

ENGLISH RAINFALL, 1860.

THE Compiler having commenced an extensive investigation into the Rainfall of the British Isles, has experienced much difficulty in collecting the earlier observations from the numerous works in which they are scattered; wishing to prevent others suffering like inconvenience in future, he offers this summary, hoping that year by year the number of stations will increase, and these papers become more valuable in themselves and more worthy the acceptance of the contributors.

The height of the gauges above the ground and above sea level (when known) will be stated, so that the differences due to these causes may be allowed for, if desired.

In order that the correction for altitude above the ground may be better known, *similar* gauges should be placed at different heights, wherever the position is advantageous, such observations being at present very scarce.

The order of the Stations is nearly that adopted by the Registrar General, but the ordinary county boundaries are maintained, and the stations in each county are arranged in the order of their latitude.

The Rainfall in 1860 was considerably above the mean at most stations, the average excess over the mean of previous years being about 25 per cent. It was nearly 50 per cent. in excess in Herefordshire, and some parts of the Lake District, while at Manchester it was only 3 per cent., and at Retford 4 per cent., above it. There does not appear to be any station which had *less* than the usual fall.

G. J. S.

DIVISION I.—MIDDLESEX.

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above the Ground.	Above Sea Level	
		ft. in.	feet.	inches.
MIDDLESEX—Chiswick	Gardeners' Chronicle . .	...	...	30.08
Whitehall	Registrar General's Returns	...	...	27.5
Guildhall	W. Haywood, Esq. . .	2.0	48	28.91
St. John's Wood	Mr. J. Carter	0.6	161	34.60
Camden Town	G. J. Symons, Esq. . .	0.4	100	32.24
Tottenham	W. D. Howard, Esq. . .	0.3	60	34.37
Enfield	Rev. J. M. Heath . . .	24.0	130	34.57

DIVISION II.—SOUTH EASTERN COUNTIES.

SURREY—Wonersh, Guildford	W. L. Woods, Esq.	1.0 ?	...	38.14
Deepdene, Dorking	Mr. J. B. Whiting	2.9	...	37.43
Cobham Lodge	Miss C. Molesworth	0.6	110 ?	31.57
Weybridge Heath	Gardeners' Chronicle . . . . .	...	...	30.33
*Kew Observatory	Balfour Stewart, Esq.	0.0	18	28.72
Wandsworth	G. Dines, Esq. . . . .	...	...	32.86
Battersea	Rev. S. Clark	0.0	13	28.26
KENT—Tunbridge	G. H. Fielding, Esq.	0.0	...	31.43
Linton Park, Maidstone	J. Robson, Esq.	0.0	200 ?	33.66
Maidstone	J. H. Baverstock, Esq.	1.3	60	33.65
Greenwich Observatory	J. Glaisher, Esq. . . . .	...	...	32.0
SUSSEX—Aldwick, Bognor	W. L. Woods, Esq.	0.6	...	29.40
Worthing	W. G. Barker, Esq.	0.0	10	34.32
Chichester	C. L. Prince, Esq. . . . .	...	...	37.44
Hastings	Rev. " " " . . . . .	...	...	34.25
Slindon	Rev. M. A. Smelt	1.0 ?	200 ?	44.06
Glynd, Lewes	C. L. Prince, Esq. . . . .	...	...	40.30

* Gauge out of order 3 days in October.

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

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above the Ground.	Above Sea Level.	
SUSSEX—(continued.)		ft. in.	feet.	inches.
Fairlight	J. Rock, Esq.	0.0	500	29.54
Chilgrove, Chichester	W. L. Woods, Esq. . . .	0.6	250 ?	43.50
Uckfield	C. L. Prince, Esq. . . .	...	200	42.46
Buxted Park . . . . .	" " "	...	...	45.55
Maresfield, Forest Lodge . .	" " "	...	...	39.02
Maresfield Rectory . . . .	" " "	...	...	40.70
Fair Oak, near Rogate . . .	W. L. Woods, Esq. . . .	...	...	44.58
The Hyde Crawley	E. S. Bigg, Esq. . . .	1.6	...	47.63
HAMPSHIRE—Ventnor, Isle of Wight	G. A. Martin, Esq. . . .	3.0	150	36.18
Ryde, Isle of Wight	B. Barrow, Esq. . . .	0.0	110	36.28
Osborne, Isle of Wight . . .	Mr. J. R. Mann	1.0	170	37.24
Thorney Island, Emsworth .	W. L. Woods, Esq. . . .	0.6	10 ?	33.14
Lyndhurst	C. L. Prince, Esq. . . .	...	...	32.86
Southampton, (O.S.O.) . . .	Col. Sir H. James, R.E. .	0.0	75	44.05
" (O.S.O.)	" " "	18.6	94	35.71
" Gas Works	Mr. J. Sharp	10.0	20	29.56
Petersfield	W. L. Woods, Esq. . . .	...	...	53.07
"	Rev. M. A. Smelt	1.6	220	48.64
Itchen Abbas	Gardeners' Chronicle . .	...	...	39.30
Aldersholt	J. Arnold, Esq. . . .	3.0	325	33.42
BERKSHIRE—Sandhurst, (R.M.C.)	Sergeant Grose	5.0	300 ?	29.84
White Waltham, Maidenhead .	J. Silver, Esq. . . .	1.6	...	28.84
Long Wittenham, Abingdon .	Rev. J. C. Clutterbuck . .	1.6	180 ?	30.64

DIVISION III.—SOUTH MIDLAND COUNTIES.

HERTFORDSHIRE—Berkhampstead .	W. Squire, Esq. . . .	1.6	370	36.24
Royston	H. Wortham, Esq. . . .	0.6	266	29.56
BUCKINGHAMSHIRE: Hartwell House	Dr. Lee	1.0	250	31.45
Hartwell Rectory	Rev. C. Lowndes	4.0	290	28.21
OXFORDSHIRE—Rose Hill, Oxford .	Rev. J. Slatter	7.9	263	25.39
Radcliffe Observatory . . .	Rev. M. A. Smelt . . . .	...	...	30.95
Bicester.	W. Johnson, Esq. . . .	4.0	220	27.36
Banbury	T. Beesley, Esq. . . .	7.0	340	31.92
NORTHAMPTONSHIRE: Althorp House	Northampton Mercury . .	3.0 ?	...	25.20
Wellingborough	Mr. M. Sharman	1.0	...	29.41
Marholm, Peterborough . .	Peterborough Advertiser .	0.6 ?	...	33.09
BEDFORDSHIRE—Aspley, Woburn .	Rev. G. W. Mahon	0.6 ?	460	31.23
Cardington	S. C. Whitbread, Esq. . .	...	...	25.08
Bedford	T. H. Barker, Esq. . . .	4.0	104	24.95
CAMBRIDGESHIRE—Cambridge Ob- servatory*	Professor Challis	2.6	91	23.73

DIVISION IV.—EASTERN COUNTIES.

ESSEX—Epping	H. Doubleday, Esq. . . .	8.0	370	37.03
Witham	H. Dixon, Esq. . . .	1.6	24 ?	26.08
Frating, Colchester	Essex & West Suffolk Gaz.	...	...	29.70
Dunmow	The Times . . . . .	...	...	28.93
SUFFOLK—Bury	Bury and Norwich Post . .	...	...	31.62
Thwaite	Mr. O. Whistlecraft . . .	3.6	150	36.60
NORFOLK—Norwich	W. Brooke, Esq. . . .	0.0	30	34.47
Holkham	S. Shellabear, Esq. . . .	0.0	39	34.69

* Gauge out of order from January 1st to 24th.

DIVISION V.—SOUTH WESTERN COUNTIES.

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above the Ground.	Above Sea Level.	
		ft. in.	feet.	inches.
DORSET—Portland	J. T. Leather, Esq.	2.0	52	30.77
Little Bridy	H. S. Eaton, Esq.	0.4	348	49.04
Bridport	A. Stephens, Esq.	0.11	85?	36.63
DEVON—Goodamoor	Woolmer's Exeter Gazette	...	600?	72.02
Torquay	E. Vivian, Esq.	6.0	120	36.36
High Wick, Newton Bushell . .	W. Vicary, Esq.	1.0	350?	48.02
Prince Town, Dartmoor . . .	Dr. Roome	35.0	1700	63.88
Bovey Tracey	W. Vicary, Esq.	0.6	100?	49.82
Exeter St. Thomas	" " "	4.0	50	42.17
" Devon & Exeter Inst.	" " "	12.0	140	36.08
" High Street	W. H. Ellis, Esq.	50.0	178	36.26
Castle Hill, South Molton . .	Mr. A. Saul.	3.6	100?	57.46
Barnstaple	T. Mackrell, Esq.	0.6	31	50.14
CORNWALL—Helston	M. P. Moyle, Esq.	5.0	...	42.96
Penzance	W. H. Richards, Esq. . . .	1.0	94	49.25
Truro	C. Barham, Esq.	40.0	53	50.06
Bodmin	Lieut. Liddell, R.N.	3.0	300	56.33
St. Petroc Minor, Padstow . .	Royal Cornwall Gazette . .	...	...	47.40
SOMERSET—Taunton	W. Vicary, Esq.	1.6	20?	32.62
Bridgewater	A. Haviland, Esq.	6.6	45	29.53
Frome, (North Hill)	Bristol Mercury . . . . .	...	...	38.90
Bath	C. S. Barter, Esq.	50.0	150	44.67

DIVISION VI.—WEST MIDLAND COUNTIES.

GLOUCESTER—Bristol Institution .	The Secretary	56.0	98	42.96
Clifton	W. C. Burder, Esq.	0.6	192	40.80
Cirencester	S. Marshall, Esq. . . . .	...	...	36.96
Gloucester (The Asylum) . . .	Dr. Williams	0.0	100	28.01
" (The Spa)	A. Price, Esq.	3.2	65	27.99
" (Twigworth).	Dr. Williams . . . . .	...	...	28.48
HEREFORD—Rocklands, Wye . . .	Hereford Times . . . . .	...	...	40.77
SHROPSHIRE—Hengoed, Oswestry .	Rev. A. R. Lloyd	4.8	...	45.51
WORCESTER—Worcester	S. Marshall Esq. . . . .	...	...	39.07
Orleton, Tenbury	T. H. Davis, Esq. . . . .	...	...	36.89
WARWICKSHIRE—Stoneleigh Abbey	Mr. T. Bowick	1.0	...	31.24
Birmingham	T. Southall Esq., (Decd.) . .	...	455	35.16

DIVISION VII.—NORTH MIDLAND COUNTIES.

LEICESTER—Leicester	J. Payne, Esq. . . . .	...	...	24.99
Belvoir Castle	W. Ingram, Esq. . . . .	...	237	29.23
LINCOLN—Grantham	J. W. Jeans, Esq. . . . .	...	179	29.67
South Kyne, Sleaford	Rev. H. S. Neucatre	0.0	9	31.73
Spring Gardens, Gainsborough	T. Dyson, Esq. . . . .	...	...	29.15
NOTTS.—Welbeck	Doncaster Chronicle . . . .	...	...	30.54
East Retford . . . . .	" " "	...	...	28.13
West " . . . . .	" " "	...	...	28.20
Retford . . . . .	" " "	...	...	28.04
DERBY—Derby	J. Davis, Esq.	5.0	174	32.77

DIVISION VIII.—NORTH WESTERN COUNTIES.

CHESHIRE—Macclesfield	W. Jeffery, Esq.	2.9	500	39.88
LANCASHIRE: Liverpool Observatory	J. Hartnup, Esq.	30.0	50	24.53
Liverpool (Sandfield Park) . .	W. Lassell, Esq.	3.0	...	35.40
Manchester	G. V. Vernon, Esq.	3.0	106	36.14
Preston (House of Correction)	Preston Chronicle	0.0	...	37.86
" " "	" " "	53.6	...	33.28
Stonyhurst	Rev. A. Weld	0.0	381	50.6
Holker, Cartmell	S. Marshall, Esq.	4.0?	...	47.07

DIVISION IX.—YORKSHIRE.

STATIONS.	AUTHORITIES.	Height of Rain Gauge.		Depth of Rain.
		Above the Ground.	Above Sea Level.	
		ft. in.	feet.	inches.
YORKSHIRE—Sheffield	D. Doncaster, Junr., Esq.	0.4	330	37.19
Saddleworth	Huddersfield Chronicle . . . . .	...	...	46.99
Standedge . . . . .	" " " " . . . . .	...	...	56.75
Ackworth	Luke Howard, Esq.	0.1	135	33.06
Longwood, Huddersfield	Huddersfield Chronicle . . . . .	...	...	34.74
Wakefield	W. R. Milner Esq.	4.0	110	33.48
Rastrick, Huddersfield	S. Marshall Esq. . . . .	...	...	33.37
Hunter's Hill, Halifax	Halifax Courier . . . . .	...	...	42.3
Warley Moor " . . . . .	" " " " . . . . .	...	...	51.2
Midgeley Moor " . . . . .	" " " " . . . . .	...	...	53.1
Ovenden Moor " . . . . .	" " " " . . . . .	...	...	51.6
Leeds	H. Denny, Esq.	45.0 ?	137	28.32
Middleton, Beverley	York Gazette	1.6	...	36.78
Ben Rhydding	R. C. Taylor, Esq.	3.0	510	34.3
York	J. Ford, Esq.	0.6	50	30.37
Huggate, Pocklington	Rev. T. Rankin	0.6	650	32.13
Arncliffe, Skipton	Rev. W. Boyd	3.0	750	54.93
Malton	The Times . . . . .	...	...	34.46
Scarborough	R. Champley, Esq.	9.0	100	24.00
Redmires, Leyburn	D. Doncaster, Junr., Esq. . . . .	...	...	44.28

DIVISION X.—NORTHERN COUNTIES.

DURHAM—Durham Observatory	A. Marth, Esq.	1.0	338	30.33
Washington	J. Watson, Esq.	20.0	120	27.61
Sunderland	The Times . . . . .	...	...	29.39
Shotley Hall, Gateshead	Mr. G. Routledge	0.8	110	35.35
NORTHUMBERLAND—Bywell	Mr. J. Dawson	1.0 ?	87	38.13
Allenheads (8 in. gauge)	T. J. Bewick, Esq.	0.5	1360	59.15
" (12 in. gauge)	" " " "	6.9	1360	59.91
North Shields	R. Spence, Esq.	1.0	124	32.19
High House, Alnwick	Mr. J. Scott	0.6	400	36.6
CUMBERLAND—Broughton	Registrar General's Returns . . . . .	...	...	49.7
Keswick	J. F. Crosthwaite, Esq.	6.0	245	54.17
Mire House, Bassenthwaite	Rev. F. Redford	4.0	210 ?	50.41
Silloth	" " " "	6.0	16	37.81
Carlisle (Ordnance Survey Office)	Captn. E. James, R.E.	50.0	123	31.62
WESTMORELAND—Kirkby Lonsdale	S. Marshall, Esq. . . . .	...	...	41.6
Kendal	" " " "	4.0	149	57.00
The How, Windermere	Admiral Wilson	1.8	436	102.58
Wray Castle	Dr. Dawson	4.6	220	69.45
Lesketh House, Ambleside	Dr. J. Davy	2.0	130	79.97
Lowther Castle, Penrith	S. Marshall, Esq.	4.0 ?	...	45.33
Brougham Hall, Penrith	" " " "	4.0 ?	...	36.68

DIVISION XI.—WALES.

GLAMORGAN—Ystalyfera, Swansea	The Cambrian . . . . .	...	...	73.21
CARDIGAN—Lampeter	Registrar General's Returns . . . . .	...	...	55.3
FLINT—Hawarden	Dr. Moffatt	0.0	260	27.80
GUERNSEY	Registrar General's Returns . . . . .	...	...	48.0
ISLE OF MAN—Ballasalla	J. Burman, Esq.	0.0	100	37.17

G. J. SYMONS.

Camden Road Villas, N.W.