " "	" " "	28 0	348	33·33
Badminton, Chippenham	Mr. J. Trotter	0 10	...	33·14
DORSET—Portland	J. T. Leather, Esq. ...	2 0	52	26·22
Encombe, Wareham	O. W. Farrer, Esq. ...	0 6	150	34·79
Little Bridy	H. S. Eaton, Esq.	0 4	348	37·22
Bridport	A. Stephens, Esq.	0 11	85	32·12
Netherbury	Rev. C. B. Mount	0 0	50 ?	34·80
Forde Abbey	G. Miles, Esq.	0 6	...	37·71
DEVON—Ham, Plymouth	Rev. C. Trelawny	3 0	94	46·75
Tideford Parsonage	Rev. T. Hullah	0 6	75 ?	43·89
Saltram Gardens	Mr. J. Snow	0 3	96	46·92
Ridgeway, Plympton St. Mary	Miss B. T. Phillipps ...	0 6	116	51·95
Torrhill, Ivybridge	J. Widdicombe, Esq. ...	0 4	240	50·49
Goodamoor, Plympton	H. H. Treby, Esq.	0 2	580	63·14
Lee Moor	" " "	0 1	900 ?	74·57
Hawson, Buckfastleigh	R. T. Abraham, Esq. ...	0 6	350	74·45
Highwick	Dr. Barham	1 6	350 ?	40·45
Dartmoor	Hon. R. R. Best	0 2	1450	93·51
Westbrook, Teignmouth	Miss K. T. Clark	0 3	25	34·61
Tavistock	Mr. W. Merrifield	45 0	278	37·85
Edgecumbe, Milton Abbot	H. Clark, Esq.	0 6	...	52·02
Dawlish	P. J. Margary, Esq. ...	0 8	62	32·16
Bovey Tracey	J. Divett, Esq.	0 6	100 ?	42·38
Exmouth	E. Divett, Esq., M.P. ...	30 0	280	31·83
Chagford	R. L. Berry, Esq.	0 5	650	56·65
Exeter (Albert Terrace)	R. Dymond, Esq.	0 0	141	31·81
" (St. Leonard's)	W. Vicary, Esq.	0 3	140	31·40
" " "	" " "	20 0	160	27·45
" (High Street)	W. H. Ellis, Esq.	40 0	170	27·75
" (Devon & Exeter Institution)	Mr. E. Parfitt	15 0	155	29·58
Clysthydon	Rev. J. Huyshe	0 6	200 ?	30·93
Overday, Honiton	R. T. Abraham, Esq. ...	0 4	700	46·04
Broadhembury "	Rev. W. Heberden ...	2 4	600	36·77

DIVISION V.—SOUTH-WESTERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above Ground.	Above Sea Level	1862
		ft. in.	feet.	inches.
DEVON (<i>contd.</i>)—Hayne, Tiverton...	W. H. Gamlen, Esq....	0 3	400	42·72
Cove	W. N. Row, Esq.	0 10	450 ?	42·38
Meshaw Rectory, S. Molton	Rev. W. H. Karlake	0 6	472	45·02
Huntsham Court, Bampton	Miss A. Troyte	1 0	585	45·66
Castle Hill, S. Molton	Mr. A. Saul	3 0	100	48·86
Barnstaple	T. Mackiel, Esq.	0 6	31	43·78
CORNWALL—Helstone	M. P. Moyle, Esq....	5 0	115	38·43
Penzance	W. H. Richards, Esq.	3 0	86	44·64
Tehidy Park, Redruth	Mr. H. Beddard	0 0	100	45·70
Truro.....	Dr. Barham	40 0	56	44·65
Newquay	Lieut. J. Liddell, R.N.	3 0	90	38·62
Bodmin	" " "	4 0	330	47·36
Warleggan, Bodmin	Rev. D. Clements	3 0	800	55·61
Pencarrow	Mr. H. Jones	3 0	230	47·81
Treharrook House, Wadebridge	F. B. Hambly, Esq. ...	3 6	303	41·04
Rosecarrock, Port Isaac	Mark Guy, Esq.	3 0	210	42·27
Camelford	Miss Pearse .....	...	...	54·63
SOMERSET—Taunton	Dr. Gillett	1 6	38	27·32
Long Sutton, Langport	R. Palmer, Esq.....	0 7	...	28·22
Street, Glastonbury	J. Clark, Jun., Esq. ...	1 6	100	32·22
" " "	W. S. Clark, Esq.	5 0	100 ?	30·08
North Hill, Frome	Mr. J. Boycott	0 3	...	35·01
Mells.....	Mr. M. Raynes	8 0	60	48·86
Sidcot	H. Dymond, Esq.	5 0	250	35·18
Bath	C. S. Barter, Esq.....	17 0	56	48·19
Batheaston, Bath	A. Mitchell, Esq.	2 0	226	29·61
Swanswick	Rev. F. Lockey	32 0 ?	...	26·52
Brislington, Bristol.....	Dr. Fox	2 0	181	35·94

DIVISION VI.—WEST MIDLAND COUNTIES.

GLOUCESTER—Clifton	W. C. Burder, Esq. ...	0 6	192	32·87
" " "	" " "	50 0	242	28·61
Cirencester	T. C. Brown, Esq.....	1 2	400 ?	32·46
Quedgeley, Gloucester	J. C. Hayward, Esq....	0 10	100 ?	29·96
Gloucester, (The Spa).....	A. Price, Esq.	3 6	50	26·86
" (Asylum)	Dr. Williams	1 0	100	28·08
HEREFORD—Leysters, Leominster	Rev. T. S. Hewitt.....	0 4	...	29·09
West Lodge, Leominster	E. P. Southall, Esq. ...	1 0	240 ?	29·09
SALOP—Cleobury, Mortimer	Mr. J. Bourn	0 9	600 ?	28·83
Knowbury, Ludlow	Rev. J. B. James	0 4	1000 ?	30·55
Haughton Hall, Shifnal	Rev. J. Brooke	4 6	450 ?	25·70
Shrewsbury	Marshall & Co.	4 4	192	17·10
Hengoed, Oswestry.....	Rev. A. R. Lloyd	6 0	...	34·68
STAFFORD—Wrottesley	Lord Wrottesley	0 0	531	26·61
" " "	" " "	22 0	553	24·14
Wolverhampton	H. Ward, Esq.	0 10	450 ?	28·14
Leek	Mr. R. Farrow	25 0	...	28·99

DIVISION VI.—WEST MIDLAND COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above Ground.	Above Sea Level	1862
WORCESTER—Northwick Park	Lord Northwick	ft. 1	in. 0	... 30·20
Malvern	Dr. Williams	4	0	450 23·37
Worcester	J. Ball, Esq.?	1	0	125 32·30
Lark Hill, Worcester	W. Burgess, Esq.	1	0	160 30·44
Orleton, Tenbury	T. H. Davis, Esq.	0	9	200 34·31
WARWICK—Leamington	S. U. Jones, Esq.	1	6	195 27·09
Stoneleigh Abbey	Mr. T. Bowick	0	9	... 25·95
Rugby	F. Fuller, Esq.	2	4	315 25·19
Edgbaston	W. Southall, Esq.	1	6	... 32·86
Birmingham (Bloomsbury Street)	D. Smith, Esq.	0	10	340 31·28
„ (Camp Hill)	T. L. Plant, Esq.	9	0	416 28·62

DIVISION VII.—NORTH MIDLAND COUNTIES.

LEICESTER—Wigston	T. Burgess, Esq.	0	6	... 26·13
Leicester	Mr. H. Billson	1	6	... 27·24
Thornton Reservoir	Mr. J. Bevins	2	8	... 28·14
Rothley, Loughborough	Rev. R. Burton	0	4	210 25·58
Waltham Rectory	Rev. G. E. Gillett	4	0	540 ? 23·95
*Belvoir Castle	W. Ingram, Esq.	0	8	237 23·35
*LINCOLN—Greatford Hall, Stamford	Captain Peacock	0	9	... 20·53
*Wytham-on-the-Hill	General Johnson	4	0	... 20·62
*Grantham	J. W. Jeans, Esq.	0	6	179 21·55
Boston	W. Veall, Esq.	1	0	... 19·93
South Kyme, Sleaford	Rev. H. S. Neucatre ...	0	0	9 20·45
Lincoln	† M. S. & L. R. Co. ...	3	6	26 20·31
Gate Burton	„ „ „	3	6	96 23·53
Market Rasen	„ „ „	3	6	100 21·31
Gainsborough	„ „ „	3	6	76 21·36
„ (Spring Gardens)	T. Dyson, Esq.	8	0	38 20·49
Stockwith	M. S. & L. R. Co.	3	6	21 19·71
Brigg	„ „ „	3	6	16 23·02
Grimsby	„ „ „	15	0	42 17·34
Barnetby	„ „ „	3	6	51 22·10
New Holland	„ „ „	3	6	18 21·62
NOTTS—Highfield House	E. J. Lowe, Esq.	0	6	162 23·88
„ „ „	„ „ „	20	0	184 21·48
Beeston Meadow	„ „ „	1	1	100 26·00
Oxton, Southwell	H. Sherbrooke, Esq.	2	0	... 20·45
Southwell	Dr. Calvert	0	0	200 ? 19·56
Stubton, Newark	G. Nevile, Esq.	5	0	... 22·97
Welbeck Abbey	Mr. W. Tillery	3	0	... 22·77
Worksop	M. S. & L. R. Co.	3	6	127 21·46
Retford	„ „ „	3	6	52 22·15
„ East	J. S. Piercy, Esq.	2	0	50 22·69
„ West	Rev. C. D. Butterfield	0	6	50 22·62
DERBY—Doveridge	Hon. & Rev. O. Forester	7	0	270 29·00
Derby	J. Davis, Esq.	5	0	180 26·28
Chatsworth Gardens	Mr. A. Stewart	5	0	404 30·61

† Gauges kept for the Canals Department of the Manchester, Sheffield, and Lincolnshire Railway Company. Returns supplied by R. Smith, Esq.

DIVISION VII.—NORTH MIDLAND COUNTIES.—(continued.)

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain. 1862
		Above Ground.	Above Sea Level	
DERBY (<i>continued</i>)—Chesterfield...	M. S. & L. R. Co.	ft. in.	feet.	inches.
Norwood	" " "	3 6	248	26·34
Comb's Moss	" " "	3 6	1669	55·81
" Reservoir	" " "	3 6	710	53·30
Chapel-en-le-Frith	" " "	3 6	965	41·91
Woodhead	" " "	3 6	878	48·51

DIVISION VIII.—NORTH-WESTERN COUNTIES.

CHESHIRE—Bosley Minns.....	M. S. & L. R. Co.	3 6	1210	34·19
Bosley Reservoir.....	" " "	3 6	590	37·59
Macclesfield	" " "	3 6	539	36·97
" " "	W. Jeffery, Esq.	2 0	500	38·82
Kingsley, Frodsham	Rev. R. Tyas	0 8	208	37·20
Willaston	T. Waring, Esq.	4 0	...	27·04
Spond's Hill, Bollington	M. S. & L. R. Co.	3 6	1279	43·61
Whaley	" " "	3 6	602	44·08
Quarry Bank, Handforth	J. Henshall, Esq.	0 8	295	35·40
Thelwall	J. Atkinson, Esq.	1 0	96	35·84
Marple Aqueduct	M. S. & L. R. Co.	3 6	321	40·41
" Top Lock	" " "	3 6	543	41·22
Mottram Hill End	" " "	3 6	680	42·33
" Matley's Field.....	" " "	3 6	399	40·29
Newton	" " "	3 6	396	35·51
LANCASHIRE — Observatory, L'pool	J. Hartnup, Esq.	30 0	52	27·66
The Brook, Liverpool.....	W. Lassell, Jun., Esq.	2 0	...	39·84
Old Trafford, Manchester	G. V. Vernon, Esq. ...	3 0	106	38·60
Market Street "	Mr. Cassartelli	3 0	...	31·78
Piccadilly "	M. S. & L. R. Co.	46 0	194	43·95
Eccles "	T. Mackereth, Esq. ...	2 6	105	37·66
Fai field	M. S. & L. R. Co.	6 0	312	46·33
Waterhouses, Oldham	" " "	3 6	345	39·74
Mount Sion, Radcliffe	H. Eaton, Esq.	1 3	250	39·10
Bolton-le-Moors (The Folds).....	H. H. Watson, Esq. ...	3 6	290	53·43
Standish, Wigan	J. L. Hunter, Esq. ...	0 6	300	49·01
Greenbank, Bury	W. Wanklyn, Esq. ...	3 0	400	41·05
Heaton, Bolton	H. Baylis, Esq.	0 0	500	47·20
Belmont	" " "	0 0	800	61·90
Rufford, Ormskirk	J. Porter, Esq.	0 8	38	37·70
Howick House, Preston	T. Norris, Esq.	0 6	72	44·33
Fishwick "	T. Oddie, Esq.	24 0	154	38·14
House of Correction, Preston ...	Mr. J. Hesketh	1 1	140	41·76
" " "	" " "	53 6	187	34·68
Holme Slack "	J. Newton, Esq.	1 6	143	43·87
South Shore, Blackpool	G. Sharples, Esq.	1 8	29	37·55
Stonyhurst Observatory.....	Rev. J. E. Moore	0 6	381	54·40
Bleasdale, Garstang	Mr. J. Hill	4 6	600	51·43
Lancaster	W. Roper, Esq.	1 0	114	46·31
*Caton, Lancaster	Rev. A. Christopherson	2 4	120	44·66

DIVISION VIII.—NORTH-WESTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above Ground.	Above Sea Level	1862
		ft. in.	feet.	inches.
*LANCASHIRE (<i>contd.</i>)—Hest Bank	R. B. Peacock, Esq. ...	2 2	82	43·27
Aynsome, Cartmel	H. Remington, Esq. ...	...	...	52·90
*Allithwaite „	Mr. W. R. Nash	1 0	88	44·99
*Holker „	Mr. Wilson.....	4 8	155	47·58
*Cartmel	Mr. J. B. Binyon	6 1	170	45·67
*Coniston	H. C. Marshall, Esq. ...	4 11	150	96·40
*Wray Castle, Windermere.....	Dr. Dawson	4 9	250	74·71

DIVISION IX.—YORKSHIRE.

W. RIDING—Sheffield Station	M. S. & L. R. Co.	3 6	188	28·93
Sheffield Edge	„ „ „	3 6	336	30·73
Broomhall Park, Sheffield	D. Doncaster, Jun. Esq.	0 4	337	30·87
Redmires	J. Gunson, Esq.	4 0	1100	40·06
Tickhill	Dr. Dixon	0 1	61	18·76
Wath-upon-Dearne	W. M. Burman, Esq. ...	4 0	186	20·09
West Melton, Rotherham	Rev. J. Boyd	0 10	172	21·99
Dunford Bridge	M. S. & L. R. Co.	3 6	954	52·55
Carlcoates	„ „ „	3 6	1075	51·29
Penistone	„ „ „	3 6	717	29·09
Standedge	Mr. Greenwood	2 0	1150	53·25
Saddleworth	„ „ „	5 0	640	43·02
Ackworth	J. Ford, Esq.	0 5	...	21·83
Ackworth Villa	Luke Howard, Esq. ...	0 1	135	24·79
Longwood, Huddersfield	Mr. C. Hare	24 0	...	34·08
*Wakefield	W. R. Milner, Esq. ...	4 0	115	26·84
Rastrick, Huddersfield	A. Clay, Esq.	2 0	410	32·95
Southowram, Halifax	R. Richardson, Esq. ...	40 0	880	25·01
*Well Head „	J. Waterhouse, Esq. ...	0 11	487	32·22
Warley Moor „	G. W. Stevenson, Esq.	1 0	1425	49·40
Midgeley „ „	„ „ „	1 0	1350	51·00
Ovenden „ „	„ „ „	1 0	1375	50·00
Bradford	P. Lund, Esq.	45 0	329	29·33
*Horton Hall, Bradford	Mr. G. Abbey	0 7	496	36·77
Chellow Dean „	C. Gott, Esq.	5 0	645	33·30
Leventhorpe Hall, Leeds	J. T. Leather, Esq. ...	2 0	90	21·18
*Holbeck „	Marshall and Co.	32 0	127	21·25
* „ „	E. Filliter, Esq.	0 0	95	21·79
Leeds	H. Denny, Esq.	5 0	156	21·74
Eccup, Leeds	E. Filliter, Esq.	0 0	340	26·11
East Chevin, Otley	Mr. W. Lawson, Jun.	4 7	764	32·76
Otley	A. Thorns, Esq.	0 7	206	31·15
Boston Spa	F. R. Carroll, Esq. ...	0 11	74	25·63
*York	F. Thorp, Esq.	0 6	50	23·11
*Harrogate.....	Dr. Bainbridge	0 6	420	32·58
Settle.....	J. Tatham, Esq.	20 0	498	42·77
Ingleborough, Clapham	Mr. D. Elder	5 0	550	45·19
Arncliffe	Rev. W. Boyd	3 0	750	64·05
*E. RIDING—Patrington	W. B. Pugh, Esq.	4 8	32	18·72
*Hull	W. Lawton, Esq.	27 0	30	19·70

DIVISION IX.—YORKSHIRE—(continued).

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain. 1862
		Above Ground.	Above Sea Level	
*E. RIDING(<i>con.</i>)—Beverley Rd. Hull	J. Smith, Jun., Esq.	ft. in.	feet.	inches.
*Holme-on-Spalding-Moor	G. Dunn, Esq.	3 10	11	23·70
*Wheldrake	Rev. R. B. Cooke	7 6	32	24·17
*Middleton, Beverley	Mr. J. B. Lotherington	1 4	40 ?	24·18
*N. RIDING—Malton	Mr. J. B. Lotherington	1 0	150	26·79
*Scarborough	H. Hurtley, Esq.	1 0	80	26·29
Redcar	R. Champley, Esq.	8 0	99	19·83
	C. C. Oxley, Esq.	4 0	20	19·14

DIVISION X.—NORTHERN COUNTIES.

DURHAM—Darlington	Mr. J. Richardson.....	4 0	140	21·25
Stubb House, Winston	T. Dodgson, Esq.	0 9	450	25·84
Durham Observatory	A. Marth, Esq.	1 0	339	21·82
Hendon Hill, Sunderland	J. W. Mounsey, Esq.	0 6	150	24·97
Bishopwearmouth	Dr. Ogden	30 0 ?	130 ?	20·97
Sunderland	Rev. G. Iliff	1 5	130	21·59
NORTHUMBERLAND—Allenheads ..	T. J. Bewick, Esq.	0 5	1360	44·21
Allenheads (12 in. gauge)		6 9	1367	50·64
Shotley	Mr. G. Routledge	0 8	309	24·04
Bywell	Mr. J. Dawson	0 6	87	25·75
Wylam	G. C. Atkinson, Esq.	0 4	96	24·68
North Shields	R. Spence, Esq.	1 0	124	28·02
Stamfordham	Rev. J. F. Bigge	2 0	380	26·00
Alnwick	Mr. J. Scott	0 6	400	31·02
Roddam Hall	W. Roddam, Esq.	0 6	400 ?	36·00
Lilburn Tower	E. J. Collingwood, Esq.	6 0	250 ?	30·04
*CUMBERLAND—Seathwaite	Mr. J. Dixon	1 0	422	170·03
*Keswick	Mr. Crosthwaite	6 3	270	61·37
Whinfell Hall, Cockermouth.....	W. Robinson, Esq.	2 0	250 ?	60·81
*Mirehouse, Bassenthwaite	F. S. Spedding, Esq.	0 5	300	55·29
Cockermouth	Dr. Dodgson	0 0	157	50·49
Silloth	Rev. F. Redford	6 0	30	44·19
*WESTMORELAND—Kendal	S. Marshall, Esq.	4 6	149	54·41
*Lesketh How, Ambleside	Dr. J. Davy	3 0	200	88·26
The How, Windermere	Vice-Admiral Wilson	1 6	400	94·27
Brougham Hall	Mr. White	4 0 ?	...	33·

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

MONMOUTH—Chepstow	J. G. Wood, Esq.	1 6	50	3?
GLAMORGAN—Ystalyfera, Swansea	J. Rogers, Esq.	4 0	368	6?
PEMBROKE—Haverfordwest	E. P. Phillips, Esq.	2 0	60	238
BRECON—Buckland, Crickhowel ...	Mrs. G. Holford	2 0		31
CARDIGAN—Lampeter	Rev. J. Matthews	5 0	420	4?
RADNOR—Cefnfaes, Rhayader	J. Jones, Esq.	2 0	900	4?
ANGLESEA—Llandyfrydog	H. Webster, Esq.	2 0	92	4?

SCOTLAND.

WIGTOWN —Mull of Galloway	Bd. of Northern Lights	260 ?	£25-44
South Cairn, Stranraer	Mr. J. Kennedy	0 4	210	56-00
Corsewall	Bd. of Northern Lights	22 ?	£42-39
KIRCUDBRIGHT —Little Ross	" " "	130 ?	£26-87
Cargen	P. Dudgeon, Esq.	0 3	80	47-29
DUMFRIES —Dumfries	T. Hogg, Esq.	0 5	63	41-43
Crichton Institution, Dumfries ...	Dr. Gilchrist	0 4	300	45-06
Drumlanrig	Scottish Met. Soc.	186 ?	57-41
Wanlockhead	Mr. G. Dawson	0 4	1330	74-10

SELKIRK—Bowhill	Scottish Met. Soc.....	11	0	537	39-27
PEEBLES—Stobo Castle	Mr. J. Anderson	0	2	600	32-70
BERWICK—Milne Graden	Scottish Met. Soc.....	100 ^p	32-78
Thirlestane Castle	Mr. J. Whitton	0	3	558	34-50
Mungo's Walls, Dunse	Mr. J. Thomson.....	0	6	270	28-80
HADDINGTON—Yester	Mr. A. Shearer	0	6	420	37-84
Smeaton	Mr. J. Black	8	0	100	26-93
Millfield	Mr. T. Dods	4	6	140	29-80
East Linton	Mr. J. Storie	0	3	90	29-28
Thurston	Mr. R. Mossman	3	0	320	30-40
EDINBURGH—Harlaw	A. Ramsay, Esq.	0	6	770	41-80
North Esk Reservoir	Mr. J. Garnock.....	0	6	1150	43-10
Glencorse	A. Ramsay, Esq.	0	6	680	43-10
Dalkeith Park	Mr. W. Thomson	6	0	189	22-81
Fernielaw, Colinton	J. Leslie, Esq.	0	6	500	39-85
Inveresk	Mr. McAuslane	3	0	60	32-89
Charlotte Square, Edinburgh ..	J. Leslie, Esq.	0	6	195	33-92
		80	0 ^p	275	24-12
" " " " " " " " " " " " " "	Scottish Met. Soc.....	250 ^p	28-80
March Hall, "Edinburgh.....	Bd. of Northern Lights	182 ^p	21-87
Inchkeith					

DIVISION XIV.—SOUTH-WESTERN COUNTIES.

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above Ground.	Above Sea Level.	
		ft. in.	feet.	inches.
LANARK—Newmains, Douglas	J. Johnstone, Esq.	0 0	783	70·92
Auchinraith	R. Ker, Esq.	4 9	150	40·40
Bothwell Castle	Mr. A. Turnbull	18 0	147	38·96
Baillieston, Glasgow	Mr. P. Jarvie	0 3	230	60·67
Hillend House	Mr. D. Thomson	7 0	620	41·09
Glasgow Observatory	J. Wood, Esq.	0 0	200	57·40
AYR—Auchendrane House	Mr. Crosby	2 3	94	50·17
Mansfield, Largs	Dr. Campbell	0 6	30 [?]	54·70
Brisbane House	Colonel Rolland	0 0	125	59·70
Ryat Linn	† Glasgow Water Works	0 5	310	58·95
Waulk Glen	" " "	0 5	280	55·25
Middleton	" " "	0 5	550	68·08
Black Loch	" " "	0 5	700	68·70
Revoch, Eaglisham	A. Mather, Esq.	0 9	700	72·60
RENFREW—Nither Place, Mearns	" " "	0 9	350	43·00
Kilbarchan	D. Rubie, Esq.	1 0	350	75·20
Ferguslie House, Paisley	Mr. J. Stewart	0 3	88	62·03
Greenock	J. Gardner, Esq.	0 6	64	74·25

DIVISION XV.—WEST MIDLAND COUNTIES.

DUMBARTON—Balloch Castle	A. L. D. Brown, Esq.	0 4	91	67·68
Arddarroch, Loch Long	J. White, Esq.	1 0	80	85·13
STIRLING—Mugdock Reservoir ...	Glasgow Water Works	0 6	320	60·60
Polmaise Gardens	Mr. Gorrie	0 1	12	49·30
Ben Lomond	Glasgow Water Works	0 6	1800	114·70
BUTE—Pladda	Bd. of Northern Lights	...	55 [?]	53·69
Isle of Cumbrae	J. Miller, Esq.	4 6	50	48·40
ARGYLL—Mull of Cantire	Bd. of Northern Lights	...	279 [?]	43·22
Devaar, Campeltown	" " "	...	75 [?]	52·54
Rhinn of Islay	" " "	...	74 [?]	34·47
Mc Arthurshead, Islay	" " "	...	106 [?]	68·60
Rhu Vaal, "	" " "	...	54 [?]	99·90
Castle Toward	Mr. W. Milne	4 0	80 [?]	62·27
Hafton, Dunoon	Mr. D. Doig	4 0	40	91·32
Otter House	Dr. Rankin	0 6	130	64·46
Kilmory, Lochgilphead	Sir J. P. Orde, Bart. ...	4 0	100 [?]	56·96
Callton Môr "	Mr. J. Russell	4 6	65	56·47
Fladda, Jura Sound	Bd. of Northern Lights	...	20 [?]	80·90
Inverary Castle	Mr. J. Caie	0 0	30	63·90
Isle of Easdale	Mr. J. Whyte	0 3	25	57·80
Oban	Captain Bedford, R.N.	0 4	10	72·40
Lismore	Bd. of Northern Lights	...	37 [?]	48·39
Corran, Loch Eil	" " "	...	14 [?]	54·54
Torosay Castle, Mull	Mr. J. Pettigrew	1 0	18	94·00
Sorne	" " "	0 9	250	54·50
Erray, Tobermory	" " "	1 3	260	76·00
Sound of Mull	Bd. of Northern Lights	...	12 [?]	75·50
Ardnamurchan	" " "	...	82 [?]	53·04

† Information supplied by J. Burnet, Esq., Secretary.

DIVISION XVI.—EAST MIDLAND COUNTIES.

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above Ground.	Above Sea Level	
		ft. in.	feet.	inches.
CLACKMANNAN—Dollar	Mr. J. Westwood	0 4	170	47·74
KINROSS—Loch Leven Sluice	Mr. P. Farnie .....	...	...	42·20
FIFE—Isle of May	Bd. of Northern Lights .....	...	182 ?	25·08
Balfour	Mr. J. Dewar	0 6	130	34·59
Nookton, Leven	W. McG. Miller, Esq.	0 6	80	34·28
Pittenweem	Mr. D. Tennant	3 0	75	25·97
PERTH—Aberfoyle	Glasgow Water Works	0 6	60	77·00
Ledard	" " "	0 6	1500	102·70
Kippenross, Dunblane	J. Stirling, Esq.	0 4	100	49·90
Deanston	J. Finlay, Esq.	0 0	60	51·55
Loch Dhu	Glasgow Water Works	0 6	325	101·10
Loch Drunkie	" " "	0 6	420	78·10
" Vennachar	" " "	0 6	275	69·00
Bridge of Turk	" " "	0 6	270	71·90
Lanrick Castle	A. Glover, Esq.	0 0	150 ?	57·75
Loch Katrine, Tunnel Hill Top	Glasgow Water Works	0 6	830	96·90
Leny, Callander	J. B. Hamilton, Esq.	0 4	345	75·00
Between Glen Finlas & Ben Ledi	Glasgow Water Works	0 6	1800	66·00
Glen Gyle	" " "	0 6	380	105·10
Auchterarder House	Lient.-Colonel " Hunter	2 0	150	38·97
Stronvar, Loch Earn Head	D. Carnegie, Esq.	0 3	460	97·84
Colquhalzie House	J. S. Hepburn, Esq. ...	0 5	60 ?	49·52
Trinity Gask	Mr. R. Wylie	0 1	133	39·34
Early Bank, Perth	Gen. Sir A. Lindsay ...	0 3	64	45·91
Perth Academy	Dr. Miller	64 5	...	25·97
Scone Palace	Mr. J. Halliday	2 6	80 ?	34·46
Stanley	Rev. W. Mather	2 0	150	34·07
FORFAR—Dundee	† Dundee Water Works	0 0	60	33·26
Dundee, Somerville Place	J. Kerr, Esq.	0 3	230	33·09
Barry Village	Mr. J. Procter	0 3	35	32·54
Craigton	Dundee Water Works	0 0	440	38·24
Kettins	Mr. J. Gibb	1 0	218	34·49
Hill Head	Dundee Water Works	0 0	500	37·33
Seichen	" " "	0 0	550	38·46
Arbroath	A. Brown, Esq.	2 0	65	31·33
Montrose	Mr. W. Leighton	4 6	25	30·27
" Museum	Mr. J. Campbell	0 3	8	27·60
Usan, Montrose	G. Wyness, Esq.	0 3	150	29·00

DIVISION XVII.—NORTH EASTERN COUNTIES.

KINCARDINE—The Burn, Brechin	Major W. McInroy ...	0 6	234	36·20
Balnakettle, Fettercairn	D. Scott, Esq.	0 3	450	37·73
Bogmuir	R. Vallentine, Esq. ...	0 3	200	32·40
Strachan	Mr. A. McConnachie ...	1 6	200	33·39
*Banchory, by Aberdeen	A. Thomson, Esq.	0 4	99	26·50
ABERDEEN—Braemar	Dr. Cameron	4 0	1110	33·84
Girdleness, Aberdeen	Bd. of Northern Lights	3 0 ?	85 ?	25·54

† Information supplied by R. Adamson, Esq.

DIVISION XVIII.—NORTH-EASTERN COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above Ground.	'Above Sea Level	
		ft. in.	feet.	inches.
*ABERDEEN (<i>continued</i>)—Aberdeen	A. Cruickshank, Esq...	0 4	95	30·77
Castle Newe	Mr. A. Walker	1 0	915	29·11
Tillydesk, Ellon	Mr. W. Hay	0 4	360 ?	28·26
Buchanness, Peterhead	Bd. of Northern Lights	...	35 ?	22·44
Kinnairdhead	" " "	...	64 ?	25·02
ELGIN—Forres	D. Bonthron, Esq. ...	0 0	53	30·48
Ashgrove, Elgin	W. Topp, Esq.	0 4	33	29·63

DIVISION XVIII.—NORTH WESTERN COUNTIES.

Ross—Kyleakin, Loch Alsh	Bd. of Northern Lights	...	3 ?	268·04
Tarbetness	" " "	...	61 ?	247·59
Stornoway, Isle of Lewis	" " "	...	31 ?	237·23
" "	Sir J. Matheson, Bart.	0 3	68	53·30
Berneray "	Mr. Macdonald	0 6	15	104·95
INVERNESS—Beaufort Castle	Mr. J. Moir	4 6	40	30·70
Culloden House	A. Forbes, Esq.	3 0	104	24·63
Oronsay, Isle of Skye	Bd. of Northern Lights	...	15 ?	267·50
Raasay "	Mr. T. Bunning	3 6	80	79·20
Portree "	Mr. J. Grant	0 1	60	111·19
Barrahead	Bd. of Northern Lights	...	640 ?	234·65
Ushenish, S. Uist	" " "	...	157 ?	251·93
Loch Maddy, N. Uist	C. Shaw, Esq.	2 6	30 ?	69·45
Island Glass, Harris	Bd. of Northern Lights	...	50 ?	225·14
Cromarty	" " "	...	28 ?	220·36

DIVISION XIX.—NORTHERN COUNTIES.

CAITHNESS—Nosshead	Bd. of Northern Lights	...	127 ?	221·04
Dunnethead	" " "	...	300 ?	225·11
Pentland Skerries	" " "	...	72 ?	229·23
SUTHERLAND—Dunrobin	Mr. J. Mitchell	0 4	6	23·65
House of Tongue	J. Crawford, Esq.	0 2	30 ?	37·50
Cape Wrath	Bd. of Northern Lights	...	355 ?	240·26
ORKNEY—Cantickhead	" " "	...	63 ?	244·30
Hoy Sound, East	" " "	...	27 ?	233·43
" West	" " "	...	37 ?	233·85
*Kirk wall	Mr. J. G. Iverach	0 4	8	34·73
Balfour	D. Balfour, Esq.	0 3	50	25·60
*Sandwick (Lawn)	Rev. C. Clouston	2 0	78	34·38
*" (North Park)	" " "	1 0	94	33·68
Start Point, Sanda	Bd. of Northern Lights	...	29 ?	225·54
North Ronaldsay	" " "	...	21 ?	234·27
SHETLAND—Sumburghead	" " "	...	265 ?	227·62
Bressay	" " "	...	72 ?	236·97
"	Rev. Z. M. Hamilton	0 6	12	45·95

I R E L A N D.

DIVISION XX.

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above Ground.	Above Sea Level	1862
		ft. in.	feet.	inches.
CORK—Queen's College, Cork	Professor England ...	5 0	50	47·27
Royal Institution „	J. Humphreys, Esq. ...	50 0	80	38·09
KERRY—Knightstown, Valentia ...	The Knight of Kerry	2 6	40	62·19
WATERFORD—Waterford	R. J. Greer, Esq.	4 0	50	45·23
Portlaw „	A. Free, Esq.	40 0	50	50·10
Rathculliheen „ .....	.....	1 6	140	41·21
CLARE—Killaloe	Rev. C. Mayne	0 5	123	49·85
„ „ „	„ „ „	5 0	128	47·37
KING'S COUNTY—Birr Castle	Earl Rosse	0 3	202 ?	36·28
QUEEN'S COUNTY—Portarlington...	M. Hanlon, Esq.	9 0	236	45·16
WICKLOW—Fassaroe, Bray	E. Barrington, Esq. ...	3 0	250	45·80
GALWAY—Queen's College	Professor Curtis.....	6 0	25	51·61
DUBLIN—Black Rock.....	T. Bewley, Esq.	28 0	90	24·98
Ordnance Survey Office, Dublin	Capt. Wilkinson, R.E.	7 0	166	30·18
Vicar's Lodge, Dublin.....	S. Yeates, Esq.	10 0	89	24·63
Glasnevin, Dublin	D. Moore, Esq.	8 0	65	28·04
Monkstown	A. Pim, Esq.	0 6	90	31·25
„ „ „	W. H. Pim, Jun., Esq.	90 0	190	20·75
SLIGO—Markree Observatory	E. J. Cooper, Esq.	16 3	145	39·91
FERMANAGH—Florence Court	Earl of Enniskillen ...	11 0	300	49·56
ARMAGH—Armagh Observatory ...	Rev. Dr. Robinson ...	36 0	247	42·05
DOWN—Queen's College, Belfast...	J. Bell, Esq.	9 0	58	39·18
Linen Hall, Belfast.....	J. Stewart, Esq.	4 0	12	41·18
Leekpatrick, Strabane.....	Rev. C. Maxwell	0 5	260	42·45

G. J. S.