

BRITISH RAINFALL,  
1892.

LONDON :

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1893.





BRITISH RAINFALL, 1892.

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ON

THE DISTRIBUTION OF RAIN

OVER THE

BRITISH ISLES,

DURING THE YEAR

1892,

AS OBSERVED AT NEARLY 3000 STATIONS IN  
GREAT BRITAIN AND IRELAND,

WITH ARTICLES UPON VARIOUS BRANCHES OF RAINFALL WORK.

COMPILED BY

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CHEVALIER DE LA LÉGION D'HONNEUR,  
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Colonial Institute; Membre correspondant étranger Soc. Royale de  
Médecine Publique de Belgique, Socio correspondiente  
Sociedad Científica Antonio Alzate, Mexico,  
&c. &c.*

AND

H. SOWERBY WALLIS, F.R.Met Soc.

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LONDON:  
EDWARD STANFORD, COCKSPUR STREET, S.W  
1893.



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## ERRATA IN BRITISH RAINFALL, 1891.

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- Page 42. Davidson, Rev. Dr. Erase the line, and substitute :—  
Davidson, Rev. Dr., Inverurie Manse, Aberdeen, C 1862 imp -79 imp  
1880-9, imp T; 27 years.
- „ [161] *Erase* South Norwood (Whitworth Road) return.
- „ [189] Hathersage (Bamford), *for* 40·34, *read* 40·64.
- „ [208] Scilly. *Erase* the second entry.
- „ [216] Cromar (Logie Coldstone Manse), *omit* “late.”
- Wrong values for one month were sent from the Blackburn Water-  
works, which involve the following corrections :—
- |         |   |                  |                   |
|---------|---|------------------|-------------------|
| „ [192] | Over Darwen (Hoddlesden Reservoir)..... | <i>for</i> 57·84 | <i>read</i> 60·24 |
| „ „     | Blackburn (Guide Reservoir) .....       | „ 39·66          | „ 40·07           |
| „ „     | „ (Pleasington).....                    | „ 46·00          | „ 46·90           |
| „ „     | „ (Witton) .....                        | „ 44·98          | „ 45·48           |
| „ „     | „ (Store Yard).....                     | „ 34·95          | „ 34·70           |
| „ „     | „ (Water Works Office) ...              | „ 28·95          | „ 28·34           |
| „ „     | „ (Pumping Station) ..                  | „ 38·84          | „ 39·57           |
| „ [197] | Slaidburn (Dunsop Houses) .....         | „ 67·39          | „ 66·20           |
| „ „     | „ (Middle Knoll).....                   | „ 60·50          | „ 58·80           |
| „ „     | „ (Brennand) .....                      | „ 76·17          | „ 75·36           |
| „ „     | „ (Whitendale) .....                    | „ 78·85          | „ 77·41           |
| „ „     | „ (Cabin Hill) .....                    | „ 68·80          | „ 69·40           |
| „ „     | „ (Baxton Fell) .....                   | „ 57·40          | „ 56·40           |



## BRITISH RAINFALL, 1892.

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HAD it not been for the exceptional—I believe unprecedented as far back as records exist—drought of the past spring, I should have had the pleasure of issuing this volume a month earlier than usual, and even now it is a fortnight earlier than in 1892. I am sometimes asked why I wait for observers who do not send their returns promptly, but the reply is obvious. I could not exclude them without making my own tables incomplete, and therefore second and even third applications for the records have to be issued, causing extra work, extra cost and delay.

The first essentials of rainfall work are accuracy, uniformity, and continuity. The result is necessarily, that these volumes externally (and even at a hasty glance internally) look very much alike. But they are not. Besides the variations in the rainfall which are endless, there are always many curious phenomena recorded. For instance, under the somewhat untempting title of “On the Meteorology of 1892” there is a statement as to hailstones, which, if in a novel, would probably be criticized as wild exaggeration; and under the title of “Heavy falls in twenty-four hours” will be found the cause of the flooding of the homes of probably quite 20,000 of our fellow-countrymen, and a list of floods in York for more than 600 years.

Lastly, I have to express my thanks to the three thousand or more observers who have supplied the information epitomized in these pages, and to a portion of them for enabling me to place the information at the service of the public.

G. J. SYMONS.

62, CAMDEN SQUARE, LONDON, N.W.

*July 14th, 1893.*

## REPORT.

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**Report.**—Year by year as the Rainfall Organization approaches perfection, there is less to be said in the earlier portion of the volume, and more in the later portion. The amount of routine work increases, and the time occupied in verifying all the returns is probably not realized by any but those who have it to do, and their almost sole reward is the consciousness of the reputation for accuracy which these tables have attained—a reputation which the very long list of errata on a previous page does much to jeopardise, though we are only responsible to the extent that we did not detect the error which ran all through the MS. returns sent to us and through the printed table issued by the Corporation with which we compared them. Like nearly all the errata hitherto detected, the error did not originate here, but we failed to see it, and so must share the discredit. Happily the errors are generally small—only one reaches or exceeds two inches—and they are some in excess, and some in defect, so that though they look very bad, they do not seriously affect the results. It is by far the worst case we ever had, and we hope that it may long remain unique. We feel, however, anxious about the present volume, because although all reasonable care has been taken, all suspicious entries have been referred to the observers, and in cases in which they could not be positive, the records have been omitted ; in spite of all this (as stated on page [139]), the fall of rain in 1892 was so irregular even at stations quite near together, that it is not at all improbable that amid the tens of thousands of entries worked up in this volume, there may be two or three errors that have escaped the notice of the observers and detection by ourselves. It is, however, quite certain that no error can have crept in which will invalidate any of the general conclusions arrived at.

**Monthly and Seasonal Rainfall.**—During the past year Mr. S. A. Marshall (to whom we are indebted for the new stations in and around Langdale in the English Lake District) has devoted considerable time to the above subject, the result being that he obtained records from eleven stations of an average length of 46 years each—the shortest being for 29 years, and the longest (Kendal) for 84 years. The following are the conclusions which Mr. Marshall draws from the large collection of data (upwards of six thousand monthly totals) :—

“April is almost universally the driest month (the Troutbeck record [29 years] is too short to be worth much), but May runs it very close.

“The places in the outskirts generally show a tendency to two maxima of rain: in autumn—about October—and in January, of which the former is much the more marked; but Kendal (with a record 30 or 40 years older than the rest) shows three months—October to December—practically equal, and markedly wetter than any other.

“The more central stations show a marked maximum in January, though the three months before it are wet, and October shows traces of the autumn maximum of the places in the outskirts. This January maximum is followed by a February wetter than in the outskirts, but the spring drought comes on very fast and passes off much more slowly.”—S. A. MARSHALL.

We hoped (and fully intended) to tabulate some of the longest records for other parts of the country, and to give them along with Mr. Marshall's values and some remarks upon the whole in the present volume. But it has proved impossible. In the early part of 1893 all our time was taken up with the present volume, and subsequently we have had a great influx of correspondence and work in consequence of the unprecedented drought of March, April, May, and June. We hope that it may be possible to prepare the tables in the autumn of 1893.

**Rain Gauges Overflowing.**—We are very glad to say that although there have been, as is shown on pages [99] to [119], many very heavy rains, we have heard of only one rain gauge being allowed to run over, and in that case we do not think that any appreciable amount was lost. Observers do not yet all believe in

the possibility of four inches falling in two hours, but it is quite clear that rain gauges with larger receiving vessels are coming into general use, so that in a few years this irritating source of interruption will cease to exist.

**Finance.**—Steadily, but very slowly, this important essential of rainfall work is improving. It is doubtless very unreasonable of me, but when I think of what has to be done to extract the fullest information from the enormous collection of old records in my possession, and of the cost of the staff, and of the printing which would be required, and when I compare that with the funds at my disposal, and when, further, I see the sums expended upon other objects, I do wonder why adequate resources are not placed at my disposal. But on the other hand, I recognize most heartily the help that I have had during nearly a quarter of a century, and though unable to do all that seems desirable, I am very thankful to those who, by their continued help, show that they, at any rate, think that good use is made of the funds they contribute.

LIST OF ALL SUMS OF £1 AND UPWARDS RECEIVED IN PAYMENT  
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Langton, Miss ....	1	0	0	Newman, T. P., Esq. ....	1	1	0
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Lea, A. A., Esq. ....	1	0	0	Northwick, Lady ....	1	0	0
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Macfie, R., Esq. ....	5	0	0	"    F. F., Esq. ....	1	0	0
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Major, R. H., Esq. ....	1	1	0	Philips, J. Capel, Esq. (2 yrs.)	3	3	0
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Shuldham, Col. ....	1	1	0	"    J., Esq. ....	1	0	0
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Sidebottom, J. Esq. ....	2	2	0	Whitaker, B. I., Esq. ....	1	0	0
"    Col., M.P. ....	1	10	0	White, Rev. J. H. ....	1	0	0
Sidney, Hon. H. ....	1	0	0	Wilkin, F., Esq. ....	1	10	0
Simpson, John, Esq. ....	1	10	0	Wilkinson, W. King, Esq. ....	1	1	0
Sing, Joshua, Esq. ....	1	0	0	Williams, Dr. Theodore. ....	5	5	0
Slade, F., Esq., C.E. ....	1	1	0	Williamson, B., Esq. ....	1	0	0
Slatter, T. J., Esq. ....	1	1	0	Wilson, Mrs. ....	1	1	0
Smart, F. G., Esq. ....	2	0	0	"    J., Esq., C.E. ....	1	2	6
Smith, B. Woodd, Esq. ....	1	1	0	"    J. M., Esq. ....	1	1	0
"    Harold, Esq. ....	2	2	0	Wood, Rev. J. Cooper. ....	1	1	0
"    Hon. F., M.P. ....	3	0	0	"    J. G., Esq. ....	1	1	0
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[Subsequent receipts will be acknowledged monthly in the *Meteorological Magazine*. Cheques should be crossed National Bank, and Post Office Orders drawn on Camden Rd., London, N.W.]



## EVAPORATION.

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WE are very glad to find that this important subject is attracting additional attention, and especially that it is being taken up by those who have the greatest practical interest in it—viz., by engineers. Besides reporting upon a new set of observations started in this country, we have found in an official publication issued in the United States, accounts of experiments which we think should be known to our readers, and of which we have prepared the following summary:—

### ON THE EVAPORATION FROM A WATER SURFACE, LAWRENCE, MASSACHUSETTS.

THE report of the State Board of Health of Massachusetts for 1890 on Water Supply and Sewerage, besides containing a mass of very valuable information upon the treatment of sewage, gives results respecting evaporation which will be of interest to many of our readers.

The tank from which the measurements were made was 17 ft. 4 in. in diameter at the top, 16 ft. 8 in. in diameter at the bottom, and 6 ft. deep. It was made of cypress, tested as to watertightness, placed on mud sills, and a bed of puddle, and puddled all round, so that its top was very nearly level with the surrounding ground. The water was generally 6 in. below the top, and never more than 15 in. below it. Having gathered the above particulars from different parts of the volume, we proceed to reprint the portion of the report giving the results; and subsequently we shall offer a few remarks upon it.

“In winter the ice which formed was cut around the edge sufficiently to free the mass of ice from the sides of the tank, and allow it to float, so that observations upon the height of water would give the true change in quantity. These observations were made with a hook gauge, resting upon a bolt in the top of one of the staves of the tank. This gauge divided to feet and thousandths was read daily, morning and afternoon. The ice cut around the edge was thrown upon the surface of the mass of ice. By comparison with the rain gauge kept at the station, and another kept a mile away, the rise in the tank, which indicated a fall of rain or snow, was found on a few occasions in winter to be increased by snow being blown into it. Deduction has been made for this in the following table. The blowing in of snow between storms probably decreased

the apparent evaporation slightly ; and some particles of ice flying out of the tank when the ice was cut around the edge every cold morning, probably increased the apparent evaporation to a small extent. These errors would tend to counterbalance one another, and their resulting amount would, as appeared evident at the time, have very little effect upon the total evaporation. The enlargement of the area of surface of ice exposed to the air, caused by piling the ice chips from the edge upon the mass of ice, may have increased appreciably the evaporation from the ice during the cold months. The results for each month are given in the following table :—

Date.	Rainfall.	Evaporation.	Evaporation in per-centage of Rainfall.	Average daily Evaporation.	Maximum daily Evaporation.	Average daily evapo-ration on days when there was no Rainfall.
1888.	in.	in.		in.	in.	in.
January .....	4·44	2·45	55	·08	·17	·11
February .....	3·83	2·16	56	·07	·22	·09
March .....	5·17	3·11	60	·10	·20	·12
April .....	3·28	3·23	99	·11	·25	·13
May.....	4·14	3·00	72	·10	·18	·13
June .....	2·08	4·94	238	·16	·26	·18
July.....	2·36	5·20	220	·17	·26	·18
August .....	4·55	3·88	85	·12	·19	·14
September .....	7·88	2·52	32	·08	·19	·11
October .....	5·86	1·75	30	·06	·16	·08
November .....	6·74	1·26	19	·04	·12	·06
December .....	4·78	1·09	23	·03	·10	·05
Year .....	55·11	34·59	63	·09	—	·12
1889.						
January ... ..	5·21	·97	19	·03	·07	·04
February .. ..	1·70	1·74	102	·06	·25	·08
March... ..	2·68	1·69	63	·05	·10	·06
April .....	3·82	2·33	61	·08	·17	·11
May.....	4·10	3·58	87	·12	·19	·12
June .....	3·13	3·71	118	·12	·26	·19
July... ..	7·48	3·49	47	·11	·23	·15
August .....	2·71	3·49	129	·11	·20	·13
September .....	2·78	2·51	90	·08	·17	·11
October .....	4·13	1·99	48	·06	·11	·08
November .....	6·58	1·07	16	·03	·08	·06
December ... ..	3·32	·90	27	·03	·06	·03
Year .....	47·64	27·47	58	·08	—	·10

Date.	Rainfall.	Evaporation.	Evaporation in percentage of Rainfall.	Average daily Evaporation	Maximum daily Evaporation.	Average daily evaporation on days when there was no Rainfall.
1890.	in.	in.		in.	in.	in.
January .....	3·02	·80	26	·03	·20	·05
February .....	3·74	·90	24	·03	·10	·08
March .....	6·64	·62	9	·02	·08	·06
April .....	1·68	2·26	135	·08	·17	·11
May.....	4·78	2·27	48	·07	·19	·13
June .....	3·82	4·20	110	·14	·24	·19
July.....	2·15	4·56	212	·15	·30	·21
August .....	5·50	3·62	66	·12	·22	·20
September .....	5·82	2·48	43	·08	·17	·15
October .....	8·26	1·40	17	·05	·20	·11
November .....	1·63	·96	59	·03	·08	·04
December .....	5·39	1·34	25	·04	·18	·06
Year .....	52·43	25·41	48	·07	—	·12
Mean for three years..	51·73	29·16	56	·08	—	·11

“The rainfall in each of the three years was above the average, which for 24 years was 44·21 in. That of 1888, 55·11 in., was the highest that has ever been observed here; 47·64 in. in 1889 was 3·43 in. above the average, and 52·43 in. in 1890 was 8·22 in. above the average. Although the rainfall in 1888 was 7·5 in. more than in 1889, the evaporation was also 7·1 in. more; but in 1890, with the very heavy rainfall, the evaporation was 2·06 in. less than in 1889. The mean yearly evaporation for the three years was 29·16 in., and that of the four cold months, January, February, and December, was 5·98 in., or six-tenths as much as the average for four months of the year. The maximum daily evaporation was in June and July, 1888, and in June, 1889, 0·26 in., and was a little greater, 0·30 in., in July, 1890. The average daily evaporation on days when there was no rainfall was highest in the same months, and amounted to 0·18 in. in 1888, 0·19 in. in 1889, and 0·21 in. in 1890. In the same months the maximum weekly evaporation amounted to 1·5 in. The greatest evaporation in one month was 5·2 in., in July, 1888, and the least was 0·62 in. in March, 1890.

“The average daily evaporation for the three years was 0·08 in., and the average daily evaporation on days when there was no rain-

fall was 0·11 in. The average daily evaporation in the four months—May, June, July, and August—was 0·12 in., or 50 per cent. more than the average per year.”

The winter temperatures at Lawrence are very low. We find one month with a *mean* minimum of 6°·3, and another with 11°·8, and such a remark as the following indicates the difficulties attending the measurement of evaporation:—“During the remainder of the month the daily minimum temperature of the air averaged 5° below zero.”

The idea of cutting a ring round the central block of ice so as to keep it floating, and heaping the chips on the centre, did certainly enable measurements to be taken daily, but, as stated above, the accumulated pile must have “increased appreciably the evaporation.” We think that this is probably the explanation of the abnormally large record for January, 1888.

It is a pity that two other columns were not added to the table, giving the actual records of the rain gauges at the two stations mentioned, together with details as to their position, because a tank with a rim probably at least an inch thick (and concerning which there is nothing to show that insplashing of bounding rain from the surrounding soil could not occur), is not an unexceptionable rain gauge. In fact, as far as we understand the text, it seems that the column headed “rain” is a record of + quantities found in the tank corrected by the readings of an ordinary gauge. Very possibly these corrections are small and rare, but the experiments are of such interest that three or four pages out of the 900 in the report might with advantage have been devoted to setting out the observations *in extenso*.

We have already remarked upon the first column of the table. The second is the all-important one, but it is subject to the above-mentioned difficulty with the ice, and to the question of whether or not the rise in the tub due to rain was correctly ascertained. For evidence on this point, the detailed observation would have been most useful. A period of three years is too short to give a mean which can be relied upon, and it is worthy of note that there was a steady decrease.

1888=	34·59
	—7·12.
1889=	27·47
	—2·06.
1890=	25·41

Even if we took off from 1888 an inch for icy difficulties, that year would still be considerably in excess. Only that we are told that the tubs were carefully tested for leakage, we might have thought that some error had crept into the first year in that way, but the monthly values also seem to negative that idea. We have therefore for the present to accept 29 in. as the mean annual evaporation in that part of Massachusetts from a 17 ft. tank buried in the earth, and measured twice daily by a hook gauge.

This value is nearly intermediate between what in "British Rainfall, 1889," we quoted as in our opinion the value for England, viz., 18 in., and the high value given for Philadelphia, by Mr. Desmond Fitzgerald, viz., 39 in.

The amount of evaporation depends upon several points, the temperature of the water surface, and of the superincumbent air, and on the humidity and motion of that air. So that, as Mr. Fitzgerald states, no one reservoir would show exactly the same as another.

#### EXPERIMENTS AT SOUTHAMPTON WATER WORKS AND AT CAMDEN SQUARE.

WE are extremely glad to state that Mr. W. Matthews, M.Inst.C.E., has established at the pumping-station of the Southampton Water Works at Otterbourne, four miles S.W. of Winchester, Hants, a tank identical in dimensions and mode of observation with that so long used at Strathfield Turgiss, and subsequently at Camden Square, for the measurement of the amount of evaporation. It is a curious but unimportant and accidental coincidence that the two tanks are *within an inch* at the same height above sea level, viz., 111½ feet. Each tank is 6 ft. square, 2 ft. deep, sunk 20 or 21 inches in the ground, and surrounded by turf. The rims are therefore about 3 inches above the grass. The water is kept between 4 and 2 inches below the rim, by the addition or subtraction of water when a continuance of drought or of rain has unduly lowered or raised the water level.

The observation is made daily at 9 a.m. by means of a hook gauge, as mentioned in *British Rainfall*, 1886, p. 16.

The tanks being exposed and uncovered, of course, receive every shower, just as a rain-gauge would do, and they are, in fact, excellent

rain-gauges, but as they are used for the measurement of evaporation, every fall of rain has to be accounted for, and this is done by having a rain-gauge near each tank and correcting the tank readings for each addition by rain. This is extremely simple and obvious, but to remove all possibility of misconception we give the workings for a few days :—

	Rain gauge gave in.	Reading or Hook Gauge. in.	Evaporation. in.
1893. May 15.....	.....	2·67	.....
„ „ 16.....	—	2·55	.....
„ „ 17.....	·07	2·59	.....
„ „ 18.....	·35	2·92	.....

It will be seen that no rain was measured on the 16th, and that on that day the depth was ·12 in. lower than on the 15th ; therefore, the ·12 in. had evaporated. On the morning of the 17th the rain gauge held ·07 in. ; therefore that amount had to be added to the—

Reading on 16th, <i>i.e.</i> .....	2·55
Rain to 9 a.m. 17th.....	·07

---

2·62

But the depth on the 17th was.....	2·59
------------------------------------	------

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Therefore ·03 had evaporated.

Similarly on the morning of the 18th—

Reading on 17th .....	2·59
Rain to 9 a.m. on 18th .....	·35

---

2·94

Reading on 18th .....	2·92
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Therefore ·02 had evaporated.\*

Mr. Matthews' record begins with February, 1892 ; it will evidently be convenient that his tables should run concurrently with those from Camden Square, and therefore on p. 22 we give the Otterbourne daily values from July 1st, 1892, to June 30th, 1893. It will, however, be well to give the totals for the five previous months :—

	Feb.	March.	April.	May.	June.	Total.
Otterbourne.....	·53	1·20	2·94	3·47	3·25	11·39
Camden Square .....	·09	·60	1·88	2·65	3·05	8·27
Excess at Otterbourne .....	·44	·60	1·06	·82	·20	3·12

\* It is very satisfactory to state that the fall of rain, as indicated by the rain-gauge, and that collected by the tank, agree very closely, as is proved by the fact that on looking down a column of the daily evaporation it is scarcely possible to pick out the days upon which the correction for the fall of rain has been applied.

It would be premature to speak decisively from a few months' records, but it seems probable that the evaporation at Otterbourne will prove very similar to that at Strathfield Turgiss (*British Rainfall*, 1889, p. 35), viz., 18 inches, or four or five inches more than that at Camden Square.

The values at the two stations are printed *in extenso* on the following pages. The entries with a + indicate that condensation had occurred to the amount shown against the +; this is very rare, except when the water is very cold, and generally occurs only when ice is floating in the tank.

The following small tables give abstracts of the Camden Square records since the tank was fixed in 1885 :—

#### TOTAL IN EACH MONTH AND YEAR.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1885.	·20	·38	·86	1·71	1·98	2·77	3·29	2·25	1·13	·77	·17	·11	15·62
1886.	·23	·13	·53	1·59	1·78	2·93	3·12	1·86	1·46	·63	·27	·12	14·65
1887.	+·07	·29	·76	1·72	1·79	3·68	3·76	2·54	1·25	·78	·21	·07	16·78
1888.	·07	·37	·48	1·16	2·71	2·24	1·44	1·90	1·17	·60	·43	·03	12·60
1889.	·03	·18	·62	1·07	1·76	2·97	2·34	1·96	1·52	·42	·29	+·13	13·03
1890.	·08	·19	·50	1·44	2·63	2·14	2·33	2·02	1·27	·79	·31	·04	13·74
1891.	·03	·16	·73	1·35	1·66	2·83	2·34	1·67	1·00	·62	·20	·22	12·81
1892.	·05	·09	·60	1·88	2·65	3·05	2·84	2·20	1·01	·36	·02	·20	14·95
1893.	+·03	·01	·92	2·33	3·06	3·62							

#### MAXIMUM IN EACH MONTH AND YEAR.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1885.	—	·04	·06	·12	·15	·14	·17	·14	·11	·05	·02	·04	·17
1886.	·01	·04	·08	·12	·15	·16	·22	·13	·10	·07	·04	·04	·22
1887.	·04	·05	·06	·11	·14	·23	·18	·16	·08	·05	·05	·02	·23
1888.	·04	·04	·05	·09	·17	·17	·10	·13	·09	·05	·06	·02	·17
1889.	·02	·04	·05	·08	·13	·18	·15	·11	·10	·04	·04	·04	·18
1890.	·04	·04	·07	·13	·19	·17	·15	·12	·09	·07	·08	—	·19
1891.	—	·02	·07	·13	·15	·18	·15	·12	·07	·08	·06	·05	·18
1892.	—	—	·06	·12	·19	·17	·18	·13	·08	·06	·03	—	·19
1893.	—	·02	·07	·14	·19	·21							

The long drought in the early part of 1893 has left a very clear trace upon the above tables, for the total evaporation in March, in April, and in May, 1893, was unprecedentedly great, and that in June, 1893, had been exceeded only once, viz., in June, 1887.

# DAILY EVAPORATION AT OTTERBOURNE WATERWORKS PUMPING STATION.

(Near WINCHFIELD, HANTS.)

Lat., 51° 0' 28" N. ; Long., 1° 19' 55" W. ; Tank, 6' 0" square, 2' 0" deep ;  
Edge, 3" above ground ; Ground level, 111½ ft. above Ordnance datum.

1892.							1893.									
Date.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.				
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.				
1	·14	·16	+·02	·04	·01	+·03	}	·03	+·03	·08	·08	·13				
2	·08	·03	·02	·02	+·02	·01		·03	·04	·13	·12	·07				
3	·27	·10	·14	·07	·01	·00		·01	·00	·10	·09	·09				
4	·24	·15	·08	·02	+·01	}		·04	·03	·12	·12	·20				
5	·10	·16	·07	·05	+·04			}	·01	·01	·06	·16	·05			
6	·10	·20	·05	·00	·07				·06	·09	·20	·06				
7	·14	·06	·05	·01	·05				·01	·03	·12	·19	·13			
8	·18	·02	·09	·04	·00				·04	·02	·12	·14	·16			
9	·11	·13	·00	·04	+·01				·02	·02	·09	·14	·18			
10	·06	·08	·01	·05	·02				·00	·07	·14	·21	·11			
11	·15	·12	·02	·07	+·03	·00			·01	·08	·08	·12	·13			
12	·00	·19	·02	·05	·01	}			·06	·06	·10	·17	·12			
13	·05	·01	·10	+·02	·00		}	+·05	·00	·08	·15	·15				
14	·06	·06	·06	·03	+·04	+·03		·01	·07	·09	·16					
15	·05	·16	·05	·00	·01	·00		+·02	·05	·06	·06	·06				
16	·12	·02	·07	·01	·03	+·02		·06	·04	·04	·10	·14				
17	·05	·08	·07	·14	·02	·03		+·05	·09	·06	·08	·12				
18	·06	·03	·08	·11	·03	·02		·00	·08	·06	·11	·31				
19	·06	·06	·05	·03	+·01	·00		·03	·05	·11	·09	·29				
20	·10	·10	·06	+·01	·03	·02		·04	·05	·10	·05	·14				
21	·11	·11	·06	·00	·00	·02		·05	·05	·17	·13	·11				
22	·07	·13	·00	·07	·02	}		·07	·06	·18	·13	·18				
23	·09	·02	·02	}	·00		}	·04	·06	·10	·11	·22				
24	·16	·11	·07		·02			·04	·06	·10	·11	·22				
25	·11	·12	·05		·05		·00	}	·13	·08	·11	·14	·13			
26	·11	·12	·02		·01		}		+·04	·08	·11	·14	·13			
27	·18	}	·04	+·13	·01				}	·03	·04	·08	·19	·11		
28	·17		·07	·14	+·06					·00	+·02	·06	·13	·11	·01	
29	·14		·07	·06	·06					·00	+·05	—	·11	·16	·13	·14
30	·06		·11	·06	·02					·03	+·03	—	·11	·13	·12	·13
31	·07		·16	—	·03			—		·00	—	·09	...	·08	·19	
														...		
Total	3·39	2·90	1·59	·87	·22		·08	+·08		·57	1·56	3·21	3·70	4·03		

NOTE.—Water level kept at about ground level. Observations at 9 a.m.  
Totals for each month checked from first and last reading. Rain-  
fall and water added or subtracted during the month.

When days are bracketed the tank was frozen, or contained ice float-  
ing on surface. Sign + indicates condensation.

April 8th, 1893.

WM. MATTHEWS, C.E.,  
Southampton.



## DAILY EVAPORATION AT CAMDEN SQUARE, LONDON.

Lat., 51° 32' 40" N. ; Lon., 0° 8' 0" W. ; Tank, 6' 0" square, 2' 0" deep ;  
Edge, 3" above ground ; Ground level, 111½ ft. above Ordnance datum.

1892.							1893.						
Date.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	
1	·08	·10	·00	·02	·03	·00	} *·13	·02	·01	·06	·05	·08	
2	·15	·05	·05	+ ·01	+ ·01	·00		+ ·01	·01	·07	·07	·09	
3	·18	·09	·08	·02	·00	+ ·01		+ ·01	·02	·06	·06	·10	
4	·18	·12	·08	·01	+ ·01	·02		·02	+ ·01	·07	·07	·10	
5	·05	·13	·05	·01	+ ·01	·01		·01	·03	·06	·12	·13	
6	·13	·09	·04	·02	·01	·02		+ ·02	·01	·05	·15	·06	
7	·15	·04	·02	·00	·01	·04		+ ·02	·03	·06	·14	·13	
8	·18	·08	·06	·02	·00	+ ·01		·02	·02	·06	·11	·16	
9	·13	·10	·02	·06	·00	·02		+ ·01	·03	·07	·15	·15	
10	·04	·09	·01	·03	·00	+ ·01		+ ·01	·06	·10	·19	·09	
11	·10	·07	·02	·01	·00	+ ·02	·02	·04	·08	·14	·13		
12	·04	·11	·03	·02	+ ·02	·00	+ ·01	·04	·04	·11	·12		
13	·04	·05	·03	·00	+ ·01	+ ·02	+ ·02	·01	·09	·14	·18		
14	·04	·11	·05	·02	+ ·01	+ ·02	+ ·02	·01	·03	·09	·18		
15	·04	·10	·04	·01	+ ·03	·01	} *·03	·00	·02	·08	·12	·16	
16	·03	·01	·05	·02	+ ·04	+ ·01		·00	·03	·04	·03	·19	
17	·02	·09	·07	·03	·02	·01		+ ·01	·07	·04	·02	·21	
18	·05	·00	·06	·03	·01	·03	} *·07	·00	} *·07	·04	·08	·18	
19	·03	·04	·04	·01	·01	·02		+ ·04		·01	·09	·09	·16
20	·09	·09	·02	·00	+ ·01	·00		·01		·01	·02	·07	·07
21	·12	·06	+ ·01	·02	·01	·01	+ ·03	·00	+ ·01	·11	·07	·05	
22	·06	·05	·02	·02	·01	·00	+ ·06	+ ·01	·01	·10	·15	·12	
23	·09	·04	·00	·04	·01	·03	+ ·05	·02	·02	·06	·08	·15	
24	·09	·06	·06	·01	·00	} *·08	+ ·01	·01	·03	·11	·08	·09	
25	·09	·07	·02	·00	·01		·02	+ ·01	·05	·14	·14	·10	
26	·11	·11	·04	·00	·02		+ ·02	·02	·03	·12	·08	·04	
27	·11	·00	·03	+ ·03	+ ·01		·00	·00	·05	·11	·11	·03	
28	·13	·05	·07	·00	·01	} *·08	·02	·01	·05	·07	·09	·15	
29	·14	·02	·02	·00	·01		+ ·02	...	·05	·13	·07	·10	
30	·09	·11	+ ·06	+ ·04	·01		+ ·02	...	·05	·12	·09	·10	
31	·06	·07	..	·01	...	}	·01	...	·07	...	·10	...	
Total	2·84	2·20	1·01	·36	·02		(·20)	(+·03)	·01	·92	2·33	3·06	3·62

\* Frozen—evaporation estimated.

## COMPARISON OF GERMAN & ENGLISH RAIN GAUGES.

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AFTER the close of the Exhibition of rain gauges held by the Royal Meteorological Society in 1891, Dr. Hellmann most kindly offered me the specimens which he had sent to the Exhibition of the pattern of gauge devised by him in 1886, and subsequently adopted in the Prussian meteorological service. Plans and sections will be given next year, but in the interim it will, we think, be of interest to show how very closely they run with the standard gauge at Camden Square. Those who are in the habit of working two gauges side by side know that it is rare for them to agree within half a tenth of an inch. The following table shows nine values out of 24 every one of which agrees within less than half that—*i.e.* is  $\cdot 02$ ,  $\cdot 01$ , or  $\cdot 00$  in. But we must explain the table, for it needs it.

In Prussia where (as the rain gauges are provided by the government) cost is not a primary consideration, each station has two gauges, carried one on each side of a post, and with its orifice about 5 ft. above the ground. A lid is provided, and at night no measurement is made, but the lid is moved from one gauge to the other—therefore one collects the day rain the other the night.

As they have much snow in some parts of Prussia, Dr. Hellmann supplies with the gauge a zinc double partition, the horizontal section of which is **X**, which being dropped into the funnel, prevents circular whirls of wind taking the snow out. We have not yet had the opportunity of seeing what will happen with London snow—but meanwhile we have done that to which Dr. Hellman would doubtless object, but we did it solely as an experiment—we have left the partition in all the year round—because we thought that its large surface (to be wetted) must cause the loss of a perceptible quantity of rain.

Moreover, having quite enough work on hand, we have left the German gauges from month's end to month's end without any attention whatever—another trial more severe than their use as originally

designed by Dr. Hellmann. We are surprised and glad to see that they have come very well through their first year.

In the table the first three columns give the monthly totals as read from Dr. Hellmann's gauges in millimetres, and the totals of the readings of the daily gauge converted into millimetres. These are the basis of the following columns in which the values are expressed in inches.

The German gauges have their receiving surfaces 5 ft. above the ground, the daily gauge is only 8 inches above it. To make the totals from the daily gauge comparable with the German ones at 5 ft. 4 % has to be deducted from it, and therefore the observed total of 574.2 mm. or 22.61 inches becomes 21.71 inches. The next columns give the readings of Dr. Hellmann's gauges converted into inches, and the last two columns the differences between these and the (computed) value of the English gauge had it been at the same height above the ground as the German ones. This brings out clearly the effect of the partition in diminishing the collected total by somewhat under half-an inch a year, but as we have already said we think that on the whole the agreement is very satisfactory.

1892.	Dr. Hellmann's gauge, No. 1. (With snow protector.)	Dr. Hellmann's gauge, No. 2. (Without snow protector.)	Ordinary English 8 in. gauge.	Ordinary English 8 in. gauge, Reduced by 4 per cent.	Dr. Hellmann's gauge, No. 1.	Dr. Hellmann's gauge, No. 2.	Difference from reduced English.	
	mm.	mm.	mm.	in.	in.	in.	Dr. Hellmann's No. 1.	Dr. Hellmann's No. 2.
January .....	11.5	13.9	13.0	.49	.45	.55	— .04	+ .06
February .....	37.2	39.2	41.1	1.55	1.46	1.54	— .09	— .01
March .....	25.0	25.7	26.4	1.00	.98	1.01	— .02	+ .01
April .....	22.4	23.0	25.1	.95	.88	.91	— .07	— .04
May.....	35.4	34.8	38.4	1.45	1.39	1.37	— .06	— .08
June .....	58.3	58.6	62.5	2.36	2.30	2.31	— .06	— .05
July.....	39.5	40.1	41.2	1.56	1.56	1.58	.00	+ .02
August .....	73.5	74.2	77.7	2.94	2.89	2.92	— .05	— .02
September .....	52.0	53.4	53.8	2.03	2.05	2.10	+ .02	+ .07
October ..	90.9	93.0	96.0	3.65	3.58	3.66	— .07	+ .01
November .....	63.4	64.7	64.2	2.42	2.50	2.55	+ .08	+ .13
December .....	32.1	33.2	34.8	1.31	1.26	1.31	— .05	.00
Yearly Total ...	541.2	553.8	574.2	21.71	21.30	21.81	— .41	+ .10

# RAINFALL AT THE ROYAL OBSERVATORY, GREENWICH

Lat., 51° 28' 38" N.

Long., 0° 0' 0".

Communicated by W. H. M. CHRISTIE, Esq., M.A., F.R.S.,  
Astronomer Royal.

1892	No. of days on which rain fell.	MONTHLY AMOUNT OF RAIN COLLECTED IN EACH GAUGE.							
		Osler's Anemometer		On roof of Octagon Room.	On roof of Magnetic House.	On roof of Photographic Thermometer Shed.	Gauges partly sunk in the ground.		
		Self-registering Gauge.	Second Gauge.						
Height above Ground. }	...	50ft. 8in.	50ft. 8in.	38ft. 4in.	21ft. 6in.	10ft. 0in.	5in.	5in.	5in.
Height above Mean Sea Level. }	...	205ft.	205ft.	193ft.	176ft.	165ft.	155ft.	155ft.	155ft.
January .....	11	in. 0·098	in. 0·106	in. 0·258	in. 0·319	in. 0·391	in. 0·384	in. 0·401	in. 0·402
February.....	19	0·995	1·032	1·270	1·385	1·552	1·688	1·637	1·668
March .....	12	0·407	0·397	0·681	0·906	1·060	1·089	1·090	1·110
April.....	10	0·445	0·469	0·843	1·190	1·405	1·421	1·415	1·443
May .....	11	1·241	1·278	1·442	1·555	1·653	1·656	1·642	1·654
June .....	14	1·516	1·546	1·936	2·169	2·243	2·268	2·211	2·249
July .....	12	0·888	0·849	1·291	1·488	1·533	1·536	1·541	1·575
August .....	16	2·121	2·126	2·716	2·982	3·046	3·026	3·029	3·121
September .....	14	1·451	1·395	1·714	1·923	2·064	2·010	2·012	2·057
October .....	22	2·345	2·442	3·201	3·758	3·993	3·879	3·915	3·952
November .....	18	1·496	1·554	1·920	2·186	2·291	2·212	2·284	2·296
December .....	11	0·544	0·493	0·843	0·978	1·121	1·144	1·177	1·211
Sums.....	170	13·547	13·687	18·115	20·839	22·352	22·313	22·354	22·738
No. of Gauge ...	...	1	2	3	4	5	6	7	8

The monthly record terminates at midnight on the last day of the month.

A rainy day is considered to be one on which 0·005 in., or more, is collected in gauge No. 6.

Of the ground gauges 6, 7, and 8, No. 6 is taken as standard, No. 7 is the old monthly gauge, and No. 8 is a gauge added in 1881.

1893, *March* 30.

WILLIAM ELLIS,  
For the Astronomer Royal.

## THE STAFF OF OBSERVERS.

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IN subsequent pages we give a list of the changes in our staff from that at which it stood in *British Rainfall*, 1891—in fact the losses and gains of the year. It will be noticed that figures in parenthesis follow the name of each county—those figures indicate the number of perfect records published in the present volume, from the respective counties, and those numbers reach in the aggregate 2,850, the highest number we have ever had. The following table will illustrate the growth of the staff from its formation in 1860.

*Number of perfect rainfall records published in the volumes of British Rainfall for the undermentioned years :—*

Years.	England.	Wales.	Scotland.	Ireland.	Gross Total.	Increase over previous year.
1860...	163 ...	5 ...	— ...	— ...	168	...
1861...	334 ...	9 ...	109 ...	20 ...	472	...
1871 .	1038 ...	88 ...	311 ...	67 ...	1504	...
1881...	1548 ...	131 ...	313 ...	153 ...	2145	...
1891...	2091 ...	168 ...	359 ...	181 ...	2799	23
1892...	2113 ...	177 ...	368 ...	192 ...	2850	51

Difference from 1891—

Increase	22 ...	9 ...	9 ...	11 ...	51
Decrease	— ...	— ...	— ...	— ...	—

It will be seen that the above is a list of “perfect” records only, as it would be useless and misleading to include any others, but there are usually from 50 to 150 imperfect or incomplete returns, so that the total number of observers must have nearly if not quite reached the 3,000. Their distribution also over the country is very good, so good that I do not remember any part of the British Isles where one could not walk in the course of a day from one observer’s house to the next; still there is much to be done towards equalizing the general distribution, and there are very few observers who could not help in this matter if they would turn their attention to it—Firstly, by writing down the name and address of everyone whom they know

to be keeping an accurate record, and then comparing that list with the present general tables, and reporting to me anyone whose name they cannot trace there. Secondly, by trying, through the local newspapers, and by watching the same, to hear of fresh observers. Thirdly, by looking in the General Tables for places not mentioned, and trying to find observers for them. Fourthly, by endeavouring to interest members of their families in the work, so that when they are ill, or leave the neighbourhood, or the world, the continuity of the record may not be broken.

## MIDDLESEX (61).

## ABSENT RECORDS.

London (235, Camden Road), N. (2 *gauges*)  
*Observer moved.*  
 Stoke Newington Res., N.—*Gauge changed.*  
 Hornsey (Mount View Road)—*Observer moved*

## INSERTIONS.

Ealing (Gordon Road).  
 Westminster (Spring Gardens) 2 *g.*  
 London (New River Office).  
 „ (West Hampstead).  
 Highgate (North Hill).  
 Hornsey (High Street).  
 „ (Burghley Road).

## SURREY (94).

Ewhurst (Heathside) *Old g.—Record ceased.*  
 Dorking (Holmbury)—*Observer dead.*  
 Brockham Vicarage — *Record ceased.*  
 Farnham (Averley Tower)—*Record ceased.*  
 Reigate (Wray Park)—*Observer dead.*  
 „ Hill (Loveland)—*Record ceased.*  
 Caterham Valley (The College)—*Return im-*  
*perfect.*  
 Bagshot (Collingwood).—*Observer moved.*  
 Weybridge Heath (Oakfield)—*Record imperfct.*  
 Carshalton (The Wrythe)—*Record ceased.*  
 Chertsey (Long Cross)—*Record ceased.*  
 „ (Burley Orchard)—*Record imperfect.*  
 Dulwich (Alleyn Park).—*Record ceased.*

Cranleigh.  
 Wonersh (Shamley Green).  
 Dorking (Fir Tor).  
 Red Hill (Montpellier).  
 Leatherhead (Oxshott).  
 Epsom College.  
 Weybridge (Egerton Road).  
 New Malden (Sewage Works).  
 Thornton Heath (Thornton Road).  
 Streatham Hill.  
 Wandsworth Com. (Patten Road).

## KENT (104).

Hawkhurst (Sandhurst Rec.) *Lawn—Record*  
*ceased.*  
 Tenterden (Ashbourne)—*No reply.*  
 Folkestone (Dover Road)—*No reply.*  
 Shepherdswell (Hazlingdane)—*Obsrvr. moved.*  
 Maidstone (Linton)—*No observations.*  
 Seven Oaks (Clare Bank)—*Observer moved.*  
 Aylesford (Preston Hall)—*No observations.*  
 Margate (Renfrew Villa)—*Observer dead.*

Appledore (Snargate).  
 Dover (Castle Knowle W.W.)  
 Acrise.  
 Maidstone (The Mote).  
 Seven Oaks (Kemsing).  
 Rochester (Halling Cottage).  
 Herne Bay (Eddington).  
 Birchington (Thor).  
 North Foreland.  
 Sheerness Waterworks.

## WEST SUSSEX (27).

Worthing (Heene) 2nd gauge— <i>Record imperfect.</i>	Steypning (Annington).
„ (Infirmary)— <i>Record ceased.</i>	
Bramber (Maudlin)— <i>Record ceased.</i>	
Chichester (West Dean)— <i>No reply.</i>	

## EAST SUSSEX (51).

Beachy Head 2nd g.— <i>Record ceased.</i>	Brighton (Goldstone Villas, Hove)
Eastbourne (The Gore)— <i>Record ceased.</i>	Lewes (Saxonbury).
Brighton (Blatchington Road).— <i>Record ceased.</i>	Hastings (Newgate Res.)
Lewes (Glynde Place)— <i>No reply.</i>	Hurstpierpoint (Hampton Lodge).
Warbleton (The Rectory)— <i>Record ceased.</i>	
Newick (Ketches)— <i>Record ceased.</i>	
„ (Beechlands) 2 g.— <i>No observations.</i>	

## HAMPSHIRE (78).

Ventnor (Consumption Hos.)— <i>Rec. imperfect.</i>	Niton (St. Catherine's House).
Totland Bay (Wilmington)— <i>Rec. imperfect.</i>	Ventnor.
Christchurch (Kenilworth)— <i>Record ceased.</i>	Ryde (Town Hall)
Havant 2 gauges— <i>Returns not received.</i>	Christchurch (Heron Court).
Idsworth House— <i>Observer moved.</i>	Portsmouth (Fort Cumberland)
Southampton (Highfield)— <i>Observer moved.</i>	Lyndhurst (Cuffnells).
Alresford (Cheriton Rec.)— <i>Record ceased.</i>	Botley (Botley Hill).
Stockbridge (Compton Gardens)— <i>No reply.</i>	„ (Beechcroft, Curdridge).
Alton (The Wakes, Selborne)— <i>Record ceased.</i>	Otterbourne Hill (Reservoir.)
Micheldever (Northbrook)— <i>Record ceased.</i>	„ (W.W.Shawford) 2 g.
Fleet (Claremont House)— <i>Record ceased.</i>	Petersfield (Lingwood, Lyss).
Kingsclere (Ramsdale)— <i>Record ceased.</i>	Alton (Rotherfield Park)
Bramley— <i>Observer dead.</i>	Headley (Arford House). 2 g.
	Rotherwick (Tylney Hall).

## BERKS (34).

Reading (Russell Street)— <i>No observations.</i>	Sunninghill (Lynwood).
Shrivenham (Ashbury Vic.)— <i>Observer dead.</i>	Hungerford (Kintbury).
	Reading (Portland Place) 2 g.
	„ (Earley).
	Twyford (Hurst Grove).
	Wantage.
	Abingdon (Sutton Courtney).

## HERTS (40).

Elstree (Aldenham Ho.)— <i>Return incorrect.</i>	Stevenage (Weston Park).
St. Albans (Torrington Ho.) 2 g.— <i>Rec. ceased.</i>	
Tring Vicarage— <i>Gauge moved.</i>	
Welwyn (Brockett Hall)— <i>Record imperfect.</i>	
Hitchin (Bancroft)— <i>Record unreliable.</i>	
„ (Bedford Road)— <i>Gauge moved.</i>	
Buntingford (Hyde Hall)— <i>Record ceased.</i>	

## BUCKS (18).

Burnham (The Elms)— <i>Record ceased.</i>	Amersham (The Plantation).
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## OXFORD (29).

Caversham (Kidmore Grange)—*No observtns.*  
 Banbury (Cotefield, Bodicote)—*Record ceased.*

## NORTHAMPTON (42).

Wansford (Apethorpe Lodge)—*Record imp.* | Aldwinkle St Peter.  
 Peterborough (Infirmary)—*Observer moved.* | Kingscliffe (Fineshade)

## HUNTS (5)

Kimbolton (Covington Rectory)—*No reply.* | Huntingdon.

## BEDFORD (19).

Biggleswade (Langford)—*No reply.* |

## CAMBRIDGE (27).

Cambridge (Fulbourne Asylum)—*Rec. imp.* | Odsey [Royston].  
 Hardwick—*Record ceased.* | Cambridge (Fulbourne Pumping  
 Papworth Hall—*Record ceased.* | Station)

## ESSEX (45).

Woodford (The Harts)—*Record ceased.* | Manor Park (Albany Road).  
 Brentwood (Dudbrook Ho.)—*Observer moved.* | Walthamstow (Prospect Hill Lodge)  
 West Mersea (Rosebank)—*Record ceased.* | Brentwood (Sawyers Hall).  
 Birchanger [Bishops Stortford]—*Rec. ceased.* | Colchester.  
 | Harwich (Ramsey).

## SUFFOLK (37).

Felixstowe—*Record ceased.* | Erwarton Hall [Harwich].  
 Ipswich (Woolverstone Park)—*Old g. incorrect* | Darsham (Sibton Vicarage).  
 Stowmarket (Wetherden Rec.)—*Observer dead.*  
 Lowestoft (Kirkley)—*No reply.*

## NORFOLK (60).

Downham (Crimplesham)—*Record ceased.* | Honingham.  
 Fakenham (Pensthorpe)—*Record imperfect.*  
 Holkham.—*Return arrived too late.*

## WILTS (56).

Warminster (Bugley Reformatory)—*Obs. mvd.* | Mere Vicarage.  
 Bradford (Westbury House)—*Record ceased.* | Trowbridge (Water Works, Biss).  
 | (Lovemead).  
 | Bradford.  
 | Alton Barnes Rectory

## DORSET (29).

Swanage (Langton Matravers)—*Record ceased* | Corfe Castle (Furzebrook).  
 Abbotsbury—*Record imperfect.*  
 Bridport (Downe Hall)—*Record imperfect.*



## DEVON (93).

Salcombe (The Molt)— <i>Record ceased.</i>	Plymouth (Drake's Reservoir).
Bolt Tail— <i>Record ceased.</i>	Totnes.
Plympton (Fursdon)— <i>Observer moved.</i>	Bickley (Roborough Reservoir).
Kingskerswell (Fluder)— <i>No reply.</i>	Torquay (Cary Green).
Exeter (Lyndhurst Road)— <i>Gauge moved.</i>	Lee Moor Clay Works.
„ — <i>Record ceased.</i>	Dartmoor (Deancombe Farm).
Tiverton (Cove)— <i>No reply.</i>	„ (Leather Tor Farm).
Bideford (Heale Ho., Littleham)— <i>Rec. ceased.</i>	„ (Siwards Cross).
	„ (Leeden Tor).
	Teignmouth (Britton Street).
	„ (Woodlands).
	„ (Reservoir).
	Dawlish (Mamhead Rectory).
	Exeter (Aylesbeare).
	Torrington (Stevenstone).
	„ (Little Silver).

## CORNWALL (31).

Penzance (Trevean)— <i>Record lost.</i>	St. Ives (Phillack Rectory).
St. Germans (Catchfrench).— <i>Record ceased.</i>	

## SOMERSET (49).

Milverton (Halse)— <i>Record ceased.</i>	Wellington (Sunnyside).
Minehead (Blair)— <i>Observer dead.</i>	Wincanton.
Batheaston— <i>Record incomplete.</i>	Bridgwater (Ashford).
	Radstock (Downside).
	Bath (Freshford).
	Weston-super-Mare (Bryn-y-mor).
	Wrington (The Rectory).
	Flax Bourton (Tyntesfield).
	Bristol (Coronation Road).

## GLOUCESTER (72).

Clifton (South Parade)— <i>Observer dead.</i>	Bristol (Redland Green).
Frampton-on-Severn (Saul Lodge)— <i>Rec. ceased.</i>	Clifton College.
Great Barrington [Burford]— <i>Gauge moved.</i>	Pucklechurch.
Cheltenham (Selsley Lawn)— <i>No reply.</i>	Bristol Docks (Underfall Yard).
Alscot Park [Stratford-on-Avon]— <i>Obs. moved.</i>	Thornbury (Prospect House)
	Lydney (Priors Mesne).
	Stroud (The Acre).
	Mitcheldean (Blaisdon) (2 <i>gauges</i> ).
	Gloucester (Churcham).
	Cheltenham (Sandford).
	„ (Naunton Pk Villas).
	„ (Southam Villa) (2nd <i>g.</i> )

## HEREFORD (26).

Wyastone Leys [Monmouth]— <i>No reply.</i>	Ledbury (Underdown).
Much Marcle— <i>Record ceased.</i>	Hereford (St. Michael's Priory).

## SHROPSHIRE (29).

Ludlow (Ashford House).	
" (Prior's Halton).	
Church Stretton.	
Ellesmere (Oteley).	

## STAFFORD (33).

Alrewas (The Cottage)— <i>No reply.</i>	
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## WORCESTER (33).

Evesham (Bank)— <i>Gauge moved.</i>	Stourbridge (Longlands).
Worcester (Fort Royal)— <i>No reply.</i>	

## WARWICK (28).

Coventry (Middlesboro' Ter.)— <i>Record ceased.</i>	Radway (Ivy Lodge).
	Leamington (St. John's Vic.)

## LEICESTER (23).

	Loughborough (Forest Road) (2 <i>gs.</i> )
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## RUTLAND (6).

Oakham (Whitwell)— <i>No reply.</i>	
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## LINCOLN (69).

Alford (The Sycamores)— <i>Record ceased.</i>	Swineshead.
Wroot Engine— <i>No observations.</i>	Sleaford (Ranceby Hall).
	Kirkstead (Woodhall Spa).
	Spilsby (Boston Road).
	Louth (Water Works).
	Market Rasen (Tealby).
	North Thoresby.
	Ferriby Sluice.

## NOTTS (36).

Newark (East Stoke)— <i>Record ceased.</i>	
Annesley Park— <i>No observations.</i>	
Tuxford (Ragnall)— <i>Record ceased.</i>	

## DERBY (39).

Derby (Holmside, Hazelwood) M— <i>Gaugemord</i>	Matlock (North Darley).
Chesterfield (Tapton House)— <i>No reply.</i>	Brimington.

## CHESHIRE (61).

Siddington (Thornycroft Hall)— <i>Record lost.</i>	Chester (Hoole Lodge).
Thurstaston (Dawpool)— <i>No reply.</i>	
Thelwall (Millington House (old g))— <i>Rec. ceased</i>	
Lymm (Statham Lodge) (2 <i>gs.</i> )— <i>Obs. moved.</i>	

## LANCASHIRE (153).

Heaton Moor [Stockport] ( <i>old g</i> )— <i>Record ceased</i> .	Warrington (Cemetery).
Walton (Breeze Hill)— <i>Record ceased</i> .	Manchester (Oldham Road).
Manchester (Embsen Street)— <i>No reply</i>	Chorley (Whittle le Woods Vic.)
Bolton (The Folds)— <i>Record ceased</i> .	Over Darwen (Daisy Green) (2 <i>gs.</i> )
„ (Heaton)— <i>Observer moved</i> .	„ (Pickup Bank).
„ (Halliwell Road)— <i>Record ceased</i> .	Todmorden (Water Works) (2 <i>gs.</i> )
Southport (Hesketh Park) 2nd <i>g</i> — <i>Rec. ceased</i> .	Blackpool.
Goodshaw— <i>Record ceased</i> .	Barton (Anderton Fold).
Lytham (Woodville Terrace)— <i>Observer dead</i> .	Heysham.
Blackpool (South Shore)— <i>Record ceased</i> .	
Grange (Nutwood)— <i>Record ceased</i> .	
Broughton (Woodland Rec.)— <i>Observer moved</i> .	

## YORKSHIRE—WEST RIDING (226).

Sheffield (Tylecote Ranmoor)— <i>Return not recvd.</i>	Standedge (Redbrook Res.)
„ (Shrewsbury Hospital)— <i>No observtns.</i>	Wakefield (Walton).
Rotherham (Ulley Reservoir)— <i>Record ceased</i> .	Ackworth (Nostell Priory).
Standedge (Red Brook) <i>old g</i> — <i>Return imperf.</i>	„ (Flounders Institute).
Doncaster (Hatfield)— <i>No reply</i> .	Goole (Swinfleet).
Pontefract (Fern Hill)— <i>Record ceased</i> .	Sowerby Bridge (Haugh End).
Boston Spa— <i>Record lost</i> .	Halifax (Hall Ings, S. Owram).
Ramsgill (Bouthwaite)— <i>Record ceased</i> .	„ (Public Library).
Nidderdale (Middlesmoor)— <i>Record ceased</i> .	Bradford (Merton Road).
	„ (Nan Scar, Oxenhope).
	„ (Manningham).
	Leeds (Holbeck).
	York (Mount Villas).
	„ (Bootham).
	Skipton (Sandbed Beck, Burnsall)
	Malham Tarn (2nd <i>gauge</i> ).

## YORKSHIRE—EAST RIDING (26).

Hull (Westcott Street)— <i>No reply</i> .	Cottingham.
Middleton-on-the-Wolds— <i>Record imperfect</i> .	Hornsea (Elim Lodge).
Hunmanby (Wold Newton)— <i>Observer dead</i> .	Catton Rectory [York].
	Driffeld Waterworks.
	Ganton Hall [Scarborough].

## YORKSHIRE—NORTH RIDING (38).

Leyburn (Bolton Hall) (2nd <i>g.</i> )— <i>Record ceased</i> .	Terrington (Manor House).
Scarborough (West Bank)— <i>Gauge moved</i> .	Thirsk (Sowerby).
Robin Hood's Bay (Fylingdales Vic.)— <i>No obs.</i>	Hambleton Hills (Paradise).
Whitby (Guisborough Road)— <i>Observer dead</i> .	Northallerton.
	Guisborough (Redcar Road).
	Saltburn.

## DURHAM (39).

Seaham Hall— <i>Return incorrect</i> .	Darlington (Langholme Crescent)..
Sunderland Fever Hospital— <i>No reply</i> .	Tow Law.
	Sunderland (W. Hendon Ho.), 2nd <i>g.</i>

## NORTHUMBERLAND (46).

Bingfield House— <i>Record ceased</i> .	Newcastle (Clifton Road).
North Tyne Valley— <i>Return unreliable</i> .	Morpeth (Bothalhaugh Garden).
Belford (Chatton Vicarage)— <i>Observer dead</i> .	Scots Gap (Rothley Lake).

## CUMBERLAND (65).

Ravenglass (The Grove)—*No reply.*  
 „ (Irt Side, Holm Rook) — *Rec. ceased.*  
 Nether Wasdale Vic.—*Observer moved.*  
 Wythburn Vic.—*Observer dead.*  
 Loweswater (Waterend)—*Observer dead.*  
 Keswick (Deer Close)—*Record imperfect.*  
 Hesketh Newmarket—*Observer moved.*

## WESTMORELAND (36).

Arnside—*Record unreliable.*  
 Kirkby Lonsdale (Casterton)—*Observer moved.*  
 Barton Hall [Penrith]—*Record ceased.*

Kendal (St. George's Vic.)  
 „ (Underfell) (2 *gauges*).  
 Haweswater (Mardale Green).  
 Fairfield (2nd *gauge*).

## WALES.

## MONMOUTH (23).

Rumney (Tredelerch)—*Return not received.*  
 Newport (Crindau House)—*No reply.*

Abersychan (The Hawthorns).  
 Llanvihangel Crucorney.

## GLAMORGAN (31).

Pontypridd (The Woodlands)—*No reply.*

Barry & Cadoxton W. W. (Pencoedtre)  
 Swansea (Morriston).  
 Aberdare (Cwmaman).

## CARMARTHEN (6).

## PEMBROKE (8).

Clarbeston (Penty Park).  
 Newport (The Castle).

## CARDIGAN (6).

Tregaron.  
 Strata Florida (Hafod).

## BRECKNOCK (19).

Builth (Llanwrtyd Wells)—*Observer moved.*

Crickhowel (Gwernvale).  
 „ (Penmyarth).  
 Towey Valley (Nant-y-stalwyn) M.

## RADNOR (13).

Rhayader (Nant-y-car).  
 „ (Nantgwillt) (2nd *gauge*)  
 „ (Bwlchyrhendre).  
 „ (Claerwen).  
 „ (Pryddellau).  
 „ (Abergwngy).

## MONTGOMERY (9).

Carno (Tybrith)—*Record ceased.*  
 Welshpool (Powys Castle)—*No reply.*  
 Garthbibio (Bwlch Tomlyd)—*Retn. unreliable.*

## FLINT (6).

Rhyl Vicarage—*Observer dead.*

## DENBIGH (19).

Ruabon (Penycae Reservoir)—*Rec. imp.*

Chirk (Brynkinalt).  
 Wrexham (Coed Efa).  
 Nantglyn (Pant-y-maen).

MERIONETH (5).  
Blaenau-Ffestiniog (Cefn-faes)—*No reply.* |

CARNARVON (13).  
| Capel Curig (Lake Cowlyd),

ANGLESEA (3).

ISLE OF MAN (10).  
Douglas (Prospect Hill)—*No observations.* |

ISLES OF SCILLY (2).  
St. Mary's—*2nd entry wrong in 1891* |

JERSEY (2).  
St. Helier (Hastings Terrace)—*Record ceased* | St. Saviour's (The Ainges).

GUERNSEY (3).

## SCOTLAND.

WIGTON (6).

KIRCUDBRIGHT (17).  
| Creetown (Cassencary).  
| Kirkpatrick Durham (Glenlair).

DUMFRIES (10).  
Durrisddeer (Drumlanrig Castle)—*Record imp.* |

ROXBURGH (11).  
Hawick (Wolfelee)—*Observer dead.* | Hawick (Ladylaw).

SELKIRK (2).

PEEBLES (3).  
Innnerleithen (Leithen Lodge)—*Ret.unrelble* | N. Esk Reservoir [Penicuik].

BERWICK (6).  
| Duns (Clouds).

HADDINGTON (4).  
Prestonkirk (Smeaton)—*Return not received.* |  
North Berwick (Fidra)—*Ret. un reliable.* |

EDINBURGH (27).  
Pentland Hills (Crosswood)—*Gauge out of order* | Pentland Hills (Harbour Hill)  
Liberton (Alnwick Hill Res.)—*Return imp.* |

LINLITHGOW (4).

LANARK (10).  
Hamilton (Ardenclutha)—*Return imp.* | Cleghorn.

AYR (16).  
Ballantrae (Glendrishalg)—*Record ceased.* | Mauchline.  
Loch Finlas—*Gauge tampered with.* |

RENFREW (26).

**DUMBARTON (6).**

Helensburgh (Glenam)—*Gauge moved.* | Helensburgh (Ferniegair).

STIRLING (9).

Stirling (Victoria Place).  
Gargunnoch.

**BUTE (4).**

Arran (Pladda)—*Return imperfect.* Kingarth (Plan).

ARGYLL, MAINLAND (22).

Ballachulish (Ardsheal).

## ARGYLL, INSULAR (19).

Islay (Rhuvaal)—*Record unreliable.* | Coll (The Manse).

**CLACKMANNAN (3).**

Alva House.

**KINROSS (4).**

**Cleish Castle.**

**FIFE (10).**

Dunfermline (Outh)— <i>Return unreliable.</i>	Carnock (Luscar House) ( <i>No. 2</i> ).
Strathmiglo (Leden Urquhart)— <i>No reply.</i>	Kennoway (Kilmux).

PERTH (26).

Comrie (Dalginross)— <i>Record ceased.</i>	Donne (Gartincaber).
Dunkeld (Inver Braan)— <i>Record imperfect.</i>	Sheriffmuir (Lynns Farm).
	Cromlix Gardens.
	Rannoch (Gauer).
	Blair Athol (The Store).

FORFAR (22).

Arbroath(W.W.Tower)—*Return not received.* | Inverarity.

KINCARDINE (3).

Girdleness—*Record unreliable.*

ABERDEEN (18).

Aberdeen (King's Coll.) 11*in g.*—*Rtn. not rec.* } Cromar (Logie Coldstone School).  
 Midmar (Blackstock)—*No reply.* } " { " " Loanhead)

**BANFF (4).**

ELGIN OR MORAY (6).

NAIRN (2).

Dunearn Lodge [Dava]—*Return not received.*

WEST ROSS (12).

Loch Broom (Loch Drome)—*Return incorrect.* | Loch Vraon.  
Ullapool (Rhidorroch).

EAST ROSS (7).

## WEST INVERNESS (14).

Skye (Kyle Akin)—*Record unreliable.* | Harris (Island Glass).

## EAST INVERNESS (8).

| Loch Treig (Luibruaridh).  
| Fort Augustus.  
| Inverness (High School).

## SUTHERLAND (8).

| Cape Wrath.

## CAITHNESS (6).

Wick H.R.S.—*Record ceased.* |

## ORKNEY (9).

North Ronaldshay—*Record unreliable.* | Pomona (Deerness).

## SHETLAND (3).

## IRELAND.

## CORK (7).

Blarney (Garrycloyne)—*Observer moved.* | Castletownshend (Glen Barrabane)  
| Cork (St. Ann's Hill).  
| Fermoy Gas Works.

## KERRY (7).

Dromore Castle—*Observer dead.*  
Valentia (Observatory)—*Gauge moved.* |

## WATERFORD (6).

| Waterford (Cove Lodge).

## TIPPERARY (6).

## LIMERICK (5).

## CLARE (6).

## WEXFORD (7).

## KILKENNY (6).

## WICKLOW (3).

Enniskerry (Parknasilloge)—*Record imperfect* | Laragh (Glendalough).

## CARLOW (3).

## QUEEN'S COUNTY (1).

## KING'S COUNTY (2).

## KILDARE (1).

## DUBLIN (10).

Killiney (Eirine)— <i>Record ceased.</i>	Rathmines (Terenure).
Dalkey (Belle vue Park)— <i>Record ceased.</i>	"      (Leinster Road).
	Lucan (The Garden).

## MEATH (5)

Aclare House.
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## WESTMEATH (3).

## LOUTH (5).

## LONGFORD (1).

## GALWAY (11).

## ROSCOMMON (1).

## MAYO (3).

Ballinrobe (Kilrush)— <i>Return incorrect.</i>	
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## SLIGO (5).

Ballysadare Bay (Glen Lodge).
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## LEITRIM (1).

## CAVAN (15).

Belturbet (Quivvy).
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## FERMANAGH (3).

## MONAGHAN (5).

Monaghan (Ballinode).
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## ARMAGH (5).

Rich Hill (Fruitfield).
Charlmont Lock [Moy].

## DOWN (12).

Castlewellan (Lough Island).
Lisburn (Union Locks).

## ANTRIM (21).

Cushendun (Agolagh)— <i>No reply.</i>	Crumlin (Langford Lodge).
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## LONDONDERRY (7).

## TYRONE (9).

Coalisland Canal (No 7 Lock).
Newtown Stewart (Baron's Court).

## DONEGAL (10).

Letterkenny (Glen Alla)— <i>Observer moved.</i>	Horn Head.
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## OBITUARY.

WE are very glad that the extremely long list of deaths which we had to insert last year is followed by a shorter one on the present occasion; but though not long, it contains the names of many excellent observers, of several who have been observing more than a quarter of a century, and of three of the little band of 168 friends who supplied me with returns for the leaflet, *English Rainfall*, 1860 — their names, in accordance with our usual custom, have a \* prefixed. That out of the 168, twenty-six should be surviving 33 years later, seems to me confirmation in another form of what I have long held as to the general long life of rainfall observers. We have it again in the fact that out of the 43 observers recorded in the following list, I have ascertained the age at death of 21, and ten of them were over 72, the oldest three being respectively 85, 88 and 93.

As regards length of record, I cannot be sure for how many years Mr. Parfitt sent the Exeter returns (which are continuous back to 1817), but I think for 31 years. If so, we have lost altogether nine observers each of whom had a record exceeding a quarter of a century.

### *Observers Deceased to July, 1893.*

NAMES AND STATIONS.	PERIOD OF OBSERVATION.	
	DATE.	Perfect Yearly Records.
Abbotts, R. W., Esq., { Horninglow, Burton-on-Trent Shobnall, „ „ „ Stapenhill, „ „ „	C 1868-80 T ..... 1875-92 ..... C 1881-92 ..... }	25
Ackland, Rev. T. S., Wold Newton, Hunmanby, York	C 1875 imp -91 T.....	16
*Boyd, Rev. Canon, Arncliffe Vicarage, Yorks .....	C 1853-93 imp .....	40
Burge, F. J., Esq., { Marlboro' Cottage, Hammersmith Bromsgrove Villa, „	1856-8, 1860-67 T } C 1869 T .. ... }	12
Cody, Rev. E. G., Fort Augustus .....	1889-90 .....	2
Drennan, J., Esq., { Holmston, Ayr .....	1869-74 imp T ... }	22
{ Auchinlee, „ .....	O 1874 imp -91 O... }	
Eddy, Rev. C., Bramley, Basingstoke, Hants .....	1883 imp -91.....	7
Elliot, J. T. S., Esq., Wolfelee, Hawick .....	1890-91 .....	2
Elliott, Mr. T. C., Melbury House Gardens, Cerne Abbas, Dorset .....	C 1856-92 .....	37

*Observers Deceased to July, 1893—(continued).*

NAMES AND STATIONS.	PERIOD OF OBSERVATION.	
	DATE.	Perfect Yearly Records.
Faunce de Laune, C. de. L., Esq., Sharsted Court, Sittingbourne.....	C 1884 imp -91 C.....	7
Fraser, Rev. H. G., Beaumont College, Old Windsor	1891-92 .....	2
Grant, Prof., F.R.S., Observatory, Glasgow .....	C 1856-91 C .....	36
Hodgson, John, Esq., M.D., Northallerton, Yorks.	1884-89 T .....	4
Jackson, Mrs. Rachel, Waterend, Loweswater.....	C 1868 imp -91.....	23
Keane, Sir R. F., Cappoquin, Waterford .....	1887-88 .....	2
Lawson, Rev. Basil, Wythburn Parsonage, Helvellyn	C 1866 imp -92 imp T .....	25
Macaulay, Jasper, Esq., Leigh Hill House, Cobham	1882-92 .....	11
Mackenzie, J. I., Esq., M.D., Belgrave, Sidmouth.	C 1865-73 T .....	9
Mahony, R. J., Esq., Dromore Castle, Kenmare, Co. Kerry .....	1875 imp -92 T.....	17
Massie, Rev. E., Nutwood, Grange, Lancashire ...	C 1873 imp -91 T.....	18
Mathison, R., Esq., Innerleithen, Peebles .....	C 1884-90 T .....	7
McKelvie, W. R., Esq., Eastern Necropolis, Dundee	C 1866-92 .....	27
Mee, E. Dyson, Esq., Bulvan, Romford .....	C 1890-93 imp T .....	3
Metcalf, Miss B., Harbledown, Canterbury.....	C 1876-92 T .....	14
Marten, H. J., Esq., C.E., Numerous gauges along the River Severn .....	C 1879 imp -92 C.....	13
Nichols, R. C., Esq., Highley Manor, Balcombe, Sussex .....	C 1888 imp -92 C .....	4
Parfitt, E., Esq., Devon & Exeter Institution, Exeter	? 1862-92 C .....	31
Potchett, Rev. C., Ryhall, Rutland .....	C 1865 imp -85 T.....	19
Scroggs, Rev. S. M., Bishopsteignton, Teignmouth.	C 1864-70 T .....	7
Simpson, Martin, Esq., Guisborough Road, Whitby	C 1864-91 T .....	28
Stanton, Miss, East Stoke, Newark .....	1879-86, 88-91 T ..	12
Stott, S., Esq., Woodfield, Lytham, Lancashire ...	1876-91 T .....	16
Symington, Capt R., Fairlawn, Market Harborough	1881-91 C .....	11
Tawney, A. R., Esq. { Wroxton, Banbury .....	C 1876 -86 imp T... }	15
{ St. Giles, Oxford .....	C 1886 imp -91 C... }	
*Vivian, E., Esq., Woodfield, Torquay .....	1860-61, 1864 .....	3
Wallis, J., Esq., Kettering, Northampton.....	C 1863 imp -91 C... .	28
Watson, Rev. J. { Wesley Villa, Sedbergh, Yorks..	C 1886 imp-88 impT }	3
	C 1888 imp-90 impT }	
	C 1891 imp -92 T... }	
Wellesley, Lady C., Conholt Pk., Ludgershall, Wilts	1888-92 .....	5
Westcott, Mr. R., Raby Castle, Darlington .....	C 1875 imp -89 C.....	14
Whipple, G. M., Esq., Kew Observatory, Surrey..	1876-92 C .....	17
*Whistlecraft, Mr. O., Thwaite, Mendlesham, Suffolk	C 1830-68 .....	39
Wigram, J. R. Esq., Landford, Wilts.....	C 1866-91 C .....	26

NOTE.—C indicates commencement of record and also its continuation, T its termination.

**RAINFALL AND METEOROLOGY**  
**OF**  
**1892.**

## SYMBOLS EMPLOYED.

<i>H.R.S.</i>	-	-	Highland Railway Station.
<b>H</b>	.	-	Hail.
<b>L</b>	-	-	Lightning.
<b>R</b>	-	-	Rain.
<b>S</b>	.	-	Snow.
<b>T</b>	-	-	Thunder.
<b>TS-</b>	-	-	Thunderstorm.
<b>TSS</b>	-	-	Thunderstorms.

## ON THE METEOROLOGY OF 1892.

### WITH NOTES ON SOME OF THE PRINCIPAL PHENOMENA.

[These Notes should be read in conjunction with those on Heavy Rains in 1892.]

#### JANUARY.

1st.—*Ross, The Graig* (VI). High flood on the Wye, 12ft.

2nd—11th.—*Drumnadrochit* (XVIII). S daily. The fall in the four days, 7th to 10th, was within a fraction of 3ft., and was the greatest S storm for a generation.

2nd—12th.—*Old Deer* (XVII). S daily.

3rd—8th.—*Glyn Padarn* (XI). S daily.

3rd—9th.—*Ardtree Rectory* (XXIII). Much S.

5th—8th.—*Broxbourne* (III). S daily.—*Miltown Malbay* (XX). S daily.

5th—9th.—*Okehampton* (V). S daily.—*Forres*. (XVII). S daily.—*Watten, H.R.S.* (XIX). S daily, drifting much on the later dates.

5th—10th.—*Melbourne, The Grange* (VII). S daily.—*Seaforde* (XXIII). S daily.—*Dungannon, Rockdale* (XXIII). Fourteen inches of S.

6th.—*Southwell, Grants* (VII). S  $1\frac{1}{2}$  in. deep.—*Ulpha Vicarage* (X). S  $5\frac{1}{2}$  in. deep, yielding .56 in.—*Athlone, Twyford* (XXI). Heavy fall of S, which remained on the ground till the 16th.

6th and 7th.—*Stronvar* (XVI). S  $3\frac{1}{2}$  in. deep.—*Killarney* (XX). Four inches of S.—*Cushendun* (XXIII). About 12 in. of S, with great drifts ; the heaviest fall remembered.

6th—8th.—*Sandy, The Lodge* (III). S.—*Rendlesham Hall* (IV). S daily.—*Hoar Cross* (VI). S.—*Coventry, Coundon* (VI). S.—*Knutsford* (VIII). S.—*Llandoverly* (XI). S.—*Colmonell* (XIV). Twelve inches of S on 6th,  $3\frac{1}{2}$  in. on 7th, and  $2\frac{1}{2}$  in. on 8th.—*Lawderdale* (XXII). S.

6th—9th.—*Ashburton, Druid House* (V). S.—*Middleton* (XIII). S daily ; aggregate depth  $4\frac{1}{2}$  in.—*Markree Observatory* (XXII). S daily.—*Lough Sheelin, Arley* (XXIII). S.

6th—10th.—*Cheltenham* (VI). S daily.—*Ross, The Graig* (VI). S on the ground, but never more than about two inches deep.—*Bedworth Cemetery* (VI). S.—*Rhiwbryfdir* (XI). S, 18 in. deep on the latter day.—*Aviemore, H.R.S.* (XVIII). Three feet of S fell.

6th—14th.—*Frodsham, Dunsdale* (VIII). S daily, excepting 11th; three to six inches deep on the ground for nearly a fortnight.

7th.—*Chelford, Astle Hall* (VIII). Heavy S storm and freezing hard.—*Southport, Birkdale* (VIII). S and soft H at intervals; 3 in. deep by 9 p.m.—*Douglas, Victoria Road* (XI). Heavy S storm, yielding .28 in.—*Kircudbright, Senwick* (XII). S about 3 in. deep.—*Carrablagh* (XXIII). Hurricane from N.N.W., with S, which remained on the ground three or four days. Towards Letterkenny the fall was very heavy, and the roads were almost blocked.

7th and 8th.—*Corwen, Rhug* (XI). S storms, yielding .93 in.—*Darrynane Abbey* (XX). S on the ground; a very unusual occurrence.

7th—9th.—*Hythe* (II). S.—*Further Barton* (VI). S.

7th—10th.—*Northampton, Sedgbrook* (III). S daily.—*Baldersby* (IX). S.

7th—11th.—*Whorlton* (X). S.

8th.—*Brighton, Prestonville Rd.* (II). Three inches of S, yielding .32 in.—*Lewes, Bedford Lodge* (II). S, yielding .51 in.—*Walthamstow, Elm House* (IV). S 1 in. deep.—*Chelford, Astle Hall* (VIII). S at night, continuing most of the day, 6 to 7 in. deep.—*East Layton* (IX). Heavy fall of S. *Hurdlestown* (XX). S  $3\frac{1}{2}$  in. deep.

9th and 10th.—*Thixendale* (IX). Heavy S.

11th.—*Chelford, Astle Hall* (VIII). S  $3\frac{1}{2}$  in. deep.

13th and 14th.—*Stronvar* (XVI). S  $3\frac{1}{2}$  in. deep.

13th—17th.—*Abergwesyn* (XI). S daily.

14th.—*Southport, Birkdale* (VIII). S 1.5 in. deep at 9 a.m., and an additional 1.2 in. by 9 p.m.

15th.—*Chelford, Astle Hall* (VIII). Six inches of S on the ground.—*Glenlee* (XII). Dense fog all day.

16th.—*Burton, Derby Road* (VI). Heavy S, yielding .22 in.—*Llanfrechfa Grange* (XI). About two inches of S.—*Llanvihangel Court* (XI). S; average depth,  $11\frac{1}{4}$  in.; the Snowdon gauge caught .93 in., the 2nd gauge .84 in.; inverting the funnel of the Snowdon gauge gave .88 in.

17th.—*Ross, The Graig* (VI). Three inches of S.

18th—20th.—*Athlone, Twyford* (XXI). Thick fog.

19th and 20th.—*Glenlee* (XII). Dense fog all day.

23rd.—*Diss* (IV). Fog all day.

26th—29th.—*Ben Nevis* (XVIII). R 13.11 in. in the four days; 3.49 in. falling in nine hours on 29th.

27th—29th.—*Miltown Malbay* (XX). Dense sea fog.

28th.—*Drumnadrochit* (XVIII). Rapid thaw and great flood, caused by R falling on soft S. In Strathglass out of seven bridges five were swept away, and the other two rendered unfit for traffic.

28th—31st.—*Hartland Abbey* (V). Fog.

29th.—*Hemingby* (VII). Temp.  $51^{\circ}$  at 11.30 p.m.

29th and 30th.—*Forres, Grange Hall* (XVII). A heavy R, combined with a rapid rise of temp., causing the S on the hills to melt, produced destructive floods.

## FEBRUARY.

2nd.—*Walthamstow, Elm House* (IV). Heavy S squall at 3.35 p.m.—*Burton, Derby Road* (VI). S.W. gale, with heavy S and H.—*Chelford, Astle Hall* (VIII). Heavy S storm, with T and L in the morning, blowing hard from W.N.W.

3rd—13th.—*Oban, Craigvarren* (XV). Much S, many roads impassable; drifts as much as 15 ft. deep, so that the mail carts were stopped, and even on horseback the postmen in several cases could not reach their destination.

6th—9th.—*Darrynane Abbey* (XX). Heavy fall of S, which lay on the ground until the 16th; without parallel since January, 1881.

8th—13th.—*Derry Castle* (XX). Fog night and morning.

13th.—*Burton, Derby Road* (VI). S all day, yielding .45 in.

13th—17th.—*Sedgebrook* (III). S.

14th and 15th.—*Sandy, The Lodge* (III). S.

14th—17th.—*Diss* (IV). S; a heavy fall on the latter date.—*Bedworth Cemetery* (VI). S.—*Melbourne, The Grange* (VII). S daily.—*Keswick, The Beeches* (X). S; 7 in. deep on the latter date.

14th—19th.—*Hemingby* (VII). S daily.

15th.—*Finchley, Etchingham Park* (I). Two inches of S.—*Canterbury, Burgate Street* (II). S yielding .58 in.—*Walthamstow, Elm House* (IV). Heavy S storm in afternoon and evening; S three inches deep at 8 a.m. on 16th.—*Hoar Cross* (VI). S all day, which drifted so that passages had to be cut through the drifts.—*Ketton Hall* (VII). Heavy S from 9 a.m. to 2 p.m.; depth 8 in., yielding .70 in.—*Beeston Fields* (VII). Wet S, yielding .52 in.—*Willington* (VII). S at night, with N.E. gale and much drifting.—*Elvaston* (VII). Heavy N.E. gale and violent S storm.—*Monmouth, The Hendre* (XI). S.—*Middleton* (XIII). S  $7\frac{1}{2}$  in. deep.

15th and 16th.—*Cockermouth, Higham* (X). S  $6\frac{1}{2}$  in. deep.—*Abergwesyn Vic.* (XI). S.—*Keith, H.R.S.* (XVII). Three inches of S.

15th—17th.—*Southend* (IV). S.—*Borrowdale, Grange* (X). S.—*Melmerby* (X). S, and helm wind on 15th and 17th.—*Aviemore* (XVIII). Seven inches of S.—*Seaforde* (XXIII). S.

15th—18th.—*Uldale Rectory* (X). S.—*Jedburgh* (XII). S daily; depth on the ground on 18th, 6 in.—*Drumnadrochit* (XVIII). S.

15th—19th.—*Steeple Aston, The Grange* (III). S.—*Eskdale Vicarage* (X). S, with much drifting on the latter day.—*Watten, H.R.S.* (XIX). S.

15th—20th.—*Hassness* (X). S daily, the 18th excepted.

15th—21st.—*Melrose, Abbey Gate* (XII). S each day, except 19th, the depth varying up to 3 in.—*Edinburgh, Blacket Place* (XIII). S daily, except 19th.—*Forres, H.R.S.* S daily.

16th.—*Ulpha Vicarage* (X). S  $2\frac{1}{2}$  in. deep.—*Middleton* (XIII). S  $4\frac{1}{2}$  in. deep.

16th and 17th.—*Seathwaite Vicarage* (VIII). About six inches of S, with strong N.E. wind.—*The Hangingshaw* (XIII). About four inches of S each day.—*Mullingar* (XXI). S.

16th—20th.—*Cork, Clarence Place* (XX). The greatest fall of S in Cork since 1855. The S was 18 in. deep, and yielded 1·84 in. of water. Railway traffic between Mallow and Cork was interrupted for 18 hours by drifts.—*Knockaderry* (XX). S daily.

17th.—*Camden Square* (I). Min. temp. in air only  $17^{\circ}5$ , being, with the exception of Feb. 15th, 1865 ( $15^{\circ}4$ ), the lowest min. in February for at least 33 years.—*Finchley, Etchingham Park* (I). S in evening  $1\frac{1}{2}$  in. deep.—*Keston Tower* (II). Two inches of S at night.—*Lewes, Bedford Lodge* (II). S, yielding ·42 in.—*Alton, Ashdell* (II). About 3 in. of S.—*Walthamstow, Elm House* (IV). S storm, depth  $2\frac{1}{2}$  in.—*Rendlesham Hall* (IV). Heavy S in evening.—*Great Yarmouth* (IV). Over 4 in. of S.—*Southport, Birkdale* (VIII). Snowing from 7 a.m. to 1 p.m.; depth 2·8 in.

17th and 18th.—*Baldersby* (IX). S.—*Nether Wasdale* (X). S.—*Inverary, Newtown* (XV). The most severe frost for many years.

17th—19th.—*Oxford, Magdalen College* (III). S.—*Bishops Cannings* (V) S.—*Further Barton* (VI). S.—*Llanvihangel Court* (XI). S; the average depth on the 19th being 10 inches.—*Enniscoe* (XXII). S.

17th—20th.—*Longraigue* (XXI). S daily.

18th.—*St. John's [Devonport]* (V). Heavy fall of S at night, yielding ·61 in.



18th and 19th.—*Stratton, Trelana* (V). Average depth of S 4 in.

18th—20th. —*Abergwesyn Vic.* (XI). S.

18th—21st.—*Aviemore* (XVIII). Four inches of S.

19th.—*Whatcombe* (V). Seven inches of S.—*Druid House* (V). Sixteen inches of S on the ground.—*Exeter Institution* (V). S 7 in. deep.—*Cheltenham* (VI). A regular blizzard.—*Keith, H.R.S.* (XVII). Four inches of S.—*Coolkelure* (XX). Blizzard from N.N.E.; probably 1 ft. of S, much drifted.—*Fethard, Mobarnane* (XX). Blizzard of great intensity, S yielding 1·00 in.—*Hurdlestown* (XX). Snowing all day and night, with E. gale; average depth 5 in.; all the roads blocked by drifts, which in some places reached a depth of 14 ft.—*Wexford, Felt House* (XXI). The heaviest fall of S remembered.

19th and 20th.—*Penty Park* (XI). Strong wind and drifting S.—*Forres, Grange Hall* (XVII). Great fall of S, depth 13 in.—*Tipperary* (XX). Great fall of S.—*Derry Castle* (XX). Terrific S storm, with intensely cold E. to N.N.E. wind, and the heaviest drifts since 1865–66. Depth estimated at 18 in.—*Castle Lough* (XX). S.—*O'Briensbridge, Ross* (XX). Heavy S, deep drifts; roads and rails all blocked.—*Kilkenny, Inch House* (XXI.) Heavy fall of S from noon on 19th to 1.15 p.m. on 20th, accompanied by a gale; the depth averaged 12 in., but reached 4 ft. in drifts. A thaw commenced three hours after the S ceased, and it had all disappeared by the evening of the 22nd.—*Mullingar* (XXI). Much S.

19th—22nd.—*Mobarnane* (XX). An unprecedented S storm; the roads were impassable for many days, the drifts being from 5 ft. to 7 ft. deep.

20th.—*Torquay, Babbacombe* (V). TS with H stones '4 in. in diameter.—*Druid House* (V). T and L.—*Ross, The Graig* (VI). S 4 in. deep.—*Cork, Clurence Place* (XX). T and L; a waterspout seen outside the harbour at 10 a.m.—*Killiney, Cloneevin* (XXI). Much S, driven by easterly gale.—*Buncrana* (XXIII). Intense cold; high N.E. wind and S.

20th and 21st.—*Mallow, Old Dromore* (XX). Heavy S storm.—*Killarney* (XX). Blizzard and much S; drifts 8 ft. to 10 ft. deep.

21st.—*St. John's [Devonport]* (V). T at 3.30 p.m., and heavy H shower.—*Peebles, Kailzie* (XIII). Gale from E.N.E., with about six inches of S.—*Coolkelure* (XX). T, L, and R.—*Derry Castle* (XX). L at night.

22nd.—*The Hangingshaw* (XIII). Six inches of S.

24th and 25th.—*Diss* (IV). Fog.—*Whorlton* (X). Flood in the Tees.

25th.—*Weston-super-Mare, Bryn-y-Mor* (V). Heavy TS with vivid L.—At *Thornbury, Gloucestershire*, there was a fall of conical hailstones as large as large filberts, which covered the ground about an inch thick.—*The Hendre* (XI). Vivid L and T.

25th—27th.—*Broxbourne* (III). Fog.

### MARCH.

1st and 2nd.—*Arley* (XXIII). S.

1st—5th.—*Broxbourne* (III). S daily.

1st—13th.—*Doddington Rectory* (VII). S every day.

3rd—5th.—*Riverhead Vicarage* (II). S.

4th—12th.—*Cheltenham* (VI). Water covered with ice, the temp. rising above 40° only on two days.

7th—9th.—*Inverary, Newtown* (XV). S.

7th—10th.—*Drumnadrochit* (XVIII). S.—*Ballymena* (XXIII). S daily.

7th—13th.—*Forres, H.R.S.* (XVII). S daily.

8th.—*Galway, Queen's Coll.* (XXII). About three inches of S.

8th and 9th.—*Knaresborough, Farnham* (IX). On 8th 2 in. of S fell, and on 9th 4 in.—*Douglas, Victoria Road* (XI). Cold N. wind, and S covering the ground.—*Glenlee* (XII). S; 3 in. deep on the latter day.—*Colmonell* (XIV). In the two days 4½ in. of S fell.—*Stronvar* (XVI). S 4½ in. deep.—*Tipperary* (XX). S.—*Twyford* (XXI). S, which remained on the ground till 15th.—*Mullingar* (XXI). S.—*Enniscoe* (XXII). S.—*Lawderdale* (XXII). S.—*Arley* (XXIII). S.—*New Barnsley* (XXIII). Severe S storms.

8th—10th.—*Oxford, Magdalen College* (III). S daily.—*Stowell Rectory* (V). S.—*Ross, The Graig* (VI). S.—*Hoar Cross* (VI). S.—*Coundon* (VI). S.—*Ketton Hall* (VII). S.—*Willington* (VII). S.—*Hinderton* (VIII). S.—*Frodsham, Dunsdale* (VIII). S.—*Eskdale Vicarage* (X). S.—*Llanwrtyd Wells* (XI). S. *Rhiwbryfdir* (XI). S.—*Cork, Clarence Place* (XX). S.—*Derry Castle* (XX). S.—*Broadford, Hurdlestown* (XX). S.—*Ardtree Rectory* (XXIII). Much S.

8th—11th.—*Ripon, Mickley* (IX). S.—*Ochtertyre* (XVI). S.

8th—12th.—*Harrogate* (IX). S daily, 6½ in. deep on 10th.—*Unthank Hall* (X). S daily.

8th—13th.—*Baldersby* (IX). S daily.—*Scarborough* (IX). S daily. *Newcastle, Clifton Road* (X). S daily.—*Hassness* (X). S daily, except on 11th.—*Middleton House* (XIII). S daily.

8th—14th.—*Hemingby* (VII). S daily, excepting 13th.—*Borrowdale Vicarage* (X). S daily.—*Abergwesyn* (XI). S every day except 12th.—*Logie Coldstone Manse* (XVII). S daily except 11th.—*Old Deer*, (XVII). S daily.

8th—16th.—*Longton, The Meir* (VI). S daily.

9th.—*Keston Tower* (II). S 3 in. deep.—*Walthamstow, Elm House* (IV). Severe squalls of wind and S at 1.15 p.m. and 4 p.m., the former being a fierce hurricane for a short time.—*Further Barton* (VI). S storms, and freezing in the shade all day.—*Ulpha Vicarage* (X). Ten inches of S on the ground.—*Peebles, Kailzie* (XIII). About four inches of S.

9th and 10th.—*St. George's Lodge* (II). S, yielding .23 in.—*Brighton, Prestonville Road* (II). S.—*Ryde, Thornbrough* (II). S.—*Alton, Ashdell* (II). S.—*Sedgebrooke* (III). S.—*Southend* (IV). S.—*Rendlesham Hall* (IV). S.—*Okehampton* (V). S.—*Cheltenham* (VI). S.—*Elvaston* (VII). Heavy S storms.—*Chelford, Astle Hall* (VIII). S, 2 $\frac{3}{4}$  in. deep on 9th, and 5 $\frac{1}{2}$  in. on 10th.—*Llanfrechfa Grange* (XI). S.

9th—11th.—*Riverhead Vicarage* (II). S.—*Emsworth, Redlands* (II). Squally from N.W., with S.—*Broxbourne* (III). S.—*Alconbury* (III). S.—*Gruinart* (XV). S.—*Knockaderry* (XX). S.—*Longraigue* (XXI). S.

9th—12th.—*Reigate, Holmfels* (II). S daily.

9th—13th.—*Melrose, Abbey Gate* (XII). S daily; aggregate depth 8 in.—*Keith, H.R.S.* (XVII). S daily; aggregate depth, 13 in.

9th—14th.—*Llanvihangel Court* (XI). S daily, except on 11th.—*The Hangingshaw* (XIII). S daily, the aggregate depth being nearly 10 in.

10th.—*Druid House* (V). Two inches of S.—*Bucknall* (VII). Min. temp. in shade 12°, the lowest in March for 25 years, excepting 1886, when the temp. fell to 11°.—*Melmerby* (X). Helm wind and S showers.—*Peebles, Kailzie* (XIII). S fully 4 in. deep.—*Killiney, Cloneevin* (XXI). Heavy S; ground covered.

10th—14th.—*North Esk Res.* (XIII). S.

11th.—*Bedworth Cemetery* (VI). Severe frost, causing much havoc with the trees and shrubs.

11th—13th.—*Lower Pitkerrie* (XVIII). S.

11th—15th.—*Watten, H.R.S.* (XIX). S.

12th and 13th.—*Lawderdale* (XXII). S.

12th—14th.—*Drumnadrochit* (XVIII). S.

13th.—*Elvaston* (VII). Heavy S storm.

14th.—*Druid House* (V). Heavy showers of S.—*Ketton Hall* (VII). S  $3\frac{1}{2}$  in. deep.—*Southport, Birkdale* (VIII). S at night; depth, 1·5 in.—*Douglas, Victoria Road* (XI). S 4 in. deep.—*Arley* (XXIII). S.

15th.—*Diss* (IV). Heavy S.E. gale in evening.

17th.—*Whorlton* (X). Flood in the Tees.

18th.—April 13th.—*Ivybridge* (V). No R fell.

25th and 26th.—*Watten, H.R.S.* (XIX). S.

25th—27th.—*Drumnadrochit* (XVIII). S.

26th.—*Buncrana* (XXIII). S 3 in. deep.

26th and 27th.—*Enniscoe* (XXII). S.

27th.—*Sedgebrooke* (III). Bitterly cold; S all night.—*Babbacombe* (V). No R was gauged in 17 days from this date.—*Middleton House* (XIII). S 10 in. deep.

27th.—April 12th.—*Southwell, Grants* (VII). No R.

28th.—April 11th.—Absolute drought for 15 days at *Kensington, Edith Road* (I).—*Finchley, Etchingham Park* (I).—*St. Albans, The Grange* (III).—*Oxford, Elsfeld* (III).—*Easton Maudit Vicarage* (III).—*Lexden* (IV).—*Further Barton* (VI).—*Ludlow, Ashford* (VI).—*Burton, Derby Road* (VI).—*Leamington, The Parade* (VI).—and *Pontefract, Purstone Hall* (IX).

28th.—April 12th.—Absolute drought for 16 days at *Nutfield, Holmesdale* (II).—*Tenterden* (II).—*Brighton, Prestonville Road* (II).—*Hurstpierpoint* (II).—*Alresford, Ovington* (II).—and *Poole, Parkstone* (V).

29th.—April 12th.—*Dorking, High Ashurst* (II). Absolute drought for 15 days.

29th.—April 13th.—*West Cowes, Holmwood* (II). Sixteen rainless days.

#### APRIL.

1st.—*Willington* (VII). Max temp. 73°, and a range 52° in the day.

11th.—*Keith, H.R.S.* (XVII). Two inches of S.

12th.—*Sedgebrooke* (III). S all night, and slight falls on the two following days.—*Willington* (VII). S.

12th and 13th.—*Melbourne, The Grange* (VII). S.

12th—14th.—*Easton Maudit* (III). S daily.—*Alconbury* (III). S.—*Cheltenham* (VI.) S.—*Kington, Eywood* (VI). S daily.—*Burton, Derby Road* (VI). S each day.—*Hoar Cross* (VI). S.—*The Heath*

*House* (VI). S.—*Coundon* (VI). S.—*Rochdale* (IX). S.—*Logie Coldstone Manse* (XVII). S.—*Old Deer* (XVII). S daily.—*Drumnadrochit* (XVIII). S.—*Watten* (XIX). S.

12th—15th.—*Muswell Hill* (I). S daily.—*Further Barton* (VI). S daily.—*Ross, The Graig* (VI). S.—*Knutsford* (VIII). S daily.—*Wath-on-Dearne, Chapel Street* (IX). S daily.—*Mickley* (IX). S daily.—*Uldale Rectory* (X). S.—*Melrose, Abbey Gate* (XII). S daily ;  $3\frac{1}{2}$  in. on the latter day.

12th—16th.—*St. Albans, The Grange* (III). S daily.—*Odsey* (III). S daily.—*Dedham, The Rookery* (IV). S daily.—*Cirencester, Claremont Place* (VI). S daily.—*Rhiwbryfdir* (XI). S.

12th—17th.—*Potton, Wrestlingworth* (III). S daily.—*Diss* (IV). S daily, especially on 16th.—*Ketton Hall* (VII). S daily, except on 15th.—*Maidenwell House* (VII). S daily.—*Broughton-in-Furness* (VIII). S daily.—*Pickering Rectory* (IX). S.—*Darlington, Elcott* (X). S daily.—*Rosset, Trevalyn Hall* (XI). S daily, except 15th.—*The Hangingshaw* (XIII.) S daily ; T and L on 15th.—*Dalnaspidal* (XVI). S daily.—*Ben Nevis* (XVIII). S daily.

12th—18th.—*Wolverhampton, Tettenhall* (VI). S daily.—*Uttoreter, Brook House* (VI). S daily.—*Keswick, The Beeches* (X). S daily.—*Windermere, Woodland Terrace* (X). S daily.—*Nantgwillt* (XI). S daily, excepting 14th.—*Rhug* (XI). S daily.—*Forres, H.R.S.* (XVII). S daily.—*Aviemore, H.R.S.* (XVIII). S daily, excepting 15th.—*Courtown House* (XXI). Sharp frosts.

12th—19th.—*Ednol* (XI). S on six out of the eight days.

13th.—*Bloxham Grove* (III). S.—*Walthamstow, Elm House* (IV). S all day, yielding .18 in.—*Warminster, Rye Hill* (V). Heavy fall of S.—*Bishops Cannings* (V). S, sleet, and R.—*Rose Ash* (V). Bitterly cold. S fell at dusk, and by midnight all was white.—*Bedworth Cemetery* (VI). S commenced about 2 a.m., and fell for 12 hours.—*Chelford, Astle Hall* (VIII). About two inches of S.—*Llanfrechfa Grange* (XI). S all day.

13th and 14th.—*Stowell Rectory* (V). S.—*Rotherby Hall* (VII). S.—*Elvaston* (VII). S storms.—*Dunfermline, Outh* (XVI). S.

13th—15th.—*Scarborough* (IX). S.—*Whorlton* (X). S.—*Llanvihangel Court* (XI). S.—*Gwernvale* (XI). S daily.—*Middleton House* (XIII). S.—*Glenaladale* (XVIII). S.

13th—16th.—*Rochester, Hoo St. Mary* (II). S daily.—*Hastings, High Beech* (II). S daily.—*Enniscoe* (XXII). S daily.

13th—17th.—*Tenterden* (II). S daily.—*Glyn Padarn* (XI). S daily,

excepting 15th.—*Gruinart, School House* (XV). S daily, excepting 15th. *Arley* (XXIII). S and soft H.

13th—18th.—*Dalby Grange* (VII). S daily, excepting 15th.—*Lowthorpe* (IX). S daily.—*Abergwesyn* (XI). S daily.

13th—19th.—*Neath, Glyncorwg* (XI). S daily.

14th.—*Bishop's Hill* (IV). Ice on shallow water  $\frac{1}{4}$  in. thick at 10 a.m.—*Hemingby* (VII). S at night.—*Chelford, Astle Hall* (VIII). Heavy S storm in afternoon, 2 in. deep.—*Doncaster, Magdalens* (IX). S from 3 p.m till dark.—*Douglas, Woodville* (XI). S 4 in. deep.—*Stronvar* (XVI). An inch of S.

14th and 15th.—*Rendlesham* (IV). The heaviest fall of S remembered in April; 6 in. deep on the level.—*Bryn-y-Mor* (V). S.—*Seathwaite Vicarage* (VIII). S.—*Baldersby* (IX). S.—*Borrowdale Vicarage* (X). S.—*Miltown Malbay* (XX). All the mountains covered with S.—*Killiney, Cloneevin* (XXI). S.

14th—16th.—*Ulpha Vicarage* (X). S.—*Melmerby* (X). S.—*Castle Lough* (XX). S showers.—*Hurdlestown* (XX). S.—*Ardtree Rectory* (XXIII). S.

14th—17th.—*Riverhead Vicarage* (II). S.—*Hassness* (X). S.—*Penty Park* (XI). S.—*Glenlee* (XII). S, and T on the latter date.—*Derry Castle* (XX). S and H.—*Lawderdale* (XXII). S daily.

14th—18th.—*Woodbridge* (IV). S daily.

15th.—*St. George's Lodge* (II). S after 11 p.m., yielding .12 in.—*Wallington* (II). S  $3\frac{1}{4}$  in. deep.—*Croydon, Waddon Road* (II). Heavy fall of S at night, yielding .54 in.—*Tenterden* (II). R .93 in., nearly all S.—*Town Malling* (II). Heavy fall of S.—*Canterbury, Burgate Street* (II). S, yielding 1.03 in.—*Canterbury, Harbledown* (II). Heavy fall of S, yielding .85 in.—*Keston Tower* (II) Gale from N.N.E. at night, with heavy S; depth,  $7\frac{1}{2}$  in.—*Beckenham* (II). S yielding .39 in.—*Brighton, Prestonville Road* (II). Heavy S, yielding .60 in.—*Lewes, Bedford Lodge* (II). S, yielding .73 in.—*Manor Park, Albany Road* (IV). Heavy S at night, yielding .52 in.—*Thixendale* (IX). Much S.—*Inverary, Newtown* (XV). S.—*Killarney* (XX). S  $\frac{1}{2}$  in. deep.

15th and 16th.—*Reigate, Holmfels* (II). S.—*Camberley, Heathcote* (II). S.—*Tenterden, Little Westwell* (II). S, yielding 1.04 in.—*Rochester, Hoo St. Mary* (II). Sharp frost on 15th, followed by a heavy fall of S, reaching 1 ft. in depth on the level, and driven into deep drifts by a gale from N.—*Maresfield, Forest Lodge* (II). Heavy S, yielding .72 in.—*Epping, The Hemnalls* (IV). S.—*Ochertyre* (XVI). S. *Blairathol* (XVI). S.—*Knockaderry* (XX). S.

15th—17th.—*Finchley, Etchingham Park* (I). S.—*Broxbourne* (III). S.—*Bideford, Northam* (V). S.—*Penzance, St. Clare* (V). S, and T and L on the latter date.—*Seaforde* (XXIII). S.

15th—18th.—*Lower Cousley Wood* (II). S daily.—*Llandoverly* (XI). S daily.—*Longraigue* (XXI). S.

15th—19th.—*Neath, Fairy Land* (XI). S yielding 1·00 in.

16th.—*Cranbrook, Hartley* (II). S ; on the level at 7 a.m.,  $7\frac{1}{2}$  in. deep, and about  $2\frac{1}{2}$  in. after 7 a.m. ; yielding ·75 in.—*Lynsted* (II). S, 7 in. deep at 9 a.m.—*Leysdown* (II). S  $1\frac{1}{2}$  in. deep on the ground.—*Brighton, Prestonville Road* (II). Four inches of S, yielding ·60 in.—*Lewes, Iford* (II). Heavy fall of S in early morning.—*Walthamstow, Elm House* (IV). Heavy S storm in early morning ; S about three inches deep, but much drifted.—*Bishops Hill* (IV). S  $3\frac{1}{2}$  in. deep.—*Hawkedon Rectory* (IV). Heavy fall of S, yielding ·65 in.—*Ashburton, Druid* (V). Heavy S shower.—*Chelford, Astle Hall* (VIII). During the night 2 in. of S fell.—*Southport, Birkdale* (VIII). Snowing from 3.20 p.m. to 5 p.m.—*Glasgow, Queen's Park* (XIV). T, S, and sleet.—*Keith, H.R.S.* (XVII). Two inches of S.—*Cork, Clarence Place* (XX). Heavy S shower.—*Miltown Malbay* (XX). S, H, and R.

16th—18th.—*Hemingby* (VII). S showers.

17th.—*Erwarton Hall* (IV). S, yielding 1·03 in.—*Bedworth Cemetery* (VI). S and very sharp frosts.—*Douglas, Woodville* (XI). L, H, and S.—*Colmonell* (XIV). One inch of S.

17th and 18th.—*Glendrishraig* (XIV). S.

17th—19th.—*Melrose, Abbey Gate* (XII.) Ice each night.

18th.—*Keston Tower* (II). About an inch of S.—*Southport, Birkdale* (VIII). Heavy fall of H from 6.25 to 6.50 p.m.—*Ulpha Vicarage* (X). Heavy S and sleet.—*Llanfrefcha Grange* (XI). Scuds of S and sleet all day.—*Monmouth, The Hendre* (XI). H, R, and S storms.

18th and 19th.—*Middleton House* (XIII). S.

19th.—*Pendock Rect.* (VI). S storm from 4 to 5 p.m.

22nd—30th.—*Ben Nevis* (XVIII). S daily, except on 26th.

24th—26th.—*Glenaladale* (XVIII). S on the hill tops.

24th—29th.—*Dalnaspidal* (XVI). S daily.

25th.—*Harrogate* (IX). T in afternoon ; aurora at night.—*Baldersby* (IX). S.

25th—27th.—*Malham Tarn* (IX). S.

26th and 27th.—*Blairathol* (XVI). S.

26th—28th.—*Pickering Rectory* (IX). S.

26th—29th.—*Drumnadrochit* (XVIII). All the hills S clad, and occasionally the lower grounds also.

27th.—*Manor Park, Albany Road* (IV). Heavy fall of H and R at 6.40 p.m.—*Scarborough* (IX). Violent N.E. gale, with S and R.—*East Layton* (IX). Severe S storm and gale.—*Abergwesyn* (XI). T.

27th and 28th.—*Lowthorpe* (IX). S.—*Keswick, The Beeches* (X). S.—*The Hangingshaw* (XIII). S.

27th—May 11th.—*Esthwaite Lodge* (VIII). Total drought.—*Ulpha Vicarage* (X). Absolute drought.—*Keswick, The Beeches* (X). Absolute drought.

27th—May 12th.—*Edenhall Vicarage* (X). Absolute drought.

28th.—*Ketton Hall* (VII). S.

28th—May 30th.—*Tenterden* (II). Partial drought; 33 days with .19 in. of R.

29th.—*Ashburton, Druid* (V). S; hills white.

29th—May 22nd.—*Babbacombe* (V). R only .07 in.

30th.—*Meltham, Harewood Lodge* (IX). Halo all the afternoon, parhelia from 4.15 to 5 p.m. at the side and rather outside the halo; a portion of the larger halo on the S. side at 4.55 p.m., and a small portion of the tangent circle at the top.

## MAY.

2nd.—*Rhiwbryfdir* (XI). S on top of hills.

2nd and 3rd.—*Dalnaspidal* (XVI). S.

3rd.—*Elvaston* (VII). Heavy N.E. gale, with incessant R.

5th—23rd.—*West Cowes, Holmwood* (II). Absolute drought for 19 days.

5th—24th.—*Emsworth, Redlands* (II). No R for 20 days.

7th.—*Bishops Cannings* (V). Very sharp frost.

15th.—*Dalnaspidal* (XVI). R and S.

16th.—*Ben Nevis Observatory* (XVIII). St. Elmo's fire.

19th.—*Keswick* (X). S on mountains.

20th.—*The Hangingshaw* (XIII). T and heavy showers.

20th—22nd.—*Dalnaspidal* (XVI). Fog, R and S.

23rd.—*Langton Herring* (V). In the 25 days ending May 23rd only .02 in. of R fell.

24th.—*Devizes, Co. Asylum* (V). In 8 minutes .08 in. of R fell.—*Bedworth Cemetery* (VI). TS with H.—*Willington* (VII). TS.—*Scarborough* (IX). TS.

24th—26th.—*Broxbourne* (III). T.



25th.—*Etchingham Park* (I). T and much sheet L.—*Redhill, Oxford Road* (II). TS.—*Reigate, Doods* (II). TS with 1·00 in. of R.—*St. George's Lodge* (II). TSS.—*Wallington* (II). Violent TS.—*Brighton, Prestonville-road* (II). TS and heavy R, 1·07 in.—*Maresfield, Forest Lodge* (II). Heavy TS with R and H.—*Oxford, St. Giles*, (III). T and H.—*Bloxham Grove* (III). Heavy T and R.—*Walthamstow, Elm House* (IV). TS in early morning, much R and L in late evening.—*Colchester, Surrey Villa* (IV). Terrible H storm with T, much damage done to glass.—*Sudbury, Friar's Street* (IV). Severe TS.—*Ipswich, Bishop's Hill* (IV). TS with heavy H, many of the H stones were over an inch in diameter, and much glass was broken in a limited area on the E. side of the town.—*Diss* (IV). Squalls and gale, H and TS at night.—*Ashburton, Druid* (V). L.—*Southwell, Grants* (VII). TS with heavy R.—*Findern* (VII). TS at 7 a.m.; three sheep and seven lambs killed under an oak.—*Chelford, Astle Hall* (VIII). TS at 7 a.m.—*Knutsford* (VIII). TS.—*Thixendale* (IX). Heavy TS.—*Melrose, Abbey Gate* (XII). T, L and heavy R.—*The Hangingshaw* (XIII). T and heavy R.—*Derry Castle* (XX). T, R and H.

25th and 26th.—*Keston Tower* (II). T.

25th—27th.—*Brighton, Prestonville Road* (II). TSS, very severe on 25th.

26th.—*Kensington, Edith Road* (I). Heavy TS early, R ·85 in.—*Emsworth, Redlands* (II). T, L, H and R.—*Walthamstow, Elm House* (IV). TSS, with heavy R in early morning.—*Ramsey* (IV). Unprecedentedly heavy H storm.—*Rendlesham Hall* (IV). Heavy T and H.—*Ross, The Graig* (VI). T and L.—*Southport, Birkdale* (VIII). Between 5 p.m. and 7 p.m. ·97 in. of R fell.—*Lough Swilly, Carrablagh* (XXIII). Torrential rain in the afternoon. In a few minutes the whole face of the hill was moving water, and all hands were rushing about to keep the floods out of the house. In 1 hour 35 min. 1·36 in. fell.

26th and 27th.—*Wallington* (II). T and L.—*Diss* (IV). TSS.

27th.—*Stowell Rectory* (V). TS.—*Titley, Eywood* (VI). R 1·35 in. The greatest fall since observations commenced in 1889.—*West Bromwich* (VI). In 1 hour ·54 in. of R fell.—*Diglis Lock* (VI). Heavy TS.—*Wakefield, Stanley Grange* (IX). Severe TS at midnight, R 1·05 in.—*Llanfrechfa Grange* (XI). Heavy T and L.—*Monmouth, The Hendre* (XI). TS and heavy R.

28th.—*Knaresborough, Farnham* (IX). Between 4 a.m. and 8 a.m.

1.24 in. of R fell.—*Douglas, Victoria Road* (XI). Sharp TS at 5 p.m. gale at night.—*New Galloway, Glenlee* (XII). T.—*Dublin, Terenure* (XXI). R 1.77 in., of which .74 in. fell in 45 minutes.—*Dublin* (XXI). R 2.06 in., 1.90 in. falling in 6 hours.

28th and 29th.—*Miltown Malbay* (XX). T and L.

29th.—*Monmouth, The Hendre* (XI). TS.—*Derry Castle* (XX). T with heavy R and H.

30th.—*Diss* (IV). TS.—*Ross, The Graig* (VI). Heavy T.—*Corwen Rhug* (XI). TS.—*Ben Nevis Observatory* (XVIII). St. Elmo's fire.

31st.\*—*Hythe* (II). T, L and R at 5.30 p.m.—*Oxford, Magdalen College* (III). Heavy T and R at night.—*Further Barton* (VI). Violent TS at night.—*Cheltenham* (VI). TS with heavy H.—*Diglis Lock* (VI). Heavy TS.—*Southwell, Grants* (VII). TSS.—*Chelford, Astle Hall* (VIII). Severe TS with much R about 2.30 p.m.—*Knutsford* (VIII). TS.—*Rochdale, Fieldhead* (VIII). In 12 minutes .10 in. of R fell.—*Seathwaite Vicarage* (VIII). TS.—*Meltham, Harewood Lodge* (IX). T and L 3.0 to 5.30 p.m.—*Thixendale* (IX). Heavy TSS.—*Scarborough* (IX). Heavy TSS.—*Whorlton Green* (X). TS.—*Rothbury, Cragside* (X). Heavy and prolonged TS, with 1.22 in. of R.—*Ulpha Vicarage* (X). TS.—*Eskdale Vicarage* (X). TS.—*Keswick* (X). Heavy TS.—*Newton Reigny* (X).—Severe TS.—*Melrose, Abbey Gate* (XII). Very severe TS; the steeple of the Presbyterian Church was struck and a wire rope carrying the clock weight was fused.—*Miltown Malbay* (XX). T.

## JUNE.

1st.†*Ashburton, Druid* (V). Heavy R at night, followed by a flood in the river on 2nd.—*Further Barton* (VI). Very heavy TS.—*Cheltenham* (VI). TS.—*West Bromwich* (VI). In 1 hr. 30 min. .60 in. of R fell.—*Burton, Derby Road* (VI). TSS, heavy R, T, and vivid L.—*Elvaston* (VII). Heavy TS with H.—*Wakefield* (IX). T and L, with heavy R and H.

1st and 2nd.—*Douglas, Victoria Road* (XI). Violent S.W. gales.

2nd.—*Kilkenny, Inch House* (XXI). Heavy shower of large H.

5th.—*Lynsted* (II). Three distinct TSS during the day.—*Walthamstow, Elm House* (IV). A succession of TSS all day, yielding .35 in.; no less than eight distinct storms. Between 3.42 and 4.5 p.m. .13 in. fell.—*Rendlesham Hall* (IV). T and H.

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\* May 31st. See *Met. Mag.* June, 1892, p. 72.

† See *Met. Mag.*, June, 1892, p. 74.

10th.—*Ketton Hall* (VII). T and heavy R, .81 in.—*Wakefield* (IX). T and L at intervals all day.—*Eskdale Vicarage* (X). Severe TS, with 1.16 in. of R.—*Keswick* (X). Heavy TS from 5 to 7 p.m.—*Carrickfergus*, *Woodburn* (XXIII). TS followed by floods.—*Carrablagh* (XXIII). A continuous downpour of R, yielding the heaviest fall in 24 hours, recorded in six years, 2.35 in.

11th.—*Bedworth Cemetery* (VI). TS.—*Stronvar* (XVI). S on the hills.

12th and 13th.—*Dalnaspidal* (XVI). S.—*Katesbridge* (XXIII) Injurious frosts.

13th.—*Borden Wood* (II). Sharp frost, cutting down young fern and potatoes.—*Killarney* (XX). Bracken and potatoes injured by frost.

13th—15th.—*Easton Maudit* (III). Frost on grass each night, and frost in shade on 15th.—*Miltown Malbay* (XX). Frost.

14th.—*Hitchin, High Down* (III). Severe frost.—*Alderbury* (V). Frost, damaging beans, &c.—*Bishops Cannings* (V). Beans, &c. badly damaged by frost.—*Broad Hinton* (V). Sharp frost at night, which caused great havoc among the potatoes and beans.

15th.—*Abingdon, Culham* (III). Sharp frost, damaging potatoes and shoots of ash in hedge rows.—*Pyrton Manor* (III).—Sharp frost; tender shoots of spruce, fir, ash, and laurel were killed.—*Cheltenham* (VI). The coldest night in June for 15 years; much injury in exposed gardens.

17th.—*Broxbourne* (III). Tender plants injured by frost.—*Seathwaite Vicarage* (VIII). TS, with H, which damaged foliage.—*Whorlton Green* (X). T, L, and S.

18th.—*Diss* (IV).—Frost in early morning.—*Willington* (VII). French beans, &c., damaged by frost.

19th.—*Cheltenham* (VI). TS.—*Seathwaite Vicarage* (VIII). TS, with heavy R and H, which damaged foliage.—*Driffield, York Road* (IX). A waterspout was observed several miles S. of Driffield between 7.20 p.m. and 7.40 p.m. It was described as descending from a dark cloud, like a corkscrew, whirling round and round; it never touched the ground, and heavy R followed immediately after its disappearance. T was heard in the S.W. in the afternoon.—*Ulpha Vicarage* (X). T and heavy R, 1.10 in.—*Kilkenny, Inch House* (XXI). Heavy R; .20 in. fell in half an hour.

20th.—*Berkhamstead, Rosebank* (III). In 3 minutes .08 in. of R fell.—*Southwell, Grants* (VII). TS, with .32 in. of R between 11 a.m. and noon.

24th.—*Town Malling* (II). Heavy TS.

27th.—*Bedworth Cemetery* (VI). Very vivid L and heavy R, 1·27 in.—*Watten* (XIX). Whole gale from W.

27th and 28th.—*Reigate, Ringley Mead* (II). Heavy R, 1·98 in. between 8.30 p.m. on 27th, and 6.30 a.m. on 28th.

28th.—*\*Kensington, Edith Road* (I). TS, with brilliant L at night.—*Muswell Hill* (I). TS at night, and in early morning of 29th, with H and heavy R.—*Etchingham Park* (I). TS at night, with 1·07 in. of R.—*Godalming, Witley* (II). Heavy TS, with remarkably vivid and continuous L.—*Abinger Hall* (II). Severe TS.—*Farnham, Seale* (II). T and heavy R, 1·01 in. in an hour.—*Redhill, Oxford Road* (II). TS.—*Nutfield, Holmesdale* (II). TS and heavy R, 1·75 in. in 1 hr. 45 min., and 2·30 in. in less than 4 hr. 30 min.—*St. George's Lodge* (II). TS, and 1·16 in. of R.—*Wallington* (II). TS, and ·63 in. of R in five hours.—*Canterbury, Burgate-street* (II). TS.—*Sevenoaks, Purleigh* (II). Heavy R, 2·33 in. falling in two hours.—*Sevenoaks, Kemsing* (II). Very heavy TS; 2·12 in. of R fell between 9 p.m. and 10 p.m.—*Sevenoaks, Riverhead Vic.* (II). Tremendous TS, with torrents of R (2·38 in.) from 9 p.m. to 2 a.m. on 29th, doing great damage, many tons of heavy material being washed from the roads, &c.—*Keston, Heathfield* (II). Terrific TS, with 1·57 in. of R between 8.50 p.m. and 0.15 a.m. on 29th.—*Keston Tower* (II). Severe TS, from 9 p.m. to 1 a.m. on 29th, 1·45 in. of R in 3½ hours.—*Hayes, Layham's Farm* (II). Heavy TS, nearly two inches of R falling in 12 hours.—*Birchington, Thor* (II). TS, with continuous and vivid L.—*Leysdown* (II). Severe TS at night; a building struck by L at Queenboro'.—*Brighton, Prestonville Road* (II). Severe TS; ·87 in. of R in two hours.—*Lewes, Bedford Lodge* (II). TS.—*Porchester, Noel Cottage* (II). Heavy TS.—*Emsworth, Redlands* (II). T, L, and heavy R from 8 p.m. to 10 p.m.—*Broxbourne* (III). L all night, and heavy R, ·90 in., four-fifths of which fell between 2 a.m. and 2.30 a.m.—*Oxford, Magdalen Coll.* (III). Very heavy T and vivid L between 9 and 10 p.m.—*Ely, Stretham* (III). Heavy TS, with 1·04 in. of R.—*Walthamstow, Elm House* (IV). Heavy TS, from 8.30 p.m. to 3 a.m. on 29th. Brilliant and frequent L, and ·59 in. of R.—*Ramsey* (IV). Terrific TS, with 2·33 in. of R.—*Bradwell Hall* (IV). TS, and 1·96 in. of R.—*Erwarton Hall* (IV). Heavy TS, and 2·52 in. of R.—*Sudbury, Friar's Street* (IV). Very severe TS.—*Rendlesham Hall* (IV). Terrific TS from 10 p.m. to 4 a.m. on 29th, with 3·08 in. of R.—*Lowestoft* (IV). The greatest R

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\* See *Met. Mag.*, July, 1892, p. 82.

ever recorded, 3·04 in.—*Diss* (IV). Heavy TS at night.—*Denver* (IV). TS all night, with heavy R.—*Blofield* (IV). Severe TS, with 1·42 in. of R.—*Pembridge, Marston* (VI). Very heavy TS.—*Ludlow, Ashford* (VI). TS, commencing about 5.30 p.m., and lasting nearly all night. R 2·14 in.—*West Bromwich* (VI). In twenty minutes ·21 in. of R fell.—*Burton, Derby Road* (VI). TS, very heavy R; total fall 1·24 in.—*Hoar Cross* (VI). T and vivid L, with very heavy R (3·00 in.), which flooded many houses.—*Cheadle, The Heath House* (VI). Heavy R, 2·15 in., L and T at night.—*Horncastle, Bucknall* (VII). A long and severe TS, with 2·27 in. of R; the heaviest fall recorded since July, 1880.—*Hemingby* (VII). T and violent R at night, 2·54 in.—*Brattleby* (VII). T, L, and heavy R.—*Louth* (VII). R, 2·80 in.; the greatest fall registered in 28 years.—*Beeston Fields* (VII). Heavy TS, with 1·53 in. of R.—*Southwell, Grants* (VII). Heavy R all night, 1·63 in., with T and L at times.—*Worksop, Hodsock Priory* (VII). Sharp TS, with 1·32 in. of R.—*Willington* (VII). Severe TS, with 1·32 in. of R.—*Findern* (VII). TS all night, with 1·42 in. of R.—*Belper, Northfield* (VII). An unprecedented R of 3·53 in. The river Derwent was flooded from 9.30 a.m. on 29th, but it was not a great flood.—*Stuffynwood Hall* (VII). The greatest R since observations commenced in 1876, 2·57 in.—*Hardwick Hall* (VII). Exceptionally heavy R, 3·24 in.—*Chesterfield, Brimington Hall* (VII). T and heavy R, 1·75 in.—*Wath-upon-Deane, Chapel Street* (IX). L, T, and 2·20 in. of R.—*Wakefield* (IX). L in evening, and heavy R, 1·87 in.—*Guisborough, Redcar Road* (IX). TS, with heavy R, 1·15 in. The streets were like small rivers.—*Llanfrechfa Grange* (XI). Heavy TS at night.—*Aberaeron, Dolaeron* (XI). T, L, and 2·72 in. of R.—*Gwernvale* (XI). T, and 1·55 in. of R.

28th and 29th.—*Rochester, Hoo St. Mary* (II). Violent TS, commencing about 8.45 p.m.; in less than seven hours 2·72 in. of R fell. During the whole time the T and L scarcely ceased; several trees were struck by L, and the R caused much damage to the roads, &c.—*Ipswich, Bishop's Hill* (IV). Very severe TS from 10 p.m. to 2 a.m., with heavy R. Two houses were injured in the town, and many premises fired in the country.—*Woodbridge, The Cedars* (IV). The most severe TS remembered; constant T and L for six hours, and 1·82 in. of R.—*Further Barton* (VI). Sudden squall at 6 p.m., with heavy R, succeeded by a violent TS from 4 a.m. to 5 a.m. on 29th.—*Elvaston* (VII). Violent rains, 1·39 in., with TSS. Heavy flood in the Derwent.

29th.—*Berkhamstead* (III). Heavy TS, and in 8 minutes between 1.24 and 1.32 a.m. there fell 0.52 in. of R.—*Kensworth* (III). At 1.45 a.m. a terrific H storm passed over this district during a heavy TS. The fall of H lasted only about nine minutes, but every pane of glass in greenhouses and skylights, and many windows, were completely smashed. The masses of ice weighed  $2\frac{1}{2}$  ounces, some being perfectly round like balls, others  $\frac{1}{2}$  in. in thickness, quite flat, but serrated, elliptical in form, four inches in length. It is believed that this house was in the centre of the storm, by the extraordinary crackling sound heard as if it were surrounded by electricity, and a curious smell of sulphur filled the atmosphere. A walnut tree 100 yards distant was struck by L.

29th and 30th.—*Northampton, Sedgebrooke* (III). Hoar frost.

30th.—*Edenfel* (XXIII). H and R; .48 in. falling between 1 and 2 p.m.

## JULY.

2nd.\*—*Broadford, Hurdlestown* (XX). The greatest R on record, 2.12 in., the greater part fell with T between 3 p.m. and 6 p.m. Much injury was done to roads and bridges.

3rd.†—*Chelford, Astle Hall* (VIII). Heavy TS in afternoon.—*Knutsford* (VIII).—Violent and sudden TS at 4.30 p.m., L exceedingly vivid, and hailstones as large as marbles.—*Bolton, The Park* (VIII). Severe TS. R commenced at 4.37 p.m. and ceased at 5.10 p.m. during which time 1.14 in. fell. The R was excessively heavy from 4.40 to 4.49 p.m., and fully an inch is believed to have fallen in those 9 minutes.—*Meltham, Harewood Lodge* (IX). Severe T squalls at 5.30 p.m. 0.28 in. of R fell in 9 minutes.—*Wakefield, Stanley Grange* (IX). Severe TS lasting 50 minutes with R, H and S, total fall .63 in.—*Hebden Bridge* (IX). Severe TS, H stones  $\frac{3}{4}$  to 1 inch in diameter. In 15 minutes (5.35 to 5.50 p.m.) .70 in. of R fell.—*South Milford Rectory* (IX). Distant T at 4 p.m., a violent storm bursting about 5.30 p.m., with the sound of an express train; violent and destructive H, much L, chiefly in the upper region; continuous T; tropical R, fall in 30 min. 1.35 in.—*Beverley, E. R. Asylum* (IX). The great storm which caused the flood at Langtoft skirted this

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\* July 2nd, see *Met. Mag.*, Sept., 1892, p. 122.

† July 3rd. See *Met. Mag.*, July, p. 82, and *Quar. Jour. Roy. Met. Soc.* Vol. XIX. p. 1.

district and could be seen between 3 p.m. and 7 p.m. passing from S.W. to N.E. with much T.—*Driffeld, Beverley Road* (IX). Water-spout, flood and very severe TS at Langtoft.—*Driffeld* (IX). TS with heavy R, and cloudburst at Langtoft causing floods and great damage to bridges and other property.—*Wetwang* (IX). A river two to three feet deep and 60 yards wide ran in the dry valley bottom from Huggate.—*Thixendale* (IX).—Terrific TS, in  $1\frac{1}{2}$  hours from 6 p.m. 1.05 in. of R fell, washing soil and seed turnips in large quantities from the hills into the dales.—*Baldersby* (IX). Large H stones and heavy R.—*Scarborough* (IX). TS.—*Whorlton Green* (X). Heavy TS, lasting 5 hours. This storm, yielding much rain in a short time, caused flooding in many places, and drains or sewers were burst in Manchester, Castleford, and Leeds. In Castleford it is stated that the local authorities removed nearly 100 cartloads of hail.

4th.—*Stoke Bruerne Rectory* (III). In 20 minutes .27 in. of R fell.—*Harrogate* (IX). T and L.

5th.—*Cork, Clarence Place* (XX). In 15 minutes .12 in. of rain fell.

6th and 7th.—*Diss* (IV). S.W. gale.

6th—8th.—*Ben Nevis* (XVIII). S daily, St. Elmo's fire on the 8th.

9th.—*Douglas, Victoria Road* (XI). Heavy R, 1.21 in.

13th.—*Sheppey, Leysdown* (II). TS.

16th.\*—*Berkhamsted, Rosebank* (III). In 9 minutes .41 in. of R fell.—*Throcking Rectory, Buntingford* (III). TS with .80 in. of R.—*Sandy, The Lodge* (III). TS.—*Stowell Rectory* (V). TS.—*Westonsuper-mare* (V). T and heavy R.—*Clevedon, Channel View* (V). R 2.20 in., 1.05 in. falling between 0.30 p.m. and 4.30 p.m.—*Bath, Bathwick* (V). Violent TS, with 1.75 in. of R between 1 p.m. and 4.15 p.m.—*Pucklechurch* (VI). In  $3\frac{1}{2}$  hours 1.88 in. of R fell.—*Flax Bourton, Tyntesfield* (VI). R 4.25 in., 3.75 in. falling in two hours.—*Lydney, Priors Mesne* (VI). Heavy TS and 1.37 in. of R.—*Ross, The Graig* (VI). Distant T and prolonged heavy R.—*Much Marcle* (VI). Heavy TS lasting from about 5 p.m. to 9 p.m., with 1.56 in. of R.—*Putley Court* (VI). Between 5 p.m. and 3 or 4 a.m. on 17th 2.30 in. of R fell, with T.—*Llanfrechfa Grange* (XI). T and heavy R 1.39 in.—*Monmouth, The Hendre* (XI). TSS with heavy R, 1.19 in.

17th to August 4th.—*Cork, Clarence Place* (XX). Absolute drought for 19 days, the longest drought since 1887.

19th.—*Ely, Stretham* (III). Heavy TS with 1.03 in. of R.—*Ketton*

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\* July 16th. See *Met. Mag.*, August, 1892, p. 102.

*Hall* (VII). Gale at night with heavy R.—*East Layton* (IX). Terrific storm of wind and R from the north.—*Rhiwbryfdir* (XI). Hurricane from W. with heavy R.—*Douglas, Victoria Road* (XI). An unusually severe N.N.W. gale delayed the across Channel steamers for several hours.

19th and 20th.—*Llanvihangel Court* (XI). Heavy gale from S.W. backing to W. and N.N.W.

21st.—*Melrose, Abbey Gate* (XII). Frost.

26th.—Several shocks of earthquake reported from *Pentewan, Megavissey*, Cornwall, about 10.30 p.m.

29th.—*Hythe* (II). TS.—*Sheerness-on-Sea, Waterworks* (II). In 45 minutes 40 in. of R fell.—*Lewes, Bedford Lodge* (II). TS.—*Sheppey, Leysdown* (II). TS.—*Emsworth, Redlands* (II). T, L and heavy R in early morning.

30th and 31st.—*Miltown Malbay* (XX). Sea fog.

#### AUGUST.

3rd.—*Douglas, Victoria Road* (XI). S.W. gale at night.

7th.—*Broughton-in-Furness* (VIII). Heavy R, 3.22 in.—*Eskdale Vicarage* (X). Heavy R all day, 2.21 in.

7th and 8th.—*Barnard Castle, Whorlton* (X). Heavy R, 1.63 in., followed by a flood on the Tees.—*Millom, Leyfield* (X). R fell without intermission from 6 p.m. on 7th to 3 p.m. on 8th, 2.72 in. falling in the 21 hours.—*Ulpha Vicarage* (X). R 2.69 in. in 24 hours.—*Halecote* (X). Between 4.30 p.m. on 7th and 10 a.m. on 8th 3.15 in. of R fell.—*Edinburgh, Blacket Place* (XIII). In 18 hours 1.12 in. of R fell.

8th.—*Melmerby* (X). Violent helm wind.

9th.—*Melmerby* (X). Frost at night.

9th—11th.—*Cheltenham* (VI). Sharp ground frosts.

10th.—*Southport, Birkdale* (VIII). Vegetation damaged by frost.—*Melrose, Abbey Gate* (XII). White frost.

11th.—*Sedgebrook* (III). Hoar frost.

12th.—*Barnard Castle, Whorlton* (X). Flood on the Tees.

12th—15th.—*Douglas, Victoria Road* (XI). S.W. gales.

13th.—*Glenlee* (XII). T and L.—*Edinburgh, Blacket Place* (XIII). TS at 4.20 p.m.—*Derry Castle* (XX). T and vivid L at 4 p.m.—*Broadford, Hurdlestown* (XX). T and L at 3.35 p.m.

14th.—*Diss* (IV). S.W. Gale at night.—*Derry Castle* (XX.) R



1.43 in., excessively heavy from 5.30 p.m. to 6.30 p.m. with great floods down the hill sides.

15th.—*Elvaston* (VII). Severe S.W. gale with heavy showers.

17th and 18th.—*Birchington* (II). T and L.

18th.—It is rather remarkable that not one of our correspondents has mentioned in his yearly summary the earthquake shock which occurred at 0.24 a.m. throughout Wales, the W. of England, and the E. of Ireland. Details are given in the *Met. Mag.* for Sept., 1892 (p. 113).

18th.—*Kensington, Edith Road* (I). Heavy TS at night.—*Finchley, Etchingham Park* (I). Much L and T between 6 and 10 p.m. H about 6 p.m.—*Godalming, Witley* (II). TS and heavy R from 5.30 p.m. to 9.30 p.m.—*Redhill, Oxford Road* (II). TS.—*Wallington* (II). T and L.—*Lynsted* (II). TSS and .80 in. of R.—*Keston Tower* (II). TS with much R from 8.30 p.m. to 9.30 p.m.—*Brighton, Prestonville Road* (II). TSS.—*Emsworth, Redlands* (II). T and L from 4 p.m. to 9 p.m.; R from 5.10 p.m. to 5.45 p.m., .33 in.; and to 9 a.m. on 19th 1.56 in.—*Alton, Ashdell* (II). TS, with 1.44 in. of R.—*Broxbourne* (III). TS.—*Throcking Rectory* (III). TS with 1.41 in. of R.—*Sandy, The Lodge* (III).—TS.—*Ely, Stretham* (III). Heavy TS, with 1.45 in. of R.—*Walthamstow, Elm House* (IV). TS in evening, vivid L and .52 in. of R.—*Diss* (IV). TS at night.—*Ashburton, Druid* (V). T and L.—*Stowell Rectory* (V). TS.

18th and 19th.—*Sheppey, Leysdown* (II). TSS all day on 18th, followed by heavy R on 19th; total for the two days, 2.25 in.

18th—20th.—*Bishop's Hill* (IV). Heavy TSS with 2.12 in. of R.

19th.—*Glenaladale* (XVIII). Frost on grass.—*Keswick* (X). T and L in early morning.

23rd.—*Finchley, Etchingham Park* (I). L in the evening.—*Birchington* (II). T and L.—*Sheppey, Leysdown* (II). Severe TS with magnificent L.—*Emsworth, Redlands* (II). T, L and R.—*Oxford, Magdalen College* (III). Heavy TS at night.—*Bloxham Grove* (III). TS, with magnificent display of L at night.—*Sedgebrook* (III). TS.—*Rendlesham Hall* (IV). Heavy TS at night.—*Diss* (IV). Distant T and brilliant L at night.—*Alderbury* (V). TS.—*Whatcombe* (V). Heavy TS.—*Stowell Rectory* (V). Severe TSS; during the second storm from 5.30 p.m. to 6.15 p.m. the L was almost continuous, several flashes being instantly followed by T.—*Further Barton* (VI). Severe TS.—*Ross, The Graig* (VI). TS, with heavy R in the evening.—*West Bromwich* (VI). In 30 minutes .36 in. of R fell.—*Burton, Derby Road* (VI). TS, with vivid L, R .30 in.—*Diglis Lock* (VI). TSS.—*Bedworth Cemetery*

(VI). T and vivid L.—*Elvaston* (VII). TS at night.—*Knutsford* (VIII). TS.—*Southport, Birkdale* (VIII). Severe TS at night; remarkably vivid L but only .40 in. of R.—*Llanfrechfa Grange* (XI). Sharp TS from 7 to 8 p.m.—*Monmouth, The Hendre* (XI). Severe TS from 6.30 to 8.30 p.m., with 1.02 in. of R.—*Llanwrtyd Wells* (XI). T, L and R at night.—*Ednol* (XI). TS.—*Cork, Clarence Place* (XX). The wettest day since September 1st, 1883; R 2.14 in.—*Broadford, Hurdlestown* (XX). Heavy R; .77 in. fell between 2.30 and 5.40 p.m.

23rd—September 3rd.—*Ludlow, Ashford* (VI). R on 12 consecutive days.

24th.—*Berkhamsled, Rosebank* (III.) In 3 minutes .08 in. of R fell.—*Ketton Hall [Stamford]* (VII). Heavy TS.—*Millom, Leyfield* (X). TS between 1 a.m. and 2 a.m.; a horse and two cows killed by L two miles from here.—*Rhug, Corwen* (XI). TS.—*Melrose, Abbey Gate* (XII). T and L.

25th.—*Canterbury, Burgate Street* (II). TS.—*Birchington* (II). T and L.—*Brighton, Prestonville Road* (II). TSS.—*Blofield* (IV). Downpour of R about 4 a.m., nearly an inch is estimated to have fallen in half-an-hour.

26th.—*Swansea, Sketty* (XI). In four hours 1.21 in. of R fell and 1.49 in. in the 24 hours.—*Douglas, Victoria Road* (XI). S.W. gale.

26th and 27th.—*Ivybridge, Langham Hill* (V). In 24 hours 2.98 in. of R fell.

26th to September 1st.—*Ambleside, Nook Cottage* (X). R 7.12 in. in the seven days, 3.04 in. falling on the last mentioned night.

27th.—*Finchley, Etchingham Park* (I). Heavy R, 1.94 in. falling after 1 p.m.—*Swarraton Rectory* (II). R 2.12 in., the largest fall in 24 hours during the 16 years observed.—*Slough, Upton* (III). R fell from 1 p.m. to 6 p.m. at night, and till 9.20 a.m. on 28th; total fall 1.69 in.—*Walthamstow, Elm House* (IV). Heavy R in afternoon, .72 in. between 1 and 7 p.m.—*Diss* (IV). S.W. gale at midday with very heavy R.—*Warminster, Rye Hill* (V). Continuous R from 7 a.m. to 7 a.m. on 28th, 2.38 in. falling in 24 hours.—*Beaminster* (V). The greatest R on record; 2.32 in.—*Whatcombe* (V). Rough, cold wind and heavy R, 1.99 in.—*Chedington* (V). R 2.88 in., the greatest fall in 10 years.—*Devonport, Rowdens Res.* (V). R 2.89 in., the greatest fall since the gauge was fixed in 1879; the greater part fell in 3 hours at night.—*Ashburton, Druid* (V). Torrents of R, 3.08 in.—*Kingsteignton* (V). R 2.28 in., the heaviest fall for many years.—*Ideford Rectory* (V). R 2.27 in., the greatest fall in the six years recorded.

27th and 28th.—*Ivybridge* (V). Between 4 a.m. on 27th and 3 a.m. on 28th 2·98 in. of R fell.—*St. John's [Devonport]* (V). Heavy R, 2·98 in. ; 2·46 in. fell between 3 p.m. on 27th and 4 a.m. on 28th.

28th.—*Keston, Heathfield* (II). Between 9 and 10 a.m. ·64 in. of R fell.—*Walthamstow* (IV). R commenced at 5.45 a.m., and continued till 9.45 a.m., by which time 1·53 in. had fallen—

In	5 minutes from	9.0	a.m.	·12	in. fell.
„	5	„	„	9.5	„ ·09 „ „
„	10	„	„	9.0	„ ·21 „ „
„	20	„	„	8.55	„ ·37 „ „
„	60	„	„	8.15	„ ·74 „ „

*Chelmsford* (IV). In 2 hours ·77 in. of R fell.—*Glenaladale* (XVIII). Frost on grass.

29th.—*Bolton, Hurst Bank* (VIII). R commenced at 8 a.m. and fell steadily and incessantly till 4 p.m., 1·31 in. falling in the 8 hours.—*Barnard Castle, Whorlton* (X). Flood on the Tees.—*Douglas, Victoria Road* (XI). R all day, S.E. gale.—*Glenlee* (XII) T, L and very heavy R, 1·48 in.—*Melrose, Abbey Gate* (XII). Frost.—*Derry Castle* (XX). TS, with heavy R from 0.40 p.m. to 1.30 p.m.

29th and 30th.—*Kinross, Turfhill* (XVI). In less than 48 hours 2·41 in. of R fell.

29th—31st.—*Elvaston* (VII). Heavy rains and TSS.—*Gargannock* (XV). Between the evening of 29th and morning of 31st 3·40 in. of R fell.

30th.—*Bloxham Grove* (III). Heavy S.W. gale.—*Burton, Derby Road* (VI). TS, heavy R in afternoon.—*Keswick* (X). TS 5.40 to 6 a.m.—*Melrose, Abbey Gate* (XII). R, T and L.

30th and 31st.—*Sedgebrooke* (III). Squally.—*Whatcombe* (V). Extremely strong S.W. wind, doing much damage to the trees.—*Loch Maddy* (XVIII). Strong gale from E. veering to N.E.

31st.—*Walthamstow* (IV). In 10 minutes, from 3.15 p.m. to 3.25 p.m. ·14 in. of R fell.—*Diss* (IV). S.W. gale.—*Chelford, Astle Hall* (VIII). T and heavy R, ·50 in. fell in 20 minutes from 10.15 a.m.

## SEPTEMBER.

1st.—*Wray Vicarage* (VIII). R, 2·11 in, followed by a very disastrous and almost unprecedented flood.—*Hawkshead, Grizedale* (VIII). Fearful R at night, 2·37 in. This, following the 10·70 in. recorded in August, has thoroughly soaked the district, and the roads are much cut up.—*Seathwaite Vicarage* (VIII). R, 2·25 in.,

causing floods.—*Whorlton Green* (X). Flood in the Tees.—*Cockermouth, Higham* (X). R, 2·15 in.; only once exceeded, viz., on October 6th, 1874.—*Brampton, Denton House* (X). R, 2·80 in., the greatest fall in any day since observations commenced in 1885. Between noon and 3 p.m. the R was frequently very heavy, and not less than 1·25 in. is believed to have fallen.—*Bowness, Fallbarrow* (X). Heavy R, 2·88 in.

1st and 2nd.—*Rendlesham Hall* (IV). Strong S.W. gales.—*Grassmere, Pavement End* (X). R, 3·87 in.

2nd.—*Diss* (IV). S.W. gale.—*Galway, Queen's College* (XXII). T and L, with heavy showers.

3rd.—*Hoar Cross* (VI). T and H.—*Keswick* (X). Heavy TS and vivid L to N., 4.35 to 5 p.m.

4th and 5th.—*Rolvenden, Hole Park* (II). In 19 hours 2·02 in. of R fell.

11th.—*Eskdale Vicarage* (X). R, 1·72 in., mainly in three showers between 2 p.m. and 5 p.m.

12th.—*Blandford, Whatcombe* (V). Thick fog.

15th.—*Kilkenny, Inch House* (XX). Terrific storm, with heavy H.—*Derry Castle* (XX). S.E. to E. gale.

16th and 17th.—*Glenaladale* (XVIII). Heavy gale and 3·72 in. of R.—*Loch Maddy* (XVIII). Strong gales from S.W. veering to N.E.

19th. *Oxford, Magdalen College* (III). Heavy TS in the night.—*Sandy, The Lodge* (III). Heavy TS.—*Monmouth, The Hendre* (XI). T and vivid L at night.

19th and 20th.—*Bishops Cunnings* (V). T.

19th—October 8th.—*Ludlow, Ashford* (VI). Eighteen days with R and only two without.

20th.—*St. George's Lodge* (II). In about five minutes, between 6 and 7 a.m., ·27 in. of R fell.—*Wallington* (II). TS.—*Hythe* (II). TS.—*Birchington* (II). T and L.—*Sheppey, Leysdown* (II). TS.—*Brighton, Prestonville Road* (II). TS.—*Lewes, Bedford Lodge* (II). TS.—*St. Alban's, Torrington House* (III). At 6.1 a.m. a flash of L, immediately followed by loud T, occurred, and heavy R commenced a few minutes later. The storm became severe shortly before 8 a.m., when the T was very heavy, following the L in from about five seconds to one second.—*Diss* (IV). TS and heavy R, 1·11 in., ·90 in. falling between 3 and 5 p.m.—*Broad Hinton* (V). TS, with ·52 in. of R; a tree struck in the village. The R did not last more than half an hour.—*Bryn-y-mor* (V). TS in night.—*Ross, The Graig* (VI).

T and L.—*Drumnadrochit* (XVIII). Very keen frost, doing serious damage.

20th and 21st.—*The Bourne Vicarage* (II). One continuous fall of R, yielding 2·00 in.—*Sedgebrooke* (III). T.

21st.—*Whetstone* (I). Heavy R, ·67 in. falling between 10 and 11 a.m.—*Maidstone, Mount House* (II). Heavy R, ·61 in. falling in about seven minutes.—*Lymington, Pennington* (II). Torrents of R and H, a whirlwind, and a waterspout, flooding the roads.—*Cookham Vicarage* (II). Very heavy R, 2·03 in. fell in about 24 hours, and 2·21 in. in 26 or 27 hours.—*Slough, Langley* (III). In 21 minutes ·49 in. of R fell.

23rd.—*Further Barton* (VI). Severe TS.

26th.—*Douglas, Victoria Road* (XI). Severe S.S.W. gale at night.

27th—October 10th.—*Walthamstow, Elm House* (IV). R every day.

28th.—*Glenaladale* (XVIII). S on hill tops.

29th.—*Southport, Birkdale* (VIII). TSS with H.

30th.—*Rochdale, Fieldhead* (VIII). In  $6\frac{1}{2}$  minutes ·10 in. of R fell.—*Melrose, Abbey Gate* (XII). L.

#### OCTOBER.

1st.—*Knutsford* (VIII). TS at 5 p.m.

1st—4th.—*Winchelsea, The Friars* (II). A remarkably wet period. R on 1st, 1·42 in. ; 2nd, ·68 in. ; 3rd, ·10 in., and 4th, 2·50 in.

1st—6th.—*Benenden* (II). R, 3·63 in.—*Tenterden* (II). R, 3·58 in. ; floods out in river flats at Maytham and Ashford.

2nd.—*Rendlesham Hall* (IV). T.—*Morpeth, Meldon Park* (X). Terrific TS about 3 a.m. ; several animals were killed in the fields, and the H destroyed all tender vegetation.

3rd.—*Uldale Rectory* (X). T and heavy R, flooding the low land.—*Rhiwbryfdir* (XI). T and L.—*Douglas, Victoria Road* (XI). S.W. gale.

4th.\*—*Sheerness-on-Sea, Waterworks* (II). In less than nine hours 2·22 in. of R fell.—*Lewes, Southmallings* (II). R, 2·21 in., the only fall exceeding 2·00 in. recorded in 24 years.

5th.—*Douglas, Victoria Road* (XI). TS at noon.

6th.—*Sedgebrooke* (III). T.—*Weston-super-Mare, Bryn-y-mor* (V). T. *Clifton* (VI). TS.—*Ross, The Graig* (VI). TS.—*The Hendre* (XI). Severe TS, with heavy R.

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\* See *Met. Mag.*, October, 1892, p. 139.

7th.—*Glenaladale* (XVIII). S on hill tops.

8th and 9th.—*Llanfrechfa Grange* (XI). Heavy W. gale.

9th.—*Diss* (IV). Heavy gale from S.—*Ashburton, Druid* (V). Lunar rainbow at 9 p.m. ; colours bright.

12th—21st.—*St. Alban's, The Grange* (III). R every day.

13th.—*Beverley* (IX). Sudden and violent squall from N.E. at 10 p.m., followed by R for 46 hours without intermission ; 2·83 in. falling in that time.—*East Layton* (IX). Heavy peals of T.

13th—15th.†—*Hemingby* (VII). Continuous R (2·64 in.), causing the river Bain to overflow.—*Saxby Rectory* (VII). R, 3·16 in. in the three days.—*Meltham, Harewood Lodge* (IX). Continuous R from 4 a.m. 14th to 10 p.m. 15th, 42 hours. Total for the three days, 4·44 in.—*Pontefract, Purston Hall* (IX). Continuous R, 3·72 in.—*Wakefield, Stanley Grange* (IX). Continuous R, with strong N.E., wind, 3·83 in.—*Leeds, Museum* (IX). Heavy R, causing disastrous floods.—*Leeds, Allerton Hill* (IX). R, 3·96 in.—*Leeds, Oliver Hill, Horsforth* (IX). Extraordinary R, 6·45 in. falling in the three days, causing floods in the Aire valley. At Kirkstall Station the water stood 15 in. above the rails.—*Knaresborough, Farnham* (IX). R began on the evening of 13th, and continued for 48 hours, 3·08 in. falling.—*Hull, Tranby Park* (IX). Continuous R for 46 hours, 3·15 in.—*Pocklington, Warter* (IX). Extraordinary heavy R from 4 p.m. on 13th to 6 p.m. on 15th, 3·35 in.—*Old Malton* (IX). R, 2·93 in. in 36 hours.—*Aysgarth Vicarage* (IX). R, 5·46 in. in 46 hours.—*Leyburn* (IX). A most unprecedented R ; 3·53 in. fell in 48 hours.—*Richmond, The Grove* (IX). R, 3·60 in.

14th.—*Huddersfield, Dalton* (IX). The heaviest R in 24 hours during 27 years, 3·01 in. ; in 48 hours 4·89 in. fell.—*Wakefield, Stanley Grange* (IX). R, 2·36 in., the heaviest fall since 1886.—*Halifax, Thorpe* (IX). R, 2·61 in., the heaviest recorded in ten years.—*Driffild, Beverley Road* (IX). R, 2·09 in., by far the greatest fall ever registered.—*Wetwang* (IX). The heaviest R recorded, 3·00 in. fell in 38 hours.—*Melmerby* (X). Helm wind.—*Cork, Clarence Place* (XX). L.—*Derry Castle* (XX). Gale from N.N.E.—*Broadford, Hurdlestown* (XX). N.E. gale.

14th and 15th.—*Elvaston* (VII). Very stormy ; flood on Derwent.—*Rotherham, Thrybergh* (IX). Heavy R, 2·92 in., causing floods in the valley of the Don.—*Hebden Bridge* (IX). In 42 hours 3·80 in. of R fell.—*Harrogate* (IX). Heavy R (3·25 in.), commencing at 6 a.m. on

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† See *Met. Mag.*, November, 1892, p. 149.

14th, and continuing till 7 p.m. on 15th.—*Beverley, Alexandra Terrace* (IX). In 46 consecutive hours 2·83 in. of R fell.

16th.—*York, Cherry Hill* (IX). The greatest flood for over 60 years, caused mainly by the heavy R of the previous three days, but increased by a large temporary dam, in connection with the new sewerage works, that was partly across the Ouse, just below Skeldergate Bridge.

16th and 17th.—*Dalnaspidal, H.R.S.* (XVI). S.

17th.—*Cork, Clarence Place* (XX). L.

17th and 18th.—*Rendlesham Hall* (IV). H.

20th.—*Drumnadrochit* (XVIII). S on the hills down to the 800 ft. line. Solar halo and mock suns from noon to 3 p.m.

21st.—*Diss* (IV). Much R, with S.W. gale at night.—*Denver* (IV). S in large lakes.—*Swaffham* (IV). S about 10 p.m.,  $\frac{3}{4}$  in. deep, followed by incessant R all night.—*Ketton Hall* (VII). S.—*Keswick* (X). S; heavy on the mountains.—*Uldale Rectory* (X). S.—*Llandoverly* (XI). H and S; hills white.—*Melrose, Abbey Gate* (XII). Sleet and R; Eildon hills white.—*Carrickfergus, Woodburn* (XXIII). T, H, and sleet.

21st and 22nd.—*Dalnaspidal, H.R.S.* (XVI). S.—*Glenaladale* (XVIII). S.

21st—23rd.—*Cheadle, The Heath House* (VI). S daily.

21st—24th.—*Rhiwbryfilir* (XI). S on the hill tops.

22nd.—*Hoar Cross* (VI). S.—*Coventry, Coundon* (VI). S.—*Knutsford* (VIII). S.—*Corwen, Rhug* (XI). S and H.—*Mullingar, Belvedere* (XXI). S.

22nd and 23rd.—*Guisborough, Redcar Road* (IX). S.

23rd.—*Ross, The Graig* (VI). Mountains covered with S.—*Chelford, Astle Hall* (VIII). H at night, covering the ground.—*Uldale Rectory* (X). S, the mountains covered.—*Llanvihangel Court* (XI). S on the mountains.—*Stronvar* (XVI). Sleet and S.

23rd and 24th.—*Keswick* (X). Heavy S on the mountains; nearly 2 in. on the ground in Keswick on the 24th.—*Miltown Malbay* (XX). Ice.—*Carrablagh* (XXIII). S on the mountains down to 500 ft. above sea level.

23rd—25th.—*Seathwaite Vicarage* (VIII). Very sharp frosts, followed by 5·97 in. of R in four days.

24th.—*Bishops Cannings* (V). Ponds frozen over.—*Watten, H.R.S.* (XIX). S at night 2 in. deep.

24th and 25th.—*Uldale Rectory* (X). Ice a quarter of an inch thick.

25th.—*Wallington* (II). Severe frost.—*Ashburton*. *Druid* (V). R and S; moors white and ice on ponds.—*Harrogate* (IX). S shower at 4 p.m.

26th.—*Douglas, Victoria Road* (XI). S.E. gale with heavy R.—*Derry Castle* (XX). Gale all day from E. to S.E.—*Broadford, Hurdlestown* (XX). Severe S.S.E. gale.—*Miltown Malbay* (XX). Heavy southerly gale.

26th and 27th.—*New Galloway, Glenlee* (XII). Heavy R, 3·44 in.

26th—28th.—*Langton Herring* (V). In the three days 2·60 in. of R fell.—*Chedington* (V). In 30 hours 3·30 in. of R fell, and 4·06 in. in three days. Unprecedented in ten years.

27th.—*Diss* (IV). S.E. gale and R all day.—*Bishops Cannings* (V). Gale from S.E.

28th.—*Melrose, Abbey Gate* (XII). S.W. gale.

29th.—*Walthamstow, Elm House* (IV). Upper Roding valleys flooded owing to the constant heavy R.

#### NOVEMBER.

1st and 2nd.—*Dalnaspidal H.R.S.* (XVI). S.

3rd.—*Wallington* (II). Extremely brilliant rainbow, between 7.3 and 7.23 a.m., just after sunrise.

4th.—*Enniscoe* (XXII). T and L.

5th.—*Emsworth, Redlands* (II). Distant T at 11.30 p.m., and heavy R.—*Ross, The Graig* (VI). River Wye in flood, 8 feet.

5th—13th.—*Broxbourne* (III). Fog daily.

6th—8th.—*Diss* (IV). Fog daily.

6th—11th.—*Dalnaspidal H.R.S.* (XVI). Fog daily.

6th—13th.—*Rendlesham Hall* (IV). Fog each day.

7th.—*Wallington* (II). Heavy fog.

7th—13th.—*Ketton Hall* (VII). Fog daily.

9th—11th.—*Derry Castle* (XX). Fog daily.

10th—12th.—*Ashburton, Druid* (V). Fog daily.

15th—25th.—*Sedgebrooke* (III). Almost continuous fog; very thick indeed on some days.

16th.—*Whatcombe* (V). L.

16th—21st.—*Burton, Derby Road* (VI). Thick fogs; very dense on 17th and 20th.

16th—24th.—*Ketton Hall* (VII). More or less fog every day.

17th—18th.—*Elvaston* (VII). Dense fog, very damp.



17th—19th.—*Llanfrechfa Grange* (XI). Much fog.

19th—21st.—*Killarney* (XX). S.E. to E. gale and floods. R 3·96 in.

20th.—*Cork, Clarence Place* (XX). R 2·26 in., an amount only once equalled in 20 years, viz., on October 18th, 1872.—*Fermoy Gas Works* (XX). Heavy R 2·40 in., causing floods which put out the fires, and no gas was made for three days.

20th—24th.—*The Hendre* (XI). Fog daily.

20th—27th.—*Broxbourne* (III). Fog daily.

21st—24th.—*New Galloway, Glenlee* (XII). Fog.

24th.—*Berwick-on-Tweed*. “On two farms on the Corporation’s Estate—Bogend and Loughend—barley and oats were being led in on Thursday last.”

24th—26th.—*Reigate, Holmfels* (II). Fog daily.

27th—29th.—*Scourie* (XIX). S and H storms.

28th and 29th.—*Edinburgh, Blacket Place* (XIII). Strong W. gale.

29th.—*Hemingby* (VII). S.—*Seathwaite Vicarage* (VIII). Slight S.—*Keswick* (X). H, S and heavy gale.—*Uldale* (X). S.—*Drumnadrochit* (XVIII). S 4 inches deep.

29th—30th.—*Stronvar* (XVI). Sleet and S, 3½ inches deep.—*Dalnaspidal H.R.S.* (XVI). S.—*Forres H.R.S.* (XVII). S.—*Watten H.R.S.* (XIX). S.

30th.—*Keswick* (X). S, the mountains covered.—*Middleton House* (XIII). S. 5½ inches deep.—*Craigend Castle* (XV). Six inches of S.—*Killarney* (XX). S on the mountains.

## DECEMBER.

1st.—*Melrose, Abbey Gate* (XII). S 2½ in. deep.—*Peebles, Kailzie* (XIII). In 4½ hours 3½ in. of S fell.—*Glasgow, Queen’s Park* (XIV). S 4 in. deep.

2nd—5th.—*Forres, H.R.S.* (XVII). S daily.

3rd—5th.—*Seathwaite Vicarage* (VIII). S.—*Douglas, Victoria Road.* (XI). S daily.—*Enniscoe* (XXII). S daily. *Lough Sheelin, Arley* (XXIII). S daily.

3rd—6th.—*Coventry, Coundon* (VI). S daily.

3rd—10th.—*Hoar Cross* (VI). S daily, except on 7th and 9th.

4th.—*Elvaston* (VII). Heavy S storm, S 3 in. deep.

4th and 5th.—*Buntingsdale* (VI). Fourteen inches of S.—*Southport, Birkdale* (VIII). S and H, greatest depth 4 in.—*Woodlawn Gardens* (XXII). S.

4th—7th.—*Sedgebrooke* (III). S daily.—*Currygrane* (XXI). S daily.

4th—10th.—*Bedworth Cemetery* (VI). S daily, excepting 9th.

5th.—*St. George's Lodge* (II). S 2 in. deep.—*Gwernvale* (XI). S 2½ in. deep.

6th.—*Old Springs* (VI). Seventeen inches of S, yielding 1·50 in.—*Edinburgh, Blacket Place* (XIII). L at 10 p.m.

6th—8th.—*Gorebridge, Middleton* (XIII). S.

6th—9th.—*Hemingby* (VII). S daily.

6th—10th.—*Denver Rectory* (IV). S daily, except 7th.

8th.—*Stronvar* (XVI). S 4 in. deep.

11th.—*Burton, Derby Road* (VI). Silver thaw.

13th.—*Burton, Derby Road* (VI). Glazed frost.

14th—31st.—*Pendock Rectory* (VI). Absolute drought.

15th.—*Walthamstow, Elm House* (IV). No R fell for 23 days from this date.

15th—30th.—Absolute drought at *Nutfield, Holmesdale* (II), and *Lexden* (IV).

15th—31st.—Absolute drought at *Kensington, Edith Road* (I), and *Finchley, Etchingam Park* (I).

15th—January 4th, 1893. Absolute drought at *Weobley, Dilwyn* (VI), and *Leamington, The Parade* (VI).

16th—30th.—*Oxford, Elsfeld*. Absolute drought.

16th—31st.—Absolute drought at *Easton Maudit Vicarage* (III), *Ludlow, Ashford* (VI), *Burton, Derby Road* (VI), and *Gwernvale* (XI).

17th.—*Melrose, Abbey Gate* (XII). Gale; L at 10 p.m.

17th—31st.—Absolute drought at *Streatham Hill* (II), *Alresford, Orington* (II), and *Maxey Vicarage* (III).

25th and 26th.—*Meltham, Harewood Lodge* (IX). Rime on trees ¾ in. in length.

26th—29th.—*Elvaston* (VII). Very severe frost; canals, &c., frozen up.

28th.—*Bloxham Grove* (III). Dense fog all day, covering the trees with rime.

28th and 29th.—*Reigate, Holmfels* (II). Thick fog.

31st.—*Woodbridge, The Cedars* (IV). Three inches of S at night.—*Douglas, Victoria Road* (XI). Intensely cold, wind all round the compass, but mostly a N.E. to S.E. gale.

## OBSERVERS' NOTES ON THE MONTHS.

## JANUARY.

I. *Kensington, Edith Road*. Very dry, R less than one-third of the average but falling on 16 days.—*Muswell Hill*. The driest January since 1880. R only three-tenths of the average of 20 years.—*Finchley, Etchingham Park*. Though R or S fell on 15 days the total fall was little more than one-third of the average of six years.

II. *Wallington*. Cold and dreary, with a remarkable absence of S. R only one-fifth of the average of 5 years.—*Keston Tower*. Almost continuous frost from 2nd to 26th, but not severe; the last four days mild and stormy. Very little R, but a good many rainy days; little or no S.—*Leysdown*. Nights cold and often frosty, but genial weather during the day. The smallest R in January since observations commenced in 1887.—*Brighton, Prestonville Road*. Very cold till 17th, then milder and a further rise of temp. at the end.—*Emsworth*. Hard frost to the 25th; mild, with rough W. and N.W. winds from 26th to 31st.—*Maidenhead, Castle Hill House*. Fairly dry and mild. S from 6th to 9th and again on 19th and 20th.

III.—*Throcking Rectory*. R .49 in. below the average of 10 years; duration of sunshine 39 hours.—*Banbury, Bloxham Grove*. Frost of considerable severity almost daily to the middle of the month, thence to the end generally milder with some fine and pleasant days.

IV.—*Walthamstow, Elm House*. The month opened mild, but colder weather set in, and lasted off and on until towards the end. Frost in shade on 22 nights. R much below the average.—*Ipswich, Bishop's Hill*. R little more than one-third of the average.—*Diss*. Cold, cheerless, grey weather, with S always on the ground for the first half of the month. Then dull, close and warm, with fogs, and a S.W. gale on 27th. The last two days fine and bright.—*Denver*. Very cold in the first half, the last four days very warm.

V.—*Bishop's Cannings*. R little more than one-third of the average. Very sharp frost from 9th to 18th; warm at the end of the month.

VI.—*Further Barton*. The first half very cold, with some severe frosts, but many sunny days ; mild and damp at the end.—*Ross, The Graig*.—On the whole cold and unpleasant, without heavy gales, very warm from the 23rd to the close. S on the ground from 7th to 9th, and 16th to 24th.—*Burton, Derby Road*. R .53 in. below the average ; S on 10 days.

VII.—*Ketton Hall*. Very cold during the early part ; more or less fog from 12th to 23rd ; S on the ground from 6th to 26th.—*Bucknull*. Hard frost from 4th to 15th with N.W. wind, followed by four days of E. wind and no return of frost.—*Brattleby*. Cold and dull, with 14 sunless days ; a period of severe frost after the 9th.—*Southwell, Grants*. Cold and dry, frost from 3rd to 18th.—*Hodsock Priory*. Cold, dry and bright. Frost and S up to the 17th, then a week of slow thaw, and the last week mild with high winds. R about .50 in. below the average.—*Elvaston*. Quiet generally, with no extreme of weather in any respect ; 13 frosty nights.

VIII.—*Southport*. R hardly up to the average but rainy days numerous, 16 sunless days ; S on 8 days.—*Cartmel, Pit Farm*. Rather more than a foot of S fell, and violent gales drifted it a good deal.—*Seathwaite Vicarage*. Very mild at the beginning and end of the month ; much S in the middle, remaining on the ground for about three weeks.

IX.—*Harrogate, Bog Valley Gardens*. Fine, dry and cold. Temp. and R below the average.—*Driffeld, Beverley Road*. Dry generally with S on the ground from 7th to 18th. A dull, sunless period from 16th to 23rd.—*Guisborough, Redcar Road*. H, S, frost and strong winds prevailed, S falling in small quantities on many days.

X.—*Ulpha Vicarage*. S lay deep on the ground from 6th to 21st, the drifts on 17th being spoken of as the heaviest that even the old folks can remember. Very mild after the 23rd.—*Keswick, The Beeches*. From 1st to 17th fine and frosty, though a good deal of S fell in the latter half of the period. The second half of the month was mild and fine till the 26th, after which an almost uninterrupted gale blew.—*Newton Reigny*. R 1.55 in. below the average of ten years.

XI.—*Llanfrechfa Grange*. Fine on the whole ; sharp frosts at night to the 18th, very mild from the 23rd to the end.—*Llanvihangel Court*. Cold and dry except from 16th to 18th.—*Disserth, Glanhewy*. Mostly mild, but cold from 8th to 15th.—*Douglas, Victoria Road*. Very cold strong N. winds with almost daily S during the first half ; the latter

half mostly wet and mild. R below the average for the first time since July, but as S or R fell on 23 days the land was in a sorry plight at the end.

XII.—*Melrose, Abbey Gate*. R .78 in. less than the average ; mean temp 3° below average.

XIII.—*Edinburgh, Blacket Place*. Dry but unsettled ; westerly winds throughout. Duration of sunshine 43 hours.

XV.—*Craigend Castle*. A dull, cold, wintry month.—*Drimninn*. Frosts very prevalent ; about 8 inches of S on the ground in the middle of the month.—*Gruinart School House*. S daily from 2nd to 14th, except 9th and 13th.

XVI.—*Dollar*. The first part of the month very dry, the latter part very wet.—*Coupar Angus*. R .78 in. below the average, mean temp. 3° below the average, but the max. on 29th, 59°, is the highest recorded in any January.—*Dunkeld, Inver Braan*. Very severe, S and ice lying on the ground up to the 27th, when a strong W. gale sprang up, and by 29th the S and ice were all gone. The sudden freshet which followed raised the rivers to a great height, and the Tay was higher than it had been for 30 years. Around Guay and Dalguise, roads were torn up, whole fields of soil washed away, and one man lost more than 100 tons of potatoes. Cows, sheep and pigs, and great quantities of fencing, &c., were seen floating past Dunkeld.

XVIII.—*Glenaladale*. Very wild and stormy, with the heaviest S storm for 30 years. A very rapid thaw with torrential rains (7.58 in. from 26th to 28th) brought Loch Shiel up to the highest flood level within living memory.—*Culloden*. S covered the ground from the 5th to the close, the depth being the greatest in any year since 1853.

XIX.—*Scourie*. S and frost, and very cold and boisterous weather characterised the month.

XX.—*Cork*. R less than half the average ; mean temp. 3°·7 below average, the 9 days ending 15th being remarkably cold.—*Killarney*. The month opened dry, followed by a week of S and frost which was succeeded by a wet unhealthy fortnight.—*Derry Castle*. The first week damp and cold ; S at intervals from 6th to 14th with intense frost. The remainder of the month stormy, damp and cold, with frequent thick fogs and frosty nights. R 15 per cent. below, but rainy days four above, the average of ten years.—*Castle Lough*. Although the R is less than the average it was spread over a considerable number of days, causing great dampness.—*Hurdlestown*.

The driest January on record, the R being less than half the average of 7 years ; rainy days two below the average.—*Miltown Malbay*. Generally cold with much moisture, but the R not excessive.

XXI.—*Kilkenny, Inch House*. The first half bright and frosty ; a thaw set in on 15th with stormy wet weather, which was followed from 23rd to 27th by bright frosty weather again, and the remainder was variable.

XXII.—*Tuam, Gardenfield*. From 3rd to 15th very cold with S, the latter half mostly mild.—*Lawderdale*. Cold but seasonable.

XXIII.—*Dungannon, Rockdale*. Much S, more than 14 inches fell between the 5th and 10th.—*Stewartstown*. Fall of S much above the average.

## FEBRUARY.\*

I. *Muswell Hill*. R 21 per cent. less than the average of 20 years, though the number of rainy days was large.

II. *Wallington*. Warm and rather wet, but on the whole not unfavourable. S on eight days. R .50 in. above the average of five years.—*Hythe*. Very dull and variable.—*Keston Tower*. An ordinary February. A good deal of frost. Many rainy days, but not much R.—*Leysdown*. Generally cold and wet, with some S and frost.—*Brighton, Prestonville Road*. Damp and mild at first ; severe frost from 16th to 20th, then less cold.

III. *Throcking Rectory*. R .37 in. above the average of 10 years ; duration of sunshine 37 hours.—*Bloxham Grove*. R below the average ; great prevalence of polar winds.

IV. *Walthamstow, Elm House*. The early part was very dull and gloomy by day, with clear skies at times at night. The middle of the period was very cold, with heavy S storms. On the whole cold and seasonable, with R rather less than the average. Frosts on 13 nights.—*Ipswich, Bishop's Hill*. Wet, cold, and foggy. R nearly twice the average, and, with the exception of 1879, the greatest in February during 20 years. From the 14th to 20th a total depth of 8 inches of S fell, with much wind and consequent drifting.—*Diss*. The month began with a heavy gale from S.W., which continued with little intermission till the morning of the 3rd. There were a few bright days, but the weather was

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\* See also *Met. Mag.*, March, 1892, p. 17.

generally dull, cold, and foggy.—*Denver Rectory*. A wet month. very warm in the early part, excessively cold in the middle, warmer again towards the end.—*Great Yarmouth*. Chiefly remarkable for the mildness of the first two weeks, the cold of the third, and the fog of the last week.

V. *Weston-super-Mare, Bryn-y-mor*. Quiet, with more or less fog, and not very cold, in the early part. Stormy, with sharp frosts and S squalls in the third week. Milder towards the end.

VI. *Further Barton*. Cold and changeable, with little sunshine. Severe frost from 14th to 20th, with frequent S. The last week milder.—*Ross, The Graig*. The first half fine, dry, and pleasant, with W. winds, rather warm for the season; the remainder very winterly, with much S, and E. winds on the last ten days. Temp. very low from 16th to 20th.—*Burton, Derby Road*. R .63 in. below the average. S on six days.

VII. *Bucknall*. Fine on the whole, with a spell of sharp frost from 16th to 20th.—*Brattleby*. Dry on the whole, but gloomy; 15 sunless days. Squalls of S from 14th to 18th.—*Hodsock Priory*. Cold and rather wet, but fairly sunny. S showers fell on several days, but there was never more than about half an inch on the ground. Min. in shade ( $14^{\circ}7$  on 19th), the lowest recorded in February in 17 years.—*Elvaston*. Mild and dry till the 14th, then very severe wintry weather till the 21st; afterwards much milder and drier, with frequent fogs to the close. Frost on eight nights.

VIII. *Southport*. R and rainy days hardly up to the average; nine sunless days; S on four days.—*Seathwaite Vicarage*. R about the average, but more S than usual.

IX. *Driffield, Beverley Road*. Remarkable for a very wintry spell from 14th to 20th, with extraordinary low temp. on morning of 19th. R frequent, though no great amounts; S on ground from 16th to 21st; fogs from 23rd to 26th.—*Scarborough*. Wet and cold, with much S and severe frost during the third week. Much fog from 20th to 26th.

X. *Whorlton*. A few fine warm days; much S and intense frost in the third week.—*Keswick, The Beeches*. With the exception of frequent S showers, and S storms on 2nd, 17th, and 20th, the weather was fair. Many roads were partly blocked with S at the end. Duration of bright sunshine 110 hours.—*Uldale*. On the whole open and seasonable, particularly the last nine days.

XI. *Llanfrechfa Grange*. The early part warm and wet, the latter

part cold.—*Douglas, Victoria Road.* Very cold and sunless, with strong S.W. gales on 1st, 2nd and 8th. A period of intense cold set in on 14th, with strong N.E. winds, frost, and S, culminating in a blizzard on 20th. A decided change occurred on 21st, and the remainder of the month was milder.

XII. *Melrose, Abbey Gate.* R, .83 in. above the average ; frost on 27 nights.

XV. *Craigend Castle.* Stormy and cold ; especially the first and last weeks. A good deal of S fell.

XVI. *Dollar.* The first fortnight fine, the second fortnight bad.—*Stronvar.* R below the average. Winds from N. and E. prevalent, with a good deal of frost.—*Coupar Angus.* R slightly above the average, falling mostly as S. Seven days of very low temp. occurred after the 14th.

XVIII. *Glenaladale.* The beginning of the month was stormy, the latter half very fine.—*Loch Maddy.* With the exception of a day or two at the beginning, the weather was good, and from 22nd to 29th was beautiful.

XIX. *Watten, H.R.S.* The first three weeks stormy, with keen frost at times ; the last week dull, hazy, and mild.

XX. *Tipperary.* Very wet ; a great fall of S on 19th and 20th.—*Derry Castle.* Very harsh generally, excepting a few mild days about the middle, and again towards the close. R and melted S, 12 per cent. above the average of 10 years.—*Hurdlestown.* A cold, wet, and stormy month, but total R only .03 in. above the average of seven years.—*Miltown Malbay.* Almost continuous fog or mist for the first 15 days, followed by frost and S, a regular blizzard occurring on 20th and 21st.

XXI. *Kilkenny, Inch House.* Very cold, wet, and stormy, with a heavy fall of S on 19th and 20th.

XXII. *Tuam, Gardenfield.* Very mild from 5th to 14th ; frost and S from 15th to 21st, the remainder mild, but a little frost.—*Lawderdale.* Cold and harsh, but seasonable ; frost and S from 16th to 20th.

XXIII. *New Barnsley.* From 1st to 7th stormy, with R, S, and sleet ; from 8th to 14th genial and spring-like ; 15th to 20th bitterly cold, with S and keen frost ; 22nd to 27th fine and spring-like, and the remainder cold and dry.



## MARCH.\*

I.—*Kensington, Edith Road*. The coldest March in nine years.—*Muswell Hill*. The driest March since 1883, and with that exception the driest in 20 years, the R being a little less than two-thirds of the average.—*Finchley, Etchingham Park*. Very dry, the total R being little more than two-thirds of the average ; the driest March since observations commenced in 1885.

II.—*Haslemere, Hazelhurst*. Cold and dry, with biting N.E. wind, and frost on 20 days.—*Abinger Hall*. Intensely cold till just at the end, when milder weather set in. Want of R was beginning to be felt at the close.—*Wallington*. Very cold and dry, and the most backward spring known for many years. R one-third less, and duration of sunshine a little more, than the average.—*Hythe*. Very wintry ; with few exceptions northerly winds prevailed. *Keston Tower*. Very cold with occasional S, and frost on 22 days ; R about the average. Vegetation very backward.—*Brighton, Prestonville Road*. Generally cold, but temp. variable. Very severe in the first part, especially on 9th ; warmer about the middle. R less than half the average of four years.

III.—*Throcking Rectory*. R .40 in. below the average of 10 years ; mean temp 4°·6 below average ; duration of sunshine 92 hours.—*Bloxham Grove*. Cold almost throughout, the prevailing wind being northerly ; a few flakes of S fell daily in the second week. R slight.

IV.—*Walthamstow, Elm House*. The first half remarkably cold with temp. much below the average and frequent S. A mild spell commenced about the middle and lasted till the end. High day temp. and frost in the early mornings. Very cold on the whole. Frosts on 18 nights.—*Bishop's Hill*. Dry, cold, and generally calm, without the usual amount of high wind, but many frosty nights. R .17 in. less than the average.—*Woodbridge, The Cedars*. Many sunny days with white frost at night. Vegetation backward.—*Diss*. Very cold and cheerless during the first half, with almost incessant, but very slight S during the first week ; then heavier falls till the 14th, and a heavy gale of short duration in the afternoon and evening of the 15th, which seemed to scatter the bad weather, literally, to the winds, for it was brilliant from that date to the 21st, when there was again a heavy fall of S. Cold snowy weather again prevailed till the 29th, and two magnificent days closed the month.

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\* See also *Met. Mag.* May 1892, p. 52.

V.—*Bishop's Cannings*. Cold and dry, and vegetation very backward. R only one-third of the average.—*South Petherton*. Dry, with very low temp. at night during the first half.—*Stowell Rectory*. Very dry, and temp. about 3° below the average.—*Weston-super-Mare, Bryn-y-mor*. Fine, dry and seasonable; the early part cold and frosty with a little S; finer and warmer towards the close.

VI.—*Further Barton*. Very cold, with much E. wind and frost. S fell as late as the 27th, and everything was backward in spite of much sunshine.—*Ross, The Graig*. Very cold, except from the 16th to 20th, when it was very fine and warm. Much sunshine and only eight rainy days. Frost on 23 days, the greatest number in March since 1859 excepting 1883, when the number was the same; the average min. was, however, 1° lower in that year.—*Burton, Derby Road*. The driest March for 16 years, R 1·03 in. below the average. S on 8 days.

VII.—*Ketton Hall*. Very cold until the 16th with showers of S, then milder and very warm and clear on the 31st. Easterly winds on 17 days. Vegetation very backward.—*Brattleby*. Dry, with rough winds; frequent S till the 15th, bright and warm at the close.—*Southwell, Grants*. The coldest but most sunny March since 1883 and the driest since 1879. Frost on 24 days.—*Hodsock Priory*. Dry and very cold, with average sunshine. The first half was dull with frequent S showers, the latter part fine and dry. The mean temp. was lower than in any of the previous 16 years except 1883; the nights were especially cold, and the mean min. was the lowest during the winter. The R was the smallest in March since 1879.—*Willington*. Very dry and cold with frost on 27 days.—*Elvaston*. Dry, particularly after the 15th. Severely cold and wintry until the middle, and during the last few days. 22 frosty nights.

VIII.—*Southport*. The coldest March in 21 years, frost in shade on 21 days. R less than half the average, and rainy days the fewest in 20 years. S on 10 days.—*St. Michael's-on-Wyre*. R ·73 in. the smallest amount ever recorded in March.—*Seathwaite Vicarage*.—Dry, with prolonged cold N.E. winds and continued frost, the S from previous falls lying on the higher ground unthawed throughout the month.

IX.—*Driffield, Beverley Road*. Very winterly to the 16th with S on the ground on 10 days. Intense frost on 14th, a remarkably fine warm day at the close.—*Scarborough*. S nearly every day for the first fortnight and again on the 27th and 28th. Cold winds till the 31st, when, after a very cold night, the ther. rose from 31° to 63°.—

*East Layton.* Very cold and intensely frosty till the 29th, when there was a decided change for the better, which continued till the end of the month.

X.—*Ulpha Vicarage.* The fall was mostly S, which lay for some time and drifted heavily on the fells. N. and E. winds prevailed.—*Nether Wasdale.* On the whole dry, clear and fine, with great prevalence of E. or N.E. winds.—*Keswick, The Beeches.* With the exception of S storms on 8th, 9th, 10th and 26th, and heavy R on 17th, the month was very fine, the total sunshine being 210 hours 30 min., the only sunless day was the 17th. Frost prevailed from 2nd to 17th, and from 26th to the close.

XI.—*Llanfrechfa.* Very fine; the early part cold and the latter part sunny and very favourable for farm work. Frost every night to the 15th and for the last seven days.—*Llanvihangel Court.* Very cold; temp. above 40° at 9 a.m. on only eight days; the only warm days were from 16th to 18th. Wind persistently N.E., E. and S.E., though not strong.—*Llandovery.* Bitterly cold with frost on 25 days. *Disserth, Glanhowey.* Generally dull, but hot sun from 18th to 31st.—*Douglas Victoria Road.* The almost Arctic weather which set in on February 14th lasted till March 27, six weeks of bitter N. and N.E. winds, hard frosts and frequent S. Brilliant sunshine by day and frosts at night for the last few days. R the least recorded in March.

XII.—*Melrose, Abbey Gate.* Very cold; mean temp. (31°·6) 2°·8 below, and night frosts (30) five above, the average. R 1·24 in., and rainy days 6, below the average. S on 8 days.

XV.—*Craigend Castle.* Cold, dry and frosty.—*Inverary, Newtown.* Cold, with severe frost late in the season.

XVI.—*Stronvar.* Dry and cold, with severe frosts and N. and N.E. winds.—*Coupar Angus.* Cold and dry, especially near the close. R only ·59 in., which fell as S. Frost on 25 nights.

XVIII.—*Ben Nevis.* The first half very cold, the mean temp. for the first 15 days being 15°·1 S on 15 days.—*Glenaladale.* Very cold and dry, with much sunshine and little wind. After the 16th a fine growing period of eight or nine days occurred, followed by a cold spell.—*Drumnadrochit.* Unusually wintry owing to S and frost. R ·58 in. below the average of six years.

XIX.—*Scourie.* Keen frost during the first week, with Aurora at night and sunshine during the day. Four inches of S on 7th; continued S and frost in the second week with about eight inches of S. Thaw on 16th and 17th, then frost and S again for almost the

whole of the remainder.—*Watten H.R.S.* Dry and cold with much S and frost

XX.—*Coolkelure*. Very dry and cold, with much frost at night and constant cold wind from N. to N.E.—*Killarney*. Dry and parching, especially after the 17th. Easterly winds prevalent and vegetation backward.—*Tipperary*. Very dry and cold.—*Derry Castle*. The driest March registered, the total R being only two-ninths of the average. Very harsh weather from 1st to 16th, seasonable from 17th to 27th, but very harsh again on the last four days.—*Castle Lough*. Fine and dry. Sharp frost about the middle.—*Broadford, Hurdlestown*. Dry and cold on the whole. R less than one third of the average and the smallest in March during the seven years recorded ; rainy days six below the average.—*Miltown Malbay*. The most inclement and cold March since 1867. Very little moisture, and that composed of S and H.

XXI.—*Kilkenny, Inch House*. The first half frosty and bitterly cold with occasional H and S ; the second half warm and sunny with frosts at night.—*Twyford*. The driest March on record in 18 years.

XXII.—*Tuam, Gardenfield*. Very dry. Very cold and frosty from 3rd to 14th, then mild to the 26th and the remainder very cold again.—*Lawderdale*. The first half very cold and harsh, the latter half dry and seasonable. The driest March recorded in nine years.

XXIII.—*Belfast, New Barnsley*. March came in fine and cold, and went out fine and warm, the last day being like July.—*Carrablagh*. The ardest month of the winter ; an exposed ther. fell to 25° in the last week.

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#### APRIL.\*

I. *Muswell Hill*. R .88 in., or 46 per cent. less than the average, maintaining the dry character of the year, the total fall for the four months being only 55 per cent. of the average of 20 years, and the least in any corresponding period during that time.—*Finchley, Etchingam Park*. Dry, except the last week, which was wet. An absolute drought of 15 days ended on the 11th.

II. *Abinger Hall*. Very dry, with a good deal of cold N.E. and N.W. wind, and some very severe frosts.—*Wallington*. The first half was very warm and sunny, the latter half cold and rather wet.

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\* See also *Met. Mag.*, May, 1892, p. 52.

Northerly winds prevailed throughout. R .24 in. below the average of five years. Total range of temp.  $51^{\circ}1$ .—*Hythe*. Very fine and dry till the 13th. S on the 15th and 16th, followed by keen frosty mornings and cold winds to the end of the month.—*Keston Tower*. Bright sunshine for the first ten or twelve days, with very high day temp. from 3rd to 9th. Fifteen frosty nights, which damaged fruit blossom. A heavy S storm on 16th. Wind chiefly northerly.—*Sheppey, Leysdown*. Warm days and cold nights; white frost nearly every morning. Wind generally E. or N.E.—*Brighton, Prestonville Road*. Very fine and dry till the 12th; less settled in the latter part.—*Lewes, Iford*. The first ten days hot; cold and dry afterwards, with a heavy fall of S on 16th.

III. *Throcking Rectory*. R .80 in. less than the average of ten years; duration of sunshine 186 hours.—*Bloxham Grove*. Fine and pleasant till the 12th, when it became cold, and so continued for some days, followed by milder weather, but from 27th to the end the weather was very stormy, with H and R and low temp. Prevailing winds northerly. R very small.—*Sedgebrooke*. Very cold throughout, winds mostly N. or N.E. R 1.05 in. below, or less than half, the average of ten years.

IV. *Walthamstow, Elm House*. Brilliant sunshine for the first eleven days, with warm temp., and nearly cloudless skies. The middle was very cold, with a remarkable S storm; rest of month cold and unseasonable, with isolated fine days. Frost in shade on 12 nights.—*Sudbury, Friars Street*. Very fine, bright, and warm at the commencement. Unsettled and cold, with S, after the 11th.—*Bishop's Hill*. The first half was very fine and hot, the latter half very cold, with frost almost every night. R .18 in. more than the average, and chiefly in the form of S and sleet.—*Woodbridge, The Cedars*. Many frosts at night, and everything very backward.—*Diss*. Brilliant, and almost cloudless skies, till the 12th, but cold northerly winds after the 6th, then cold, snowy weather till the 18th, improving but with frequent showers to the end of the month.

V. *Bishop's Cannings*. Dry and cold; hardly any grass, and few trees in leaf at the close. R 1.49 in. below, or less than one-third of, the average.

VI. *Further Barton*. A drought of 15 days, with bright sunshine, ended on the 11th, and N. winds brought sleet and S, the cold spell lasting till the 19th.—*Cheltenham*. Brilliant days and cloudless skies from the 1st to the 11th; cold and miserable with S from 12th to

18th. Frost on grass on 23 days.—*Ross, The Graig*. The max. temp. for the first eleven days averaged  $68^{\circ}\cdot2$ , unprecedented for such a continuous spell of heat. The change to cold on 13th was equally remarkable, a fall of  $38^{\circ}$ . R only half the average, and principally in the form of S. The number and intensity of frosts exceeded any April since 1859.—*Burton, Derby Road*. The driest April since 1881. R 1·06in. below the average. S on four days.—*Bedworth Cemetery*. Very fine and warm days, but cold nights till the 10th, then very cold and dull, with frequent S and sharp frosts till the 17th. On 20th, the wind changed to W., and it became warmer though dull.

VII. *Ketton Hall*. Bright, fine and warm up to the 12th; changeable after and much colder, with S storms and severe frosts. There were 14 bright days, five of which were altogether clear. Wind northerly on 21 days.—*Bucknall*. The first week unseasonably warm, the remainder very cold, excepting 21st to 23rd. Very sharp frosts from 13th to 20th, especially on 14th and 16th.—*Brattleby*. Dry and warm for the first ten days, cold afterwards. Twenty frosts on ground.—*Southwell, Grants*. R nearly an inch below, and temp. slightly above, the average. Remarkable extremes of temp.—*Hodsock Priory*. Fine and dry, with warm days, but very cold and frosty nights. The average min. temp. was lower than in any of the previous 16 Aprils, while the average max. has only twice been higher. R less than half the average, and sunshine more than in any of the last eleven Aprils.—*Elvaston*. Very dry. Remarkably warm and summerlike during the first eleven days, afterwards cold and wintry for several days. Grand display of aurora on 25th. Fourteen frosty nights.

VIII. *Knutsford*. Cold nights throughout, keeping vegetation backward. Frost probably occurred on at least twenty nights.—*Southport*. R somewhat below the average. The first twelve days very warm, dry, calm, and hazy; particularly cold from 13th to 19th. Frost on eight nights. Duration of bright sunshine nearly 90 hours more than the average.—*Seathwaite Vicarage*. Very ungenial, in spite of much bright sunshine, owing to cold winds and repeated night frosts, some of quite winter severity.

IX. *Harrogate, Bog Valley Gardens*. High temp. during the first eleven days, and the dryness of the atmosphere phenomenal. The remainder of the month was winterly.—*Driffild, Beverley Road*. Warm at the commencement; cold from 6th to 19th, with E. winds; very winterly about the 15th, with S on two or three days.

R deficient in the early part. Heavy R and sleet on 27th and 28th. Great range of temp. ; air very dry and mild.—*East Layton*. Generally cold and ungenial, with a few fine days, but on the whole very changeable. Frost on twelve nights.

X. *Whorlton*. Very cold, with much N. and E. wind.—*Ulpha Vicarage*. Characterized by extremes of temp., N. and N.E. winds, and many frosts. R small, and much needed at the close.—*Nether Wasdale*. Unusually dry, with hot sun by day, but N.E. winds and generally frost at night.—*Keswick, The Beeches*. Fine and warm till the 11th, the remainder cold, hard frost prevailing from 13th to 19th, with almost daily S showers. Bright sunshine 269 hours.

XI. *Llanfrechfa Grange*. The early part very hot and sunny, bringing on vegetation rapidly ; the latter part very cold.—*Llanvihangel Court*. Cold, though with much sunshine ; wind N.E. till 17th, S.W. and W. from 19th to 21st, and then N.W. or N.E. to the end. Frequent S in the middle of the month.—*Douglas, Woodville*. Bitterly cold and dry, with strong polar winds. Almost nightly frosts during the first half. Much bright sunshine, but probably the coldest April on record. S fell on five, and H on two, days.

XII. *Melrose, Abbey Gate*. R slightly below the average. Frequent S in the middle of the month, and again towards the end, the Eildon hills being white on the 26th and 28th. Ice formed on 17th, 18th, 19th, and 29th.

XIII. *Edinburgh, Blacket Place*. Sunshine was abundant, but excepting the first six days the weather was cold and unseasonable. S on five days.

XV. *Craigend Castle*. A dry month ; the first half mild, the second half cold.

XVI. *Dollar*. Cold and frosty almost throughout.—*Stronvar*. Very cold. N winds prevalent, and a great deal of frost. R small, but mostly fell as sleet or S.—*Coupar Angus*. R about 1.45 in. below, or little more than a quarter of, the average.

XVIII. *Ben Nevis*. The first eleven days were very fine and warm, but afterwards cold snowy weather predominated.—*Glenaladale*. Very fine and warm for the first eleven days, the remainder cold. Vegetation very backward.

XIX. *Scourie*. Very fine till the 10th, then extremely wintry, with H showers. Six inches of S about the 14th, and very cold to the end.—*Watten*. Dry, cloudy, cold, and frosty, with biting northerly winds. The coldest April for many years.

XX. *Coolkelure*. Very harsh, dry, and cold ; much of the moisture which fell was sleet or very cold R. Wind nearly always rough and cold, from N.N.E. and E, with frequent night frosts.—*Cork, Clarence Place*. The smallest R in April for over 20 years.—*Waterford, Brook Lodge*. The driest April since 1870, R .98 in.—*Derry Castle*. Dry, warm days, but cold nights till the 13th, then four days with S and H, and daily showers from 19th to the close. R 30 per cent. below the average of 10 years.—*Castle Lough*. Rather cold, and the first half very dry.—*Miltown Malbay*. The first three weeks dry, with frost at night, and brilliant sunshine by day. The frosts on the nights of 11th to 14th were the severest known in April. Changeable and cold at the end of month.—*Hurdlestown*. Very dry, the R being less than half the average of seven years : rainy days also below the average.

XXI. *Kilkenny, Inch House*. Very dry, with night frosts ; H and S showers from 13th to 17th, the ground being covered all day on 16th.

XXII. *Tuam, Gardenfield*. Mild to the 13th, and very dry to the 19th, the remainder variable.—*Lawderdale*. The first half very warm and dry, then very cold for a week in the middle, and the last week seasonable, with light R.

XXIII. *Belfast, New Barnsley*.—Warm spring weather from 1st to 6th, frost every night from 7th to 11th, and still colder, with S showers, from 12th to 18th ; fine growing weather from 19th to 26th, and then showery to the end.—*Killybegs*. A remarkable month ; up to the 15th R fell on only three days ; on 16th there was S, and during the remainder of the month only two days were without R.—*Carrablagh*. The first half dry and not cold ; the third week very inclement, with raw N. and N.E. winds, bringing frequent S showers. R small.

## MAY.

I. *Kensington, Edith Road*. Fine and warm. The last nine days extremely warm.—*Muswell Hill*. R .67 in., or 31 per cent., less than the average of 27 years. From the 1st to the 23rd .37 in. of R fell on seven days, while in the next three days 1.09 in. fell. The R of the first four months of the year is nearly 42 per cent. below the average.—*Finchley, Etchingham Park*. The fifth consecutive month of deficient R, the total being about seven-tenths of the average.



II. *Haslemere, Hazelhurst*. Very dry ; rainwater tank dry for the first time known.—*Abinger Hall*. Very dry till the 24th (only .09 in. of R), then refreshing rains, which were much wanted for hay.—*Wallington*. Warm, dry and genial, with the exception of a very few days. R little more than half the average of five years.—*Hythe*. Very dry, with cold winds, in the early part ; remarkably fine and dry in the latter part.—*Keston Tower*. Very fine, and the last week unusually warm. Very little R.—*Leysdown*. Generally hot and dry. Wind E. or N.E. during the greater part.—*Brighton, Prestonville Road*. Fine and dry to the 25th, when a severe TS occurred.

III. *Throcking Rectory*. R .39 in. below the average of ten years ; Duration of sunshine 154 hours.—*Bloxham Grove*. Cold and ungenial till 3rd, followed by ten days of fine weather, then higher temp. and occasional showers.

IV. *Walthamstow, Elm House*. Taken altogether, fine, sunny, and warm, with sharp frosts on one or two nights. Very warm at the end, with frequent TSS and R. R rather below the average. Frosts in shade on three nights. Temp. above 80° in screen on two days.—*Woodbridge, The Cedars*. Unusually warm and sunny.—*Diss*. A brilliant and warm 1st was followed by five cold drizzling days, and then by a week of splendid but somewhat cold weather. Changeable again to the 22nd, and then warm and bright to the end.—*Denver*. The early part unusually cold, warmer in the last week, and the last day very warm.

V. *Warminster, Rye Hill*. Cold and dry on the whole, with sharp frosts in the early part ; the last week warm.—*Bishop's Cannings*. Bright, sunny, dry days, and cold nights.

VI. *Further Barton*. Very dry until the last week, then showery with T. Particularly fine from 5th to 13th.—*Ross, The Graig*. The drought which commenced in December, 1891, may be said to have ended on the 25th ; it was broken up by a succession of TSS. The last week was very warm, and vegetation, which had been checked so long, made rapid progress.—*Cheadle, The Heath House*. Fine on the whole, with some sharp frosts in the first fortnight ; good growing weather after the 13th.—*Bedworth Cemetery*. Hot days and frosty nights till the 6th, then mild for four days, and frosty nights again till the 12th, followed by refreshing showers ; cold nights from 19th to 23rd, and frequent T from the 24th to the end.

VII. *Ketton Hall [Stamford]*. Very dry, especially at the beginning. R .87 in. below the average of ten years.—*Bucknall*. Heavy cold R

on the 3rd, and the weather remained cold till the 8th, after which it was warm and showery to the close.—*Brattleby*. Fairly dry ; cold at the beginning, but quite hot for the last ten days.—*Southwell, Grants*. The first half dry, the remainder showery. R 1·08 in., and temp. 1°·5, above the average.—*Hodsock Priory*. Rather cold at first, but the latter part warm and showery, and everything making rapid growth.—*Willington*. The first week very cold and backward, followed for the rest of the month by warm, showery, growing weather, vegetation making up for lost time.—*Elvaston*. Very pleasant and genial, the second half being remarkably warm. Great progress in vegetation. Frost on two nights.

VIII. *Southport*. The first week unusually cold, but excessive heat during the last nine days. R more than an inch above the average. Practically no R till 13th, then almost daily. The cloudiest May on record.—*Seathwaite Vicarage*. Too little R in the first half and too much in the latter, 16 out of 20 days being wet. Vegetation backward.

IX. *Driffield, Beverley Road*. Frosty and ungenial to 13th, when a period of exceptionally fine growing weather began, and continued to end of month, with much R and many TSS.—*Baldersby*. The Hambleton hills (1,000 ft. high) were covered with S during the first week.

X. *Whorlton Green*. Very cold, with much high wind.—*Ulpha Vicarage*. After 14 days (ending on 11th) without R, the weather was unsettled, with some heavy falls. It was, however, warm and genial. Frost on only one night.—*Nether Wasdale*. Remarkably fine, dry, and genial.—*Keswick*. The first week was fine but very cold ; from 7th to 12th quite summerlike ; and after that date R fell daily, excepting on 25th.—*Keswick, Shu-le-Crow*. The first eleven days were rainless ; but during the remainder R fell daily.—*Newton Reigny*. The first part was dry and very cold, with severe frosts at nights. R set in on the 12th, and fell nearly every day till the end.

XI. *Llanfrechfa Grange*. Dry and cold, all vegetation very backward and R much needed.—*Llanvihangel Court*. Very dry, R much needed. Wind N.E. and variable to the 11th ; then chiefly N.W.—*Douglas, Victoria Road*. May came in with bitter N.E. winds, and continued drought, followed by four mild, springlike days (9th to 12th), when the drought broke up and the rest of the month was cold and wet, and for a spring month unusually stormy.

XII. *Melrose, Abbey Gate.* R 1·35 in., and rainy days 2, above the average.

XV. *Craigend Castle.* Mild, with the much-needed R.

XVI. *Dollar.* The first half dry, the second half cold and wet.—*Stronvar.* Frost nearly every night till the 12th, followed by R every day to the end.—*Coupar Angus.* The nights were generally cold, and the days dry, sunny and barren, till R came on the 12th, and fell daily till the end, with a rising temp. R ·88 in. above the average.

XVIII. *Glenaladale.* Fine on the whole ; much R after 12th, and vegetation came on rapidly.—*Loch Maddy.* R 8·73 in., the heaviest in May, since 1874.—*Drumnadrochit.* R ·79 in. more than the average of six Mays.

XIX. *Watten, H.R.S.* The first half dry and cold, with little sunshine ; the latter half wet and cloudy, but more genial.

XX. *Cork, Clarence Place.* Temp. and R both about the average.—*Killarney.* Very arid up to the end of the second week, after which S.W. winds prevailed, with R and sunshine, promoting rapid growth.—*Derry Castle.* Favourable on the whole, though rather harsh during the first half, and with insufficient sunshine at the close. Hot sunshine by day, but cold and often frosty nights till the 11th ; only two rainless days afterwards.—*Castle Lough.* The first part fairly dry, but very rainy after the 12th.—*Broadford, Hurdlestown.* The first half was dry and cold, the last half wet ; R ·97 in. above the average of seven years.—*Miltown Malbay.* The first eleven days were dry ; the remainder of the month was seasonable, dropping and boisterous, giving a spurt to vegetation.

XXI. *Kilkenny, Inch House.* Raw, cold and very wet at the beginning ; lovely from 4th to 11th ; stormy, showery and cold from 12th to 23rd ; lovely again from 24th to 27th ; the remainder dull, wet and stormy.—*Currygrane.* Very stormy, with an almost continuous downpour of R.

XXII. *Tuam, Gardenfield.* Wet on the whole ; fine from 2nd to 12th, the remainder wet or showery.—*Lawderdale.* Dry and warm till the 11th, and R much required for grass and crops. From the 12th to the end wet and cold.

XXIII. *New Barnsley.* Cold and dull at the beginning, then stormy till the 7th, and fine and warm till 11th. R almost daily from the 12th to the close.

## JUNE.

I. *Muswell Hill*. R about 10 per cent. in excess of the average. — *Etchingham Park*. R about 20 per cent. above the average, this being the first month of the year with an excess.

II. *Wallington*. Comparatively cool and wet, but on the whole favourable to farmers and gardeners. R nearly twice the average of five years.—*Hythe*. A very fine growing month, with occasional heavy R.—*Keston Tower*. Fine on the whole, but sharp ground frosts on the 14th and 15th.—*Sheppey, Leysdown*. Generally fine and warm; some days intensely hot, and a few rather cold.—*Brighton, Prestonville Road*. Generally unsettled; cold at the end of the second week, warm towards the end of the month. R .57 in. below the average of four years.—*Maidenhead, Castle Hill House*. Warm, and the first half dry, but the latter half rather wet.

III. *Throcking Rectory*. R 1.19 in. above average; duration of sunshine 158 hours.—*Bloxham Grove*. The month opened with steady R and was showery till 5th, followed by six fine hot days; a cold and gloomy week then occurred with a destructive frost on the 14th. From 19th to 23rd the R was considerable, but the remainder of the month was fine and hot.

IV. *Walthamstow, Elm House*. Hot and dry at the commencement; a cold period about the middle; warm, bright and thundery at the end. Very sunny, pleasant and seasonable on the whole. Temp. rose above 80° twice.—*Ipswich, Bishop's Hill*. Remarkable for great and sudden changes of temp. a white frost occurring on 14th. R .25 in. more than double the average.—*Diss*. Some R on the 2nd, but otherwise magnificent hot weather till the 11th, then colder till the 19th, with frost on the 18th. There were heavy rains on the 22nd, 23rd, and 28th, a furious TS raging on the latter day. Altogether it was a beautiful month, and very warm and bright during the last 10 days. *Denver*. Remarkable for sudden variations from great heat to great cold, similar to June 1881.

V. *Bishop's Cannings*. R .91 in. below, or rather less than two-thirds of, the average.—*Stowell Rectory*. Moderately dry and rather cool.

VI. *Further Barton*. Unsettled till the 5th, then very fine and warm with 10 days quite dry; after that a cold, showery fit set in, with frost on the 15th; a thundery period followed, but all the

storms were distant until the 28th.—*Ross, The Graig*. But for heavy showers on the 1st, 4th, 22nd and 28th, it was a very dry month. The 9th and 10th were very hot, and the nights from the 13th to 20th were very cold, potatoes and beans being damaged by frost.—*Bedworth Cemetery*. The first part very hot, then a spell of cold wind and a frost at the end of the second week, which did much damage to vegetation.

VII. *Leicester, Rotherby Hall*. The wettest June since 1883. Frosts on grass occurred on 4 nights, and the grass min. on 15th fell to 25°.—*Ketton Hall*. Warm and bright till the 10th, changeable after, with some very cold nights and a frost on 14th doing much damage. Wind westerly on 21 days. R considerably above the average.—*Bucknall*. Very droughty, with great variations of temp. up to the 28th, when 2·27 in. of R fell in a TS.—*Brattleby*. An uncertain month; warm and fine periods succeeded by cold and wet ones; 5th to 10th hot, 11th to 19th comparatively cold. TSS on six days.—*Southwell, Grants*. Cold and wet. A warm period from 5th to 10th, but R nearly every day after.—*Worksop, Hodsock Priory*. Cool and showery, but rather sunny. The R, which is more than 50 per cent. above the average, would have been normal but for the heavy TS on 28th.—*Elvaston*. The first part fine and generally warm, afterwards frequently windy, showery and cooler.

VIII. *Southport*. The middle of the month cold; the first ten and last ten days considerably warmer. R about ·50 in. above the average.—*Seathwaite Vicarage*. Rainy, with temp. mostly below the average, with the exception of a warm spell from the 4th to the 10th.

IX. *Driffild, Beverley Road*. Very cold and wet. R much above, and mean temp. and amount of sunshine below, the average, although there was a brilliant spell from 7th to 9th. TSS frequent though not severe.

X. *Whorlton Green*. Much R, much wind, and some T and H.—*Ulpha Vicarage*. A pleasant month with moderate R. With the exception of the four days (7th to 10th), the temp. was low.—*Keswick*. Very fine and hot from the 7th to the 10th; the rest of the month cool and somewhat showery.—*Uldale Rectory*. A “dripping June” with 3·04 in. more R than the corresponding month last year.

XI. *Llanvihangel Court*. Temperate up to the 10th, which was a very hot day; suddenly cold on the 13th, 14th, and 15th. In the last half of the month the temp. gradually rose.—*Douglas, Victoria*

*Road.* Except three warm days from 7th to 9th, cold and ungenial with much strong parching wind. R very unequally distributed and vegetation suffering.

XII. *Melrose, Abbey Gate.* Very cold on the whole, except from 6th to 9th. R 2·22 in. or 125 per cent., and rainy days seven, above the average. Frost on seven nights.

XV. *Craigend Castle.* Cold, wet and backward.—*Inverury.* Cold throughout, except on the 8th and 9th, which days were intensely hot. No TSS.

XVI. *Stronvar.* Very low temp. and much less sun than usual.—*Coupar Angus.* R ·74 in. above the average. The max. temp. on 9th (85°) is the highest in June for 12 years, and the max. on 25th (51°) is the lowest, with one exception, in the same period.

XVIII. *Ben Nevis.* S fell on seven days.—*Glenaladale.* Chilly and windy, with frost on the 13th.—*Loch Maddly.* Temp. exceptionally low during the whole month, and the weather quite unsummerlike even for the Western Islands.—*Drumnadrochit.* Most unseasonable from the 11th to the 19th, with a very destructive frost on the 12th. R more than double the average of six years, and the largest in June during that period.

XIX. *Scourie.* Abnormally cold, with frequent R and high winds.—*Watten.* Wet and cloudy, with frost on several nights in the last week.

XX. *Cork, Clarence Place.* R about ·25 in., and temp. 3°, below the average.—*Derry Castle.* Very favourable, with abundance of sunshine and sufficient moisture to promote vegetation. R 12 per cent. below the average.—*Hurdlestown.* Very favourable on the whole; R ·25 in. below the average of seven years.—*Miltown Malbay.* With the exception of a few nights of slight frost, which, in some low lying districts did partial injury to potato stalks, the month was all that the agriculturist could desire, warm and genial without oppressive heat or drought.

XXI. *Kilkenny, Inch House.* Fine with warm sunshine; some H showers.

XXII. *Tuam, Gardenfield.* Showery to the 4th, then mostly dry till the 20th and variable afterwards. Fine and warm from 5th to 11th; slight frosts about the middle.—*Lawderdale.* An average month, with only a few hot days.

XXIII. *Belfast, Springfield.* Cold and wet till the 5th, then warm and sultry till the 10th, with T and heavy R on that day; thence to

the 17th cold as March, followed by showery and warmer weather till the 26th, and very fine till the 30th, when T and heavy R again occurred.

## JULY.

I. *Muswell Hill*. R .88 in., or 31 per cent., less than the average of 20 years. None fell after the 19th, except .01 in. on the 31st.—*Finchley, Etchingam Park*. R about seven tenths of the average, falling on nine days. In the four days, 16th to 19th, 1.37 in. fell, being a little more than two-thirds of the total, followed by 11 consecutive dry days.

II. *Abinger Hall*. The latter half was not very genial, and, although dry, there was much N. and N.E. wind.—*Wallington*. Fairly warm and dry, but cloudy and rather dull. R less than half the average of five years.—*Hythe*. Cool, with strong winds, and dry, with the exception of a few heavy showers.—*Keston Tower*. Fairly pleasant, but the coldest July on record except 1890, which was slightly colder.—*Birchington*. Cold and dull generally, N. and N.E. winds prevailing.—*Sheppey, Leysdown*. Generally cold and wet, with comparatively little sunshine.—*Brighton, Prestonville Road*. Fine and warm at the commencement, succeeded by a period of changeable, and, at times, cold, dull and stormy weather; some recovery of temp. towards the close.—*Maidenhead, Castle Hill House*. Warm and rather wet.

III. *Throcking Rectory* R .11 in. above average; mean temp.  $4^{\circ}5$  below average.—*Bloxham Grove*. The first three days were fine and hot, the heat on the 3rd being intense. A change then set in, and from the 5th to the 20th, with some exceptions, cold gloomy weather prevailed, with low night temp. From the 20th to the 30th no R fell, and the days were mostly fine and pleasant.

IV. *Walthamstow, Elm House*. Fine, hot, and dry for the first few days, then cooler and showery. From 12th to 19th cold, wet, and rough; thence to the end hot and dry. Temp. above  $80^{\circ}$  on one day.—*Ipswich, Bishop's Hill*. R 1.15 in. below, or little more than half, the average.—*Diss*. With the exception of a rather heavy R on the 5th, the weather was fine, but decidedly cool, till the 12th, when a very heavy R was followed by unsettled wet and cold weather till the 20th. After that it was dry but sunless till the 28th; bright weather followed, but the last day was gloomy with slight R.—

*Denver.* Very cold and wet during the first two and a half weeks, the max. temp. on the 14th ( $55^{\circ}$ ) being the lowest recorded in July.

V. *Bishop's Cannings.* R  $\cdot 56$  in. below the average.

VI. *Further Barton.* Very warm the first few days, then a wet, windy, cold period till the 20th, when fine and warmer weather set in, which lasted till the 31st.—*Ross, The Graig.* Only one hot day, viz., the 3rd ( $82^{\circ}7$ ). On 22 days the max. did not reach  $70^{\circ}$ , and on five it did not reach  $60^{\circ}$ ; as a consequence of this and of the previous drought, vegetation was not so vigorous as usual, notwithstanding drenching showers on the 5th, 12th, and 16th.

VII. *Ketton Hall, [Stamford].* Very changeable and showery to the 20th; finer after, with seven bright days. Wind northerly on 19 days; temp. varied greatly.—*Brattleby.* Warm for the first ten days, afterwards mostly cold. No. TSS.—*Southwell, Grunts.* Very cold and sunless. Showery weather from 4th to 20th, followed by ten days without R.—*Worksop, Hodsock Priory.* The coldest July for at least 17 years, and the duller but one (1888) of the last 11. A temp. of  $70^{\circ}$  was reached only twice. R slightly below the average.—*Elvaston.* The first part rather unsettled. After the 3rd, the weather was generally very cold and ungenial, owing to the prevalence of very strong winds from the N.E.

VIII. *Knutsford.* Cold between the 3rd and 21st, with scarcely any sun; the nights generally cold throughout.—*Bolton, The Park.* The weather of the first 19 days was unsettled, with low temp., but from the 20th to the close it was dry and bright. R  $\cdot 12$  in. above the average.—*Southport.* Thoroughly cold; R little more than half the average; sunshine deficient.—*St. Michael's-on-Wyre.* The driest July since 1878.—*Scuthwaite Vicarage.* The former part showery and rather cool, but improvement in the latter half, the last ten days being bright and warm.

IX. *Driffield, Beverley Road.* Dull and cold, with great deficiency of sunshine; several sunless days, and the mean temp. much below the average.—*Scarborough.* Much cold and sunless weather; mean temp  $4^{\circ}5$  below the average. R  $1\cdot58$  in. below, or less than half, the average.—*East Layton.* Wonderfully dry, with much cold weather in the early part.—*Guisborough, Redcar Road.* Cheerless on the whole, with sunshine on only a few days. E. and N.E. winds prevailed with cloud and mist.

X. *Ulpha Vicarage.* The R was confined to 13 days, but was often heavy and accompanied by high winds. The wind for the last half



was almost uniformly N. or N.E. Temp. generally rather low.—*Keswick*. The first nine days were rather showery ; from that time to the end, with the exception of the 19th, which was very wild and wet, the weather was fine and dry, no R falling from the 9th to the 18th, and from the 20th to the 29th. Duration of sunshine, 218 hours.—*Keswick, Shu-le-Crow*. Cold and sunless, the temp. exceeding 70° on only five days at the end, and on four days not reaching 60°. —*Uldale Rectory*. By far the most brilliant month of the year, and the hay crop very heavy.

XI. *Llanfrechfa Grange*. Fine and unusually dry.—*Monmouth, The Hendre*. During the last fortnight the wind was from E. or N.E., and was very cold.—*Douglas, Victoria Road*. July came in cold, wet, and stormy, and strong northerly winds and gales prevailed from the 4th to the 13th. Heavy R fell on the 9th, and a severe gale occurred on the 19th. The remainder was fine calm, and bright on the whole, but the temp. was persistently below the average.

XII. *Melrose, Abbey Gate*. Cold and unsettled, with heavy falls of R at the beginning ; the latter part very fine. R 1·67 in. below, or about three-fifths of, the average.

XIII. *Edinburgh, Blacket Place*. Dull, cold, and dry throughout ; only 120 hours of bright sunshine. E. winds unusually frequent.

XV. *Inverary, Newtown*. Said to be the driest July ever known here. R on only two days from 10th to 29th.

XVI. *Stronvar*. Temp. low until the 23rd, but a great improvement afterwards.—*Coupar Angus*. R about 1·50 in., and temp. about 1°·5, below the average.

XVIII. *Glenaladale*. Fine and warm, with the exception of the first week, which was wet and chilly.—*Loch Maddy*. The early part was cold and raw, but the last ten days were exceptionally hot.—*Drumnadrochit*. R 1·09 in. below the average of six years, and the smallest in July, except in 1889.

XIX. *Scourie*. Very little sunshine. For the greater part the weather was more like November than a summer month.—*Watten*. The first half was wet, cold, and cloudy, and the latter half, cloudy, but mild and fine. Very little sunshine.

XX. *Coolkelure*. Curiously wet during the first half, and almost rainless during the latter half.—*Cork*. The first half was remarkably wet, all the R falling in the first 16 days. The latter half was more favourable, being drier and warmer. R slightly above the average.—*Darrynane Abbey*. R 6·55 in. The heaviest R in July in the 13

(not consecutive) years recorded.—*Killarney*. The first half cold and showery, and most unsummerlike, the second half warm and fair.—*Derry Castle*. The first half was wet and stormy, but glorious summer weather prevailed from the 16th to the close. R  $\cdot 53$  in., or 11 per cent., and rainy days six, less than the average of ten years.—*Castle Lough*. The first half very rainy, the second half very favourable for saving hay.—*Broadford, Hurdlestown*. R  $1\cdot 55$  in. above, and rainy days four below, the average of seven years. On the whole a favourable month for farmers.—*Miltown Malbay*. The first 20 days were boisterous, cold, and moist; the remainder of the month was seasonable, dry, warm and sunny, splendid for hay-making and ripening the crops.

XXI. *Kilkenny, Inch House*. The first half cloudy, wet, and wild; the second half perfect summer weather.

XXII. *Lawderdale*. The first week was very wet, the rest of the month dry, and most favourable for hay harvest.

XXIII. *Belfast, Springfield*. From the 1st to the 9th cold, wet, and miserable; 10th to 17th, fine summer weather; a passing storm from the west on the 18th and 19th; thence to the end lovely summer weather.

## AUGUST.

I. *Muswell Hill*. R  $\cdot 48$  in. or 17 per cent., above the average of 20 years. During the first 22 days only  $\cdot 79$  in. of R fell, and in the remaining 9 days  $2\cdot 44$  in.

II. *Abinger Hall*. The first part of the month was dry and water was becoming scarce, but a fall of  $1\cdot 60$  in. of R occurred on 27th.—*Wallington*. Warm and rather wet, especially in the latter part. R  $\cdot 98$  in. or nearly 50 per cent. above the average of 5 years.—*Hythe*. Fine to the 12th; afterwards wet and stormy.—*Keston Tower*. Warm and pleasant, but no very hot weather. A good deal of R, especially in the last week.—*Birchington*. Stormy and wet generally, with much T and L.—*Sheppey, Leysdown*. Generally wet and stormy, one of the worst harvest seasons on record.—*Brighton, Prestonville Road*. The latter half was unsettled, TSS being frequent, and the weather oppressively close and warm.—*Emsworth, Redlands*. The first half was hot and dry; strong winds and gales occurred on the last 4 days.—*Maidenhead, Castle Hill House*. Warm, but the wettest month of the year. Heavy R on the 18th,  $1\cdot 33$  in., and on 27th  $1\cdot 62$  in.

III. *Throcking Rectory*. R 1·36 in. above average ; duration of sunshine 147 hours.—*Bloxham Grove*. Very variable. There were three periods, of from four to five days each, of fine weather with showers between, but from the 27th to the end R fell daily.—*Sedgbrooke*. Rather unsettled, but the middle part fine and hot. R ·17 in. above the average of 10 years.

IV. *Walthamstow, Elm House*. The first half fine, hot and dry with only occasional R ; a few wet but warm days in the middle, and the last part warm and showery. Temp. above 80° on two days. R above the average, nearly all falling in the last half.—*Bishop's Hill*. R 2·03 in., or 80 per cent., above the average, and the greatest in August during the 20 years recorded.—*Rendlesham Hall*. Very heavy R and stormy S.W. winds during the latter half, doing much damage to corn and causing considerable floods. The wettest August for many years.—*Diss*. The first half was dry and cold, the temp. falling to 30° on the nights of the 8th and 9th. The latter half was much warmer, with electrical disturbance and some very hot days. Though R fell on only 10 days it came so as to delay harvest.

V. *Bishop's Cannings*. R 1·87 in., or about 75 per cent. above the average. The water in a deep chalk well was 100 feet below the surface, 6 ft. lower than at any time in 1891.—*Stowell Rectory*. A month of average temp. and heavy R.

VI. *Further Barton*. Fine and warm on the whole, only four days in succession without R.—*Ross, The Graig*. Fine, with the exception of the last week, during which two heavy TSS occurred, and rather more than two inches of R fell, There was much pleasant but not hot weather.

VII. *Ketton Hall [Stamford]*. Very changeable. Wind in a westerly direction on 23 days.—*Brattleby*. Except for the last week a really fine and hot month ; much high wind.—*Southwell, Grants*. Temp. and R about the average ; little R fell till the 29th.—*Worksop, Hodsock Priory*. Cool and rather cloudy, but with very little R till the last three days.

VIII. *Bolton Park*. Somewhat unsettled, with R rather below the average of seven years.—*Southport*. R more than an inch above the average, rainy days numerous, and a great deficiency of sunshine.—*Cartmel, Pit Farm*. Exceptionally wet, R 8·80 in. More than an inch fell on three days, and 3·19 in. fell in the 24 hours ending 5.30 p.m. on 8th.

IX. *Otterburn in Craven*. Another very wet August, R 8·71 in In

the corresponding month of 1891 9·15 in. fell, and these are the two wettest months in 21 years.—*Scarborough*. Mild, but much dull, and very little settled weather. The third week foggy.—*East Layton Hall*. Somewhat showery, but some nice warm weather about the middle.

X. *Whorlton*. Much R with cold N. wind. One very hot week after the 21st.—*Keswick*. Stormy, changeable weather prevailed throughout, but the month was a great improvement on August 1891. *Netherhall*. Extraordinarily wet, five days on which over an inch of R fell; total, 8·60 in.

XI. *Llanvihangel Court*. Very fine till the 23rd, notwithstanding small quantities of R on 12 days.—*Douglas, Victoria Road*. The weather broke up completely on the 7th, the rest of the month being very wet and stormy, and for the most part cold, with the exception of the 22nd and 25th, which were fine and even warm.

XII. *Ardwell*. The heaviest R in August (7·01 in.) since the record commenced.—*Melrose, Abbey Gate*. R ·41 in. above, and rainy days six below, the average. Wind from S. and W. on 23 days.

XIII. *Edinburgh*. Though the temp. was the average, warm days were very rare. R nearly double the average.

XVI. *Dollar*. Dull and very rainy, especially in the second half.—*Stronvar*. Low temp. and excessive R (10·80 in.), the fall on four days exceeding an inch.—*Coupar Angus*. R ·92 in. above the average; only twice did two successive rainless days occur.

XVIII. *Glenaladale*. Rather ungenial and only four rainless days. *Loch Maddy*. Good on the whole; high winds on a great many days.—*Drumnadrochit*. R 1·13 in., and number of rainy days four, above the average of six years

XIX. *Scourie*. R on 24 days, and the fall greatly in excess of the average.—*Watten*. The first half was mild and fine, with a good amount of sunshine; the latter half cold, wet, cloudy and almost sunless.

XX. *Coolkelure*. The wettest August on record. The R chiefly of a thundery character, though scarcely any T was heard or L seen. Harvesting almost impossible.—*Cork, Clurence Place*. R the greatest in August during 27 years; temp. low.—*Killarney*. Only two fine days in the month, and the heaviest R in any month since January 1890.—*Mobarnane*. R unprecedented, 6·07 in.—*Derry Castle*. The wettest August recorded here except 1891, and the greatest mountain floods remembered occurred on the evening of the 14th. R more than

double, and wet days five above, the average of ten years.—*Castle Lough*. At the beginning of the month the weather was favourable, but after the 11th there were only four dry days, the R being heavy and incessant.—*Broadford, Hurdlestown*. R 1·08 in. above the average; rainy days just the average.—*Miltown Malbay*. R much in excess of the average; temp. rather warm and equable; not much T.

XXI. *Kilkenny, Inch House*. Excepting the 9th and 10th, dark, cloudy and wet till 16th; from 17th to 28th very fine; wet and very stormy on 29th and 30th.—*Currygrane*. Almost a continual down-pour of R.

XXII. *Tuam, Gardenfield*. The wettest month since observations commenced in 1866; showery till 6th, very few dry days after.—*Lauderdale*. Very wet and unseasonable, much against harvest work.

XXIII. *Arley*. The wettest month since observations commenced in January 1887. Much damage done to standing corn by heavy R and strong winds.—*Belfast, Springfield*. Not much R till the 7th, when 1·25 in. fell; then showery (except two days) till the 14th, when 1·20 in. fell. R from 16th to 18th, and then fine till the 22nd, then showery, with the exception of the 25th, till the end. Temp. variable, sometimes sultry and the following day cold as October.—*Carrablagh*. A wet month but fairly good during the first half.

## SEPTEMBER.

I. *Muswell Hill*. R ·87 in., or 35 per cent., more than the average of 20 years. The last 12 days were wet, 2·94 in. of R falling, being more than seven-eighths of the total.—*Finchley, Etchingam Park*. The first 18 days were generally dry, during which time only ·59 in. of R fell, while during the last 12 days 2·86 in. fell. The R exceeds the average by about an inch, or 40 per cent.

II. *Wallington*. The month, though pleasant and fairly dry, was mainly notable for its comparatively low, but constant mean temp. R about 50 per cent. above the average of five years.—*Hythe*. With the exception of the last three days the weather was very favourable for harvest.—*Keston Tower*. Fine and very pleasant, with temp. above the average.—*Sheppey, Leysdown*. Generally fine and warm, the most summer like month of the year.—*Brighton, Prestonville Road*. Very wet and stormy at first, then finer, but wet and stormy again after a TS on 20th. R 1·76 in. above the average of four years.

III. *Throcking Rectory*. R  $\cdot 33$  in. above average ; duration of sunshine, 91 hours.—*Bloxham Grove*. Very variable ; from the 11th to the 18th fair, which enabled some progress to be made with the harvest ; from the 18th to the end, frequent and heavy R.—*Sedgebrooke*. The first four days were wet and squally. From the 7th to the 18th the weather was dry, bright and fine, then changeable to the end.

IV. *Walthamstow, Elm House*. September opened showery and cool ; much warmer and finer in the middle, with local TSS about the 20th ; then wet but warm until within a few days of the close, after which it became very wet and colder.—*Bishop's Hill*. Fine and pleasant on the whole. R  $\cdot 40$  in. less than the average.—*Diss*. The month set in with four days of unsettled weather followed by a brilliant spell till the night of the 19th, when heavy R fell and continued with a TS till the evening of 20th. A great downpour occurred on 21st,  $\cdot 90$  in. falling between three and five p.m., and the remainder of the month was unsettled.

V. *Bishop's Cunnings*. R slightly below, but rainy days above, the average.—*Rose Ash*. Mostly warm and beautiful, but  $2\cdot 49$  in. of R fell in three days, 28th to 30th.—*Stowell Rectory*. A month of moderate R. Temp.  $1^{\circ}8$  below the average.

VI. *Further Barton*. The first week cool and showery, the second drier and warmer. Frost on the 18th followed by three wet days and R at the close.—*Ross, The Graig*. Principally fine till the 18th. The close of the month very wet, with some bright days intervening, but no hot weather.—*Bedworth Cemetery*. Cold and windy for the first four days, then 13 days of fine, warm autumn weather, followed by a sharp frost and variable weather till the end.

VII. *Ketton Hall [Stamford]*. Very changeable, but only a small quantity of R till the 20th, wet after. Wind westerly on 27 days.—*Brattleby*. Good harvest weather for the first three weeks, then cold and catchy.—*Southwell, Grants*. Cold and wet ; R  $\cdot 60$  in. above the average ; wetter than the preceding eight Septembers. More than half the total R fell on 20th. A fine period from 3rd to 19th.—*Hodsock Priory*. Rather cold, but otherwise fairly normal. The first three weeks fine, and the bulk of the harvest secured in good order, but the rest of the month showery and unsettled. R about 25 per cent. below the average.—*Elvaston*. Nearly average in all respects, yet rather showery.

VIII. *Bolton, The Park*. Showery with low temp., but the total R

only a quarter of an inch above the average of seven years.—*Southport*. A cold month with R above the average and rainy days frequent.—*Wray*. With one exception the wettest month during 15 years. R 8·82. Very heavy R fell at night on 1st, causing destructive floods on the Hindburn and Roeburn.—*Seathwaite Vicarage*. One of the rainiest and most trying Septembers for harvesting, experienced for years.

IX. *Driffild, Beverley Road*. A fine harvest month, work progressing with scarcely any interruption. Cold and dry, with several cloudless days. Sunshine below the average, as there were five dull days.—*East Layton*. A great absence of sunshine. T frequent throughout.

X. *Whorlton Green*. Much R and cold wind ; only one fine week.—*Ulpha Vicarage*. Wet, stormy and chilly. A few fine warm days between the 20th and 26th. A good deal of harvesting remains to be done.—*Keswick*. Cold and showery throughout, with only 138 hours of sunshine.—*Uldale Rectory*. With the exception of a few bright days the month was more than usually wet, cold and depressing.

XI. *Llanfrechfa Grange*. Fairly fine ; a good deal of the harvest secured, but some wheat not ready to cut at the close. Very few gales.—*Llanvihangel Court*. A somewhat gloomy month with low temp. Crops very late.—*Douglas, Victoria Road*. Cold, stormy and wet throughout—in a word, a “winter” month.

XII. *Melrose, Abbey Gate*. Cold and unsettled, with great absence of sunshine. R 1·03 in. below, or three-fifths of, the average.

XV. *Craigend Castle*. A dull and wet month.

XVI. *Coupar Angus*. Mean temp. almost 3° below the average, and the lowest in September for 12 years. R slightly below the average.

XVIII. *Ben Nevis*. Very cold ; on 22 days the temp. fell below 32°, and on four days did not rise above that point. S on 14 days.—*Glenaladale*. Wet, cold and stormy.—*Loch Maddy*. Except on three days, which were very good, the weather was most unsettled. Frost on fully half the nights.—*Drumnadrochit*. Excessively wet and cold. R 1·62 in., or about 65 per cent., more than the average of six years.

XIX. *Scourie*. R much above the average ; grain and other crops much injured.—*Watten*. Very unsettled, with too little sunshine, but often close and mild. Not excessively wet.

XX. *Derry Castle*. The wettest September, with the exception of

1885, and one of the worst harvesting months, in 16 years. R more than 80 per cent., and wet days eight, above the average of ten years.—*Castle Lough*. A month of cold and continued wet.—*Broadford, Hurdlestown*. The wettest September on record. R .98 in., and rainy days five, above the average of seven years. Very unfavourable for farmers.—*Miltown Malbay*. One of the wettest months on record, only four days without R. Scarcely any T or L.

XXI. *Kilkenny, Inch House*. Cold, wet and stormy ; prevailing winds S.W., N.W. and W.—*Currygrane*. Almost a continual down-pour of R, doing much damage to the crops.

XXII. *Lawderdale*. Very wet, cold and unseasonable ; much damage done to corn and hay.

XXIII. *Belfast, Springfield*. Cold showers on the first three days ; the next three fine, with showers at night, then unsettled till the 20th ; fine till the 24th, and cold and stormy again till the end.

#### OCTOBER.\*

I. *Kensington, Edith Road*. A month of unbroken cold and wet, the temp. never reaching 60°.—*Muswell Hill*. R .87 in., or 29 per cent., above the average of 20 years. There were two wet periods, 1st to 9th (1.34 in.), and 27th to 31st (2.08 in.).—*Finchley, Etchingham Park*. R about 30 per cent. more than the average, 55 per cent. of the total falling in the last five days.

II. *Abinger Hall*. Very showery, and open generally. Very heavy rains during the last week.—*Wallington*. Very cold, wet, and cloudy, R 2.04 in. above, or nearly double, the average.—*Hythe*. Unsettled, dull, and windy, with excessive R.—*Lynsted*. R phenomenally heavy, greatly interfering with agriculture.—*Ospringe, Lorenden*. With the exception of 1880, the wettest October for 27 years. R 7.23 in.—*Sheppey, Leysdown*. Generally wet and cold with a few fine days.—*Brighton, Prestonville Road*. Very cold and wet. Mean temp. 4°.1 below the average of 24 years, during which period there has been only one October as cold. R the greatest in any month since October, 1891.—*Lewes, Iford*. Very wet, with little wind, and an extraordinary rainfall of 2.28 in. on 4th.—*Maidenhead, Castle Hill House*. Mild and rather wet.

III. *Throcking Rectory*. R .98 in. above the average of ten years ;

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\* See also *Met. Mag.*, November, 1892, p. 149.



duration of sunshine, 56 hours ; mean temp.  $3^{\circ}0$  below average.—*Bloxham Grove*. Very variable, with a succession of northerly winds, from the 7th to the 27th, accompanied by low temp. Great deficiency of sunshine.—*Sedgebrooke*. Very wet and stormy. R  $\cdot 73$  in., or nearly 25 per cent., above the average of ten years.—*Trumpington*. Excessive R, 4.72 in. Only twice did two consecutive dry days occur.

IV. *Walthamstow, Elm House*. Cold and thoroughly wet. R fell on 26 days, mostly at the commencement and end of the month, and was above the average. Frosts on four nights.—*Bishop's Hill*. The R (6.51 in.) was excessive, being 3.69 in. above, or more than double, the average, and the greatest registered in any month during 21 years, the nearest being 5.08 in. in September, 1885.—*Rendlesham Hall*. The heaviest R registered in October.—*Bury St. Edmunds, Westley*. Observations were commenced in 1857, and since that time there have been only two months with more R than this October.—*Barningham*. R 5.72 in., the greatest fall in any month during 27 years, except July, 1875, when 6.38 in. fell.—*Lowestoft*. The wettest month ever recorded here. R 7.12 in.—*Belton Rectory*. Excessively rainy, 7.81 in. falling on 26 days, causing very disastrous floods.—*Diss*. Only four rainless days ; R 6.61 in. In 22 years only one heavier monthly R has been registered, viz., October, 1882, when the fall was 6.80 in. The low meadows were much flooded, and farming operations at a complete standstill.—*Bergh Apton*. The wettest October on record, R 7.57 in.—*Denver*. The wettest October in the seven years observed. At the end the weather became remarkably warm and close, after some days of unusual cold.—*Great Yarmouth*. The wettest month for many years. R 9.27 in., unparalleled for 25 years.—*Blofield*. The wettest month in East Anglia since November, 1878, R 7.62 in.—*Swaffham*. The great amount of R stopped wheat sowing ; all low-lying lands were flooded, and two small streams in adjoining villages were so swollen that foot bridges were swept away, and at the fords drivers of vehicles found it impossible to get through.—*Sprowston, Oak Lodge*. An extraordinarily wet October. R more than one-fourth the total for the year.—*Aylsham, Woodgate*. R 8.19 in. The most remarkable feature of the year.—*Cranmer Hall*. An extraordinary R, 8.07 in. on 28 days.

V. *Stowell Rectory*. A cold month ; temp.  $3^{\circ}3$  below the average.

VI. *Further Barton*. Fine on the whole, with much sunshine and frequent frosts.—*Ross, The Graig*. Very cold ; no day on which the

temp. rose to 60°. R 39 per cent. below the average. During the first twelve days only 50 in. fell, while at Liverpool 3·96 in. fell, and in the first 21 days 1·23 in. fell, as compared with 6·91 in. at Yarmouth.

VII. *Ketton Hall*. Wet, with very little sunshine; only nine bright days. R 1·09 in. above the average. W. wind on 21 days.—*Boston*. Notwithstanding the heavy R, there was not, owing to the excellent system of drainage in the Fens, any flooding as in other parts of the country.—*Hemingby*. R the greatest in any month since October, 1885.—*Brattleby*. Cold and wet; much corn uncartered at the end.—*Southwell, Grants*. Very cold and wet; temp. 2°·4 below, and R 1·65 in. above, the average.—*Hodsock Priory*. Cold and wet, but fairly sunny. Mean temp. as low as in any October during 16 years. R 1·66 in., or more than 50 per cent. above the average. Streams a good deal flooded on the 16th.—*Willington*. Very cold; mean temp 41°·1.—*Elvaston*. Showery and changeable; no high temp. and frequently cold and windy. Frosty nights, five.

VIII. *Eccleston*. Exceptionally wet, 5·25 in. of R falling on 14 out of the first 15 days.—*Chester, Christleton Hall*. Very wet, the 12th being the only dry day out of the first fifteen.—*Hinderton*. The R (7·66 in.) has only twice been equalled since 1869, when observations were commenced, viz., July, 1872 (7·76 in.), and August, 1879, (7·65 in.)—*Garston, Grassendale Park*. The heaviest R recorded in any month during 15 years, total 7·70 in.—*Aigburth, Kelton*. R 7·45 in., the greatest monthly fall in 20 years, the fall on the 3rd, 1·97 in., was the greatest fall in 24 hours during the same period.—*Blundellsands*. R 6·38 in., the greatest fall recorded in any month.—*Southport*. Thoroughly cold, R nearly 2·00 in. above the average, and rainy days numerous. Frost on four days.—*Seathwaite Vicarage*. A rainy month, more than 5·00 in. falling from the 26th to 28th.

IX. *Doncaster, Burghwallis Rectory*. Very cold and wet.—*Halifax, Thorpe*. Exceptionally wet, R 8·17 in. The fall on 14th, 2·61 in., is the greatest recorded in ten years.—*Leeds, Allerton Hill*. Total R, 6·69 in.; unprecedented in ten years. On 13th, 14th, and 15th, 3·96 in. fell.—*Harrogate*. The wettest October since observations commenced in 1884.—*Driffield, Beverley Road*. Very wet, extraordinary R from 13th to 15th, 2·40 in. falling on 14th in 24 hours.—*Melmerby, Baldersby*. R 2·44 in. above, or nearly twice, the average of nine years. Most disastrous to corn crops.—*East Layton*. An almost unbroken record of R, dampness, cloudiness, and T and L.—Disastrous

to farmers ; small areas of corn to cut, and much standing in the fields at the close.—*Guisborough, Redcar Road*. Characterized by R and cold winds. Much wheat spoiled and some floods.

X. *Ulpha Vicarage*. Very changeable. Severe frosts on the 24th and 25th, followed by heavy R and wind, brought all the leaves off.—*Keswick*. Cold and showery on the whole ; harvest unfinished at the close. Sixty-one hours less sunshine than in October, 1890.—*Uldale Rectory*. Cold and unseasonable throughout ; only two instances of two consecutive dry days.

XI. *Llanvihangel Court*. Gloomy and sunless, the temp. rising above 50° on only one day.—*Disserth, Glanhowey*. Very cool and sunless.—*St. Asaph, Nantllys*. With the exception of August, 1879, the wettest month in 22 years. R 9·43 in.—*Hafodunos*. Extraordinary R, 13·03 in., or more than a quarter of the total for the year. *Douglas, Victoria Road*. The coldest and wettest October since observations commenced in 1874. Westerly gales occurred on seven days in the first half of the month, but the remainder was generally calm.

XII. *Melrose, Abbey Gate*. Cold and wet, mean temp. 3°·1 below, and R 1·63 in., or about 50 per cent., above the average. Harvest finished under great difficulties.

XVI. *Coupar Angus*. Cold generally, mean temp. about 3° below the average of 12 years. R ·89 in. above the average.

XVII. *New Deer*. R fell every day from 1st to 29th, the total, 9·17 in., being the largest on record.—*Forres, Grange Hall*. Abnormally excessive R, 5·00 in.

XVIII. *Glenaladale*. The first and last weeks wet ; the remainder fine ; temp. low ; very little wind.—*Loch Maddy*. On the whole exceedingly cold, and characterized by continuous N. and N.E. wind, with occasional heavy showers of S and E. Between the 10th and 18th there was some keen frost at night, and beautiful displays of aurora.—*Drumnadrochit*. R 3·55 in. above, or more than double, the average of six years.

XIX. *Scourie*. R fell on 28 days, consequently grain crops are still out on the fields in a very damaged condition.—*Watten*. The first ten days were very wet, cold, and stormy, a few days in the middle, and the last two days, were moderately fine ; the remainder was rainy, with frequent S.

XX. *Coolkelure*. Dry and cold, except during the last week. Wind principally N. and E., several hard frosts.—*Cork, Clarence Place*. R ·80 in. below the average, temp. remarkably low.—*Killarney*. Very

broken weather, with constant squalls from N., till the 10th, then a fine week, with destructive frosts on the 13th and 17th, then rainy till the close.—*Derry Castle*. Very favourable for harvesting hay and corn. R 41 per cent. below the average of ten years.—*Castle Lough*. Cold and rainy.—*Broadford, Hurdlestown*. Very fine; the R being 1·15 in., and the rainy days two, below the average of eight years.—*Miltown Malbay*. On the whole dry and cold, with a tendency to high winds.

XXI. *Kilkenny, Inch House*. Remarkably cold, with severe night frosts, stormy on 14th, and from 26th to 29th.

XXII. *Lawderdale*. Very cold and unsettled. Frequent frosts in the second half.

XXIII. *Belfast, Springfield*. Cold, dull and wet till the 10th, then fine till the 14th, when heavy R fell; from 16th to 19th fine; sleet on the 22nd, leaving the hills white; very hard frost on the 24th and 25th; very wet nights on 26th and 27th.—*Buncrana*. Very unsettled and variable throughout; wind and frost, H and R.

#### NOVEMBER.

I. *Muswell Hill*. R 24 in., or 8 per cent., less than the average of 20 years. R fell on 12 out of the first 16 days, while only three days were wet after.—*Finchley, Etchingam Park*. R about 50 in., or 18 per cent., less than the average; rather more than half the total fell on the 15th and 16th.

II. *Abinger Hall*. Mild and open, with frequent but not heavy showers. Foggy at times.—*Wallington*. Warm, calm and open; R 58 in. below the average.—*Hythe*. A very dull, unsettled month.—*Keston Tower*. An ordinary November, with temp. above the average, especially in the middle. A good deal of R and several foggy days.—*Sheppey, Leysdown*. Very mild and damp, with occasional light fogs and genial sunshine.—*Brighton, Prestonville Road*. Mild and damp till the last day, then much colder. R about half-an-inch below the average.—*Maidenhead, Castle Hill House*. Moderately warm and rather wet.

III. *Bloxham Grove*. The weather for the most part was extremely disagreeable, owing to continued fog and gloom. The wind was S.E. for 14 days, but on only two days was it brisk. Frost on only two days.

IV. *Walthamstow, Elm House*. Showery and mild in the first week, followed by a foggy and colder week, then a few wet days with mild air, and gloomy, wet, and cold to nearly the end, when a brighter period set in. Frosts on five nights.—*Ipswich, Bishop's Hill*. Dull but mild, with very little frost but the usual mist and fog typical of November. R only .03 in. below the average.—*Diss*. Three fine days at the commencement, followed by a long spell of close, damp, sunless weather, with fogs, drizzle and R till the 16th, after which there was no R till the 26th, but, with the exception of the 19th and 25th, which were bright, the days were dull and cold, and the sky was overcast. The last three days were brighter, with more wind and a slight fall of S and H on the 30th. Land very wet and water-courses swollen.—*Denver*. Very little frost and the day temp. unusually high. Not much R, but the land so wet from the October R and the absence of drying winds that ploughing on stiff soil was impossible.

V. *Bishop's Cannings*. A warm month with some sharp frosts. R 1.34 in. below the average.

VI. *Further Barton*. Remarkable for mist, fog and darkness, especially during the latter half. Frost on only three or four days.—*Ross, The Graig*. On the whole seasonable, with slightly less R than the average. Day temp. rather above the average, especially in the first half. Fogs on ten days, and occasionally very dense, though not persistent. A good deal of sunshine and clear weather, the average amount of cloud being 6.6. No gale of any consequence.

VII. *Ketton Hall*. Very dull and foggy, with only two clear days, and only 12 on which the sun appeared. R 1.73 in. below the average. Wind W. on 20 days and very light.—*Hemingby*. Mild and pleasant, mean temp. 1°·4 above the average of seven years.—*Brattleby*. Fine and mild; only nine frosts on ground and none severe; a good many dull and foggy days.—*Southwell, Grants*. Warm and damp, though the R was nearly an inch below the mean.—*Worksop, Hodsock Priory*. Dry and dull, with very little cold weather, and a calm atmosphere with high pressure. R only half the average.—*Elvaston*. Fair, dry, mild and calm, no gales or heavy storms. Frost on three nights.

VIII. *Knutsford*. Very mild throughout, with many pleasant days.—*Bolton, The Park*. R about two-thirds of the average. Sunshine recorded on only seven days, the total being six hours below the average. Fog on 12 days.—*Southport*. R an inch below the average,

but distributed over a good many days ; excessive amount of cloud and deficiency of sunshine. Frost on only two days.—*Seathwaite Vicarage*. A rainy month and unusually mild, especially from 19th to 28th.

IX. *Driffeld, Beverley Road*. Dull and warm ; very foggy from 5th to 13th. R and duration of sunshine below the average, 16 sunless days. The last two days very bright.—*East Layton*. Dull, cold, damp and sunless, with an occasional sharp frost.—*Guisborough, Redcar Road*. R comparatively small, but mists, light showers, and almost constant slight fog with very chilly winds made the month unpleasant.

X. *Whorlton Green*. Constant showers and much fog, with frequent hoar frost.—*Ulpha Vicarage*. Dark and foggy as usual, but there were some very fine days, and the temp. was generally mild ; no excessive falls of R. —*Keswick*. Showery weather prevailed from the 2nd to the 14th ; fine dry weather from that date to the 26th, then unsettled to the end.

XI. *Llanfrechfa Grange*. Calm and fine on the whole, and favourable for agriculture.—*Llanvihangel Court*. Calm and dull, with temp. generally low, but great variations.—*Douglas, Victoria Road*. Very damp, but pleasant on the whole, with many sunny days, the R, which is quite up to the average, often falling at night. Mild and calm to the 18th, succeeded by a week of cold E. wind. The end was very cold and marked by W. to N.W. gales.

XII. *Melrose, Abbey Gate*. Dull and cold, R 1·75 in. below, or less than half, the average. S.W. gales on four days, fog on six days.

XV. *Craigend Castle*. Dull with storms of wind and R.

XVI. *Coupar Angus*. R below the average and no heavy falls. Temp. above the average, and range not great. No gales.

XVIII. *Glenaladale*. Very fine on the whole, but stormy at the beginning and the end.—*Loch Maddy*. Very boisterous in the early part. From the middle to the end more or less frost, with some heavy H showers and a little S during the last few days.—*Drumna-drochit*. R ·35 in. less than the average of six years. Strong gale and S storm at the end.

XIX. *Watten*. Wet, dull and mild.

XX. *Coolkelure*. Exceedingly wet, R being recorded on every day but one. Temp. exceptionally high. Prevailing winds S.S.W. to S.E.—*Cork, Clarence Place*. Remarkable for excessive R and number of rainy days, the total fall being the greatest in November since

1872, and the number of rainy days the greatest in any month for 10 years.—*Mallow, Old Dromore*. The wettest month recorded since observations commenced, total 7·87 in. ; only one rainless day.—*Derry Castle*. Persistently damp and sloppy but mild, with only four rainless days. Very high winds in the first and third weeks, and on the closing days. R 16 per cent., and wet days five, above the average of ten years.—*Broadford, Hurdlestown*. Very mild, wet and damp, the R being 1·04 in., and number of rainy days five, above the average of eight years.—*Miltown Malbay*. Very wet, but mild and open. During the week ending 22nd strong southerly gales prevailed, with R daily.

XXI. *Kilkenny, Inch House*. Wet and very cold ; much dark and cloudy weather, with some fog and occasional storms.

XXII. *Lawderdale*. Wet and cold, with S.W. gales on 3rd and 27th.

XXIII. *Belfast, Springfield*. Variable but open.—*Carrablagh*. Another dreadfully wet month. More than 34 inches of R fell from May to November inclusive, probably an unparalleled fall.

## DECEMBER.

I. *Kensington, Edith Road*. No R in the last 17 days ; very hard frost in the last week.—*Muswell Hill*. R ·85 in., or 35½ per cent., less than the average of 20 years ; the whole fell during the first 14 days, neither R nor S being recorded from 15th to 31st inclusive.—*Finchley, Etchingham Park*. R barely two-thirds of the average, the whole of it falling during the first fortnight.

II. *Haslemere, Hazelhurst*. Wet and warm early. Skating from Christmas day to the end of the month.—*Abinger Hall*. The first half was showery, open and quiet. Frost set in on the 19th, and continued to the end, gradually getting more severe.—*Wallington*. Remarkable only for the low min. temp. in the latter part, and for the comparatively deficient R. S was conspicuous by its nearly total absence.—*Hythe*. Wet, cold, and windy during the first half, very fine and seasonable during the latter.—*Keston Tower*. Slight frost nearly every night during the first half, then very mild during the third week, and a hard dry frost from the 23rd until the end, with skating from Christmas day. A good deal of fog during the last ten days.—*Birchington, Thor*. The weather of the first half was showery,

but frost set in on the 14th and continued to the end.—*Sheppey, Leysdown*. Variable weather, cold nights and mornings, with genial sunshine during several days. Very little S; frequent fog in the latter half.—*Brighton, Prestonville Road*. Wet and changeable in the first part; hard frost from the 21st to the end.—*Maidenhead, Castle Hill House*. Cold and dry, S on 5th and 6th; sharp frost set in on 22nd.

III. *Throcking Rectory*. R .28 in. below the average of ten years; duration of sunshine 32 hours; mean temp.  $3^{\circ}1$  below the average.—*Oxford, St. Giles*. Very dry during the latter part, with little or no wind, but some fog.—*Bloxham Grove*. Raw and cold, with a considerable amount of S and R, and frosts in the nights and early mornings up to the 14th. From the 15th to the 21st mild and pleasant, after which frost set in with great severity and continued to the end, many of the days being clear, bright, and still.

IV. *Ipswich, Bishop's Hill*. The first half was variable and showery, with slight frosts and fogs. Some warm days and nights occurred about the third week with calms and fogs. Sharp frost and skating during the last week. R .31 in. less than the average, none falling after the 15th.—*Rendlesham Hall*. Fine, dry, and frosty, with a fall of S on the last day.—*Diss*. A still, windless month, with much bright sunshine till after the 26th, when it was cold and foggy to the end. The weather during the entire Christmas holidays was exceptionally brilliant, with sharp frost and good skating.—*Denver*. Cold during the first week, very warm in the third week, then becoming colder every day.

V. *Bishop's Cannings*. Cold nights to the 14th, then warm till the 22nd, when hard frost set in. R 1.13 in. below the average.—*Rose Ash*. Cold but not severe till 26th, then bright till 31st.

VI. *Further Barton*. After the 1st very cold for ten days, with a little S; then mild and damp. No sunshine for seven days in succession. The last ten days were extremely cold with severe frost.—*Ross, The Graig*. R the smallest in December, with three exceptions, since 1859, the 16 days of absolute drought (15th to 31st) being unprecedented. With the exception of 1890, the coldest December since 1879.—*Burton, Derby Road*. R .55 in. below the average. S on five days.—*Hoar Cross*. The last week will long be remembered for the very severe weather, the temp. falling to  $9^{\circ}$ .

VII. *Rotherby Hall*. R or S fell almost daily, from 1st to 15th, causing a small flood on the 12th; but after the 15th absolute



drought prevailed.—*Ketton Hall*. Cold, with much frost, especially during the last week, but with a fair amount of sunshine, 14 days being bright. R 1·30 in. below the average.—*Brattleby*. Dry and cold, with severe frosts. Skating for a few days about the 7th, and from the 24th to the end.—*Southwell, Grants*. Very dry and cold; temp. more than 4° and R 1·53 in. below, the average. No R fell after the 15th.—*Hodsock Priory*. Very dry and cold, but sunny and calm. A spell of frost at the beginning of the month, and another and sharper one at the end, but with practically no S. The R smaller than in any December during the last 16 years.—*Willington*.—The first half was wet, and severe cold prevailed during the latter half.—*Elvaston*. Cold till the 10th, then remarkably mild until the 24th, afterwards severe frost to the end. Very dry, with absolute drought from the 15th. Frost on 17 nights.

VIII. *Knutsford*. Frequent S from the 3rd to the 10th. Very fine during the latter half, with much more bright sunshine than usual, and none of the dark gloomy days so frequent before Christmas.—*Bolton, The Park*. R ·86 in. below the average. Nine and a half in. of S fell from 3rd to 5th, remaining on the ground to 14th, when mild weather set in. Severe frost prevailed from 22nd to the close.—*Southport*. Cool with frequent H and S from 2nd to 10th, mild from 11th to 21st, and severe frost in the last week. R almost entirely confined to the first half, and somewhat below the average.—*Seathwaite Vicarage*. An average month as regards downfall, marked by exceptionally intense frost during its closing days.

IX. *Doncaster, Burghwallis Rectory*. Mild till frost came, then cold but dry.—*Harrogate, Bog Valley Gardens*. Frost intense, R remarkably light.—*Driffield, Beverley Road*. Very bright and cold to the 14th, then a week of dull, mild weather, followed by severe cold from the 22nd to the close; very low min. from 25th to 30th. R below, and sunshine much above, the average.

X. *Whorlton Green*. Very cold, with frequent slight S at the beginning, and much hoar frost in the last week.—*Newcastle, Wellburn, Jesmond*. R the least in December during ten years, with the exception of 1888.—*Ulpha Vicarage*. A considerable fall of S occurred from 3rd to 5th, which lay on the ground for several days in spite of R, which fell almost daily up to the 20th. The last eleven days were cold and rainless.—*Hassness*. Severe frost from the 20th to the end, with no precipitation whatever.—*Keswick*. Wintry weather with a considerable quantity of S prevailed from the 1st to the 10th;

mild from the 11th to 20th ; almost continuous sunshine and hard frost from the 21st to the end. Derwentwater was frozen over on the 26th.

XI. *Newport, Clytha Park.* Drought of 14 days' duration, with sharp frost in the latter part of the month.—*Llanfrechfa Grange.* R unusually small, and falling chiefly at night. Sharp frost from the 4th to 10th, mild from the 14th to 22nd, then steady frost till the end.—*Disserth, Glanhowey.* Generally warm and fine, but intensely cold from 25th to 31st.—*Douglas, Victoria Road.* Very cold weather prevailed, with severe frosts, heavy falls of S, and N.W. gales, to the 11th ; followed by a remarkably mild and wet spell to the 21st. The remainder of the month was unusually severe, with hard frosts and strong N.E. to S.E. winds. R or S fell on 18 out of the first 20 days, but none afterwards.

XII. *Melrose, Abbey Gate.* Very cold ; mean temp.  $4^{\circ}4$  below the average. Frost on 28 nights, two more than the average. R 1.16 in. below the average.

XV. *Craigend Castle.* Cold, frosty, and dry, but a good deal of S fell.—*Inverary, Newtown.* Unusually severe weather ; frequent S at the beginning, and hard frost towards the end of the month.

XVIII. *Glenaladale.* Cold and wintry, but mostly calm, with a few milder days about the middle. S fell on seven out of the first nine days.—*Loch Maddy.* Average winter weather, but no very severe gales. The last ten days quiet and slightly frosty.—*Drumna-drochit.* S fell on six out of the first eight days, and S or R on 19 out of the first 21 days. The last ten days were rainless, with very severe frost.

XIX. *Scourie.* R fell on 17 days. There were some inches of S early in the month, and keen frosts during the last ten days.—*Watten, H.R.S.* Storms of wind, S, and R during the first half ; calm and frosty weather during the latter.

XX. *Coolkelure.* Fogs and Scotch mists, alternately with R, during the greater part. Temp. exceptionally high. A hybrid rhododendron in full bloom at 500 feet above sea level, with a N. aspect, on Christmas Day.—*Cork, Clarence Place.* Fog during the greater part of the month ; R about half an inch below the average. Slight S only on the 4th.—*Killarney.* Almost total absence of sunshine except on the 27th and 28th.—*Derry Castle.* Damp and unwholesome weather, with frequent fogs and some frosts till the 19th ; afterwards dry and seasonable, though stormy ; very cold towards the

close. R nearly 44 per cent., and rainy days three, below the average of ten years.—*Broadford, Hurdlestown*. The finest December on record, the R being 1·24 in. below the average of eight years, the number of rainy days just the average. The min. temp. was above 40° on eight nights, but generally the month was dry and cold.—*Miltown Malbay*. The first week was cold and harsh ; the remainder was muggy and very mild, with some strong southerly gales during the last week.

XXI. *Kilkenny, Inch House*. Much dry weather, but gloomy and dark, and very cold throughout.

XXII. *Tuam, Gardenfield*. Dry. S and severe frost from 3rd to 8th, changeable from 8th to 25th, then fine, with sharp frost to the end.—*Lawderdale*. Wet and harsh ; S on the 3rd, 4th, and 5th.

XXIII. *Belfast, Springfield*. The first day was fine, then to the 15th S showers, sleet, R, and frost. From 15th to 20th quite mild, with April showers, then fine and frosty till the 29th, followed by a thaw, with light showers.—*Carrablagh*. Bright, mild, delightful weather, with the exception of S on the 3rd and 4th, and frost from the 26th to the 29th. Many wild and garden flowers in bloom throughout.

## OBSERVERS' NOTES ON THE YEAR 1892.

## ENGLAND.

## DIVISION I.—MIDDLESEX.

TEDDINGTON, GOMER HOUSE.—Though the total R is less than the average, there were four falls largely exceeding an inch in 24 hours.

KENSINGTON, EDITH ROAD.—The eighth consecutive year with a mean temp. below the average. The first seven months were extremely dry, the R amounting to only 9·08 in.

HOLLAND HOUSE.—July and August were the only months free from frost. October was unusually cold and dull. Fog more than usually prevalent during the last three months.

MUSWELL HILL.—R 3·71 in., or nearly 13 per cent., below the average of 20 years. Four months, June, August, September, and October, had excesses, ranging from 10 per cent. in June to 35 per cent. in September, while the deficiencies of the remaining eight months ranged from 8 per cent. in November to 70 per cent. in January. The number of rainy days was 25 below the average. There were two absolute droughts, 15 days from March 28th, and 17 days from December 15. On four days the fall exceeded an inch, one in August, two in September, and one in October.

FINCHLEY, ETCHINGHAM PARK.—R about three inches, or  $10\frac{1}{2}$  per cent., below the average. There were five consecutive months (January-May) with a considerable deficiency, and the July, November, and December falls were also deficient. These eight months yielded 12·09 in., and the remaining four months 13·49 in. There were two absolute droughts: 15 days ending April 11th, and 17 days ending December 31st; while there were no fewer than five falls exceeding an inch in 24 hours. Number of rainy days about 8 per cent. below the average.

## DIVISION II.—SOUTH EASTERN COUNTIES.

HASLEMERE.—Very little R in the first six months, only 7·86 in. ; and the total for the year was 7·14 in. below the average of 20 years.

GRAYSWOOD HILL.—R in the first half of the year remarkably small, being little more than half the average.

GODALMING, HASCOMBE.—R nearly five inches below the average, the fall in the first six months showing a deficiency of nearly 50 per cent.

GODALMING, WITLEY.—R of the year small, the spring being remarkably dry, and only 7·05 in. falling in the first six months. The late autumn was very mild, and there was much fog in November.

REIGATE, DOODS.—Little R during the first five months, (6·18 in.) but the fifth consecutive wet summer.

DORKING, HIGH ASHURST.—The first half of the year was remarkably dry, cold easterly winds prevailing; May and June were better, but vegetation of all kinds felt the effects of drought.

HORSLEY TOWERS.—R much less than usual, the fall of the first half of the year being deficient.

KENLEY, INGLESIDE.—A protracted spring, ·29 in. of S falling as late as April 15th. Summer generally cool, the temp. never exceeding 81°. Winter very open, and no severe frost till Christmas eve.

SUTTON.—R 1·14 in. below the average of ten years.

BEDDINGTON.—R about the average. The first three months very dry. Only one fall exceeding an inch in 24 hours.

TENTERDEN, SUMMERHILL.—Extremely dry and cold during the first five months, then cold and damp; no grass, and a very bad year for farming operations. Very high winds in June and July, and great humidity, as shown by the hygrometer, even when there was little or no R. Very mild in November and up to Christmas, when severe frost set in.

BENENDEN.—The spring drought and the late frosts in April and May checked growth, and the hay crop was very deficient. Harvest again wet, and October even wetter than in 1891. November mild, and the beginning of December wet. Hard frost at Christmas.

TENTERDEN.—R and rainy days both below the average. S fell on 20 days in the first four months, and in sufficient quantity to yield ·93 on April 15th. The number of frosts was greater than

in any of the previous three years. The duration of sunshine was 1,701 hours 35 minutes; only 39 hours in November, but 235 hours in May. The temp. rose above 60° on 13 days in April, a very exceptional number.

CRANBROOK, HARTLEY.—R 1·41 in. below the average of 25 years. During the first five months only 5·96 in. fell, while in the next five 19·01 in. fell; 10·94 in. falling in August and October. January and May have only once been drier in 27 years.

MALLING.—The first half of the year was very dry, but the last quarter peculiarly wet. The R in October was quite tropical. On six days over an inch of R fell.

SEVENOAKS, PURLEIGH.—A wet year, particularly in June, August, October, and November. R about 4·00 in. above the average of nine years.

KESTON TOWER.—January, February, and March were colder than usual, and April also, with the exception of a week in the first part, which was abnormally warm. May and June were warm and seasonable, July was very cold. Nothing remarkable occurred during the rest of the year until two days before Christmas, when severe frost set in, which continued to the close.

RECVLVER, BROOK.—The heaviest R in any year since observations commenced in 1884. More R fell during October than in the first four months.

MARGATE, APSLEY HOUSE.—R much above the average, and more than the usual number of heavy falls.

CHICHESTER, WESTGATE MEADOW.—R nearly 2·00 in. less than the average. The contrast of the R in the early and in the later months is remarkable; less than one quarter of the total falling in the first six months.

CHICHESTER, WATERGATE.—Although 14·27 in. less R fell than in 1891, the springs rose earlier than for some years past, and at the close were 40 ft. higher than 12 months before.

MIDHURST, LYNCH FARM.—Very dry and cold in the early part; a large proportion of the fall of January, February, and March was S.

FALMER.—R 3·78 in. below the average of 31 years.

HURSTPIERPOINT.—Dry on the whole, with a remarkable number of dry days.

WINCHELSEA, THE FRIARS.—January was remarkably dry, and May still more so. The fall of the last five months was great,

October being the wettest month in the 15 years observed, with a fall of 2·50 in. on 4th.

WALDRON, BRYCKDEN.—R 1·46 in. below the average of nine years.

MARESFIELD, FOREST LODGE.—R 2·39 in. in defect of the average of the 30 years ending 1885. Four months were in excess, June, July, August, and October, but only in the last named was the excess more than an inch. The fall in the remaining eight months was in defect, but only in January did the deficiency greatly exceed half an inch. October was very wet, R falling on 29 days.

EAST GRINSTEAD, HALSFORD PARK.—A dry spring, cold summer, wet autumn, and hard winter.

SANDOWN, LAKE.—A dry year, R about 3·50 in. below the average. The early months were unusually dry, the last six months wetter than the average.

RYDE, THORNBROUGH.—R of the first five months only 5·47 in., less than half the average.

WEST COWES, HOLMWOOD.—R 3·85 in. below the average of seven years. June, August, and September slightly in excess, and October more than double the average.

CHRISTCHURCH, MUDEFORD.—A cold, dry, and ungenial spring. The R of all the first six months was much below the average.

LYMINGTON, PENNINGTON.—Total R 2·53 in. below the average. Only 6·13 in. fell in the first half-year, while 20·84 in. fell from July to December. March, April, and May were unusually dry, with a total fall of only 2·34 in., while in August, September, and October 12·61 in. fell.

EMSWORTH, REDLANDS.—The R of the first six months was the smallest in the nine years recorded, and less than two-thirds of the average. The last six months were very wet, but the total for the year is only ·09 in. above the average.

WICKHAM, WEST LODGE.—The driest year since 1887. R 3·55 in. less than the average of eight years.

ALRESFORD, OVINGTON.—R 2·83 in. below the average of ten years. The seven months, January to June, and December, gave 6·75 in., while the remaining five gave 19·72 in. January, February, April, and May each had a total fall of less than an inch, but in October 5·07 in. fell.

ALRESFORD HOUSE.—A cold, late spring, with frosts in May and June. Very little T, and very free from heavy winds.

ALTON, EAST TISTED RECTORY. — The first six months were very dry, having just one quarter of the average annual R. Water tanks lower than at any other time in 22 years.

TYLNEY HALL.—Only 5·82 in. of R fell in the first half of the year, being by far the least on record.

HUNGERFORD, DENFORD PARK.—March, April, May, and half of June were very dry, harsh, and frosty, ending with a hard frost on June 17th, cutting even the foliage of trees.

WARFIELD.—The early part of the year was comparatively dry, the latter part correspondingly wet. Rains exceeding an inch occurred on two days in August. October also was very wet.

READING, PORTLAND PLACE.—January and February were generally cold, and the first half of March was very severe ; the spring was very dry, and the hay crop the lightest known for many years. The summer was nearly all comprised between May 23rd and June 10th. R came when not wanted, and there was a wet harvest time and autumn. October was very cold ; November damp, mild, and foggy ; December cold till the 14th, then mild for a week, and ended with a phenomenal frost.

READING, EAST THORPE.—R 2·74 in., and number of wet days three, below the average of ten years.

NEWBURY, WESTON.—The year was remarkable for the small R of the first six months, and for the heavy R during July, August, September and October.

LONG WITTENHAM, MANOR HOUSE.—During the 42 years record so small a quantity of R during the first six months of the year (6·31 in.) has never before been registered.

FARRINGTON, THE ELMS.—R 9·01 in. below the average of 16 years.

### DIVISION III.—SOUTH MIDLAND COUNTIES.

ST. ALBAN'S, THE GRANGE.—R a little below the average ; a very dry spring and very wet autumn. January and April were dry, averaging ·93 in. August, September and October were very wet, averaging 3·78 in.

DATCHWORTH RECTORY.—The last half of the year again had more than double the R of the first half (14·69 in. against 6·72 in.). The only other notable feature was the summer heat of the first week in April, followed by S.



THROCKING RECTORY.—R 1·10 in., and rainy days four, above the average. The duration of bright sunshine was 1,152 hours; there were 91 days when no sunshine was recorded, and 41 on which the duration was less than an hour. Mean temp. 1·0 below the average.

SLOUGH, LANGLEY.—A dry spring and wet autumn, with four falls of R exceeding one inch in 24 hours. R 1·58 in. below the average of 20 years, two only of which had fewer rainy days.

SLOUGH, UPTON.—The total R of the first four months did not equal the fall of either August or October, while in the three months, August to October, nearly half the total for the year fell.

WINSLOW, ADDINGTON.—R, and number of days on which it fell, below the average. Frosts occurred in nine months and were very severe in January, February, March and December.

THORNTON.—R 5·84 in. below the average of 20 years.

WOBURN SANDS.—R more than four inches less than the average of 12 years. In the three months August to October more R fell than in the first seven months of the year.

FILGRAVE RECTORY.—R 1·40 in. less than the average of 18 years.

WHITCHURCH RECTORY.—Extremely dry in the early part, ruining most hay crops.

HENLEY-ON-THAMES, ASSENTON.—A cold, late spring and wet autumn. Sharp frosts in June and September.

CULHAM VICARAGE.—The first six months very dry, R not half the average. Very sharp frosts in January, February, March, April, May and December.

WATLINGTON, PYRTON MANOR.—R below the average; only 5·14 in. fell in the first five months.

BANBURY, BLOXHAM.—The principle features were the great freedom from TSS and the short R in the first four months.

BLOXHAM GROVE.—A great prevalence of ungenial and gloomy weather. Spring very cold and backward, and the deficiency of R injurious to the pastures. During the corn harvest the weather was at first unfavourable, but a short dry period occurred later. The autumn wheat sowing was much retarded by heavy R in October, and part of November. Frost set in about December 22nd, and continued with great severity to the end of the year.

DAVENTRY, FAWSLEY.—The striking feature of the year was the deficient R, with disastrous results to farmers in general.

EASTON MAUDIT VICARAGE.—Very dry, save for one isolated R

on August 27th, and the very wet 41 days from September 20th to October 30th inclusive ; the 6·39 in. which fell in that time kept the total from being remarkably low.

MAXEY VICARAGE.—R 2·07 in. below the average of 10 years ; rainy days two above average.

ASPLEY GUISE, OAKLANDS. —Total R 3·24 in., or 13 per cent., less than the average of 20 years. In the three months August to October there was an excess of 2·83 in., while all the other months were deficient excepting June, when there was a trifling excess.

CAMBRIDGE OBSERVATORY.—Duration of bright sunshine, 1538 hours, 53 hours more than the average of ten years.

#### DIVISION IV.—EASTERN COUNTIES.

WALTHAMSTOW, ELM HOUSE.—Very fair as a whole, with a large amount of sunshine in the first nine months, and R rather below the average. Absolute droughts from March 29th to April 12th, 14 days, and December 15th to 31st, 17 days. The first six months were dry, only 8·26 in. of R falling, whilst in the latter six, 15·47 in. fell.

BILLERICAY, BURGHSTEAD LODGE.—R about an inch above the average, but number of wet days rather below. Wet weather prevailed in February, June, August, October and November.

CHELMSFORD.—R ·22 in. below the average of 25 years.

BOCKING, FENNES.—R ·40 in. more than the average of 40 years.

IPSWICH, BISHOP'S HILL.—R 5·34 in. above the average. There was a considerable excess of R in February, June, August and October, the last named being far the wettest month recorded in 21 years. January, May and July were very dry.

RENDLESHAM.—The heaviest rainfalls for many years in June, August and October. November and December dry, with a heavy fall of S and hard frost in the latter month.

GREAT THURLOW.—R about five inches above the average of seven years.

DRINKSTONE PARK.—R about 2·50 in. above the average of 27 years. S fell on six consecutive days in April.

WALSHAM-LE-WILLOWS. —The wettest year since 1882, June, July, August, September and October all having falls much above the average.

DISS.—Winter weather continued till after the middle of April. A magnificent hot week occurred in the first half of June, but was

followed by frost on the 18th. The hayseal was fair, but late summer and early autumn were wet and cold and the harvest was bad. October, with the exception of the corresponding month in 1882, was the wettest month recorded in 22 years. November dull and foggy, and December very calm with brilliant days at Christmas. R of the year nearly five inches above the average.

GELDESTON.—R 3·65 in. above the average of 20 years. August was very wet and October unprecedented, the fall being 4·70 in. or 170 per cent., more than the average.

NORWICH, ESSEX STREET.—An ungenial year. The summer was so generally cloudy and cold that the crops could not ripen well and October was the most rainy month during the century, doing much damage to stacks that were unthatched.

BLOFIELD.—The wettest year since 1882, the R being 3·85 in. above the average of 20 years. All the months were of deficient mean temp. except May and November.

SOUTH WALSHAM.—The first five months were dry. The latter half of June and the first three weeks of July were very wet, damaging the hay. The summer generally was dull and rainy, and harvest was very late. The excessive wet from September 27th to November 7th prevented the sowing of winter wheat.

EAST DEREHAM.—R about 1·50 in. above the average. January and March were wintry; February, April and June variable; May fine with excessive heat in the last week; July dull, cold and wet; August and September generally dry; October very wet, and November and December fairly dry.

#### DIVISION V.—SOUTH WESTERN COUNTIES.

ALDERBURY.—For the first half of the year the R was less than, and in the last six months more than, the average, but the total for the year shows a deficiency of seven inches.

MERE DOWN.—A backward spring with deficient R, and although there was no absolute drought, there was no fall sufficiently heavy to fill the ponds till the end of August. Consequently there was great dearth of water the whole summer. The deep-seated springs also were very low and the river Wily was dry as far as Brixton Deverell

MAIDEN BRADLEY.—R ten inches, and rainy days 25, below the average of four years.

MILDENHALL.—The first four months were remarkably dry, R only 3·70 in., the smallest quantity in any corresponding period since observations commenced in 1866. The only period of four months with less R was April to July 1870, 3·37 in.

LANGTON HERRING.—The R was very unequally distributed throughout the year. In the first six months only 6·56 in. fell, and in the last six months 18·05 in., the former period showing a deficit of 6·00 in., and the latter an excess of 1·25 in., the total for the year being 4·75 in. less than the average. Rainy days 23 below the average.

POOLE, THE YARRELLS.—R 5·26 in. less than the average of 15 years:

HAMWORTHY.—Fine and warm with a great want of R in the early part; the latter part cold and stormy, with more than the usual number of sea fogs.

TARRANT KEYNSTON.—R 6·45 in. below the average of 14 years. Extremely dry in spring and early summer, the R of the first six months being only half the average.

CHALBURY.—With the exception of 1870, the smallest R in the 27 years recorded. The dryness of the first six months was remarkable, the fall being less than half the average. January to March 3·61 in., April to June 3·06 in., July to September 8·27 in., October to December 10·05 in.

IVYBRIDGE, LANGHAM HILL.—On the whole a beautiful year—dry and remarkably sunny but not very hot at any time. January was rather cold but dry; February the most disagreeable month of the year, some very cold winds with S and R. From February 27th to the end of August unusually dry and fine; October was the only really wet month of the year. September and November were average months and December was very dry.

HEMERDON.—A remarkably dry year. Although in no month did as little as ·07 in. fall—as in February, 1891—a drought causing great scarcity of water and very low springs occurred in July and August, especially from July 18th to August 20th. Yet in the latter month two very heavy falls occurred—1·08 in. in nine hours on 27th, and 1·90 in. in ten hours on 21st. There were also heavy falls in September and October.

BABBACOMBE.—A very dry, fine, sunny, but rather cold year. The R was less than in any of the previous 15 years, and 12·08 in. or 33 per cent., below the average; the number of rainy days was 32 or 17

per cent., below the average, and the least registered except in 1887. The R of the first seven months was the least in any consecutive seven months and less than half the average. The longest dry period was 17 consecutive days from March 27th to April 12th, and the longest wet period was ten consecutive days from November 10th to 19th.

WATCOMBE PARK.—R 10·00 in. less than the average of seven years.

HOLNE VICARAGE.—R the least in any year of the past ten.

TEIGNMOUTH, BONNICLIFFE.—A very dry year, with the exception of 1887 the driest for 22 years.

TEIGNMOUTH, WOODLANDS.—The smallest R (except 1887) since the register commenced in 1882. Fall very small from March to July inclusive.

IDEFORD RECTORY.—R 7·20 in. below the average of five years.

TRUSHAM.—Great drought, R 10·40 in. less than the average of seven years and only ·35 in. more than that of Jubilee year.

ROUSDON OBSERVATORY.—On the whole fine, bright and genial ; the first six months unusually dry. Duration of bright sunshine 149 hours above the average of seven years.

AXMINSTER, GREAT TRILL.—R 8·38 in. below the average of nine years.

TORRINGTON, LITTLE SILVER.—R two inches below the average of seven years.

PARRACOMBE.—A dry spring and wet autumn. August very wet and stormy, 2·20 in. of R falling on 27th and 28th, and 1·05 in. on 30th.

ST. AGNES.—R 7·81 in. below the average of 25 years, and, with the exception of 1887, the least in that period.

LISKEARD.—A dry year. Great scarcity of water in May, June and July, and grass much burnt up.

WEST COKER.—A very dry and late spring, followed by an unusually fine summer. R about five inches below the average.

WHITE LACKINGTON.—The driest year for 21 years excepting 1887. R more than ten inches below the average.

STOWELL RECTORY.—A rather cold and very dry year, March, May and December having particularly small R.

MILVERTON.—R 3·91 in. below the average of five years.

MELLS.—Great scarcity of R during the first seven months, and

low temp. throughout, May being the only month warmer than the average.

STON EASTON.—R 12·44 in. below the average of 24 years and the smallest in any year during that period.

HARPTREE COURT.—Very dry. R 9·19 in. below the average of ten years, the fall of the first six months being extremely small, only 12·01 in. The number of rainy days also is the smallest with the exception of 1887.

LONG ASHTON.—The smallest R for at least 21 years.

#### DIVISION VI.—WEST MIDLAND COUNTIES.

CLIFTON, PEMBROKE ROAD.—R 9·13 in., and rainy days 17 below the average of 36 years. The driest March recorded, and the R of every month, except August, deficient.

KEMPSFORD.—One of the driest and coldest years on record. No flood on the meadows throughout.

HORCOTT.—R the same as in the dry year, 1887. Summer very cold.

BERKELEY.—The smallest R since observations commenced in 1866.

HATHEROP RECTORY.—Very dry, the R being 9·46 in. below the average of 22 years, and only ·78 in. above the minimum.

NEWNHAM-ON-SEVERN.—R 9·13 in. less than the average of 15 years. Much sunshine throughout, but little sun heat.

HAMPNETT RECTORY.—R 6·62 in. below the average of 11 years.

QUEDGELEY HOUSE.—An unusually dry spring, and farmers had to cart water all the summer.

GLOUCESTER, BIRDLIP HILL.—A persistent deficiency of R, only three months having an average fall, and the total being the least recorded in ten years.

WITCOMBE.—The driest year in our records, which extend back to 1863.

GLOUCESTER, LOWER BARTON STREET.—A dry year, the fall being 5·54 in. below the average of nine years. Two droughts occurred, March 28th to April 11th, and December 17th to January 4th, 1893. August and September were the wettest months.

CHELTENHAM, HEATH LODGE.—Great deficiency of R, the fall being the least recorded in nearly 40 years' observation.

CHELTENHAM, NAUNTON PARK VILLAS.—Remarkably dry, no month with a heavy R. Between February 26th and April 11th only .86 in. of R fell, and absolute drought prevailed from March 28th to April 11th, and December 17th to 31st.

BURGHILL.—R short, and springs very low, but less felt owing to many wells having been deepened two years ago. R normally deficient in March and April, but abnormally so in October and December; the three summer months the wettest.

DILWYN.—R 3.49 in. below the average of five years. Absolute drought prevailed for 15 days, March 27th to April 12th, and 16 days, December 15th to 31st.

PEMBRIDGE, MARSTON.—Dry, R 6.03 in. less than the average of 12 years. March and April very dry, with only one rainy day between March 17th and April 11th.

MIDDLETON-IN-CHIRBURY.—R 8.16 in. below the average of ten years, May being the only month with more than an average fall. Wells very low all the year. Total drought for 16 days from March 28th, and for 20 days from December 16th.

BURTON, SHOBNALL.—R 4.43 in. less than the average of 17 years. No R for 16 days ending December 31st.

BURTON, DERBY ROAD.—R 5.71 in. below the average, being the sixth dry year in succession. The R of every month save two, June and September, was below the average. Mean shade temp. 1°6 below the average, being the lowest since 1879. With the exception of May and November, the temp. of all the months was below the average.

EVESHAM, LANSDOWNE.—A very dry year, the spring particularly so.

MADRESFIELD RECTORY.—R about six inches short of the average.

HARTLEBURY.—Very many wells became dry in the early part of the year.

KING'S HEATH.—A dry spring, and the autumn wet and showery. Never more than nine consecutive fine days in the harvest months, while in December no R or S fell for 17 days. TSS very rare.

RADWAY, IVY LODGE.—The smallest R since the gauge was fixed in 1871.

STRATFORD-ON-AVON.—Very dry, but not so much so as in 1887. Only one month with more than two inches of R, and February to April particularly dry. No day with a fall of as much as .75 in.

RAGLEY HALL.—A very dry year, even in October, when there seemed to be so much R elsewhere. R 4·13 in. below the average of ten years ; drains and ditches hardly ran during the year, and the lake was several feet below its usual level. On no occasion was an inch of R recorded.

SNITTERFIELD.—The driest year on record. R very small in the early part, but summer and early autumn wet.

KENILWORTH, THE SPRING.—R 4·05 in. less than the average of ten years.

RYTON-ON-DUNSMORE.—With the exception of 1887, the smallest R in any year since observations commenced in 1878.

COVENTRY, PRIORY ROW.—Very dry. A cold, late spring, damaging frosts in June, and a want of summer heat.

#### DIVISION VII.—NORTH MIDLAND COUNTIES.

BARKBY VICARAGE.—Deficient R, no great heat and an injurious frost on June 14th.

ROTHERBY HALL.—R 4·68 in. less than the average of 24 years. The grass min. fell below 32° in 11 out of the 12 months.

WALTHAM LE WOLD.—From July 20th to August 19th ·90 in. of R fell, and from September 20th to October 19th 7·22 in.

BELVOIR CASTLE.—Deficiency of R from January to August, but the average was made up in September and October.

UPPINGHAM.—Cold and gloomy, giving the impression of a greater R than occurred.

KETTON HALL.—R 5·37 in. below the average. A favourable season for all root crops ; bad for corn, grass and autumn fruit.

BLOXHOLME.—R not quite up to the average, but heavy rains in October were very destructive to late harvests.

LOUTH.—R 2·30 in. above the average of 28 years ; mean temp. 1°·8 below average.

BEESTON FIELDS.—R 2·44 in. less than the average. The spring was dry, the early summer wet, and November and December were very dry. June had the greatest excess of R (1·24 in.) and November the greatest deficiency (1·15 in.) The mean temp. was lower than that of any of the preceding 11 years. May and November were the only months with temp. above the average.

STRELLEY HALL.—R rather more than an inch below the average.



SOUTHWELL, GRANTS.—R about 1·25 in. below the average. In four months, May, June, September and October, the fall was above the average, October being specially wet; the other months were dry, the deficit being considerable in March, April, November, and December. The coldest year since 1879; May was the only month with a considerable excess of temp., while eight months were considerably below the average. Duration of sunshine 1304 hours, an excess of about 100 hours.

BABWORTH HALL.—About the average amount of R, but more than usual in the summer months.

HODSOCK PRIORY. —The year was dry, very cold, but fairly sunny. The mean temp. was about 2° below the average, and lower than that of any of the previous 16 years except 1879. It was cold almost throughout; the only month in which the mean was 1° above the average was May, and there was a slight excess in November; in the remaining ten months the temp. was below the average, in October and December by more than 3°, and in March and July by more than 4°. The nights were especially cold, and the number of frosts was large, though the extreme min. was not exceptional. R about ten per cent. below the average, the only really wet month was October, though there was a considerable excess in June caused by a heavy TS on the 28th. In December the fall was barely one fourth of the average, and in April and November about half; March, August, and September were also dry. There was a fair amount of S early in the year, but practically none at the end. There were 1261 hours of sunshine, which is about 35 hours more than the average, the largest excesses were in April and June, and there was also a good excess in October and December. July and August were dull, especially the former. The winds were generally light, with no gales of importance. The spring was very late.

ELVASTON.—The R was below the average in every month but June and September, March, April and November being particularly dry. The total R was 6·31 in. below the average of 13 years, and the smallest in that period with the exception of 1887. March, June, July, October and December were very cold, while April, May and November were warm.

DERBY, HOLMSIDE.—In spite of the first four and the last two months being dry, the R of the year was slightly above the average.

## DIVISION VIII.—NORTH WESTERN COUNTIES.

NESTON, HINDERTON.—R 12·5 per cent. above the average of 23 years.

WILMSLOW, SOUTHSIDE.—Following a dry spring, R set in after the middle of May, the fall increased during the summer, and culminated in a very wet October in which R fell on 22 days. November and December were dry.

AIGBURTH, KELTON.—R 6·61 in. above the average of 10 years, and the greatest fall in that period.

ECCLESTON, ELSWICK LODGE.—Total R rather less than the average ; May, August, September and October had more than the average, August being the wettest month of the year.

CLITHEROE, DOWNHAM HALL.—Total R slightly below the average.

ARKHOLME, STORRS HALL.—A cold spring ; 21 frosty nights in March, 11 in April and 3 in May. A wet harvest, with upwards of 17·00 in. of R in August and September. Cold almost throughout ; temp. below the average each month excepting May, June and November.

CARTMEL, HOLKER.—A late, cold spring, with severe frost and S at Easter, which completely destroyed the apple crop. A few very hot days in the second week of June, otherwise the season was dull and unfavourable for fruit crops. Somewhat severe frost set in on December 23rd and continued till the end of the year.

CARTMEL, PIT FARM.—The first half of the year (except May), was drier, and the latter half (except December), was wetter, than usual. The autumn was exceptionally free from violent storms.

CARTMEL, BROUGHTON HALL.—R two inches above the average of 25 years. August and September yielded more than one-third of the total R, while February, March and April produced only one-tenth.

SEATHWAITE VICARAGE.—A disappointingly rainy and cold year throughout, though with a smaller total R than some former years.

## DIVISION IX.—YORKSHIRE.

WATH-UPON-DEARNE.—R ·04 in. above the average of 30 years. The temp. of much of the year, especially in the winter, was below the average, and frosty nights lasted far into May.

MELTHAM, HAREWOOD LODGE.—R about the average, and very evenly distributed throughout the months, except October, which was very wet, owing to the exceptional R on three consecutive days. The year was the coldest since 1879 ; the whole of the summer, with the partial exception of August, being cool and dull. TSS were rather infrequent, and of moderate intensity.

HUDDERSFIELD, DALTON.—R 2·03 in. above the average of 27 years.

WAKEFIELD, ALVERTHORPE HALL.—The early part was cold and wet ; severe frost occurred in April and May, destroying the fruit bloom. Much R in June and October ; July and August were rainy and unsettled. Strong frost set in on Christmas day, and continued till the close of the year.

HALIFAX, THORPE.—Very cold in the early part of January ; April very dry ; mean temp. of June 4°·2 below the average of nine years. July was cold, October exceptionally wet. The last week of the year was very dry and cold.

SEDBERGH, THORNS HALL.—The year was cold and wet, especially in August and September, in which months more than one-third of the total R fell.

BEVERLEY, ALEXANDRA TERRACE.—All kinds of weather, except fine. Average R ; sun seldom seen. All crops nearly, some entirely, ruined. Weather throughout disastrous and depressing.

DRIFFIELD, BEVERLEY ROAD.—Remarkable for the low mean temp. of several of the months, notably March, June, July, September, October, and December. R 2·13 in., and sunshine 77 hours, above the average of four years. Severe floods in July and October.

DRIFFIELD, YORK ROAD.—Cold and wet ; R 2·13 in. above the average of four years. Sunshine (77 hours above the average) very abundant during the first half.

THIXENDALE.—Cold, wintry weather, more or less, to May 9th ; great lack of sunshine, particularly in July. A backward harvest, and bad weather for getting it in. The year closed with singularly calm and cold weather.

OLD MALTON.—R 1·19 in. above the average of 34 years.

AYSGARTH VICARAGE.—A very cold year, but not a wet one. Mean temp. of June, July, and August 54°·7, the coldest since 1879.

INGLEBY MANOR.—A cold, dry spring, with occasional spells of very warm weather, followed by cold and frost. A cold, cloudy summer, but not very wet. A terrible October, much corn being

spoilt. November and December very dry and calm, the year ending with severe frost. A very bad year for everything, the harvest being spoilt. R about the average.

#### DIVISION X.—NORTHERN COUNTIES.

DARLINGTON, DINSDALE RECTORY.—A cold spring, and very heavy rains in the autumn. About a fortnight of summer weather from June 22nd to July 11th.

SEAHAM VICARAGE.—The R was unfortunately distributed; the first six months were dry though cold; in August nearly 4·00 in. fell on 13 days, and nearly 6·00 in. in October on 15 days. The summer months, June, July, and August, were cloudy, and wanting in sunshine, the temp. rarely much above 60°. The fine September saved the crops.

SUNDERLAND, WEST HENDON HOUSE.—R ·47 in. above the arithmetical average, and ·73 in. above the geometrical mean of 30 years. R fell every day from September 29th to October 29th inclusive, though on two days the amount was not measurable. On no day did the fall reach an inch. S fell on 52 days, the greatest depth being eight inches on January 9th and 10th. There was a marked excess of winds from W. to N., and a still greater deficiency of those from S.E. and S. The N. was the wettest wind in proportion to the time it blew, and the W., as usual, was the driest. The S.W. and S.E. were respectively wet and dry, the reverse of what is almost always the case. The wind force was above the average, January and September chiefly contributing to the excess, and March showing the greatest deficiency. The unusual excess of cloud from July to October was almost counterbalanced by the fine weather from February to April.

OVINGHAM, W. TYNE COLLIERY.—R four inches above the average of six years.

HAYDON BRIDGE, BELTINGHAM.—R 7·84 in. above the average of 11 years.

NEWCASTLE, WELLBURN, JESMOND.—On no day throughout the year did an inch of R fall; this has not happened before during ten years.

ROTHBURY, CRAGSIDE.—A very damp, sunless year. Fruit, flowers, and vegetables very poor for want of sun.

ALWINTON, BIDDLESTON HALL.—A sunless year, with occasional frost at night every month except August.

PAWSTON [COLDSTREAM].—R .97 in. less than the average of 11 years. August, June, and October had decidedly more than the average, while July, September, November and December had less than the average. The summer generally was cold and cheerless, but owing to a comparatively fine September, the harvest which was large was got in in good order.

MILLOM, LEYFIELD.—A dry spring and wet autumn. Harvest much delayed and many crops spoiled. Sharp frost occurred from December 21st to the end of the year.

BRAYSTONES.—R 1.00 in. above the average of 28 years, and the evaporation was 2.77 in. less than the average of the same period.

WHITEHAVEN, IRISH STREET.—R exactly the same as the average of 16 years.

KESWICK, THE BEECHES.—The R of the autumn months, August, September, and October, was again excessive, while the fall in the first half of the year was deficient.

KESWICK, SHU-LE-CROW.—In the three months, August to October, 26.09 in. of R fell, or 45 per cent. of the total for the year.

COCKERMOUTH, WHINFELL HALL.—R 1.85 in. below the average of 37 years. A cold summer, and much hay and corn damaged.

COCKERMOUTH, BROUGHTON GRANGE.—A very dry spring, and favourable summer, but heavy rains in August and September spoilt an otherwise excellent harvest. The least number of days with R for 20 years, and apart from August and September a fine year.

EDENHALL VICARAGE.—R 8.17 in. above the average of eight years.

BLENCOWE SCHOOL.—The R of January, February, March, April, July, November, and December was below the average. The remaining months were in excess, August having almost double its usual fall. Total for the year a little below the average of 20 years. Very little T.

CARLISLE, WREAY VICARAGE.—R 2.71 in. above the average of the ten years ending 1885.

BRAMPTON, DENTON HOUSE.—Remarkable for the large quantity of R which fell in August, September, and October, viz., 18.02 in., or 47 per cent., of the total for the year.

KENDAL, NATLAND PARK.—R 3.07 in. above the average of five years. The autumn was remarkably cool and sunless.

KENDAL, ELLERGREEN.—A remarkably dry spring, but the much-needed R came on the 12th of May, and a wet May and June “put all things in tune.” A fine July enabled the hay to be gathered in, but it was followed by a very wet August and September, which completely spoiled some of the corn.

BOWNESS, FALLBARROW.—In the two months, August and September, 21·18 in. of R fell, or 32 per cent. of the total for the year, On six days the fall exceeded 1·00 in., and on one day nearly reached 3·00 in.

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

LLANFRECHFA GRANGE.—The smallest R for 27 years except 1890. Summer fairly warm.

TREDUNNOCK.—R about ten inches below the average.

ABERGAVENNY, DYNE HOUSE.—The R, though small, was fairly evenly distributed, no drought occurring.

LLANVIHANGEL COURT.—January to April inclusive was very cold. The characteristics of the year were deficient R, low temp., deficient sunshine and absence of gales.

FONMON CASTLE.—Average R, a dry spring and summer and a wettish autumn. The R of the first seven months was 14·58 in., and of the last five, 18·25 in. The former being much the same as the corresponding period of 1891, but the latter ten inches less.

NEATH, FAIRY LAND.—R much below the average, 1887 and 1889 being the only drier years recorded.

TEGFYNYDD.—R very much below the average.

CARMARTHEN ASYLUM.—R 12·86 in. less than the average of 20 years.

LLANDEFARLOG FACH.—R 6·92 in., and rainy days four, less than the average of ten years.

DISSERTH, GLANHOWEY.—Generally cool and sunless. Many rainy days but no great fall.

NEW RADNOR, DOWNTON.—A dry year, the R being 13 per cent. short of the average of eight years. Two absolute droughts occurred, one of 14 days in March and April and one of 16 days at the end of December. In eight months the R was below the average.

GWERN-I-ARGLWYDD.—A very wet, cold, sunless summer, and a very late harvest.

NANTGWILLT.—The smallest R in any year since observations were commenced, the nearest approach to it being 1887 and the next 1870. The fall of the first six months was only 17·13 in., or less than two-thirds of the average.

CHURCHSTOKE, MELLINGTON HALL.—The driest year since records commenced in 1875, the R being 9·05 in. less than the average of 17 years. May and September were the only months with more than the average. Total drought for 14 days ending April 11th, and for 15 days ending December 31st.

WELSHPOOL, POOL QUAY.—R 2·13 in. and rainy days eight, less than the average. Absolute drought from March 28th to April 11th, and from December 17th to 31st.

RHYL, SEDGELEY HOUSE.—The first four months were dry and rather cold, while October had three times the average R. No heavy fall in 24 hours.

ROSSET, TREVALYN HALL.—R 1·32 in. above the average of 25 years. The autumn was very wet, the fall in October being the largest in that month since 1872. The spring and winter months were dry on the whole. Temp. was deficient; severe winter frosts were followed by a generally cool and unsettled summer and an ungenial autumn.

COLWYN BAY.—The most remarkable features of the year were the number of days in the first four months on which S fell, viz. 23; the number of days between August 23rd and November 6th on which R fell, viz., 61, and the heavy fall in October, 9·30 in.

DOUGLAS, VICTORIA ROAD.—Unusually cold winter weather, with much S, was prolonged to the end of April, and the spring was so late that some foliage was not fully out till mid June. July was cold and often stormy, and August and September were wet, cold and stormy. October was the wettest and coldest recorded, while November was perhaps the best month of the year. Much S and frost in December. R of the year slightly above the average.

## SCOTLAND.

### DIVISION XII.—SOUTHERN COUNTIES.

AUCHENCAIRN, TORR HOUSE.—An unusually wet May and very bad weather during harvest.

COLVEND MANSE.—The R of August, September, and October,

taken together is the heaviest remembered in 49 years, 16·08 in. or 43 per cent. of the total for the year.

GLENLAIR.—The spring months were abnormally dry and the water supply was consequently short in May, but the deficiency was made up in August. Fortunately less R in September permitted harvest.

HOLM OF DALQUHAIRN.—R slightly below the average. The special feature was the small R and number of rainy days in the three months February to April.

DUMFRIES, IVY BANK.—R a little less than the average, only two falls exceeding an inch, both in August, that of the 29th (2·00 in.), being the greatest fall recorded since observations commenced in 1886.

HAWICK, BRANXHOLME.—The general impression of the year is that it was all out of season with great want of sunshine.

MELROSE ASYLUM.—R ·52 in. less, and rainy days one more, than the average of ten years.

MELROSE, ABBEY GATE.—A very cold, backward year; almost no sunshine, except in the beginning of June. R 3·19 in., and mean temp. 2°·0, below the average.

#### DIVISION XIII.—SOUTH EASTERN COUNTIES.

MARCHMONT HOUSE.—A very cold late season. October, the harvest month had 5·29 in. of R and only six dry days.

EDINBURGH, BLACKET PLACE.—R about the average; mean temp. 1°·1 below the average.

BO'NESS GRANGE.—The spring was dry on the whole, and occasional S showers fell until the middle of April. May and June were fine on the whole, July fine but cold, August very wet with a great fall of 2·00 in. on 30th. September and October were fine, November dull and December very frosty.

#### DIVISION XIV.—SOUTH WESTERN COUNTIES.

CAMBUS WALLACE.—R below the average. The summer cold and bleak, harvest greatly interrupted by R, and in some cases by S.

DALZELL HOUSE.—The last six months exceptionally cold, dull, and unseasonable.



HAMILTON, ARDENCLUTHA.—The summer and autumn were dull and wet after a very dry winter and spring.

DOCHROYLE.—R 6·61 in. below the average of 17 years.

COLMONELL.—R 3·48 in. less than the average of 16 years; 16·57 in. fell in the first half, and 27·13 in. in the latter half, August being the wettest month.

PAISLEY, CROOKSTON.—R about the average, but very little heat during the summer.

#### DIVISION XV.—WEST MIDLAND COUNTIES.

CRAIGEND CASTLE.—A very cold and wet year, but the crops were got in in good order.

BUCHLYVIE.—The R was unequally distributed, 19·77 in. falling in the first six months, and 31·26 in the last six. The spring and early summer (April particularly) were dry, and the latter part of summer and autumn very wet. August fairly “broke the record,” with 9·48 in. There were few TSS, and none severe. There was a 15 days period of absolute drought at the end of April and beginning of May.

ARDSHEAL.—Spring late, cold, and wet. May exceptionally wet, July and the first half of August unusually dry; the bulk of the hay secured without a shower. Excessive R in September, followed by a partial drought in October. November wet and stormy; December characterised by early frosts and S.

ISLAY, ARDBEG.—Low temp. and deficient sunshine both in summer and autumn.

#### DIVISION XVI.—EAST MIDLAND COUNTIES.

KINROSS, TURFHILLS.—A late cold, dry spring, and, excepting some hot days in the beginning of June, a cold summer. A wet autumn, followed by exceptionally early hard frosts.

TULLIALLAN.—Much frost, low temp., and S storms in the first three months; April dry, May wet and cloudy after the 5th. The summer cold and backward. December frosty.

CALLANDER LENY.—Distinguished by its small rainfall in February, March, and April (only 4·10 in.). No summer, but three days of great heat, June 7th to 9th.

COUPAR ANGUS.—R about four inches below the average. May, June, August, and October gave a copious supply of R, all the other months being deficient, particularly March, April and December.

#### DIVISION XVII.—NORTH EASTERN COUNTIES.

FETTERCAIRN.—R below the average. The autumn months wet, especially October. December very dry and frosty.

ELLON, KERLUCK.—Not unfavourable for the first nine months, and the crops though late were good, but the excessive R and moistness of October, and far into November, in great part ruined the harvest.

NEW DEER.—The weather during harvest time was the worst experienced since 1816 and 1817.

CULLEN HOUSE.—The year opened with sharp frost; February was milder, and March very stormy. The spring was cold and unseasonable, and the summer was bleak and sunless, and even worse than in 1891.

GRANTOWN.—R the heaviest since 1882.

#### DIVISION XVIII.—NORTH WESTERN COUNTIES.

KINNAHAIRD.—The coldest and wettest year remembered; little or no sunshine.

STRATHPEFFER SPA.—Long dry spells occurred in the last week of February, in March, April, the first half of May, and in part of June and July. Continuous wet periods in the beginning and end of September, and the early part of October.

GLENALADALE.—Temp. the lowest of the last four years, December being the coldest month of that period.

LOCH MADDY.—R 2·66 in. above the average of nine years.

DRUMNADROCHIT.—R 8·30 in., and rainy days 17, above the average of six years. The harvest quarter was far the wettest, showing an excess of 6·30 in. of R, and of 20 wet days.

#### DIVISION XIX.—NORTHERN COUNTIES.

DUNROBIN.—On the whole deficient in heat and sunshine. R if anything less than the average, but a good deal fell in September and October, much interfering with harvest operations.

SCOURIE.—Heavy falls of S with intense frost characterized the opening months. With the exception of a few days in May and June there was no sunshine and no summer. From July onward R prevailed, with little intermission, until November. December most pleasant, although frost and S occurred at times.

WATTEN, H.R.S.—Spring dry and cold ; summer cold and wet ; autumn wet ; winter frosty.

## IRELAND.

### DIVISION XX.—MUNSTER.

CASTLE TOWNSHEND.—The first half of the year had about an average R, while in the last six months more R fell than usual.

DARRYNANE ABBEY.—R of the first six months 7·30 in. below the average of ten years, and of the last six months 5·70 in. above, leaving a deficiency of 1·60 in. in the total for the year. The first half cold ; the second half mild, with little sunshine.

KILLARNEY.—The latter half very wet, R 37·88 in., while in the first six months only 19·15 in. fell.

WATERFORD, COVE LODGE.—As in 1891, August, the month in which R does most mischief, was the wettest month of the year.

WATERFORD, BROOK LODGE.—R 7·45 in. below the average.

DERRY CASTLE.—R ·82 in., and rainy days five, above the average of ten years. The weather was very harsh up to the middle of May, and dry generally, except in February, when the most severe S storm since 1866 occurred. The summer months were very favourable, but August and September were the worst on record for harvesting. October fine, November very wet but mild.

CLASHNEVIN.—The spring was very late and backward, but a small R in the early months allowed crops to be sown in good time. However, want of sun, low temp., and a heavy rainfall in summer produced a poor harvest.

LIMERICK, ROXBOROUGH.—As regards R an average year. An exceedingly dry spring ; a fairly good summer ; August and September terribly wet, wild, and broken ; October very fine ; November wet.

O'BRIENSBRIDGE, ROSS.—S in January, average weather in February and April, March dry and fine, May cold, June and the latter half of July fine and seasonable, August and September very

bad, October moderately fine, November mostly wet, and December variable.

HURDLESTOWN.—On the whole favourable ; R 1·26 in. and rainy days eight, below the average of seven years.

MILTOWN MALBAY.—March and April very dry and cold ; summer cold, with only one week of heat ; August and September exceptionally wet ; October very cold ; November mild.

#### DIVISION XXI.—LEINSTER.

WEXFORD, FELT HOUSE.—Spring very cold and late ; and summer cold and sunless.

INISTIOGE, WOODSTOCK.—The year was remarkable for lowness of temp. and want of sunshine. R below the average.

STRAFFAN HOUSE.—Spring late and cold, with severe frost up to the first week in June ; summer dull and cold with very little sunshine.

DUBLIN, PHENIX PARK.—R 3·25 in. above the ten years' average.

BALBRIGGAN, LARAGH.—R 1·28 in. less than the ten years' average.

#### DIVISION XXII.—CONNAUGHT.

TUAM, GARDENFIELD.—R 1·29 in. above the average of ten years ; the first seven months, with a fall of 17·20 in., showing a deficiency of 4·98 in., and the last five months, with a fall of 26·85 in., an excess of 6·27 in.

CASTLE COOTE.—The six months, May to October inclusive, show a R of 26·70 in. ; the remaining six, including all the winter months, only 12·50 in., or less than half.

LAWDERDALE.—R an average amount, but rainy days fewer than the average. The excessive R from August 5th to October 9th, during which period there were only nine dry days, did great damage to the harvest. Wells and springs were never short.

#### DIVISION XXIII.—ULSTER

LURGAN, BELLE VUE.—A year of average R. March, April, July, and December were dry.

EDENFEL.—The R for the three months ending March 31st is little more than half the average, and the smallest in the corresponding period for at least 28 years.

RAPHOE, CONVOY HOUSE.—A year of low temp., with little sun, and a full allowance of R ; little T and no heavy gales. The autumn was very wet.

## HEAVY FALLS IN SHORT PERIODS.

It is happily evident that increased attention is being bestowed upon this branch of rainfall investigation. Some persons seem to imagine that a "recording" or a "storm" gauge is indispensable; that is by no means the case, although of course an instrument of either class greatly lessens the trouble. But an observer who has only an ordinary gauge can, with a watch and a little care, obtain very good results. If there has been no rain since the gauge was emptied, all that is necessary is to note precisely the time of commencement, and of ending, of the heavy rain, and to measure immediately that it ceases, being mindful of—

RULE 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 written down, and added to the subsequent measurement.

On the accompanying diagram we have drawn three curves instead of two, as in previous years. The lowest, forming the boundary of the shaded portion, represents falls which are so frequent as not to require enumeration. For instance, many persons would think that for half an inch to fall in three quarters of an hour was exceptional, but on looking at the diagram they will see that such a fall is so common as not to claim entry here. Proof of this will be found in many entries in the following table, *e.g.*, upwards of half an inch fell in the following periods, viz., in 7, 8, 9, 15, 30, and 33 minutes; hence, evidently, there is nothing noteworthy in its falling in three quarters of an hour.

The next curve represents values usually reached at a few stations each year, but still very remarkable and quite unusual, for it must never be forgotten that in this table are concentrated the exceptional records from more than 2,000 stations.

The top curve is more irregular, since it is based upon only a few values, viz., the very highest that have been reported to us in

any year, or perhaps it would be more safe to say in any recent year. Altogether exceptional cases as rare as earthquakes, or as catching the produce of a waterspout.

Of entries above the second line the number is usually between 0 and 10, and averages about 4. In 1892 there are seven, which in the following table are marked with an \*.

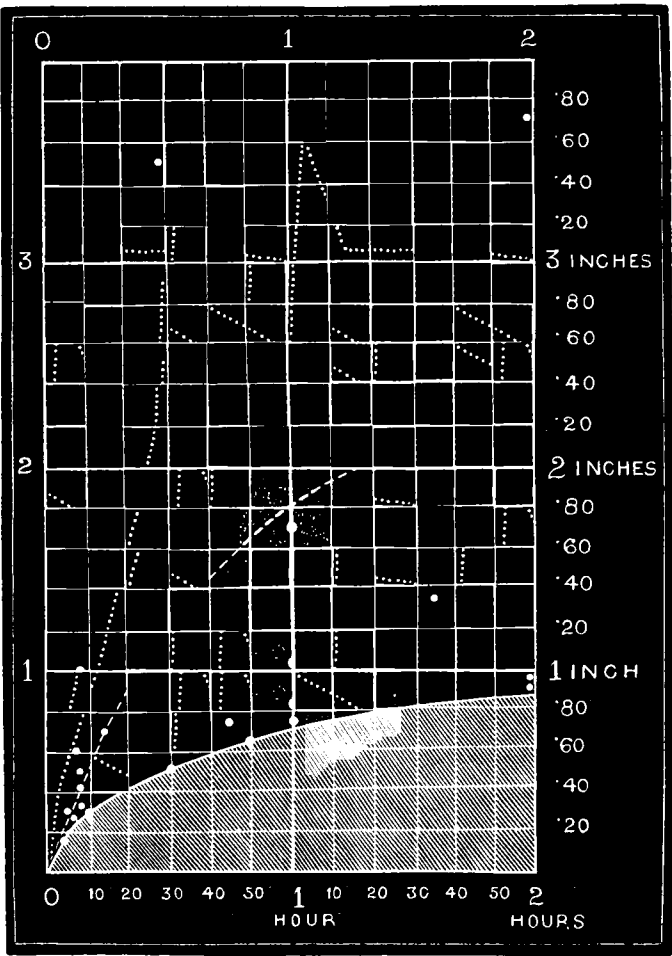
But what is still more remarkable is that there are two entries marked with a double \*\*, which are above the top curve, *i.e.*, two records without precedent, viz. :—

July 3rd.—The Park, Bolton, Lancashire.—1·00 in. in nine minutes. Both the time and quantity are marked with a ? by the observer, but the fact of the time being 9 and not a round number like 10 indicates care, and therefore we think that the estimate is probably nearly correct—at any rate, it is clearly a careful one.

July 16th.—Tyntesfield, Flax Bourton, Somerset.—3·75 in. in two hours.

We have always held that, though very improbable at any one spot, and not likely to occur anywhere twice in a century, the limit for this country was approximately *four inches in two hours*. We have hardly ever met with an observer who could believe this ; but the top curve is not based upon theory, it represents actual facts. As we have had 2·90 in. in half an hour, which occurred at Ash Hall, Cowbridge, Glamorgan, on July 22nd, 1880, and 3·64 in. in one hour and five minutes, which occurred on July 13th, 1889, at Barrells, Henley-in-Arden, Warwickshire, there can hardly be any doubt as to the fall in double the time being half-an-inch more, or 4·14 in. in two hours and ten minutes. The record of 3·75 in. in two hours in 1892 at Tyntesfield is one step more towards actual proof.

HEAVY FALLS IN SHORT PERIODS.



..... the extreme values hitherto recorded.

..... extremes rarely reached.

The shaded portion represents falls so frequent as not to require special notice.





*Heavy Falls in Short Periods in 1892.*

Date.	Div.	Station.	Amount.	Duration.	Rate per hour.
			in.	hr. min.	in.
June 29 ...	III.	Berkhamstead, Rosebank .....	·03	... 1	1·80
" " ...	"	" " " " .....	·07	... 2	2·10
May 25 ...	I.	Camden Square .....	·08	... 2½	1·92
June 28 ...	"	" " " " .....	·08	... 2½	1·92
" 20 ...	III.	Berkhamstead, Rosebank .....	·08	... 3	1·60
Aug. 24 ...	"	" " " " .....	·08	... 3	1·60
Sept. 20 ...	II.	St. George's Lodge .....	·27	... 5	3·24
Aug. 28 ...	IV.	Walthamstow, Elm House ..	·12	... 5	1·44
June 28 ...	I.	Camden Square .....	·20	... 5½	2·18
Sept. 21 ...	II.	Maidstone, Mount House .....	·61	... 7?	5·23*
June 29 ...	III.	Berkhamstead, Rosebank .....	·52	... 8	3·90*
July 3 ...	VIII.	Bolton, The Park .....	1·00?	... 9?	6·70**
" 16 ...	III.	Berkhamstead, Rosebank ...	·41	... 9	2·73
" 3 ...	IX.	Meltham, Harewood Lodge ...	·28	... 9	1·86
Aug. 28 ...	IV.	Walthamstow, Elm House ...	·21	... 10	1·26
July 3 ...	IX.	Hebden Bridge .....	·70	... 15	2·80
Aug. 31 ...	VIII.	Chelford, Astle Hall .....	·50	... 20	1·50
Sept. 21 ...	III.	Slough, Langley .....	·49	... 21	1·40
July 3 ...	IX.	South Milford Rectory .....	1·35	... 30	2·70*
June 28 ...	III.	Broxbourne .....	·72?	... 30	1·44
Sept. 20 ...	V.	Broad Hinton .....	·52	... 30?	1·04
July 3 ...	VIII.	Bolton, The Park .....	1·14	... 33	2·07
May 28 ...	XXI.	Dublin, Terenure .....	·74	... 45	·98
July 3 ...	IX.	Wakefield, Stanley Grange ...	·63?	... 50	·76
June 28 ...	II.	Seven Oaks, Kemsing .....	2·12	1 0	2·12*
July 16 ...	V.	Flax Bourton, Tyntesfield .....	1·70	1 0	1·70
June 28 ...	II.	Farnham, Seale .....	1·01	1 0	1·01
Aug. 28 ...	IV.	Walthamstow, Elm House ...	·74	1 0	·74
July 3 ...	IX.	Thixendale .....	1·05	1 30	·70
May 26 ...	XXIII.	Lough Swilly, Carrablagh .....	1 36	1 35	·86
June 28 ...	II.	Nutfield, Holmesdale .....	1·75	1 45	1·00
July 16 ...	V.	Flax Bourton, Tyntesfield ...	3·75	2 0	1·88**
June 28 ...	II.	Seven Oaks, Purleigh .....	2·33	2 0	1·17*
Aug. 23 ...	XI.	Monmouth, The Hendre .....	1·02?	2 0	·51
May 26 ...	VIII.	Southport, Birkdale .....	·97	2 0	·48
Sept. 20 ...	IV.	Diss .....	·90	2 0	·45
June 28 ...	II.	Brighton, Prestonville Road...	·87	2 0	·44
Sept. 11 ...	X.	Eskdale Vic. .....	1·72?	3 0	·57
July 16 ...	V.	Bath, Bathwick .....	1·75	3 15	·54
June 28-29	II.	Keston, Heathfield .....	1·57	3 25	·46
July 16 ...	VI.	Pucklechurch .....	1·88	3 30	·54
June 28-29	II.	Keston Tower .....	1·45	3 30	·41
" 28 ...	"	Nutfield, Holmesdale .....	2·30	4 30	·51
" 28-29	"	Seven Oaks, Riverhead .....	2·38	5 0	·48
" " "	IV.	Rendlesham Hall .....	3·08	6 0	·51

## HEAVY FALLS IN 24 HOURS IN 1892.

## INTRODUCTORY.

YEAR by year from the great majority of our correspondents we receive, among other information, the particulars as to the largest fall of rain in any rainfall day, *i.e.*, the largest amount measured at 9 a.m. on any date, and, of course, in pursuance of Rule IX., entered against the previous day.

Of these records, as will be seen from Table V., on page [123], there are upwards of 2,000 for 1892. For every one of these we calculate the per centage which the fall on that one day was of the total fall during the year. For example, the first entry on the next page—

Jan. 28th. XV. Strontian (Laudale).. ..... 3·28 in. or 4·7 per cent.

shows that at Laudale, Strontian, on the morning of January 29th, there was 3·28 in. in the gauge. As the total for the year was 70·09 in., it follows that—

$$\text{As } 70\cdot09 : 3\cdot28 :: 100 : 4\cdot7.$$

so that 3·28 in. is 4·7 per cent. of the yearly total. Of course it takes time to calculate these percentages for over 2,000 stations, but it is well worth the trouble, because evidently a fall of (say) 3·28 in. in one day is more remarkable at a station with a yearly total of 25 in., than at one with 70 in., and this would be brought out by the higher percentage. For instance, this 3·28 in., which is only 4·7 per cent. of 70·09 in., would be 13·1 per cent. of 25 in.

There is another point to be considered. To print the whole 2,231 entries would fill about forty pages, which would be very expensive and not very interesting. We have, therefore, always made a selection, trying to print all values of importance, but that is a very difficult selection to make.

In the first place, we have just seen that the same fall will be a higher or lower percentage, according as the total is less or greater. Hence it follows (supposing the max. falls to be identical in two years but that one was a wet year and the other a dry one) that the percentages would be much higher in the latter than in the former case. In order to keep the list within reasonable limits, we have for some years selected for publication *in extenso* all maximum

falls amounting to 2·50 in., or to 6 per cent., but it will be seen that this corresponds to a mean rainfall of 42 in., which is decidedly too high to represent the mean fall at the 2,231 stations, and therefore this year we have raised the limit for the percentage to 7 per cent, which of course brings the corresponding mean rainfall down to 36 in.

# CHRONICLE.

In this first part of the discussion we give the heavy falls in chronological order, and as regards the most important rains add a few words of summary.

## JANUARY 28TH.

XV.	Strontian (Laudale) .....	3·28 in.	or	4·7 per cent.
„	Ardgour House .....	3·80	„	4·5 „
„	Loch Eil (Corran) ..	4·25	„	5·0 „
XVIII.	Glencarron Lodge .....	4·33	„	4·7 „
„	Loch Shiel (Glenaladale) .....	4·48	„	4·5 „
„	Glenquoich .....	5·59	„	5·0 „
„	Luibruaridh .....	3·72	„	5·2 „

A heavy winter, rain in the wet districts of the Western Highlands.

## FEBRUARY 1ST.

XVIII.	Ben Nevis Observatory.....	3·57 in.	or	2·4 per cent.
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## FEBRUARY 20TH.

V.	Walkhampton (Lowery) .....	2·54 in.	or	5·7 per cent.
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## FEBRUARY 21ST.

XI.	Rhondda (Castell-nos Res.) .....	2·97 in.	or	6·6 per cent.
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## MARCH 16TH.

IX.	Northallerton (Osmotherley) .....	2·01 in.	or	7·7 per cent.
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## MARCH 18TH.

IX.	Hambleton Hills (Paradise).....	1·92 in.	or	8·2 per cent.
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## MAY 28TH.

VI.	Bridgnorth (Aldenham Park) .....	2·25 in.	or	9·1 per cent.
XXI.	Rathmines (Leinster Road) .....	1·84	„	7·7 „
„	Dublin (FitzWilliam Square) .....	2·06	„	8·0 „

## MAY 31ST.

VI.	Upton-on-Severn (Willow Bank) .....	1·40 in.	or	7·4 per cent.
XVIII.	N. Uist (Loch Maddy) .....	2·82	„	5·4 „

## JUNE 11TH.

XXII.	Sligo (Mount Shannon) .....	2·60 in.	or	6·0 per cent.
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## JUNE 16TH.

VI.	Southam (Stockton) .....	1·90 in.	or	9·0 per cent.
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JUNE 28TH.

II.	Reigate (Woodhatch Lodge) .....	1·93	in. or	7·5	per cent.
„	„ (Ringley Mead) .....	1·98	„	7·1	„
„	„ (Sewage Farm).....	2·00	„	7·7	„
„	Red Hill (Oxford Road) .....	2·20	„	8·0	„
„	„ (Montpellier) .....	2·18	„	8·0	„
„	Reigate (Dovers Lodge).....	2·19	„	8·7	„
„	Nutfield Priory .....	2·30	„	8·4	„
„	„ (Holmesdale) .....	2·30	„	9·0	„
„	Caterham Asylum .....	2·45	„	8·5	„
„	„ Valley (Birchwood House)...	2·12	„	7·7	„
„	Seven Oaks (Purleigh) .....	2·63	„	7·4	„
„	„ (Riverhead Vic.) .....	2·38	„	8·0	„
„	„ (Kemsing) .....	2·37	„	8·3	„
„	Ash (Pettings House) .....	2·73	„	11·3	„
„	Farningham Hill.....	1·95	„	7·2	„
„	Rochester (Knights Place) .....	2·36	„	7·9	„
„	Frindsbury (Manor Farm) .....	2·08	„	7·5	„
„	Gravesend (Park Place) .....	2·35	„	9·6	„
„	Rochester (Cooling Castle) .....	2·43	„	10·0	„
„	„ (Hoo St. Mary) .....	2·72	„	10·9	„
IV.	Shoeburyness .....	1·57	„	7·3	„
„	Southend Waterworks .....	1·76	„	8·1	„
„	Maldon (Norton Hall) .....	2·13	„	8·5	„
„	Bradwell-on-Sea (Bradwell Hall) .....	1·96	„	8·2	„
„	„ „ (Down Hall) .....	1·86	„	7·5	„
„	Witham (Little Braxted Hall).....	2·00	„	7·6	„
„	Braintree (Bocking, Fennes).....	1·86	„	7·4	„
„	Earls Colne (Chalkney House) .....	2·65	„	9·3	„
„	Harwich (Ramsey).....	2·33	„	7·3	„
„	Erwarton Hall [Harwich].....	2·52	„	8·0	„
„	Ipswich (Belstead Hall) .....	2·22	„	7·9	„
„	Rendlesham Hall .....	3·08	„	9·4	„
„	Aldborough (Aldringham House) .....	3·60	„	11·9	„
„	Lowestoft (Bryn-y-Môr) ..	3·04	„	9·9	„
VI.	Weobley (Dilwyn) .....	1·77	„	7·4	„
„	Ludlow (Ashford) .....	2·14	„	8·8	„
„	„ (Ashford House) .....	2·00	„	7·5	„
„	Cleobury Mortimer (Neen Savage).....	2·44	„	8·8	„
„	Burwarton .....	2·67	„	8·8	„
„	Bridgnorth (Coton Hall) .....	1·92	„	8·1	„
„	Wolverhampton (Town Hall) .....	2·20	„	8·8	„
„	„ Park .....	2·57	„	9·9	„
„	„ (Tettenhall) .....	2·44	„	9·1	„
„	„ (Wrottesley).....	2·51	„	9·4	„
„	Brewood (Belvide Res.).....	2·15	„	8·9	„
„	Penkridge (Rodbaston).....	4·04	„	14·0	„
„	Hednesford .....	2·57	„	12·4	„
„	Burton (Hoar Cross) .....	3·00	„	10·9	„
„	Uttoxeter (Brook House) ..	3·58	„	10·8	„
VII.	Swithland (The Brand).....	1·92	„	8·0	„
„	Stubton [Newark] ..	2·04	„	8·6	„
„	Sleaford (Bloxholme).....	1·67	„	7·4	„
„	Horncastle (Bucknall) .....	2·27	„	10·1	„
„	Lincoln (Branston).....	3·75	„	13·2	„
„	„ (Boultham) .....	2·23	„	7·7	„
„	„ (Moorlands, Skellingthorpe) ...	2·08	„	7·5	„
„	„ (D'Isney Place) .....	1·88	„	7·4	„
„	„ (The Quarry) .....	1·78	„	7·8	„

JUNE 28TH (*continued*).

VII.	Horncastle (Hemingby).....	2·54 in.	or	9·0 per cent.
„	Louth (Gospelgate).....	2·80	„	8·7 „
„	„ (Waterworks).....	2·79	„	9·5 „
„	„ (Westgate).....	3·48	„	10·9 „
„	N. Thoresby.....	2·73	„	9·9 „
„	Bingham (Whatton Manor).....	1·91	„	9·0 „
„	Nuttall.....	1·85	„	7·5 „
„	Newark (Shelton Rec.).....	2·09	„	9·6 „
„	Eastwood Colliery.....	2·21	„	8·8 „
„	Hucknall Torkard (Forge Mills).....	1·85	„	8·0 „
„	Papplewick (Waterworks).....	2·22	„	8·6 „
„	Farnsfield.....	2·45	„	8·6 „
„	Mansfield (Market Place).....	2·85	„	9·7 „
„	Ollerton (Thoresby Gardens).....	2·56	„	9·5 „
„	Worksop (Osberton Gardens).....	1·65	„	7·6 „
„	Retford (Babworth Hall).....	1·90	„	8·8 „
„	„ (W. Retford House).....	1·66	„	8·1 „
„	Derby (All Saints' Works).....	1·95	„	8·2 „
„	„ (Midland Railway).....	1·66	„	7·1 „
„	„ (Holmside, Hazelwood).....	3·33	„	11·9 „
„	„ (Breadsall Lodge).....	2·08	„	9·3 „
„	Belper (Chevin, Hazelwood).....	3·48	„	13·4 „
„	„ (Northfield).....	3·53	„	11·7 „
„	Stretton (Lindway Res.).....	2·27	„	11·9 „
„	Stuffynwood Hall [Mansfield].....	2·57	„	9·9 „
IX.	Sheffield (Crookes).....	2·15	„	7·3 „
„	„ (Chapelton).....	2·16	„	7·3 „
„	Wath-upon-Deane (Chapel Street) ...	2·20	„	8·7 „
„	„ „ (West Melton).....	1·86	„	8·0 „
„	Stainborough (Wentworth Castle).....	2·11	„	7·2 „
„	Barnsley (Church Street).....	2·07	„	7·7 „
„	„ (Wellington Street).....	2·11	„	7·6 „
„	Doncaster (Burghwallis Rec.).....	1·86	„	7·6 „
XI.	Aberaeron (Dolaeron).....	2·72	„	9·1 „

The above heavy rain was due to thunderstorms on the night of the 28th, and early morning of the 29th. They were heaviest in Kent, on the extreme coast of Suffolk, and in Lincolnshire, and along a tract running N.E. from South Staffordshire. In all these districts from 2½ in. to 4 in. of rain fell.

JULY 3RD.

Had there existed a rain gauge in a field near Langtoft, in East Yorkshire, and had it been able to hold 100 inches, we are inclined to think that it would have been filled on the evening of this day. But the fall was a local one, a so-called waterspout, and not one station reported any exceptionally heavy daily total. Some details will be found on pages [20] and [21] and [101]; also references to the *Met. Mag.*, and to the *Quar. Jour. Royal Met. Soc.*, and to these we may add the *Met. Mag.*, 1888, p. 84, (for details of an almost identical flood), and an interesting little book (with illustrations from photo-

graphs), entitled "Waterspouts on the Yorkshire Wolds, Cataclysm at Langtoft and Driffield," by J. Dennis Hood, published by Mr. Fawcett, of Driffield.

JULY 16TH.

III.	Buntingford (Hamels Park).....	2·08 in.	or	7·9 per cent.
V.	Portland (The Manse) .....	3·05	„	11·5 „
„	Wrighton Rectory .....	2·18	„	7·3 „
„	Bath (Bathwick) .....	2·01	„	8·3 „
„	„ (Ensleigh, Lansdowne) .....	2·01	„	7·6 „
„	„ (Charlcombe). .....	2·37	„	9·3 „
„	Batheaston Reservoir .....	1·87	„	8·5 „
„	Yatton (Chelvey) .....	3·52	„	12·4 „
„	Barrow Gurney Reservoir .....	2·48	„	8·2 „
„	Flax Bourton (Tyntesfield) .....	4·27	„	15·0 „
„	Abbots Leigh [Bristol] ... ..	3·25	„	— „
„	Long Ashton Estate Office ... ..	2·72	„	9·9 „
VI.	Monkswood Res. [Bath] .....	2·55	„	10·3 „
„	Bristol (Small Street) .....	1·77	„	7·6 „
„	Pucklechurch .....	2·31	„	9·4 „
„	Ross (Perrystone Court) .....	1·70	„	9·9 „
„	Much Marcle (Caerswall).....	1·77	„	7·3 „
„	Ledbury (Putley Court) .....	2·30	„	9·7 „
„	„ (Canon Frome Vic.) .....	2·03	„	8·6 „

AUGUST 7TH.

VIII.	Ulverston (Poaka Beck) .....	2·95 in.	or	5·5 per cent.
„	Cartmel (Pit Farm) .....	2·94	„	6·0 „
„	„ (Broughton Hall) ... ..	2·90	„	5·8 „
„	Broughton-in-Furness) .....	3·22	„	5·2 „
XI.	Llanberis (Glyn Padarn) .....	3·48	„	4·4 „

AUGUST 23RD.

XX.	Roche's Point .....	2·75 in.	or	5·6 per cent.
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AUGUST 25TH.

III.	Great Berkhamstead (Gt. Gaddesden)	1·81 in.	or	7·3 per cent.
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AUGUST 27TH.

I.	Sunbury (Hanworth Road) .....	1·65 in.	or	7·2 per cent.
„	„ Staines .....	2·14	„	8·1 „
„	„ (Knowle Green) .....	2·07	„	8·4 „
„	Twickenham (Vale House) .....	1·65	„	7·1 „
„	Acton (Newburgh Road) .....	1·76	„	8·0 „
„	Ealing (Public Building) .....	1·91	„	9·2 „
„	„ (Avenue Lodge, Gordon Road)	1·94	„	8·9 „
„	Kensington (Edith Road).....	1·65	„	7·6 „
„	„ (Addison Gardens) .....	1·85	„	8·3 „
„	„ (Campden Hill).....	1·68	„	7·5 „
„	London (Savile Row, W.) .....	1·54	„	7·1 „
„	„ (Norfolk Terrace) .....	1·72	„	7·3 „
„	„ (Guildhall) .....	1·64	„	7·7 „
„	Perivale (Sewage Farm) .....	1·90	„	8·7 „
„	London (Gloucester Place, W.) ..	1·73	„	7·6 „
„	„ (Regent's Park, Roy. Bot. Soc.)	1·75	„	7·3 „
„	„ (Old Ford).....	1·75	„	8·2 „
„	„ (Canonbury, N.) ... ..	1·83	„	7·9 „
„	„ (Camden Square)....	1·71	„	7·6 „
„	Hampstead (Kidderpore Res.) .....	2·30	„	8·8 „
„	Highgate (Northwood Road) .....	1·87	„	7·8 „

AUGUST 27TH (*continued*).

I.	Child's Hill (Helenslea), N.W. ....	1·76 in. or	7·5 per cent.
„	Upper Clapton (The Common) .....	1·57 „	7·1 „
„	Hornsey (Burghley Road) .....	2·12 „	8·8 „
„	Tottenham .....	1·98 „	8·8 „
„	Muswell Hill ... ..	1·89 „	7·5 „
„	Finchley (Etchingham Park) .....5 in.	1·89 „	7·4 „
„	Friern Barnet (Sewage Works) .. ....	1·94 „	8·3 „
„	Whetstone ... ..	1·79 „	7·4 „
„	Enfield (Nag's Head Lane) .....	1·93 „	7·9 „
II.	Farnham (Great Down, Seale) .....	1·75 „	7·3 „
„	Guildford (Wern) .....	1·65 „	7·4 „
„	Leatherhead (Downside) .....	1·55 „	7·5 „
„	Camberley (Heathcote).....	2·15 „	9·1 „
„	Cobham (Leigh Hill House).....	1·85 „	8·2 „
„	Chertsey (Ottershaw) .....	1·85 „	7·6 „
„	Windsor (Erlwood).....	1·99 „	8·5 „
„	Weybridge (Egerton Road).....	1·91 „	8·4 „
„	„ Heath (Netherfield).....	1·92 „	8·2 „
„	„ (Field Place) .....	1·95 „	8·2 „
„	„ (St. George's Lodge) ... ..	1·87 „	8·2 „
„	Walton-on-Thames (Hersham) .....	1·63 „	7·1 „
„	Surbiton (Seething Wells) .. ....	1·75 „	8·3 „
„	East Molesey (Palace Road) .....	1·68 „	7·7 „
„	Kingston Sewage Works.....	1·85 „	7·4 „
„	Wandsworth Common (Patten Road)	1·58 „	7·1 „
„	Egham (Cooper's Hill) .....	2·01 „	7·8 „
„	Kew Observatory .....	1·80 „	7·4 „
„	Battersea (Southwark W.W.).....	1·61 „	8·7 „
„	Alresford House .....	2·06 „	7·6 „
„	„ (Swarraton Rectory) .....	2·12 „	8·3 „
„	Whitchurch (Long Parish) .....	2·16 „	9·0 „
„	Tedworth House [Ludgershall] .....	1·95 „	7·1 „
„	Aldershot.....	2·13 „	8·6 „
„	Basingstoke (Chapel Hill) .....	2·08 „	8·5 „
„	„ (Monk Sherborne) .....	2·21 „	8·8 „
„	„ (Sherborne St. John) .....	2·12 „	8·5 „
„	Hartley Wintney .....	2·04 „	8·5 „
„	Hartley Grange ... ..	2·08 „	9·1 „
„	Strathfield Turgiss.....	1·85 „	7·8 „
„	Heckfield (Park Corner) .....	1·69 „	7·6 „
„	Sandhurst Lodge .....	1·98 „	7·9 „
„	Newbury (Donnington Square) .....	1·78 „	8·0 „
„	Wokingham (Wellington Coll.) .....	1·97 „	7·9 „
„	Hungerford (Denford Park).....	1·91 „	7·4 „
„	Wokingham (Binfield Park) .....	1·80 „	7·8 „
„	Windsor (Royal Gardens) ... ..	1·92 „	7·8 „
„	Newbury (Welford Park).....	1·79 „	7·3 „
„	„ (Weston) .. ....	1·78 „	7·1 „
„	Yattendon .....	1·62 „	7·5 „
„	Little Wittenham Rectory .....	1·42 „	7·6 „
III.	Southgate (The Lawns) .....	1·83 „	7·4 „
„	Cheshunt College .....	1·73 „	7·4 „
„	Slough (Langley) .....	1·79 „	7·6 „
„	Taplow Court.....	1·62 „	7·1 „
„	Whitchurch Rectory.....	1·50 „	7·6 „
IV.	Ilford (Great Gearies) .....	2·10 „	11·1 „
„	Walthamstow (Prospect Hill).....	2·01 „	8·6 „
„	Woodford (Hagger Lane).....	1·98 „	9·2 „

AUGUST 27<sup>TH</sup> (*continued*).

IV. Waltham Abbey .....	1·73 in. or	7·2 per cent.
V. Broad Chalke ....	1·98 „	7·7 „
„ Salisbury (Alderbury) .....	1·78 „	7·7 „
„ „ (West Dean).....	1·87 „	7·8 „
„ „ (Britford .....	1·87 „	7·7 „
„ „ (Wilton House) .....	1·85 „	7·7 „
„ Mere Down .....	2·01 „	7·5 „
„ Maiden Bradley.....	2·15 „	7·1 „
„ Warminster (Rye Hill) .....	2·15 „	7·7 „
„ Salisbury Plain (Chitterne Ho.) .....	1·76 „	8·2 „
„ Amesbury (Figheldean) .....	1·74 „	8·2 „
„ Ludgershall.....	1·90 „	7·6 „
„ „ (Conholt Park)...	1·95 „	7·2 „
„ „ (Collingbourne Kingston). .....	1·79 „	8·3 „
„ Market Lavington.....	1·82 „	8·6 „
„ Trowbridge (Rodney House) .....	1·63 „	7·6 „
„ „ (Steeple Ashton Vic.) .....	1·53 „	7·2 „
„ „ W. W., (Upton Scudamore) .....	1·87 „	8·4 „
„ Devizes (Southgate House) .....	1·42 „	7·2 „
„ „ (Wilts Co. Asylum) .....	1·65 „	8·1 „
„ Burbage (Wolfhall) .....	2·00 „	9·3 „
„ Alton Barnes Rec. ....	1·78 „	8·0 „
„ Bishops Cannings .....	1·85 „	7·8 „
„ Devizes (Shepherd's Shore) ..	1·65 „	7·5 „
„ Marlborough (Preshute Ho.) .....	2·00 „	8·1 „
„ „ (Mildenhall) .....	1·95 „	8·4 „
„ Ramsbury .....	1·83 „	8·5 „
„ Ogbourne Maizy.....	1·80 „	7·8 „
„ Maiden Newton (Cattistock Lodge) ...	2·36 „	7·5 „
„ Cerne Abbas (Melbury) .....	2·54 „	8·8 „
„ Beaminster Vic. ....	2·32 „	8·1 „
„ „ (Chedington).....	2·88 „	9·0 „
„ Hazelbury Bryan Rec. ....	2·95 „	7·9 „
„ Sturminster Newton (Riverside) .....	1·85 „	7·1 „
„ Plymouth (Drake's Res.) .....	2·97 „	10·4 „
„ Devonport (Rowdens Res.) ..	2·89 „	11·2 „
„ Ivybridge (Langham Hill) ...	2·52 „	7·1 „
„ Brixham (Lupton) .....	1·65 „	7·4 „
„ Totnes .....	2·15 „	7·2 „
„ Bere Ferrers .....	2·24 „	7·1 „
„ Torquay (Babbacombe).....	1·75 „	7·2 „
„ Buckfastleigh (Bossel Park) .....	2·80 „	6·9 „
„ Sheepstor (Head Weir).....	2·70 „	6·2 „
„ Roborough Res. ....	2·45 „	7·1 „
„ Deancombe Farm .....	2·88 „	6·7 „
„ Leather Tor Farm .....	2·71 „	5·6 „
„ Abbotskerswell (Court Grange) .....	2·45 „	9·1 „
„ Ashburton (Holne Vic.) .....	2·62 „	6·0 „
„ „ (Druid House) .....	3·08 „	8·1 „
„ Kingsteignton (Teignbridge Ho.) .....	2·28 „	8·9 „
„ Teignmouth (Bonnicliff) .....	2·37 „	10·2 „
„ „ Res. ....	2·68 „	11·1 „
„ „ (Woodlands).....	2·01 „	8·6 „
„ Ilington (Middlecot Ho ) .....	3·14 „	9·4 „
„ Chudleigh (Ideford) .....	2·27 „	8·9 „
„ Mamhead Rec. ....	2·14 „	7·8 „
„ Bovey Tracey (Colehays).....	3·03 „	9·1 „
„ Chudleigh (Trusham) .....	2·34 „	8·4 „



AUGUST 27TH (*continued*).

V.	Budleigh Salterton (Ravenshaw) .....	2·10 in.	or	9·0 per cent.
„	„ „ (Bickton) .....	1·76 „		7·3 „
„	Kenton (Southtown House).....	1·79 „		7·4 „
„	Exeter (Devon and Exeter Inst.) .....	1·70 „		7·3 „
„	Falmouth (New Obsy.).....	2·74 „		7·8 „
„	Empacombe [Devonport] .....	2·70 „		9·8 „
„	Cremyll [ „ „ ] .....	2·73 „		10·3 „
„	St. John's [ „ „ ] .....	2·57 „		9·1 „
„	Saltash (Pentillie Castle) .....	2·65 „		7·4 „
„	Yeovil (West Coker).....	2·00 „		7·6 „
„	„ (Hendford).....	2·00 „		7·5 „
„	„ (Summerlands) .....	1·85 „		7·3 „
„	Ilminster (White Lackington) .....	2·04 „		8·0 „
„	„ (Ilton Vicarage) .. . . .	1·80 „		7·7 „
„	South Petherton.....	1·84 „		8·0 „
„	Wincanton .....	1·85 „		7·4 „
VI.	Dennel Hill [Chepstow] .....	2·10 „		7·5 „

A not very important rain, but still the maximum of the year over a large part of the home counties, and extending westwards as far as the north of Cornwall. The percentage was generally about 8, and the fall about 2 in., but in the extreme East and West the percentage rose to 11, and the fall at some Devonshire stations exceeded 3 in.

## AUGUST 28TH.

XIV.	Greenock (Prospect Hill) .....	2·57 in.	or	4·2 per cent.
„	Shaws W. W. (Gryfe Reservoir) .....	2·60 „		4·3 „
„	„ (Mansfield) .....	2·60 „		4·2 „
XV.	Helensburgh W. W. ....	2·70 „		5·7 „
„	Loch Eck (Benmore).....	3·14 „		3·7 „

## AUGUST 30TH.

XI.	Treherbert .. . . .	2·62 in.	or	4·1 per cent.
XVI.	Blairingone [Dollar] .....	2·73 „		6·7 „

## SEPTEMBER 1ST.

VIII.	Hawkshead (Esthwaite Lodge) .....	3·70 in.	or	5·2 per cent.
„	Monk Coniston Park.....	2·65 „		3·1 „
„	Skelwith Fold [Ambleside] .....	3·18 „		3·9 „
X.	Borrowdale Vic.....	4·06 „		4·2 „
„	„ (Grange).....	3·85 „		4·7 „
„	Keswick (Barrow House).....	2·54 „		3·9 „
„	Aspatria (Brayton Hall) .....	3·07 „		7·1 „
„	Brampton (Denton House) .....	2·80 „		7·3 „
„	Bowness (Fallbarrow) .....	2·88 „		4·4 „
„	Windermere (Woodland Ter.).....	3·08 „		5·1 „
„	Longsleddale .....	3·40 „		4·2 „
„	Ambleside (Nook Cottage) .....	3·04 „		4·0 „
„	„ (Lesketh Howe) .....	2·97 „		3·8 „
„	Elterwater (Birch Hill).....	3·50 „		4·0 „
„	Grasmere (High Close) .....	3·30 „		4·0 „
„	„ (Pavement End) .....	3·87 „		4·5 „
„	Patterdale Hall .....	2·70 „		3·5 „

The record of a heavy fall of rain, but strictly confined to the English lakes, and for that district by no means remarkable.

## SEPTEMBER 18TH.

X.	Seathwaite .....	5.80 in.	or	4.5 per cent.
„	Buttermere (Hassness) .....	3.50	„	3.5 „
„	Dungeon Ghyll .....	4.07	„	3.7 „

## SEPTEMBER 20TH.

VII.	Swithland (Broombriggs Hill) ..	1.75 in.	or	8.3 per cent.
„	Loughborough (Nan Panton Res.) .....	1.82	„	8.6 „
„	Waltham-le-Wold .....	2.05	„	7.9 „
„	Farforth (Maidenwell House) .....	2.43	„	7.4 „
„	Bulwell (Bestwood) .....	1.83	„	7.5 „
„	Southwell (Grants).....	1.84	„	7.5 „
„	Bretby Park [Burton] .....	1.76	„	7.4 „
„	Melbourne (The Grange) .....	2.15	„	8.6 „
„	„ .....	2.07	„	9.6 „

## SEPTEMBER 21ST.

III.	Alconbury .....	1.57 in.	or	7.5 per cent.
IV.	Bury St. Edmunds (Abbeygate St.) ...	2.38	„	9.9 „
„	„ (Hengrave) .....	2.20	„	7.8 „

## SEPTEMBER 26TH.

XV.	Loch Eil (Conaglen) .....	3.02 in.	or	3.2 per cent.
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## SEPTEMBER 29TH.

V.	Salcombe (Prawle Point) .....	1.48 in.	or	7.1 per cent.
VI.	Berkeley (Salter Street) .....	1.64	„	7.9 „
„	Gloucester (Llanthony Lock) .....	1.32	„	7.5 „

## OCTOBER 2ND.

VII.	Bottesford.....	1.45 in.	or	7.8 per cent.
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## OCTOBER 4TH.

II.	Dungeness .....	1.46 in.	or	7.1 per cent.
„	Benenden (East End) .....	1.97	„	7.1 „
„	Cranbrook (Camden Lodge).....	2.07	„	7.2 „
„	Ashford (Bethersden) .....	2.00	„	7.2 „
„	„ (Beavor Green) .....	2.60	„	7.7 „
„	Sittingbourne (Sharsted Court) .....	2.58	„	7.8 „
„	Lynsted (The Batteries) .....	2.60	„	8.4 „
„	Sheppey (Leysdown).....	1.93	„	7.3 „
„	Sheerness-on-Sea W. W. ....	2.22	„	8.8 „
„	Lewes (Iford) .....	2.28	„	7.3 „
„	„ (Bedford Lodge).....	1.95	„	7.8 „
„	„ (South Malling) .....	2.21	„	9.5 „
„	„ (Saxonbury) .....	2.09	„	7.1 „
„	Hastings (Newgate Res.) .....	2.00	„	7.2 „
„	Winchelsea (The Friars) .....	2.50	„	9.0 „
„	Waldron (Bryckden).....5 in.	2.19	„	7.5 „
„	Cross-in-Hand (Montpellier) .....	2.65	„	8.5 „
„	Mayfield Vicarage .....	2.49	„	7.6 „
„	Wadhurst (Lower Cousley Wood) ...	2.17	„	7.1 „
IV.	Beccles (Sotterley Hall Gardens) .....	2.49	„	7.9 „
XI.	Capel Curig (Lake Cowlyd) .....	4.90	„	6.8 „
XIII.	North Berwick (Fidra).....	1.70	„	11.3 „

## OCTOBER 5TH.

XVI.	Kirriemuir (Lednathie).....	2.86 in.	or	7.2 per cent.
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OCTOBER 14TH.

We have now to deal with the most remarkable rain of the year, in fact with one of the most exceptional rains we have had to record. It fell partly on three days, and therefore in the following elaborate table we give, for all stations whence we have received it, the fall on each of the three days, and in subsequent columns the total for the three days, and lastly the percentage which the fall on the heaviest of the three (in nearly all cases the 14th) was of the yearly total, even if less than 7·0 per cent. It will be seen that this percentage is not given for every station, and this fact itself supplies additional information. The percentages are given only for stations at which the fall on this day was the heaviest in the year. Where no percentage is given, it therefore proves that some other day was wetter than either the 13th, 14th, or 15th of October.

Div.	Station.	October.			Total.	Per cent.
		13th. in.	14th. in.	15th. in.		
VII.	Brigg .....	1·12	1·15	·79	3·06	...
"	Barton-on-Humber (Saxby Rec.)... ..	·81	1·45	·90	3·16	5·4
"	Chatsworth Gardens .....	1·06	1·48	1·05	3·59	...
VIII.	Todmorden Waterworks .....	·38	2·14	·49	3·01	4·1
IX.	Sheffield (Tylecot, Ranmoor) .....	·70	1·20	1·19	3·09	...
"	" (Weston Park) .....	·95	1·30	·99	3·24	...
"	Rotherham (Thrybergh) .....	..	1·90	...	...	7·5
"	Sheffield (Chapeltown) .....	·82	1·70	1·11	3·63	...
"	Bolsterstone (Waldershaigh) .....	·87	1·94	1·45	4·26	6·0
"	Wath-upon-Deane (Chapel St.) .....	·94	1·44	·87	3·25	...
"	" " (West Melton).....	·84	1·50	·87	3·21	...
"	Stainborough (Wentworth Castle) .....	·92	1·93	·76	3·61	...
"	Holmbridge (Yateholme) .....	2·00	1·40	1·00	4·40	3·4
"	Barnsley (Church Street) .....	1·08	1·74	·74	3·56	...
"	" (Wellington Street) .....	1·07	1·76	·85	3·68	...
"	Meltham (Harewood Lodge) .....	1·02	2·31	1·11	4·44	5·2
"	Doncaster (Burghwallis Rec.) .....	·84	1·62	·81	3·27	...
"	Slaithwaite (Blackmoorfoot) .....	·54	2·48	1·00	4·02	5·8
"	Huddersfield (Dalton) .....	·84	3·01	1·04	4·89	8·7
"	Ackworth (Flounders Inst.).....	·70	2·13	·76	3·59	8·3
"	Nostell Priory (Garden) .....	·95	2·10	1·30	4·35	8·2
"	Pontefract (Purstone Hall) .....	·86	2·06	·80	3·72	8·2
"	Mirfield (Cote Wall) .....	·78	2·37	·92	4·07	8·5
"	Wakefield Prison .....	·92	2·38	·84	4·14	9·1
"	" (Alverthorpe Hall) .....	·88	3·50	·86	5·24	11·8
"	" (Walton Hall) .....	·90	2·16	·81	3·87	9·2
"	Rastrick .....	·71	2·32	·70	3·73	7·8
"	Sowerby Bridge, Haugh End .....	·70	2·23	·72	3·65	5·3
"	Wakefield (Field Head).....	·80	2·28	·84	3·92	9·3
"	" (Stanley Grange).....	·61	2·36	·86	3·83	9·2
"	Halifax (Bermerside Obsy.) .....	·63	2·68	·66	3·97	7·8
"	" (Public Library) .....	·73	2·19	·60	3·52	6·6
"	" (Thorpe).....	...	2·61	...	...	5·9
"	Leeds (Methley Park) .....	·81	2·21	·90	3·92	8·5

Div.	Station.	October.			Total. in.	Per cent.
		13th. in.	14th. in.	15th. in.		
IX.	Hebden Bridge .....	...	2·61	...	...	5·9
"	South Milford Rectory .....	·76	1·88	·82	3·46	7·0
"	Leeds (Wortley Res.) .....	...	2·15	...	...	7·6
"	Bradford (Brayshaw Res.) .....	84	3·19	·88	4·91	8·2
"	" (The Exchange) .....	·60	2·72	·63	3·95	9·4
"	" (Stubden) ..... <i>O.G.</i>	·50	3·20	·83	4·53	6·5
"	" ( " ) .....	·46	2·95	·78	4·19	6·5
"	" (Doe Park) ..... <i>O.G.</i>	·63	2·75	1·02	4·40	6·1
"	" (Merton Road) .....	·36	3·43	·88	4·67	9·6
"	" (Chellow Dean) .....	·50	3·34	·70	4·54	10·1
"	" (Hewenden Res.) .....	·70	2·25	·75	3·70	5·9
"	" ( " ) ..... <i>O.G.</i>	·65	2·25	·70	3·60	6·4
"	" (Heaton Res.) .....	·56	2·10	·65	3·31	6·4
"	Leeds (Holbeck) .....	·60	2·75	·70	4·05	11·3
"	" ( " Mill Yard) .....	·93	2·40	·68	4·01	9·2
"	" ( " W. Works Dépôt) .....	·94	3·53	·91	5·38	12·3
"	" (Museum) .....	·91	2·84	·58	4·33	10·2
"	" (Woodhouse Moor) .....	...	2·61	...	...	9·0
"	" ( " Cliff) .....	·68	2·52	·64	3·84	8·7
"	" (Elmete Hall, Roundhay) .....	·91	2·60	·84	4·35	8·6
"	" (Weetwood Res.) .....	...	2·65	...	...	9·2
"	" (Allerton Hill) .....	·75	2·47	·74	3·96	8·4
"	" (Oliver Hill, Horsforth) .....	1·61	3·72	1·12	6·45	11·0
"	Bingley (Gilstead Filters) .....	·56	1·90	·61	3·07	6·8
"	Leeds (Eccup South) .....	...	2·60	...	...	8·6
"	" ( " East) .....	...	3·01	...	...	9·6
"	Bingley (Sunnydale) .....	·10	2·75	·72	3·57	8·4
"	Harewood (Arthington) .....	...	3·18	...	...	10·3
"	Skipton (Silsden Res.) .....	·42	2·45	·30	3·17	8·2
"	Ilkley (Cherry Bank) .....	·54	2·30	·66	3·50	6·5
"	Leathley (Lindley Wood S.) .....	...	2·47	...	...	7·3
"	" ( " " N.) .....	...	2·68	...	...	7·8
"	Skipton (Cringles Res.) .....	·41	2·37	·37	3·15	7·7
"	Wetherby (Ribston) .....	·82	1·64	·65	3·11	7·2
"	Fewston (Swinsty E.) .....	...	3·20	...	...	7·7
"	" ( " W.) .....	...	2·91	...	...	7·0
"	" (Timble) .....	...	3·20	...	...	8·1
"	" South .....	...	3·10	...	...	8·0
"	" North .....	...	2·94	...	...	8·4
"	" (Spinksburn) .....	...	2·43	...	...	7·1
"	Blubberhouses .....	...	3·71	...	...	9·4
"	Harrogate (Bog Valley Garden) .....	·62	2·40	·85	3·87	8·2
"	" (Skipton Road) .....	·51	2·36	·76	3·63	7·8
"	Skipton (Barden Res.) ..... <i>O.G.</i>	·53	2·68	·40	3·61	6·1
"	" ( " ) .....	·54	2·58	·40	3·52	5·9
"	West End .....	...	3·57	...	...	8·1
"	" (Thruscross) .....	...	3·67	...	...	8·9
"	Skipton (Upper Res., Barden) .....	·29	3·21	·50	4·00	7·4
"	Knaresborough .....	·50	2·05	·58	3·13	7·4
"	" (Conyngham Hall) .....	...	2·15	...	...	8·0
"	" (Farnham) .....	·50	2·00	·58	3·08	7·9
"	Ripley Castle .....	·51	2·44	·80	3·75	8·6
"	Pateley Bridge (Castle Stead) .....	·85	3·25	·86	4·96	7·7
"	" (Grimwith Res.) ..... <i>O.G.</i>	·71	3·00	·60	4·31	6·8
"	" ( " " ) .....	·69	2·88	·58	4·15	6·5

Div.	Station.	October.			Total.	Per cent
		13th. in.	14th. in.	15th in.		
IX.	Pateley Moor (Smaden Head) .....	...	3·04	...	...	10·9
"	Dallow Moor (Harper Hill) .....	...	3·45	...	...	10·1
"	Ripon (North Lodge) .....	...	1·90	...	...	7·7
"	" (W. W. Lumley Moor) .....	·57	2·48	1·04	4·29	7·0
"	Ramsgill (Raygill House) .....	·83	3·90	1·04	5·77	7·2
"	" .....	1·00	4·03	·72	5·75	9·2
"	Arncliffe Vicarage .....	·70	2·59	·44	3·73	4·4
"	" (Amerdale) .....	·78	3·14	·39	4·31	5·4
"	Nidderdale (High Riggs) .....	·50	4·45	·84	5·79	8·6
"	" (West Houses) .....	·60	4·50	1·23	6·33	8·1
"	" (New Houses) .....	1·20	4·63	1·02	6·85	10·6
"	Kirkby Malzeard (Drovers Inn) .....	...	3·08	...	...	9·4
"	" (Bagwith Brae) .....	...	3·37	...	...	9·2
"	Ripon (High Bank, Mickley) .....	·34	2·12	·55	3·01	6·9
"	Masham Moor (W. Somerside) .....	...	4·07	...	...	10·7
"	" (High Sour Mire) .....	...	4·03	...	...	11·2
"	" (Low Houses) .....	...	2·60	...	...	7·7
"	Oughtershaw Hall .....	1·08	3·26	·47	4·81	4·8
"	Hull (Tranby Park) .....	·53	1·92	·70	3·15	7·5
"	" (Derringham) .....	...	1·84	...	...	7·6
"	Hedon (The Vicarage) .....	·69	1·76	·68	3·13	7·2
"	Brough (Brantinghamthorpe) .....	·84	2·50	1·03	4·37	8·0
"	Market Weighton (Houghton) .....	1·05	1·55	1·50	4·10	5·5
"	Beverley (East Riding Asylum) .....	·67	1·88	·57	3·12	6·9
"	Pocklington (Warter) .....	·60	2·20	·55	3·35	6·8
"	Driffeld (Beverley Road) .....	·46	2·09	·46	3·01	7·6
"	" (York Road) .....	·61	2·40	·54	3·55	8·4
"	" (Waterworks) .....	...	2·02	...	...	7·4
"	Wetwang .....	...	2·10	...	...	7·3
"	Thixendale .....	·84	2·37	·54	3·75	...
"	Lowthorpe (The Elms) .....	·60	2·04	·50	3·14	7·5
"	Ganton Hall .....	·75	2·30	·71	3·76	7·7
"	Aysgarth Vicarage .....	1·12	3·36	1·02	5·50	9·2
"	" (Carperby) .....	1·10	3·42	·91	5·43	9·0
"	Leyburn (Bolton Hall) .....	1·13	3·25	·68	5·06	10·1
"	Seamer (Irton) .....	...	2·50	...	...	7·6
"	Hawes (Hardrow Vic.) .....	1·41	3·47	·60	5·48	7·5
"	Richmond (The Grove) .....	1·14	1·96	·50	3·60	...
"	Guisborough (Lockwood Beck Res.) .....	·74	2·35	·95	4·04	6·3
X.	Kirkby Stephen .....	·27	2·87	·22	3·36	5·8
XXI.	Glenesmoel Lodge .....	...	2·58	...	...	5·4
"	" (W. W.) .....	...	2·74	...	...	6·2

In order to illustrate clearly the character of this rain we have prepared the map forming the frontispiece. This represents the area to which the exceptional fall was confined, viz., the eastern portion of England, from about  $53\frac{1}{4}^{\circ}$  N. to about  $54\frac{1}{2}^{\circ}$  N, say 100 miles square, or an area of about 10,000 square miles.

In the table we give no station at which the fall in the three days was less than three inches, and it will be seen that the

amounts rise to no less than 6·85 in. at the head of the Nidd, one of the sources of the Ouse, which passes York and flows into the Humber. When these amounts were placed upon the map, a curious difficulty presented itself: there were records in abundance on both sides of the map, but along the middle, both south and north of York, there was a broad blank space. It was soon seen that this was due to the exclusion of stations having less than three inches. These figures having been obtained, the map assumed its present form, and we have the somewhat strange system of two wet areas with a drier one between. A little further examination showed the cause of this distribution, namely the altitude of the different districts; that it was, in fact, a *rough* and *exaggerated* illustration of the (approximate) rule that the fall of rain increases 3 per cent. for each hundred feet of altitude above sea level—a *rough* illustration, because there are many cases in which the higher of two stations reports less than the lower, and an *exaggerated* illustration because the excess runs up in some cases to seven or eight per cent. instead of three per cent.

The map is, we hope, nearly, if not quite, self-explanatory. The scale shows that each inch of paper represents about 150 square miles.

The figures represent the total rainfall on the three days, October 13th-15th, expressed in inches and tenths.

The dotted lines represent the water partings (or limits of the watersheds) of the principal rivers, of which the names are given in light type. In order to avoid confusion, the great watershed of the Ouse has not been divided into its chief components, but, reckoning from north to south, they are the Swale, the Ure, and the Nidd.

The boundaries of the shading had been laid down before all the observations had been received, and it is very satisfactory to be able to state that in every case but one the additional records went on to the map without involving any change in the shape of these boundary lines—Iso-hyetal lines they are sometimes called—because they run through places of which the rainfall is equal.

It will be seen that the colouring is not extended over the whole area of the heavy rain, but is limited to the basin of the Humber above Goole, in which district nearly all the mischief occurred. The eastern 3 inch area, though part only is coloured, extended into N. Lincolnshire.

Although it is true that this map represents the aggregate of three days, it will be seen, by reference to the table, that a large

proportion (in some cases more than two-thirds) of the total fell in the one day ; and we further see that at six stations the fall on that day exceeded 4 inches.

As far as we are aware, there is not one recording rain gauge at work within the area of the map of this rain, and very few persons appear to have read their gauges except at the usual observing hour of 9 a.m. There was, however, one exception—Mr. Albert Wilson, of Merton Road, Bradford, whose observations are set out in the following table :—

RAIN FROM—				RATE PER HOUR.	
			in.		in.
5	a.m. to	7.45 a.m. on 14th ...	·36	.....	·13
	7.45 a.m. ,,	0.15 p.m. ,, ,, ...	·75	.....	·17
	0.15 p.m. ,,	4.45 p.m. ,, ,, ...	·70	... ..	·16
	4.45 p.m. ,,	8.15 p.m. ,, ,, ...	·63	.....	·18
	8.15 p.m. ,,	10 p.m. ,, ,, ...	·33	.....	·19
10	p.m. ,,	5.30 a.m. ,, 15th ...	·76	.....	·10
	5.30 a.m. ,,	7.45 a.m. ,, ,, ...	·26	.....	·12
	7.45 a.m. ,,	0.15 p.m. ,, ,, ...	·37	.....	·08
	0.15 p.m. ,,	4.45 p.m. ,, ,, ...	·37	.....	·08
	4.45 p.m. ,,	7 p.m. ,, ,, ...	·14	.....	·06
TOTAL (in 38 hours)...			<u>4·67</u>	AVERAGE ...	<u>·12</u>

It is very difficult without, or even with, a series of photographs to form any idea of the mischief which this rain produced in the low lands on the side of the principal rivers. We can give only a few facts, and must leave our readers to fill in the details from their own knowledge of the necessary discomfort and danger. It is impossible to state the number of houses flooded, but the official report for York alone was more than 500, and we have dozens of photographs of, or details respecting, flooded houses in Barnsley, Batley, Bingley, Boroughbridge, Castleford, Cleckheaton, Dewsbury, Doncaster, Ferrybridge, Halifax, Kirkstall, Knottingley, Leeds, Pateley Bridge, Pickering, Selby, and Wakefield. We feel sure that the total number of houses flooded cannot have been less than 4,000.

In at least five towns darkness was added to the discomfort, as either the gasworks were so flooded that no gas could be supplied, or the flood water got into the mains and replaced the gas.

At Selby the floods were stated to have flooded the waterworks, and so contaminated the supply. Service on the Sunday was impossible in many churches : in some because they were surrounded

by water, in some because they were flooded, and in many because there was no means of lighting them.

In parts of Wakefield, York, and probably other towns, the drains were so flooded that the water boiled up out of them, *i.e.*, they worked the wrong way, pouring their dirt into the streets and houses.

But we must not devote unlimited space to this rain. Important notes have been given on a previous page—[28]—of this volume, and an article upon the subject occupies pages 149 to 153 of the *Met. Mag.* for 1892; therefore, with the following references to notes of Yorkshire floods, and with the two subsequent reprints dealing with the facts as regards York, we must close this notice.

In connection with Yorkshire floods, the following references may be useful :—

1866—Nov. 15-17	...	<i>British Rainfall</i> , 1866, p. 49.
1870—July 9	...	" " 1870, p. 97.
1877—July 14-15	...	" " 1877, p. 83; & <i>Met. Mag.</i> , 1877, p. 103.
1886—July 25	...	" " 1886, pp. [31], [117] & [124].

#### THE YORK FLOODS.

*To the Editor of the "Times."*

SIR,—You have given to your readers details of some of the disasters which have befallen some of the low-lying portions of York, but you have said nothing as to the cause. I have not yet had time to investigate the whole of the facts, but those which I have received may be of sufficient interest to be worth placing upon record, and may be an inducement to some persons to do something in a direction in which Englishmen are terribly behind other nations.

To understand what happened we must first consider where York is—*viz.*, in the flat part of the Ouse at its junction with the Foss. The drainage area above York is about 876,000 acres, say 1,400 square miles—that is to say, every drop of rain (except what may have been absorbed or evaporated) that falls on those 1,400 square miles has to run past York to the sea. We must further remember that the north-west of Yorkshire (forming the sources of the rivers Nidd, Ure, and Swale, which united form the Ouse) is elevated, reaching 2,000 ft. above sea level, and impervious rock, off which the rain runs very rapidly. And it is on this high tract that the rain falls most heavily; at least double that which falls at York. This is sufficient to show that as an ordinary event the Ouse, which at York is not 20 ft. above the level of the sea, must require either a broad or a deep channel to carry away the water which comes down in time of flood.

It is not for me to say what engineers could do to facilitate the discharge of these floods. But the fact is that floods of 10 ft. to 12 ft. are common, and no great harm is done, but every foot beyond includes a larger and larger flooded area. One would have imagined that the knowledge of this fact would have induced the local authorities to keep an accurate automatic record of the



variations in the level of the river ; but, although I mentioned the desirability of this being done, and volunteered to gratuitously render any help in my power, some years since, nothing has been done, and the volume discharged by the Ouse is unknown. Until quite lately we were in the same discreditable state respecting the Thames, and nearly every other river, but I hope for better things in the future. At York, however, they are, in one respect, ahead of London. Every one familiar with Paris and other Continental cities knows that on nearly every bridge there is a scale of *mètres*, so that every passer-by can see the precise level of the river. Neither the Thames Conservancy, the Metropolitan Board of Works, nor even the County Council, have done this for a single bridge on the Thames (as far as I am aware) ; but the York authorities have such a scale on Ouse bridge, and all honour to them for it. They must, however, have it lengthened, for in the recent flood it was entirely submerged. Fragmentary records of the level of floods as observed on this scale exist, but they need close scrutiny. As far as I can at present ascertain, the recent flood seems to have been the greatest since February 10th, 1831.

As regards the cause of this flood, it was the fall of rain on Thursday, Friday, and Saturday last. At present I have only few returns from York or the area above it, but even they are quite sufficient to show that the flood was merely the natural result of a rather exceptional rain over the very large watershed. The following are the values for York and stations north-west of it :—

	Rainfall on October.			Total.
	13th.	14th.	15th.	
York .....	in. ·38	in. 1·73	in. ·50	in. 2·61
Farnham Hall, Knaresborough (16 miles north-west of York) .....	·50	2·00	·58	3·08
Aysgarth, Bedale (45 miles north-west of York)...	1·12	3·36	1·02	5·50

As it is probable that the rain was heavier than even at Aysgarth, in the extreme portions of the watershed, it is not improbable that four inches had to run off the whole 1,400 square miles ; and, if so, the Ouse had to discharge about 80,000,000,000 gallons. Is it any wonder that the old city suffered severely, even the records in the muniment-room of the Guildhall having been damaged by the flood ?

As is so frequently the case, small houses have been built on ground which careful inquiry would have shown was liable to be flooded. One has little sympathy with those who have built in such a spot, but much with the occupiers, and I am glad to hear that the Lord Mayor of York and others are collecting funds to alleviate the distress. Local efforts may be sufficient, but I think that Yorkshiremen in the south might help.

I am, Sir, your obedient servant,

G. J. SYMONS, F.R.S.

62, Camden Square, N.W., Oct. 20th.

*Flood Levels at York, extracted from tables by MR. ALFRED CREER, C.E.,  
City Surveyor, and by MR. J. EDMUND CLARK, B.A., B.Sc.*

DATE.	Height Corrected (1).	REMARKS AND AUTHORITY.
	ft. in.	
1263 (Snow)...*	18 3	D. Flooded across from North St. to Skeldergate, p. 281. "Highest known."
1564 .....*	18 0 ?	N. Two arches of Ouse Bridge washed away.
1614, March...*	18 0 ?	D. North St. flooded for 10 days. Frost and Snow. Jan. 16-Mar. 10. "Highest ever remembered."
1625, Feb. ...*	18 3	L. and date on City walls, St. George's Field.
1636 .....*	17 6	Line and date on City walls, St. George's Field.
1689, Oct. ....*	18 3	L., &c. 8 or 10 inches higher than 1636 : as high as 1263.
1732, Jan.....*	17 4	D. Eleven inches below 1689.
1763, Dec.....*	16 2½	L. "York Antiquities, 1785," says : 'higher than ever known by 8 inches,' but the brass plate at Ouse Bridge Inn gives 16 ft. 2½ in.
1783, Feb. ... ..	14 4 ?	N.
1795 .....*	16 4	M.T. Corrected by recent floods.
1809 .....*	15 10	M.T.
1824, Oct. ....	13 1 ?	L.
1824, Dec. ....	13 1 ?	L.
1831, Feb. 10 *	16 8	L., M.T., &c.
1856, Oct. ....	15 0	L. Was at Naburn at least 8 inches lower than in 1892. Castlegate was flooded. Highest at York between 1831 and 1892.
1869, Feb. 5 ...	14 10 ?	L. Mr. Reader says that at Naburn it was 8 inches lower than in 1892. The Nidd accident.
1870, Jan. ....	13 10	Rose just upon tessellated pavement in Hospitium. (Canon Raine).
1881, Mar. 10...	13 9	... ..
1892, Oct. 16 ...	15 8	... ..

(1). These are the heights above summer level at Ouse Bridge, which is 16 ft. 9 in. above Ordnance Datum; therefore the entry for 1263 corresponds to 35 ft. above Ordnance, and October, 1892, to 32 ft. 5 in.

REFERENCE LETTERS: D—Drake's Eboracum; N—Newspaper Cuttings; L—Mr. Leetham's List (earlier from Drake, &c.); M.T.—Record at Marygate Tanyard; T.C.—Town Clerk's Records. The original of the returns (marked T.C.) is now in the hands of Mr. T. Humphries, 15, High Ousegate, who received them from Mr. Leetham, by whom the earlier entries were collected, and the later recorded up to 1875.

NOTE.—There seems to be no record from 1856 to 1866.

\* Floods higher than that of October, 1892.

OCTOBER 16TH.

VII. Brimington .....	2.57 in. or 10.0 per cent.
IX. Swinfleet ... ..	2.38 „ 8.9 „
„ Wetherby (Ribston) .....	1.66 „ 7.1 „

OCTOBER 26TH.

V. Blandford (Tarrant Keynston) .....	2.00 in. or 7.8 per cent.
„ Axminster (Great Trill) .....	2.25 „ 9.3 „
„ „ (South Street).....	2.46 „ 8.9 „

OCTOBER 26TH—*continued*.

XX.	Kenmare (Derreen) .....	3.49 in.	or	5.3 per cent.
„	Valencia (Glanleam) .....	2.74 „		4.9 „
XXIII.	Castlewellan (Lough Island) .....	3.00 „		7.3 „

## NOVEMBER 20TH.

XX.	Mallow (Old Dromore) .....	2.68 in.	or	6.1 per cent.
„	Killarney (Woodlawn) .....	2.53 „		4.4 „
XXII.	Clifden (Kylemore House) .....	3.07 „		3.8 „
„	„ ( „ Castle) .....	2.62 „		3.5 „

## NOVEMBER 28TH.

XVIII.	Invergarry .....	2.52 in.	or	4.5 per cent.
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## NOVEMBER 29TH.

XVIII.	Fort William (Public School) .....	2.51 in.	or	3.1 per cent.
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## ABSTRACT.

IN this section we have firstly to consider the very highest amounts and percentages on any rainfall day throughout the year at any of the 2,231 stations contributing information for this section. For this, we have for many years selected the highest 16 values. These, as regards amount of fall, are dealt with in Tables I. and II. Stations at which the yearly total is 100 or 150 ins., must obviously have large daily values; and, therefore, there is nothing remarkable in stations in the English Lakes, N. Wales, and the N.W. of Scotland appearing in this table with daily falls of from 4 to nearly 6 ins.; and we have already seen so much as to the flooding in Yorkshire, that it was quite reasonable to expect that several Yorkshire stations should appear in the list, but the two exceptional entries are those on June 28th and July 16th, each being due to a TS in a dry district.

Table II. shows that the records in Table I. are much above the average, have indeed been exceeded only twice in 28 years—the mean value for 1892 being 4.47 in., and the only instances of higher means being 4.52 in. in 1875, and 5.01 in. in 1890—and as the mean percentage is also high, it follows that generally these maxima occurred at stations where the rainfall was not very different from the mean.

Table III. presents a peculiarity in the fact that all the entries belong to one other of three dates—June 28th, July 16th, or October 14th, dates already sufficiently brought to the attention of our readers. The percentages are very high; the lowest, 11.2 in., being higher than the highest in 9 out of the last 28 years.

Table IV. makes this fact still clearer. The mean of the 16 highest percentages is 12.3, and this has been exceeded only twice in

28 years, viz., in 1889 (12·7), and in 1890 (14·4). The mean depth at these stations is above the average, but not so much so as the percentages, which, of course, indicate that at them the total yearly fall was less than usual. The absolute maximum percentage (15·0, at Tyntesfield, Somerset) has been exceeded in only four out of 28 years.

Lastly, we come to Table V., the general summary of this branch of the work. It shows that 1892 had maximum falls which, considered as a percentage of the total fall in the year, were unprecedentedly large. Hitherto 5·1 per cent. in 1865 was the highest value, but 1892 shows 5·4. As the mean amount is also high, it follows that the max. falls really were large, and that while the percentages were undoubtedly large, owing in part to the total rain being small, yet a portion of this excess is due to actually larger heavy falls than usual.

TABLE I.—*Maximum Falls in 1892.*

Date.	Div.	Station.	Depth.	Per Cent.	Fall in year.
Sept. 18 ...	X.	Seathwaite .....	5·80in.	4·5	129·50 in.
Jan. 28 ...	XVIII.	Glenquoich .....	5·59 ,,	5·0	111·99 ,,
Oct. 4 ...	XI.	Capel Cerig, Lake Cowlyd ...	4·90 ,,	6·8	72·55 ,,
„ 14 ...	IX.	Nidderdale, New Houses ...	4·63 ,,	10·6	43·69 ,,
„ „ „	„	„ „ West Houses ...	4·50 ,,	8·1	55·55 ,,
Jan. 28 ...	XVIII.	Loch Shiel, Glenaladale .....	4·48 ,,	4·5	98·69 ,,
Oct. 14 ...	IX.	Nidderdale, High Riggs.....	4·45 ,,	8·6	51·55 ,,
Jan. 28 ...	XVIII.	Glencarron Lodge .....	4·33 ,,	4·7	91·78 ,,
July 16 ...	V.	Flax Bourton, Tyntesfield ...	4·27 ,,	15·0	28·52 ,,
Jan. 28 ...	XV.	Loch Eil, Corran .....	4·25 ,,	5·0	84·80 ,,
Oct. 14 ...	IX.	Masham Moor, W. Somerside	4·07 ,,	10·7	38·04 ,,
Sept. 18 ...	X.	Dungeon Ghyll.....	4·07 ,,	3·7	110·04 ,,
„ 1 ...	„	Borrowdale Vicarage .....	4·06 ,,	4·2	95·67 ,,
June 28 ...	VI.	Penkridge, Rodbaston.....	4·04 ,,	14·0	28·91 ,,
Oct. 14 ...	IX.	Masham Moor (High Sour Mire)	4·03 ,,	11·2	35·88 ,,
„ „ ...	„	Ramsgill .....	4·03 ,,	9·2	43·99 ,,

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	Camusinas.....	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.	„
1876 ...	3·37	5·9	57·6	4·50	5·5	Foffany .....	XXIII.
1877 ...	3·77	4·6	93·4	4·98	5·3	Skye, Portree..	XVIII.
1878 ...	3·57	7·4	57·2	4·24	8·6	Springfield ...	XI.
1879 ...	3·66	+9·5	50·4	—4·05	4·1	Little Langdale	X.
1880 ...	3·50	7·7	51·1	4·75	3·9	Seathwaite.....	„
1881 ...	3·65	4·9	83·1	5·42	4·7	Sligachan ...	XVII.
1882 ...	3·28	4·5	84·3	4·51	3·0	Seathwaite ...	X.
1883 ...	3·69	6·1	72·4	5·27	9·0	Glenesmoel ...	XXI.
1884 ...	3·45	4·7	80·7	6·78	5·0	Seathwaite ...	X.
1885 ...	3·45	5·8	68·2	4·62	3·2	Seathwaite ...	„
1886 ...	3·77	7·7	58·7	4·20	9·9	Little Bredy ...	V.
1887 ...	—2·83	6·1	56·8	4·93	13·0	Galway .....	XXII.
1888 ...	4·20	5·9	77·0	5·20	5·4	Wythburn Vic.	X.
1889 ...	3·89	9·9	49·2	4·45	16·5	N. Ockendon..	IV.
1890 ...	+5·01	6·9	95·1	+7·29	3·7	Ben Nevis ....	XVIII.
1891 ...	4·38	4·7	+108·4	6·14	4·2	Seathwaite.....	X.
Mean ...	3·65	6·4	69·2	5·26	7·0	.....	...
1892 ...	4·47	7·9	70·1	5·80	4·5	Seathwaite.....	X.
Diff. ...	+·82	+1·5	+·9	+·54	—2·5	.....	...

TABLE III.—*Maximum Per Centages in 1892.*

Date.	Div.	Station.	Per Cent.	Depth.	Fall in year.
July 16 ...	V.	Flax Bourton, Tyntesfield ...	15·0	4·27 in.	28·52 in.
June 28 ...	VI.	Penkridge, Rodbaston.....	14·0	4·04 „	28·91 „
„ „ ...	VII.	Belper, Chevin.....	13·4	3·48 „	26·00 „
„ „ ...	„	Lincoln, Branston Hall .....	13·2	3·75 „	28·45 „
July 16 ...	V.	Yatton, Chelvey .....	12·4	3·52 „	28·46 „
June 28 ...	VI.	Hednesford .....	12·4	2·57 „	20·67 „
Oct. 14 ...	IX.	Leeds, Holbeck W.W. Dépôt	12·3	3·53 „	28·69 „
June 28 ..	IV.	Aldborough Aldringham Ho.	11·9	3·60 „	30·17 „
„ „ ...	VII.	Derby, Holmside Hazlewood.	11·9	3·33 „	28·09 „
„ „ ...	„	Stretton, Lindway Res. ....	11·9	2·27 „	19·07 „
Oct. 14 ...	IX.	Wakefield, Alverthorpe Hall	11·8	3·50 „	29·69 „
June 28 ...	VII.	Belper, Northfield .....	11·7	3·53 „	30·22 „
July 16 ...	V.	Portland, The Manse .....	11·5	3·05 „	26·42 „
Oct. 14 ...	IX.	Leeds, Holbeck Mill .....	11·3	2·75 „	24·35 „
June 28 ..	II.	Ash, Pettings House .....	11·3	2·73 „	24·15 „
Oct. 14 ...	IX.	Masham Moor (High Sour Mire)	11·2	4·03 „	35·88 „

TABLE IV.—*Comparison of Max. Per Centages with those in previous years.*

Years.	MEAN.			ABSOLUTE.			
	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	2·50	Welwyn.. [Hall	III.
1875 ...	10·2	+3·76	37·5	13·2	3·95	Letheringsett ...	IV.
1876 ...	— 7·4	2·49	33·7	— 8·5	3·70	Cragside .....	X.
1877 ...	8·2	2·73	33·1	9·3	3·09	Wellington.....	VI.
1878 ...	10·2	3·05	30·0	11·8	3·90	Haverstock Hill	I.
1879 ...	10·9	3·31	30·5	12·3	3·80	Cambridge M. V.	III.
1880 ...	9·5	3·06	32·3	11·7	3·34	Marmont Pr. L.	„
1881 ...	8·1	2·42	30·3	10·6	3·20	Aboyne Castle..	XVII.
1882 ...	7·7	2·54	33·4	9·1	2·80	Bothalhaugh ...	X.
1883 ...	9·7	3·00	31·1	12·3	4·31	Skegness.....	VII.
1884 ...	11·7	2·33	—20·0	13·8	2·66	Diss(Thelveton)	IV.
1885 ...	8·9	2·71	30·7	9·6	2·62	Beccles, Ellough	„
1886 ...	10·1	3·32	32·7	11·5	4·10	Methley Park...	IX.
1887 ...	9·5	—2·11	21·9	13·0	4·93	Galway .....	XXII.
1888 ...	10·9	3·05	28·3	11·8	3·24	Rothamstead ...	III.
1889 ...	12·7	3·51	27·8	16·5	4·45	N. Ockendon...	IV.
1890 ...	+14·4	3·60	25·1	17·2	3·68	Slough, Langley	III.
1891 ...	9·7	2·67	27·6	14·4	4·00	Sunnyside Aslm	XVI.
Mean ..	9·7	2·77	29·2	12·2	3·68	.....	...
1892 ...	12·3	3·37	27·4	15·0	4·27	Tyntesfield .....	V.
Diff. ...	+ 2·6	+ ·60	— 1·8	+ 2·8	+ ·59	.....	...

TABLE V.—*Comparison of the Mean of all the Maximum Falls of 1892 with similar data for previous years.*

Years.	Number of Returns.	Mean Percentage.	Mean Amount.	Mean Total Fall in year.	Ratio taking 34=100.	Total Fall being assumed =34in. Mean Max. =
			in.	in.		
1865.....	481	5.1	1.70	33	97	5.0 per cent
1866.....	590	3.7	1.48	40	118	4.4 „
1867.....	584	4.6	1.44	31	91	4.2 „
1868.....	676	4.3	1.43	33	97	4.2 „
1869.....	637	4.2	1.42	34	100	4.2 „
1870.....	687	4.9	1.30	27	79	3.8 „
1871.....	752	4.9	1.49	30	88	4.4 „
1872.....	743	— 3.4	1.59	+ 47	+ 138	4.7 „
1873.....	809	4.6	1.35	29	85	4.0 „
1874.....	1010	4.4	1.41	32	94	4.1 „
1875.....	1081	5.0	+1.83	37	109	+5.4 „
1876.....	1112	3.9	1.49	38	112	4.4 „
1877.....	1180	3.8	1.56	41	121	4.6 „
1878.....	1186	4.3	1.49	35	103	4.4 „
1879.....	978	4.2	1.52	36	106	4.5 „
1880.....	1117	4.8	1.72	36	106	5.1 „
1881.....	1194	4.1	1.45	35	103	4.3 „
1882.....	1463	3.6	1.42	39	115	4.2 „
1883.....	1505	4.0	1.41	35	103	4.1 „
1884.....	1691	4.8	1.32	28	82	3.9 „
1885.....	1801	4.5	1.41	31	91	4.2 „
1886.....	1718	4.6	1.64	35	103	4.8 „
1887.....	1921	4.5	—1.14	— 25	— 74	—3.4 „
1888.....	1974	4.4	1.41	32	94	4.1 „
1889.....	1812	4.8	1.41	29	85	4.1 „
1890.....	2081	5.0	1.46	29	85	4.3 „
1891.....	2218	4.1	1.47	35	103	4.3 „
Mean ...	1222	4.4	1.47	34	100	4.3 „
1892.....	2231	+ 5.4	1.62	30	88	4.8 „
Diff.....	+1009	+ 1.0	+ .15	— 4	— 12	+ .5 „

## DROUGHTS IN 1892.

It will be remembered that after considerable discussion we adopted in 1887 the following definitions of droughts :—

ABSOLUTE DROUGHTS.—Periods of *more than* 14 consecutive days absolutely without R.

PARTIAL DROUGHTS.—Periods of *more than* 28 consecutive days, the aggregate rainfall of which does not exceed 0·01 in. per diem.

For 1888 we selected fifty stations nearly equally spread over the British Isles, and for each subsequent year we have employed as the basis of this section the same stations whenever possible, and when not, then substitutes from the nearest available records. This, therefore, ensures a very close approach to absolute uniformity and comparability.

The following table gives an abstract for 1892 and for four previous years :—

ABSOLUTE DROUGHTS.								
	No. of stations.	Number.			Average.	Duration.	Greatest.	Stations without one.
1888	... 50	.....	17	.....	17 days	.....	20 days	..... 35
1889	... 50	.....	42	.....	21 „	.....	30 „	..... 13
1890	... 50	.....	13	.....	18 „	.....	20 „	..... 39
1891	... 50	.....	26	.....	18 „	.....	34 „	..... 28
1892	... 50	... ..	36	.....	16 „	.....	20 „	..... 25

PARTIAL DROUGHTS.								
	No. of stations.	Number.			Average.	Duration.	Greatest.	Stations without one.
1888	... 50	.....	4	.....	42 days	.....	50 days	..... 46
1889	... 50	.....	38	.....	34 „	.....	45 „	..... 15
1890	... 50	.....	3	.....	30 „	.....	31 „	..... 47
1891	... 50	.....	38	.....	36 „	.....	49 „	..... 14
1892	... 50	.....	17	.....	35 „	.....	64 „	..... 33

Absolute droughts were rather more numerous than in previous years, but they were of very short duration. Partial droughts were rather few and rather short.



STATION & COUNTY.	ABSOLUTE DROUGHTS.			PARTIAL DROUGHTS.			
	Began.	Ended.	Lasted	Began.	Ended.	Lasted.	Amount.
London (Camden Square), N.W.. <i>Middlesex.</i>	Mar. 28 Dec. 15	April 11 Dec. 31	15 17	None			in.
Dorking (Abinger Hall) ... <i>Surrey.</i>	Mar. 28 Dec. 15	April 12 Dec. 31	16 17	None			
Hythe..... <i>Kent.</i>	None			April 29	May 30	32	·26
Welwyn (Datchworth Rectory).. <i>Herts.</i>	Dec. 16	Dec. 31	16	Mar. 28	April 26	30	·24
Maxey Vic. [Market Deeping] ... <i>Northampton.</i>	Dec. 17	Dec. 31	15	None			
Geldeston [Beccles] ..... <i>Norfolk.</i>	None			None			
Calne (High Street) ..... <i>Wilts.</i>	Mar. 28 Dec. 17	April 11 Dec. 31	15 15	None			
Torquay (Babbacombe) ..... <i>Devon.</i>	Mar. 27	April 12	17	Mar. 16	April 27	43	·42
Bideford (Northam)..... <i>Devon.</i>	Mar. 27	April 12	17	Mar. 16	April 14	30	·15
St. Austell (Trevarna) ..... <i>Cornwall.</i>	Mar. 18 July 18	April 3 Aug. 4	17 18	Mar. 16	April 14	30	·12
Ilminster (White Lackington) ... <i>Somerset.</i>	Mar. 28 Dec. 16	April 12 Dec. 31	16 16	Mar. 16	April 19	35	·28
Ross (The Graig) ..... <i>Hereford.</i>	Mar. 28 Dec. 15	April 11 Dec. 31	15 17	None			
Weston Park [Shiffnal] ... <i>Stafford.</i>	Mar. 28 Dec. 14	April 11 Dec. 30	15 17	None			
Market Overton ..... <i>Rutland.</i>	Mar. 27 Dec. 16	April 11 Dec. 30	16 15	None			
Worksop (Hodsock Priory) ..... <i>Notts.</i>	None			None			
Chesterfield (Gas Works) ..... <i>Derby.</i>	Mar. 28 Dec. 16	April 11 Dec. 31	15 16	None			
St. Michael's-on-Wyre ..... <i>Lancashire.</i>	None			None			

STATION & COUNTY.	ABSOLUTE DROUGHTS.			PARTIAL DROUGHTS.			
	Began.	Ended.	Lasted.	Began.	Ended.	Lasted.	Amount.
Knaresboro' (Farnham) ..... <i>York, W.R.</i>	None			None			in.
Driffield (York Road) ..... <i>York, E.R.</i>	None			None			
Darlington (South End) ..... <i>Durham.</i>	None			None			
Morpeth (Bothalhaugh) ..... <i>Northumberland.</i>	None			None			
Pawston [Coldstream]..... <i>Northumberland.</i>	None			None			
Blencowe School [Penrith]..... <i>Cumberland</i>	None			None			
Chepstow (Shirenewton Hall) .. <i>Monmouth</i>	Mar. 28	April 11	15	None			
Haverfordwest (High Street) ... <i>Pembroke.</i>	None			None			
Churchstoke (Mellington Hall) ... <i>Montgomery.</i>	Dec. 17	Dec. 31	15	None			
Halkyn ..... <i>Flint.</i>	Mar. 28 Dec. 15	April 11 Dec. 31	15 17	None			
Carnarvon (Cocksidia)..... <i>Carnarvon.</i>	None			None			
Garliestown (Galloway House) ... <i>Wigton.</i>	None			Mar. 18	April 18	32	21
Cargen [Dumfries] ..... <i>Kirkcudbright.</i>	Mar. 29 July 20	April 12 Aug. 4	15 16	None			
Melrose Asylum ..... <i>Roxburgh.</i>	None			None			
Edinburgh (Blacket Place)..... <i>Edinburgh.</i>	None			None			
Old Cumnock ... <i>Ayr.</i>	None			None			
Killearn (Old Ballikinrain) ... .. <i>Stirling</i>	April 28	May 12	15	None			

STATION & COUNTY.	ABSOLUTE DROUGHTS.			PARTIAL DROUGHTS.			
	Began.	Ended.	Lasted.	Began.	Ended.	Lasted.	Amount.
Strontian (Laudale)..... <i>Argyll.</i>	None			None			in.
Islay (Ardbeg) ..... <i>Argyll.</i>	None			Feb. 15	Mar. 15	30	·21
Kirriemuir (Lintrathen) ... .. <i>Forfar.</i>	Mar. 28	April 16	20	Mar. 19	April 26	39	·22
Cromar (Logie Coldstone) ..... <i>Aberdeen.</i>	None			Mar. 14	April 11	29	·26
Alness (Ardross Castle) ..... <i>Ross.</i>	None			None			
Golspie (Dunrobin Castle) ..... <i>Sutherland.</i>	Mar. 18	April 4	18	Mar. 18	April 16	30	·26]
Dunmanway (Coolkelure) ..... <i>Cork.</i>	None			None			
Killarney (Woodlawn) ..... <i>Kerry.</i>	None			None			
Portlaw (Mayfield) ..... <i>Waterford.</i>	July 17	Aug. 4	19	Mar. 18	April 23	37	·30
Fethard (Mobarnane) ..... <i>Tipperary.</i>	None			None			
Bray (Fassaroe)..... <i>Wicklow.</i>	None			None			
Athlone (Twyford) ..... <i>Westmeath.</i>	Mar. 29	April 13	16	Mar. 17	April 20	35	·31
Ballinasloe (Garbally) ..... <i>Galway.</i>	July 21	Aug. 6	17	Mar. 18	April 16	30	·23
Collooney (Markree Observatory) <i>Sligo.</i>	Mar. 29	April 12	15	Mar. 15	April 15	32	·28
Belfast (Antrim Road) ..... <i>Antrim.</i>	None			Feb. 15	April 18	64	·56
Stewartstown (Ardtree Rec.) ... <i>Tyrone.</i>	July 19	Aug. 2	15	Mar. 17	April 18	33	·31

## MONTHLY RAINFALL OF 1892.

We give, as usual, information on this subject in many forms.

In the *Meteorological Magazine* we give monthly abstracts of records from 150 stations, and for about 40 of them the difference between the fall in each month, and the average for the same month during the previous decade.

In the Observers' Notes on the Months (see pages [33] to [73]) we have given the general history of the weather ; in the following tables (pages [129] to [135] we give the monthly rainfall at each of about 230 stations, and in the two sheets of maps inserted between pages [135] and [136] we show in which part of the country the fall was near the average, and in which it was an inch or more above or below it.

These maps are similar to those given in previous years, and are based upon the following data :—A map was prepared showing the stations of which the records date back to 1880 and are still being continued ; 48 stations were then chosen as widely distributed as possible ; for each of them the mean rainfall was determined for each month, from the observations made during the decade, 1880-89. Then a table was constructed, showing for each station, whether the fall in each month in 1892 was within an inch of the average, or more than an inch above or below it. Upon the map for each month were then placed marks over the site of each station, indicative of the relation of the fall in that month to the average. The symbols adopted were :—

A round dot when within an inch of the average.

A + when more than an inch above it.

And a — when more than an inch below it.

Lastly, we give on pages [136] and [137] a brief history of the distribution of the fall of rain over the British Isles in each month, and remarks on such monthly totals as have been exceptional.

# MONTHLY RAINFALL AT 233 STATIONS IN THE BRITISH ISLES DURING 1892.

## ENGLAND.

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
I.	Middlesex .....	London (Camden Sq.) .....	.51	1.62	1.04	.99	1.51	2.46	1.62	3.06	2.12	3.78	2.53	1.37	22.61
II.	" .....	Pinner Hill.....	.79	1.28	1.24	.89	1.38	2.49	2.14	4.02	2.67	4.02	2.12	1.55	24.59
"	Surrey .....	Guildford (Guildown) .....	.62	1.08	1.33	1.28	.90	2.20	2.06	3.90	2.24	3.93	2.59	1.55	23.68
"	Kent .....	Tenterden .....	.60	2.01	1.78	1.50	.30	2.78	2.33	3.27	1.87	6.12	2.59	2.09	27.24
"	" .....	Hythe .....	.92	2.61	2.15	1.51	.36	3.08	2.75	3.45	2.23	5.56	2.95	2.66	30.23
"	" .....	Sevenoaks (River Hill) .....	.64	1.65	1.48	1.08	.94	3.84	2.27	3.55	2.17	4.30	2.93	2.22	27.07
"	" .....	Ospringe (Lorenden) .....	.43	2.07	2.10	1.43	.45	3.22	2.19	4.14	2.16	7.23	2.52	1.76	29.70
"	Sussex .....	Worthing (Heene) .....	.73	1.20	.88	1.27	1.27	1.93	2.21	2.46	2.46	4.14	2.88	2.30	23.73
"	" .....	Maresfield (Forest Lodge) ..	1.11	1.77	1.49	1.36	1.36	2.22	3.19	3.36	2.57	5.23	3.24	2.55	29.45
"	" .....	I. of Wight (Sandown) .....	.65	1.82	1.13	1.36	.91	1.66	1.53	3.24	3.22	4.92	3.90	2.91	27.25
"	Hants.....	Bps. Waltham (Swanmore) ..	1.05	.99	.85	.79	.72	1.74	2.60	3.31	3.53	4.64	3.33	1.90	25.45
"	" .....	Basingstoke(Sherborne S.J.) ..	.48	1.19	1.04	1.11	1.02	1.84	3.01	4.45	2.98	4.30	2.20	1.26	24.88
"	Berks .....	Newbury (Welford) .....	.90	1.36	.83	.92	1.64	1.81	2.74	4.16	3.08	3.65	2.34	.94	24.37
III.	Herts .....	Hertford (Bayfordbury) .....	.71	1.62	1.30	.83	1.22	2.77	2.59	3.09	2.43	4.05	1.89	1.43	23.93
"	" .....	Royston .....	.86	1.92	1.00	.78	1.28	2.46	3.60	3.18	2.81	3.84	1.52	1.66	24.91
"	" .....	Greenlands[Henley-on-Thames]	1.18	.94	.84	.82	.95	1.00	2.98	3.46	4.50	3.37	2.18	2.08	24.30
"	Bucks.....	Buckingham (Adstock) .....	.88	1.12	.65	.51	1.69	1.64	2.16	2.41	3.00	3.68	1.87	1.21	20.82
"	Oxford .....	Oxford (Magdalen Coll.) .....	.45	.76	.37	.72	1.19	1.66	2.81	2.91	2.19	3.09	1.67	.89	18.71
"	Northampton ..	Wellingborough(Swanspool) ..	.84	1.54	.88	.67	1.19	1.93	1.89	2.36	3.25	3.88	1.09	1.57	21.09
"	Bedford .....	Bedford .....	.65	1.47	.85	.79	1.00	2.10	1.97	3.30	3.12	3.45	1.37	1.42	21.49
"	Cambridge.....	Ely (Stretham) .....	.50	1.79	.40	1.79	1.15	3.21	3.26	2.80	2.76	5.00	2.21	1.23	26.10
"	" .....	Wisbech .....	.97	2.04	.74	1.87	1.56	2.03	2.68	2.17	3.39	5.31	1.47	.96	25.19
IV.	Essex .....	Loughton (High Beech) .....	.54	1.43	1.06	.86	1.50	2.36	1.83	3.15	2.48	3.56	2.23	1.45	22.45
"	" .....	Chelmsford (High Street) .....	.48	2.42	1.08	1.21	.87	2.64	1.27	3.52	2.22	4.05	2.09	1.31	23.16
"	" .....	Braintree (Bocking Place) ..	.80	2.18	1.33	1.83	1.42	4.36	1.73	3.40	2.18	4.39	2.12	1.23	26.97
"	" .....	Ipswich (Bishop's Hill).....	.79	2.75	1.30	1.84	1.31	4.33	1.25	4.52	1.85	6.51	2.20	1.45	30.10
"	Suffolk .....	Haverhill (Great Thurlow) ..	.81	1.93	.97	1.73	1.29	2.73	3.26	2.90	3.81	4.86	1.52	1.21	27.02
"	" .....	Framlingham(MountPleasant)	.95	1.95	1.47	2.10	1.07	3.49	2.11	4.56	2.96	7.07	2.23	1.04	31.00
"	" .....	Geldeston [Beccles] .....	.84	1.37	1.77	2.28	1.61	2.83	2.06	3.72	2.08	7.39	1.52	1.01	28.48
"	Norfolk .....	Swaffham.....	.87	2.60	.70	1.08	1.57	2.61	4.03	2.53	2.07	6.46	1.84	1.33	27.69
"	" .....	Holt (Letheringsett Hall) ..	1.18	2.14	1.23	1.63	2.25	3.16	2.18	1.95	2.03	7.26	1.28	1.24	27.53

## ENGLAND--(continued.)

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August	Sept.	Oct.	Nov.	Dec.	Total.	
V.	Wilts	Salisbury (Alderbury).....	1.10	1.38	.80	.62	1.00	1.05	1.95	3.68	2.36	4.94	3.32	.96	23.16	
	"	Trowbridge (Steeple Ashton).....	.98	1.46	.61	.67	1.04	1.49	2.26	3.62	2.71	3.27	2.05	1.03	21.19	
	"	Marlborough Mildenhall.....	.98	1.22	.77	.73	1.22	1.30	2.53	3.90	2.41	4.73	2.24	1.10	23.13	
	Dorset	Beaminstur .....	2.59	1.44	.84	.76	.51	1.60	3.09	3.83	2.12	6.47	3.97	1.30	28.52	
	"	Wimborne (Chalbury).....	1.40	1.50	.71	.84	.95	1.27	2.02	3.48	2.77	4.96	3.57	1.52	24.99	
	"	Shaftesbury .....	2.10	1.95	.57	1.04	1.13	1.44	1.98	3.88	3.16	5.29	2.44	1.76	26.74	
	"	Brixham (Lupton) .....	1.24	1.88	1.06	.78	1.13	.89	1.16	3.05	2.45	3.53	3.59	1.50	22.26	
	"	Walkhampton (Lowery) (5in) .....	3.80	5.39	2.02	1.93	2.38	2.67	2.27	5.03	4.11	7.04	5.00	3.31	44.95	
	"	Ilslington (Middlecott Ho.) .....	2.50	3.66	1.41	1.05	1.25	1.87	2.31	2.31	4.73	2.43	5.70	4.36	2.08	33.35
	"	Cullompton .....	2.62	2.92	.88	1.24	.95	1.34	2.66	3.88	2.64	4.57	4.57	2.71	1.76	28.17
VI.	"	South Molton (Rose Ash).....	3.79	3.31	.70	2.07	1.41	1.58	3.45	3.53	3.79	5.16	2.40	3.38	34.57	
	Cornwall	Penzance (Penlee) .....	2.37	5.28	1.10	1.60	2.24	1.67	1.23	4.92	3.53	4.73	5.13	3.40	37.20	
	"	St. Agnes .....	2.83	3.95	.85	1.50	2.00	1.66	1.63	4.17	3.27	4.78	3.85	2.58	33.07	
	"	Pade .....	2.14	2.46	.68	1.16	1.13	1.41	1.93	2.96	3.41	3.03	3.34	2.66	26.31	
	"	Ilminster (White Lackington) .....	2.32	2.21	.86	.95	.74	1.71	1.92	3.86	2.11	4.77	3.03	1.10	25.58	
	Somerset	Glastonbury (Street) .....	1.79	1.50	.49	1.04	.97	2.23	2.02	2.78	3.05	2.14	2.12	1.10	21.23	
	"	Dunster (Knowle) .....	1.91	4.19	.96	1.48	1.02	1.98	1.97	3.30	2.72	4.72	3.27	1.61	29.13	
	"	Clifton (Pembroke Road).....	1.61	2.10	.74	1.05	1.16	2.42	2.96	4.23	3.40	2.94	2.94	2.36	1.38	26.35
	Gloucester	Stroud (Upfield) .....	1.14	1.27	.95	.89	1.07	2.76	2.86	3.07	2.66	2.50	2.54	2.54	.85	22.56
	"	Fairford (Hatherop Rec.).....	.78	1.14	.56	.72	1.01	2.44	2.44	2.59	2.75	3.05	3.11	2.02	.89	21.06
VII.	Hereford	Ross (The Graig) .....	1.90	2.17	.89	.92	1.67	1.91	3.10	2.67	2.36	1.89	2.55	.78	22.81	
	Salop	Ch. Stretton (Woolstaston) .....	2.74	1.66	.95	.89	3.42	2.04	1.89	2.40	2.96	4.04	2.21	1.80	27.00	
	"	Much Wenlock (Willey Pk.) .....	2.42	1.52	.99	1.18	2.72	3.10	2.51	2.08	2.97	3.33	2.02	1.58	26.42	
	"	Oswestry (Hengoed).....	1.95	1.70	1.14	1.19	2.90	2.04	1.92	3.33	2.92	3.96	2.28	1.13	26.46	
	"	Lichfield Museum .....	2.13	1.44	.78	1.09	2.18	3.19	2.20	1.95	2.54	2.73	1.66	2.36	24.25	
	Stafford	Burton (Shobnall) .....	1.36	1.18	.81	.94	1.88	2.60	1.94	2.37	2.70	2.38	1.53	1.91	21.60	
	"	Etruria .....	2.51	1.48	.92	.65	3.02	4.26	2.67	2.75	2.93	5.09	2.31	2.27	30.86	
	Worcester	Blockley .....	1.00	2.62	.75	1.06	.90	1.55	1.44	2.25	3.76	2.60	2.15	1.25	21.33	
	"	Malvern (Church St.) .....	1.39	1.43	.87	.87	1.72	1.91	1.55	1.44	2.25	1.74	2.41	2.17	1.05	21.33
	"	Tenbury (Orleton) .....	2.11	1.54	.82	.99	1.90	3.02	3.02	2.83	3.55	2.69	2.18	2.41	1.29	24.75
Warwick	Stourbridge (Pedmore) ...	2.41	1.47	.80	1.07	2.07	2.97	2.97	2.40	2.80	2.29	2.46	2.28	1.31	24.33	
	Leamington (Upper Parade) .....	1.04	.81	.45	.78	1.51	3.13	3.13	2.81	1.96	1.95	2.43	1.73	1.31	19.91	
	Bedworth Cemetery .....	1.52	1.19	.92	1.07	1.79	3.40	3.40	2.13	2.33	2.27	2.88	1.92	1.35	22.77	
	Loughboro' (Nan Pantan Res)	.93	1.62	.75	.74	2.21	2.41	2.41	2.20	1.91	2.89	2.99	1.10	1.37	21.12	
	Leicester	Bottesford.....	.71	1.49	.70	.82	1.82	2.05	2.05	1.49	1.19	2.36	4.60	.71	.55	18.49

ENGLAND—(continued.)

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
VII.	Rutland.....	Market Overton .....	1·30	2·04	1·10	·96	2·03	2·08	2·36	1·79	2·60	4·96	1·08	·99	23·29
"	Lincoln .....	Horncastle (Queen Street) .....	·88	2·00	2·61	1·24	2·59	2·04	2·07	1·64	1·04	3·33	·99	1·06	21·49
"	" .....	Barton on Humber(Saxby) .....	1·64	2·04	1·13	1·41	3·87	3·56	1·52	2·59	1·76	4·97	1·27	·96	26·72
"	Notts .....	Ollerton(ThoresbyGardens) .....	1·52	2·38	1·42	·95	2·56	4·32	2·81	1·88	2·18	5·33	1·04	·67	27·06
"	Derby.....	Stoney Middleton .....	3·42	2·55	1·02	1·09	4·09	3·68	3·34	2·81	2·99	4·94	2·55	1·99	34·47
VIII.	Cheshire.....	Congleton(Buglawton Vic.) .....	2·44	1·53	·97	1·01	3·70	3·18	2·11	3·44	3·43	4·50	1·69	2·29	30·29
"	Lancashire.....	Manchester (Withington) .....	2·81	2·12	·91	1·24	3·00	3·58	3·39	4·09	3·51	4·05	2·28	2·06	33·04
"	" .....	Ormskirk (Rufford) .....	3·00	2·04	1·01	1·55	3·29	2·90	2·85	4·51	4·09	4·89	2·51	2·37	35·01
"	" .....	Burnley (Swinden, Lower) .....	4·25	3·75	1·62	1·34	5·27	4·53	1·92	5·27	3·93	7·05	2·36	2·58	43·87
"	" .....	St. Michael's-on-Wyre .....	3·04	1·86	·72	1·34	4·08	3·76	1·50	5·78	5·45	4·41	2·92	2·34	37·20
"	" .....	Cartmel (Pit Farm) .....	4·14	2·16	1·42	1·91	5·20	2·80	2·22	8·80	7·60	4·97	4·16	3·46	48·84
IX.	York, W.R. ....	Rotherham (Moorgate Grove) .....	1·09	2·63	1·38	1·45	3·17	3·53	2·45	1·96	2·13	5·41	1·34	·45	26·99
"	" .....	Huddersfield (Dalton) .....	2·46	3·35	1·24	1·18	3·74	4·13	2·02	3·00	2·33	8·35	1·70	1·18	34·68
"	" .....	Leeds (Methley Park).....	1·51	2·07	·86	1·14	2·91	4·32	1·61	2·08	1·27	6·34	1·08	·82	26·01
"	" .....	Malham Tarn .....	5·40	4·15	1·27	2·64	6·60	4·60	2·61	8·90	5·45	7·81	3·84	3·80	57·07
"	" .....	Ripon (Mickley) .....	1·46	2·92	1·02	1·71	2·80	4·08	1·63	3·87	1·29	7·43	1·78	·55	30·54
"	York, E.R. ....	Pattingham.....	·81	1·70	1·21	1·85	2·59	3·84	1·72	1·74	1·29	5·60	·93	·84	24·12
"	" .....	Brantinghamthorpe.....	1·84	1·98	1·59	1·79	3·78	4·54	1·64	2·58	1·51	6·61	2·24	1·26	31·36
"	" .....	Pocklington (Warter) .....	1·98	3·33	1·92	1·74	3·40	3·91	2·11	3·19	1·21	6·56	1·96	1·19	32·50
"	York, N.R. ....	Malton .....	1·44	2·16	·96	1·86	3·49	4·21	1·31	2·64	1·58	5·93	1·60	1·24	28·42
"	" .....	Thirsk (Sowerby) .....	3·00	2·39	1·22	1·52	2·41	3·57	1·66	4·28	·87	5·68	1·56	·87	29·03
"	" .....	Whitby (Royal Crescent)...	1·64	1·91	1·37	1·18	3·40	4·41	1·12	2·77	1·95	5·50	1·28	·97	27·50
"	" .....	Lockwood Beck .....	1·74	2·32	2·27	2·16	3·42	5·15	2·07	4·37	1·47	9·28	1·80	1·47	37·52
"	" .....	Darlington (South End) ...	1·57	2·28	·97	1·26	3·08	3·55	1·36	4·05	2·12	4·52	1·16	1·01	26·93
X.	Durham.....	Hartlepool(HurworthBurn) .....	1·75	1·69	1·00	2·01	1·81	1·75	1·40	3·90	2·81	6·77	1·17	1·18	27·24
"	" .....	Wolsingham .....	2·00	3·35	1·30	2·13	4·49	4·28	1·21	4·28	3·36	5·76	1·65	·84	34·65
"	Northumberland	Haltwhistle(UnthankHall) .....	2·22	2·38	1·25	1·41	3·99	3·96	1·87	4·89	5·20	4·84	1·59	1·58	35·18
"	" .....	Morpeth (Meldon Park) ...	1·77	2·92	1·23	1·48	4·05	3·84	1·66	4·52	2·67	5·54	1·35	1·53	32·56
"	" .....	Alwinton (Biddleston) ...	1·84	3·10	1·73	1·00	2·84	3·99	1·55	4·62	1·99	5·55	1·58	1·35	31·14
"	" .....	Howick Hall .....	1·43	2·28	1·54	·93	2·88	3·69	1·58	3·64	2·16	5·24	1·62	1·20	28·19
"	Cumberland	Borrowdale (Seathwaite)...	14·44	5·15	3·29	3·91	12·13	8·01	8·39	15·57	25·62	12·11	11·82	9·06	129·50
"	" .....	Brampton (Denton House) ..	2·74	2·52	1·07	1·28	4·04	2·82	2·36	5·76	7·52	4·74	1·84	1·50	38·19
"	" .....	Kendal (Kent Terrace) ...	6·87	1·93	1·23	1·35	5·90	3·81	2·03	9·54	10·00	5·40	4·88	2·81	55·75
"	Westmoreland	Appleby.....	2·13	2·16	·66	1·23	4·01	4·24	1·39	5·88	5·16	6·04	2·31	·81	36·02
"	" .....	Lowther Castle.....	2·04	2·42	·92	·70	3·41	4·62	·80	6·24	5·62	6·54	3·08	·87	37·26

# MONMOUTH, WALES AND THE ISLANDS.

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
XI.	Monmouth.....	Chepstow (Shirenewton Hall)	2.12	1.79	1.25	1.04	1.57	2.31	3.73	6.06	3.43	3.11	4.29	1.66	32.36
"	"	Abergavenny(Larchfield) ..	2.33	2.96	1.23	1.01	2.06	3.68	2.67	4.49	2.10	2.87	3.60	1.16	30.16
"	Glamorgan.....	Cardiff Castle .....	1.78	2.17	1.12	1.35	1.38	1.82	3.76	4.34	3.80	2.45	3.17	2.13	29.27
"	"	Ystalyfera (Tan-yr-allt) ...	6.71	3.34	1.76	1.75	2.18	3.26	2.51	6.57	4.61	5.60	5.16	4.67	48.12
"	"	Cardmarthen Asylum .....	3.96	2.46	2.13	1.64	2.06	2.44	3.15	4.66	4.43	3.99	4.78	3.15	38.85
"	"	Llandoverly .....	3.05	3.12	1.35	1.58	2.03	1.87	2.68	4.32	5.08	4.36	4.04	3.25	36.73
"	Pembroke .....	Stackpole Court .....	2.56	2.22	1.05	2.03	1.96	1.54	2.72	4.47	3.48	3.62	5.13	2.80	33.58
"	Cardigan .....	Troedynaur Rectory .....	2.81	2.56	.98	1.21	2.37	2.77	1.60	3.38	2.74	5.20	3.44	2.27	31.33
"	"	Aberaeron (Dolaeon).....	2.12	2.62	.61	1.24	1.85	4.30	1.52	2.85	2.65	5.12	3.11	1.89	29.88
"	"	Brecknock (Cantref Rec.) ..	2.15	3.29	1.46	1.37	1.93	3.10	2.36	4.62	3.16	4.04	4.41	2.11	34.00
"	"	Newbridge (Llysdinam) ...	3.03	1.77	.87	.86	1.73	1.66	1.37	3.35	3.06	2.88	2.89	2.58	26.05
"	Radnor .....	Rhayader (Nantgwlit) .....	5.27	3.95	1.59	1.50	2.37	2.45	3.03	3.64	4.88	6.10	4.77	3.88	43.43
"	Montgomery .....	Churchstoke (Mellington) ..	1.91	1.68	1.12	.91	2.79	1.80	1.68	2.45	3.15	2.25	1.80	1.41	22.95
"	Flint .....	St. Asaph (Nantllys) .....	1.52	1.27	1.08	1.09	3.65	3.18	2.13	2.55	1.92	9.43	1.28	1.68	30.78
"	Denbigh.....	Rosset (Trevallyn Hall) ...	2.87	1.26	1.36	1.05	2.61	2.47	3.03	2.92	2.65	6.01	1.54	1.93	29.70
"	Merioneth .....	Oakley Quarries .....	9.39	3.39	2.41	3.74	7.79	5.47	7.45	14.04	12.56	9.17	8.40	8.94	92.75
"	"	Corwen (Rhug Gardens) ...	2.37	2.29	1.56	.88	3.83	2.42	2.49	4.18	3.78	7.20	2.12	1.78	34.90
"	Carnarvon.....	Llanystumdwy (Talarvor) ...	3.57	1.75	.99	1.44	3.38	2.09	3.37	4.70	4.81	4.96	3.56	2.71	37.33
"	Anglesey .....	Llanerchymedd (Llwydiarth) ..	4.09	1.78	1.59	1.94	3.59	2.24	2.46	7.66	5.46	5.15	4.42	2.07	42.45
"	Isle of Man .....	Douglas (Victoria Road)....	3.46	1.37	.98	1.73	3.89	2.88	3.00	6.54	4.05	6.81	3.95	4.23	42.89
"	Jersey.....	St. Aubins (Noirmont) ...	1.78	2.21	1.80	2.33	1.02	1.75	2.45	2.21	2.36	8.17	2.72	2.44	31.24
"	Guernsey .....	Les Ruettes Brayes .....	2.77	2.15	.90	2.10	1.07	1.80	1.34	1.77	2.34	7.59	2.61	4.12	30.56

## SCOTLAND.

XII.	Wigton .....	Carlirstown (Galloway House)	3.77	1.15	.83	.94	3.93	3.52	2.91	5.64	4.32	3.40	3.89	2.22	36.52
"	"	Corsewall .....	3.83	1.33	.70	.15	2.93	2.38	1.16	2.33	2.94	2.36	3.28	2.21	25.60
"	"	Dalbeattie(Colvend Manse)	2.57	1.54	1.14	.90	3.81	3.23	2.62	6.58	5.28	4.22	3.13	2.89	37.17
"	"	New Galloway (Glenlee)....	4.46	2.75	1.29	1.28	5.93	4.26	3.89	8.07	5.39	6.11	7.14	2.59	53.46
"	"	Moffat (Ericstane) .....	5.60	3.35	1.20	1.30	5.40	1.10	2.80	6.70	2.90	4.25	6.90	2.70	44.20
"	Dumfries .....	New Castleton (The Flatt). ..	5.10	2.70	1.90	1.20	5.70	3.60	3.60	7.40	7.20	5.40	3.80	2.50	49.60
"	Roxburgh .....	Hawick (Branxholme).....	1.97	2.23	1.05	.88	3.88	3.71	2.41	4.71	3.08	4.18	2.66	1.16	31.92
"	"	Jedburgh .....	1.39	2.46	1.60	.92	2.82	3.92	2.38	3.75	2.57	5.00	.97	1.20	28.98
"	"	The Hangingshaw .....	2.57	2.48	2.45	1.75	2.90	2.43	2.23	4.84	2.12	4.37	2.49	1.28	31.91
XIII.	Selkirk .....	Ellidstone (Portmore) ...	1.43	2.10	1.07	.85	2.68	3.35	1.75	4.20	2.53	4.20	1.20	1.67	27.03



## SCOTLAND—(continued.)

Div.	County.	Station.	Jan.	Feb.	March	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
XIII.	Berwick	Marchmont House	1.89	2.63	1.53	1.29	3.03	3.55	2.46	3.75	1.81	5.29	1.61	1.89	30.73
	Haddington	North Berwick Reservoir	1.87	2.47	2.23	.36	2.24	2.30	.57	3.44	1.54	4.38	1.32	1.57	24.29
	Edinburgh	Edinburgh (Blacket Place)	1.05	2.00	1.37	1.11	3.00	3.14	1.17	4.80	1.20	3.92	1.43	1.36	25.55
	Linlithgow	Uphall	1.25	1.67	.65	.66	3.50	3.79	1.30	6.73	2.40	4.11	1.68	1.50	29.24
XIV.	Lanark	Biggar (Cambus Wallace)	2.38	2.81	.90	.78	3.18	2.11	1.65	4.58	2.49	3.78	2.00	1.90	28.56
	"	Hamilton (Water Works)	2.75	1.75	.65	1.10	3.45	3.65	2.00	7.20	4.20	4.60	3.35	1.60	36.30
	"	Colmonell	4.37	2.01	.88	.90	4.01	2.40	3.29	5.92	4.32	4.94	5.90	2.76	43.70
	Ayr	Ayr (Auchinlee)	3.10	1.43	.80	.58	4.21	2.95	2.50	6.75	4.55	2.90	3.10	1.80	34.67
XV.	"	Old Cumnock	3.39	2.27	1.31	1.06	3.50	3.01	3.12	6.08	3.82	3.13	3.49	2.31	36.49
	Dumbarton	Arrochar	6.24	5.09	2.10	2.85	6.27	5.10	5.09	11.15	9.94	7.95	8.65	4.59	75.02
	Stirling	Killearn (Old Ballinrain)	4.48	2.89	.78	1.31	4.46	5.21	2.58	8.04	7.34	5.35	5.58	2.19	50.21
	Bute	Rothsay (Barone Cott.)	4.66	2.56	1.23	1.86	6.13	3.99	3.49	8.25	6.59	3.60	5.93	3.61	51.90
	Argyll	Holy Loch (Rosmor)	9.26	4.13	1.63	2.37	7.07	6.29	3.84	9.07	10.00	5.94	9.07	4.99	73.66
	"	Lochgilphead (Kilmory)	5.82	3.05	1.12	1.94	7.26	4.69	4.56	5.21	7.49	4.49	7.67	4.62	57.92
	"	Appin (Airds)	6.91	2.48	1.30	1.23	6.33	3.50	4.85	5.65	10.64	3.14	5.90	1.05	52.98
	"	Strontian (Laudale)	12.29	3.66	1.59	2.35	5.78	3.83	5.35	6.46	12.32	4.22	7.84	4.40	70.09
	"	Cantire (Devaar)	4.27	2.48	.33	1.40	5.19	2.81	3.87	6.12	5.77	3.14	4.51	2.77	42.66
	"	Islay (Eallabus)	4.61	2.24	.66	1.49	4.55	3.10	3.47	4.62	5.96	5.39	5.29	2.94	44.32
	"	Jura (Bay of Small Isles)	8.30	3.60	1.20	1.80	6.00	4.50	6.50	5.00	7.50	5.00	6.00	5.00	60.40
	"	" (Ardfin)	7.27	3.05	1.70	1.62	5.92	5.85	4.08	5.24	6.16	4.69	4.69	4.62	54.89
XVI.	Clackmannan	Dollar	2.57	1.61	.88	1.03	2.65	4.04	2.07	7.40	3.06	5.64	2.85	1.53	35.33
	Kinross	Loch Leven Sluice	2.00	2.30	.60	.90	3.60	3.50	1.20	5.20	2.40	4.70	2.60	1.10	30.10
	Fife	Kilconquhar (Balcarres)	1.76	2.53	1.44	1.35	3.33	3.88	2.03	5.23	1.15	4.95	2.25	1.15	31.05
	Perth	Stronvar	7.37	2.88	2.27	1.75	5.69	5.05	4.43	10.80	10.01	6.24	8.96	3.22	68.67
	"	Cupar Angus	1.69	1.81	.59	.55	2.92	2.46	1.51	3.99	1.95	3.80	1.90	.93	24.10
	"	Dalnaspidal H.R.S.	7.17	2.65	1.33	2.15	5.38	4.80	3.98	7.60	8.38	6.68	6.57	3.78	60.47
	Forfar	Dundee (Broughty Ferry)	1.50	2.25	.81	.89	3.07	2.96	1.59	5.18	1.09	4.00	1.95	.92	26.21
	"	Kirriemuir (Lintrathen)	2.39	2.26	.63	.81	2.80	4.30	2.10	4.68	2.39	5.45	3.40	1.01	32.22
XVII.	"	The Burn	2.30	2.80	.70	1.20	2.80	3.30	2.20	3.80	2.36	5.90	3.10	.70	31.40
	Kincardine	Coldstone Manse	2.73	2.03	1.01	.78	2.60	1.80	2.23	3.79	2.36	5.63	1.42	1.39	27.77
	Aberdeen	Haddo House	3.04	3.10	.98	1.28	2.52	1.92	2.77	3.92	2.59	5.91	2.18	1.74	31.95
	"	Old Deer	3.58	2.86	1.12	1.64	2.54	2.05	3.00	3.51	2.39	6.79	2.86	1.48	33.82
	"	Grantown	4.01	2.51	1.48	1.12	2.29	2.61	3.31	2.38	2.74	6.98	1.57	2.31	33.31
	Moray	Gordon Castle	3.16	2.39	1.53	1.58	2.61	2.40	3.16	3.82	2.27	7.72	1.30	1.54	33.48
	"	"	2.77	2.32	1.59	1.30	2.46	2.07	3.09	2.66	2.51	6.26	1.55	1.58	30.16

SCOTLAND--(continued.)

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
XVIII.	Ross	Applecross.....	7·22	2·97	2·15	1·69	4·21	3·00	2·67	5·75	6·86	9·98	5·37	4·76	56·63
"	"	Strathconan .....	7·39	4·13	1·42	3·82	3·32	2·56	2·78	4·09	5·50	5·17	2·65	4·56	47·39
"	"	Braemore House .....	10·10	4·98	1·70	2·10	3·72	5·19	2·80	4·98	8·50	6·41	2·23	6·17	58·88
"	"	Ardross Castle .....	5·61	3·69	3·09	2·34	3·09	2·69	2·77	1·86	4·51	7·44	2·75	2·03	41·37
"	Inverness	Fort William .....	9·66	2·32	1·88	2·01	5·94	3·66	5·34	8·33	13·99	5·26	9·43	5·49	72·71
"	"	N. Uist (Loch Maddy) ..	7·28	2·55	1·98	1·69	8·73	3·98	2·64	3·64	5·58	4·01	6·52	3·70	52·30
"	"	Invergarry .....	3·91	2·81	1·74	1·84	4·70	3·10	3·70	7·11	10·28	4·40	9·09	3·36	56·04
"	"	Aviemore H.R.S. ....	5·89	1·53	1·54	'83	1·71	1·73	2·73	4·35	3·79	5·55	2·02	2·34	34·01
"	"	Cawdor [Nairn] . . . . .	3·41	2·32	1·64	1·17	2·40	2·28	2·95	3·20	2·82	5·82	1·46	1·57	31·04
XIX.	Sutherland	Invershin .....	2·05	1·35	'94	1·89	3·01	2·78	2·67	2·07	3·37	5·26	2·84	1·04	29·27
"	"	Dunrobin Castle .....	3·23	2·95	1·03	2·17	3·35	1·59	2·81	2·73	3·03	3·78	1·71	1·48	29·86
"	"	Scourie .....	3·70	5·02	2·53	1·97	3·02	2·96	4·07	5·82	5·84	5·83	4·45	4·18	49·39
"	Caithness	Wick H.R.S. ....	4·33	3·01	'97	2·08	2·44	1·85	2·89	2·82	2·30	5·14	3·02	2·79	33·64
"	Shetland	Sumburghhead(Dunroseness)	3·94	3·15	1·99	1·20	2·70	1·73	1·67	3·51	5·05	4·37	4·41	2·73	36·45

**IRELAND.**

XX.	Cork	Dunmanway (Coolkelure)	5·62	4·55	2·98	2·53	3·72	3·38	5·59	9·96	6·57	3·62	10·34	6·77	65·63
"	"	(Cork (Clarence Place))	2·28	3·98	1·13	·82	2·60	2·69	3·12	8·50	3·41	3·08	7·87	3·37	42·85
"	"	Darrynane Abbey	3·97	3·18	2·75	2·22	2·78	2·71	6·55	8·21	4·43	3·06	9·24	5·25	54·35
"	Kerry	Kennmare (Derreen)	4·85	3·98	2·82	1·48	4·50	2·86	5·05	10·03	4·76	5·91	12·13	7·43	65·80
"	"	Dingle	5·94	4·25	2·95	2·40	2·90	2·80	5·39	9·15	7·15	6·48	8·60	4·66	62·67
"	"	Waterford (Brook Lodge)	1·40	3·22	1·12	·98	3·47	2·01	3·30	4·74	2·89	2·36	4·87	2·27	32·63
"	Tipperary	Tipperary (Henry Street)	3·16	4·54	·97	1·24	2·85	2·53	2·62	6·45	3·69	3·02	6·24	2·37	39·68
"	"	Nenagh (Castle Lough)	2·57	2·49	·55	1·54	4·29	2·19	3·82	6·46	3·97	1·80	4·83	2·51	37·02
"	"	Ballingarry (Hazelport)	2·10	2·47	·42	1·15	4·12	1·64	3·57	7·80	4·24	1·89	3·70	1·64	34·74
"	"	Newcastle West	2·74	3·36	1·05	1·29	3·25	1·48	3·02	5·87	4·87	2·44	5·02	3·04	37·43
"	Limerick	Jane Ville	3·64	7·42	1·71	1·35	4·66	3·67	3·21	7·12	7·37	3·15	10·23	4·56	58·09
"	Clare	Ennis	3·02	2·32	·56	·83	3·94	2·21	3·47	6·52	5·49	2·35	4·20	2·39	37·30
"	"	Miltown Malbay	2·52	2·97	·74	1·47	4·13	2·37	2·43	7·56	6·60	2·64	6·12	2·39	41·94
XI.	Wexford	Ballyhyland	1·44	4·13	1·16	1·02	3·75	3·09	5·12	6·59	3·54	3·23	5·53	1·98	40·58
"	"	Gorey (Courtown)	·91	3·39	1·17	1·16	2·51	2·80	3·90	4·65	3·47	3·11	4·41	·91	32·39
"	Kilkenny	Rosbercon Castle	·68	2·55	·34	·20	3·57	2·08	3·41	4·39	2·39	2·63	4·45	1·58	28·27
"	"	Kilkeuny (Lavistown)	1·01	3·35	·78	·95	3·97	1·70	3·07	2·93	2·32	2·20	4·00	1·19	27·47
"	Wicklow	Bray (Fassaroe)	2·60	3·54	1·41	1·13	5·20	3·61	3·90	3·73	3·06	4·01	5·39	·92	38·50

## IRELAND—(continued.)

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.	
XXI.	Carlow	Browne's Hill	1.58	3.65	1.04	1.24	4.30	2.42	3.90	4.24	2.88	1.97	3.73	1.57	32.52	
	Queen's County	Abbey Leix (Blandsfort)	2.25	3.99	.86	1.09	4.38	2.11	3.22	5.49	3.74	2.32	4.62	1.57	35.64	
	Kildare	Stratton House	1.33	3.33	.95	1.09	4.92	1.68	2.04	5.15	3.52	3.22	2.88	1.43	31.54	
	Dublin	Glassevin(BotanicGardens)	2.31	2.38	1.12	1.37	4.47	1.82	2.53	3.85	2.72	2.98	2.50	1.18	29.23	
	Meath	Athboy	1.22	2.79	.51	1.20	4.62	2.10	3.14	4.48	4.30	3.07	2.97	2.19	32.59	
	"	Moynalty (Westland)	1.58	2.75	.79	1.24	5.03	2.35	3.14	7.15	4.27	4.30	3.63	4.51	38.58	
	"	Mullingar (Belvedere)	1.65	2.61	.69	1.31	5.25	2.92	3.79	7.56	3.74	2.64	2.64	3.92	37.99	
	"	Athlone (Twyford)	1.50	2.32	.71	1.06	5.18	1.99	4.36	7.06	4.48	3.42	2.53	3.78	1.89	36.86
	"	Ardee (Lissenny)	1.82	2.29	.51	.75	4.52	2.97	2.31	7.24	3.42	4.76	1.68	4.47	2.34	37.62
	"	Greengore	1.95	1.67	.28	.73	3.65	1.52	1.52	3.28	6.34	2.83	2.23	3.47	2.24	35.47
XXII.	"	Edgeworthstown	1.21	1.74	.96	1.08	4.41	2.85	3.11	7.61	4.56	2.23	3.47	2.24	35.47	
	Longford	Ballinasloe	1.70	2.17	.68	1.08	5.26	1.90	5.08	6.50	4.76	1.68	4.47	2.34	37.62	
	Galway	Kylemore	6.45	4.88	2.52	3.23	6.41	3.67	6.15	9.05	11.90	8.15	12.98	5.76	81.15	
	"	Tuam	2.37	2.35	1.31	1.65	5.03	1.75	2.93	9.31	5.55	3.61	5.98	2.65	44.49	
	"	Donamon (Castlecoote)	1.62	2.16	.71	1.21	4.92	1.93	4.42	7.28	5.02	3.13	4.57	2.23	39.20	
	"	Ballinrobe (Cranmore)	3.85	2.56	1.85	1.62	4.29	2.58	2.02	3.67	7.49	5.79	3.94	6.58	3.13	47.35
	"	Crossmolina (Enniscote)	5.80	2.46	1.94	2.65	5.30	2.02	3.67	6.46	6.03	4.49	4.69	4.85	2.90	43.11
	"	Sligo (Mount Shannon)	3.37	2.70	.71	1.19	4.74	5.26	2.18	6.03	6.03	4.49	4.66	4.66	3.28	40.79
	"	Ballinamore (Lawderdale)	2.75	2.43	1.13	1.26	5.49	3.12	3.05	6.36	6.36	4.83	2.43	4.66	3.28	40.79
	"	Belurbet (Red Hills)	1.57	2.08	.87	.97	4.79	3.01	2.85	6.01	6.01	3.59	1.99	4.14	2.44	34.31
XXIII.	Cavan	Brookboro (Colebrooke Pk)	2.82	2.72	1.06	.88	5.65	2.57	2.81	5.90	5.18	2.79	5.26	3.09	40.73	
	Fermanagh	Edwarl St. [Newry]	2.48	2.25	.47	.70	3.75	3.24	3.50	6.90	3.47	3.95	4.90	1.15	36.76	
	Armagh	Armagh	1.78	1.35	.73	.70	4.54	3.12	2.66	7.04	2.92	2.34	3.74	1.52	32.44	
	"	Newcastle (Fairleigh)	3.63	1.71	.96	.99	4.59	3.64	3.11	7.61	3.07	5.68	5.96	2.48	43.43	
	Down	Donaghadee	3.00	.98	.81	.65	3.67	3.74	2.61	5.63	1.81	3.06	3.09	1.92	30.97	
	"	Belfast (Springfield)	3.98	1.63	.86	1.44	4.94	4.60	3.16	5.81	2.91	4.59	3.72	3.73	41.37	
	Antrim	Ballymena	4.44	2.28	1.11	1.24	3.94	3.25	3.18	6.11	3.77	5.39	3.63	3.70	42.04	
	"	Bushmills (Dundarave)	3.22	2.15	.98	1.84	4.02	3.58	2.92	3.78	3.49	4.33	3.36	3.07	36.74	
	"	Newtown Limavady	2.82	1.57	1.59	1.05	3.55	3.01	2.49	4.17	2.98	4.79	3.22	2.50	33.74	
	"	Stewartstown (Ardtrea)	2.43	1.65	1.00	.68	5.62	4.10	2.76	6.14	3.36	2.64	2.64	4.40	2.04	36.82
"	Tyrone	Omagh (Edenfel)	2.40	1.60	.76	.84	4.43	3.33	2.60	4.83	4.84	3.72	5.54	2.60	37.49	
	"	Castlefinn (Finn Lodge)	2.58	1.24	.76	.81	4.22	2.89	1.59	5.80	3.74	3.57	4.23	2.28	33.71	
	Donegal	Malin Head	1.71	1.41	.42	1.31	5.40	3.61	2.70	3.78	3.90	3.08	3.79	2.03	33.14	
	"															
	"															

## JANUARY.

The fall was below the average in nearly all parts of the British Isles, the only exceptions of importance being a few stations in the W. of England, in N. Wales, the N. of Scotland, and the N. of Ireland.

## FEBRUARY.

Another dry month, except along the E. and N.E. coast of England, and at a few stations in the S.E. of Scotland.

## MARCH.

A third consecutive dry month, with quite trifling exceptions at a few stations in the E. of England and the S.E. of Scotland.

## APRIL.

The fourth consecutive dry month. At Oxford, for example, not one month had an inch, and the total for a third of the year was only 2·30 in. The only stations which seem to have reached the average in April were a few along the East coast of England and Scotland.

## MAY.

The distribution of rain was irregular. In the S.E. and S. there were many stations where this, the fifth consecutive month, had less than the average; but in Norfolk, Stafford, and in the North of England the fall was at most places above the average, and it was also in excess in most parts of Scotland and Ireland.

## JUNE.

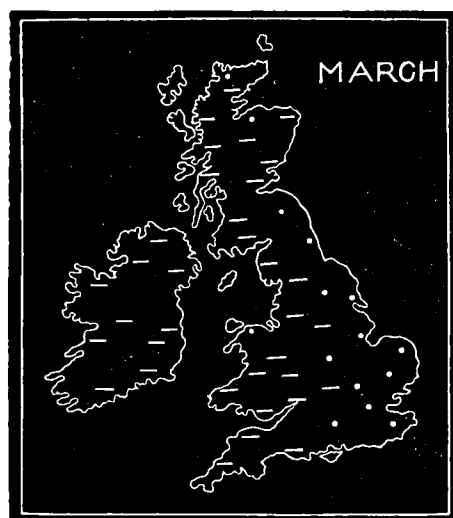
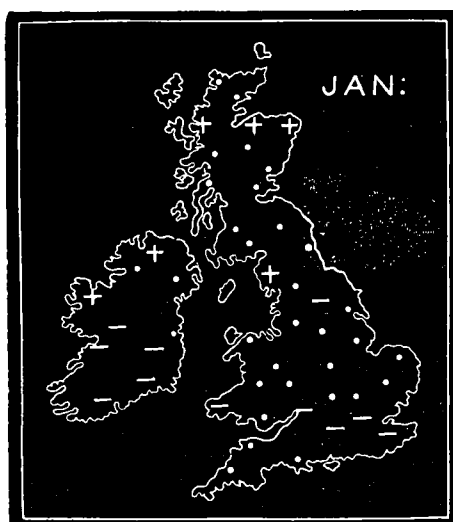
In this and the three following months the relation of the fall of rain to the average depends largely on the yield of thunderstorms. Generally the fall in June was near the average, but at stations where heavy thunderstorm rains fell it was above it, and this holds true for Wales, Scotland, and Ireland, as well as for England.

## JULY.

The fall this month was generally below the average in England and Wales, except at places where the thunderstorm rains were important. In Scotland the fall seems to have been below the average, except in the extreme W. and N., and somewhat similarly the W. of Ireland was generally very wet, and the E. and N. relatively dry.



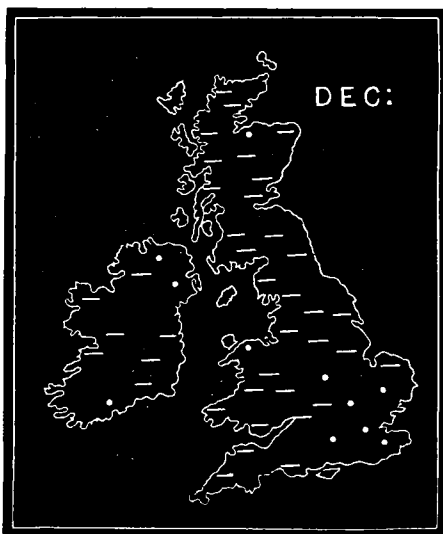
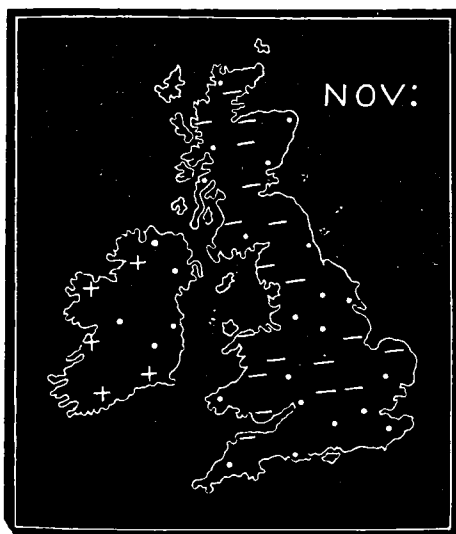
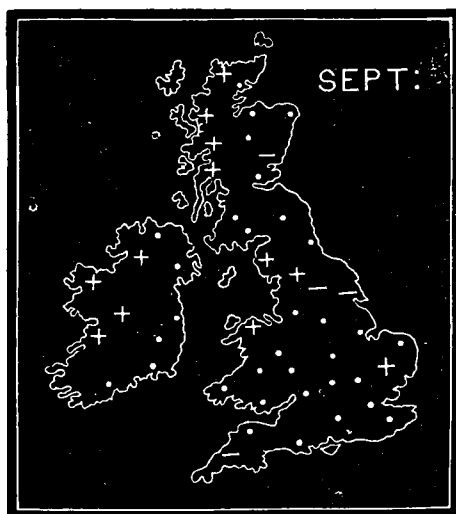
# MAPS OF MONTHLY RAINFALL IN 1892.



• Within an inch of average.

+ More than 1 in. above average.  
 - „ „ „ below „

# MAPS OF MONTHLY RAINFALL IN 1892.



• Within an inch of average.

+ More than 1 in. above average.

— „ „ „ below „





## AUGUST.

A wet month almost everywhere, except in Division VII.—the North Midland Counties of England.

## SEPTEMBER.

As regards England the fall in this month was near the average, except in the English Lake district, where September 1st (see *ante*, p. [109]) was but one of several very rainy days. In Wales the fall was irregular, especially in the north. In Scotland it was very wet in the Western Counties, many stations having over 10 inches, and in Ireland also it was very wet.

## OCTOBER.

Extremely, if not unprecedentedly, wet in Suffolk and Norfolk and adjoining counties, many stations having more than twice their average; wet also in the S.E. of England and in Nottinghamshire and Yorkshire. Below the average at a few stations in Hereford and Worcester. Dry in the south of Wales, but excessively wet along the north coast from Chester to Llandudno. Very wet at stations on the East coast of Scotland; near the average in other parts, and also in Ireland.

## NOVEMBER.

Rainfall generally rather below the average. Very wet in Ireland, especially in the West, where several stations had more than 10 inches.

## DECEMBER.

Dry in almost every part of the British Isles.

## ON THE RELATION OF THE TOTAL FALL OF RAIN IN 1892 TO THE AVERAGE.

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WE are here concerned merely with the total fall in the civil year, and its relation to the average, at individual stations, over large districts, over the three countries, and over the British Isles as a whole.

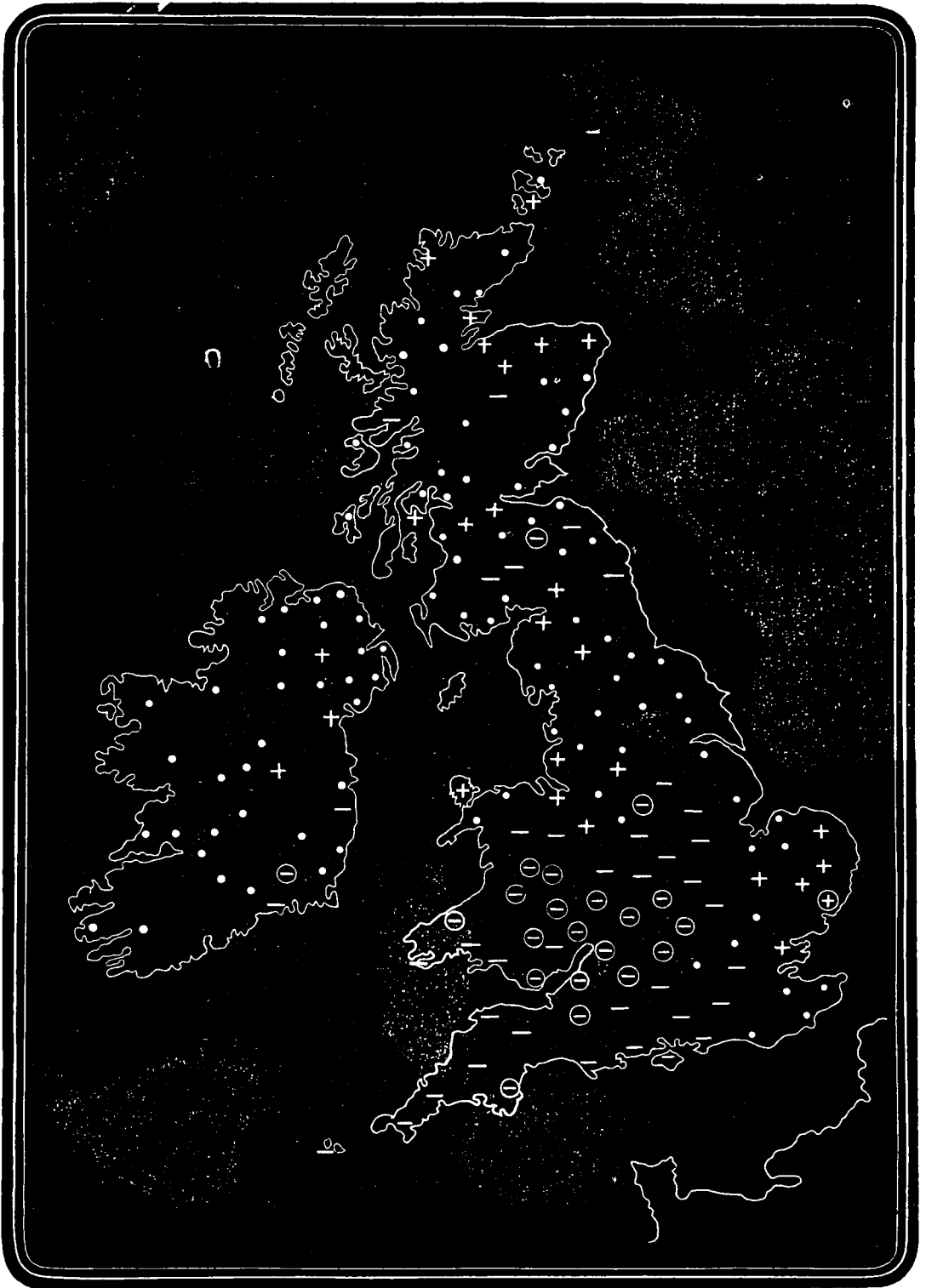
Taking first individual stations, and asking our readers not merely to note our comments but to examine the map, and the tables on pages [140] to [144] for themselves, we proceed first to call attention to the exceptionally small rainfall over the Severn watershed, South Wales and across the St. George's Channel to a few stations in the S.E. of Ireland. It has been fixed approximately that, at any one station the driest year will have a fall of rain one-third less than the average. That is the same thing as to say that the deficiency in the driest year will reach 33 per cent. If we turn to the Comparison Table we find that even this deficiency was exceeded in 1892 at—

	Per cent.	in.
Lynhales, Kington, Hereford .....	—37	Record for 26 yrs., lower in 1870 by 0·47
Northwick Park, Worcester .....	—35	Record for 33 yrs., 1892 the lowest.
Fenny Compton, Kineton, Warwick .....	—43	Record for 14 yrs., 1892 the lowest.
Castle Malgwyn, Pembroke .....	—35	Record for 27 yrs., lower in 1887 by 0·07
Cantreff, Brecknock .....	—34	Record for 15 yrs., 1892 the lowest.
Inistiogue, Kilkenny .....	—34	Record for 53 yrs., lower in 1887 by 2·17

No wonder that observers in Division VI. express themselves rather strongly on pp. [84—86] as to the exceptionally small yearly total.

From this focus of deficiency the fall increased in all directions, so that in parts of North Wales, Cheshire, and Lancashire there was an excess; but the most notable excess was in Essex, Suffolk, and Norfolk, where the great rains of October produced excesses of more than 20 per cent., and at Rendlesham Hall, near Woodbridge, Suffolk, the excess reached 31 per cent. There do not appear to be any Scotch or Irish returns calling for special notice.

# DIFFERENCE OF TOTAL RAINFALL IN 1892 FROM THE AVERAGE OF 1880-89.



The round dot indicates a rainfall within 10 per cent. of the average.  
The + and — respectively show excess or defect of between 10 and 25 per cent.  
The same signs enclosed by a ring indicate a departure from the average of more than 25 per cent.



As regards the Countries, the following abstract will almost speak for itself. It shows a deficiency over England and Wales which averaged 10 per cent., and that Scotland and Ireland each had exactly the average. In fact, this closeness to the average is probably the most unusual feature in the table.

## ABSTRACT.

COUNTRIES.	No. of Records.	Mean 1880-9.	1892.	Diff. from Average. 1880-89.	
				Amount.	Per cent.
		in.	in.	in.	
England and Wales...	96	33·85	30·35	3·50	— 10
Scotland .....	48	42·55	42·55	·00	— 0
Ireland .....	39	39·52	39·13	·39	— 1
Mean of all Stations ..	183	37·34	35·42	1·92	— 5

As regards the entire British Isles, the deficiency of 5 per cent. is quite unimportant, and the total fall may be regarded as an average one.

One very curious circumstance arises from the great dryness in the West of England—viz, that in the Table of Extremes on p. 144, the driest stations are not as usual from Division III. or IV., but from Division VI., which very rarely contributes even one entry to that table.

As will be seen by an examination of the percentage columns in the following pages, the fall has been very irregular, and if similar details had been given for all stations, it would have been found that there are many cases of records even in the same town differing by three or four inches. This has rendered impracticable the detection of small errors by the method of differences which we usually employ. Happily the great majority of our observers have had such long practice that their returns may be implicitly relied upon, and we are convinced that in nearly every case the discrepancies are due to irregularity in the fall of rain, and not to errors of observation. Of course, wherever the study of either the monthly or daily values has indicated error, we have either obtained satisfactory explanation or suppressed the return, but owing to these local irregularities we must point out that while we have done our utmost to verify every record, the responsibility for each must rest, even more than usually, upon those who have furnished them.

COMPARISON OF THE RAINFALL OF THE YEAR 1892,  
WITH THE AVERAGE OF THE YEARS 1880-89.

ENGLAND & WALES.

DIV.	COUNTY.	STATION.	Average, 1880-9.	Depth in 1892.	Difference from average, 1880-9.	
					Amount.	Per cent.
			in.	in.	in.	
I.	Middlesex .....	London (Camden Square) .....	25·45	22·61	2·84	— 11
II.	Surrey .....	Dorking (Abinger Hall) .....	30·60	26·98	3·62	— 12
„	Kent .....	Tenterden ..... ( <i>Snowdon</i> )	28·11	27·24	·87	— 3
„	„ .....	Maidstone (Hunton Court) ...	24·59	24·91	·32	+ 1
„	„ .....	Canterbury (Harbledown) ...	25·51	27·64	2·13	+ 8
„	Sussex. West...	Chichester (Chilgrove) .....	32·83	27·62	5·21	— 16
„	„ East ...	Lewes (Iford) .....	31·75	31·05	·70	— 2
„	Hampshire.....	Isle of Wight (Osborne) .....	27·29	22·87	4·42	— 16
„	„ .....	Christchurch (Mudeford) .....	27·01	23·56	3·45	— 13
„	„ .....	Alresford (Ovington) .....	31·02	27·47	3·55	— 11
„	Berkshire .....	Newbury (Welford Park) <i>n.g.</i>	30·27	24·37	5·90	— 19
III.	Hertfordshire..	Hertford (Bayfordbury) .....	25·04	23·93	1·11	— 4
„	Buckingham ...	Great Marlow .....	27·81	27·93	·12	+ 0
„	„ .....	Winslow (Addington Manor) ..	27·97	20·72	7·25	— 26
„	Oxfordshire ...	Oxford (Magdalen Coll.) .....	26·19	18·71	7·48	— 29
„	Northampton.	Kettering (Montague Street)...	27·18	22·27	4·91	— 18
„	Bedfordshire...	Bedford (Western Street).....	24·01	21·49	2·52	— 10
„	Cambridgeshire	Elv (Stretham) .....	22·39	26·10	3·71	+ 17
„	„ .....	Wisbech (Bank House).....	25·27	25·19	·08	— 0
IV.	Essex .....	Maldon (Norton Hall) .....	22·01	24·95	2·94	+ 13
„	„ .....	Saffron Walden (Newport) ...	24·82	25·19	·37	+ 1
„	Suffolk .....	Rendlesham Hall .....	24·83	32·60	7·77	+ 31
„	„ .....	Ixworth (Walsham-le-Willws.)	26·13	31·88	5·75	+ 22
„	Norfolk .....	Diss .....	25·81	30·65	4·84	+ 19
„	„ .....	Swaffham .....	27·30	27·69	·39	+ 1
„	„ .....	Sprowston (Oak Lodge).....	26·11	29·43	3·32	+ 13
„	„ .....	Hunstanton .....	23·93	24·15	·22	+ 1
V.	Wilts .....	Salisbury Plain (Chitterne Ho.)	28·26	21·48	6·78	— 24
„	„ .....	Swindon (Pen Hill) .....	27·19	20·24	6·95	— 26
„	Dorset.....	Weymouth (Langton Herring)	29·36	24·61	4·75	— 16
„	Devon.....	Torquay (Babbacombe).....	34·59	24·16	10·43	— 30
„	„ .....	Coryton (Lew Down) .....	46·29	41·17	5·12	— 11
„	„ .....	Bampton (Huntsham) .....	44·52	38·40	6·12	— 14
„	„ .....	Barnstaple (Arlington Court)..	52·85	42·86	9·99	— 19
„	Cornwall .....	Marazion .....	38·68	32·96	5·72	— 15
„	„ .....	St. Austell (Trevarna) .....	47·10	36·09	11·01	— 23
„	Somerset .....	Glastonbury (Street) .....	31·16	21·23	9·93	— 32
VI.	Gloucestershire	Clifton (Pembroke Road) .....	36·08	26·35	9·73	— 27
„	„ .....	Stroud (Upfield).....	30·91	22·56	8·35	— 27
„	Hereford .....	Ross (The Graig) .....	31·18	22·81	8·37	— 27
„	„ .....	Kington (Lynhales) .....	35·32	22·36	12·96	— 37

## ENGLAND &amp; WALES.—Continued.

DIV.	COUNTY.	STATION.	Average, 1880-9.	Depth in 1892	Difference from average, 1880-9.	
					Amount.	Per cent.
			in.	in.	in.	
VI.	Shropshire .....	Bishop's Castle (Castle Street).	34.08	22.72	11.36	— 33
"	" .....	Oswestry (Hengoed) ... ..	34.95	26.46	8.49	— 24
"	" .....	Adderley Rectory .....	28.80	31.63	2.83	+ 10
"	Stafford .....	Dennis [Stourbridge] .....	28.07	24.43	3.64	— 13
"	" .....	Burton (Shobnall) .....	25.86	21.60	4.26	— 16
"	" .....	Cheadle (The Heath House) ...	32.71	31.34	1.37	— 4
"	Worcester .....	Northwick Park .....	30.09	19.64	10.45	— 35
"	" .....	Grt. Malvern (Church Street)	29.49	21.33	8.16	— 28
"	Warwick .....	Kineton (Fenny Compton) ...	27.53	15.70	11.83	— 43
"	" .....	Coventry (Priory Row) ... ..	28.94	22.98	5.96	— 21
VII.	Leicester .....	Thornton Reservoir .....	27.69	21.83	5.86	— 21
"	Rutland .....	Market Overton .....	28.54	23.29	5.25	— 18
"	Lincoln .....	Stubton [Newark] .....	27.44	23.73	3.71	— 14
"	" .....	Horncastle (Miningsby) .....	26.62	24.90	1.72	— 6
"	" .....	Brigg .....	27.22	25.54	1.68	— 6
"	Nottingham .....	Worksop (Hodsock Priory) ...	25.84	22.22	3.62	— 14
"	Derby .....	Matlock Bath .....	36.62	25.23	11.39	— 31
"	" .....	Glossop (Spire Hollin) .....	41.60	45.92	4.32	+ 10
VIII.	Cheshire .....	Chester Nurseries .....	29.08	33.61	4.53	+ 16
"	" .....	Chelford (Astle Hall) .....	30.73	30.52	.21	— 1
"	Lancashire .....	Ormskirk (Rufford) .....	31.86	35.01	3.15	+ 10
"	" .....	Over Darwen (St. James's Vic.)	46.56	46.78	.22	+ 0
"	" .....	Kirkham (Weeton) .....	37.04	37.15	.11	+ 0
"	" .....	Cartmel (Holker) .....	42.25	45.76	3.51	+ 8
IX.	York W. Ridng. ....	Rastrick .....	30.72	29.67	1.05	— 3
"	" " .....	Otterburn-in-Craven .....	41.19	43.66	2.47	+ 6
"	" " .....	Knaresborough (Farnham) ...	27.37	25.35	2.02	— 7
"	" E. Ridng. ....	Pocklington (Warter) .....	30.46	32.50	2.04	+ 7
"	" N. Ridng. ....	Malton .....	26.90	28.42	1.52	+ 6
"	" " .....	Leyburn .....	36.10	33.72	2.38	— 7
"	" " .....	Guisborough (Hutton Hall) ...	33.97	33.28	.69	— 2
X.	Durham .....	Darlington (South End) .....	26.45	26.93	.48	+ 2
"	" .....	Wolsingham .....	35.27	34.65	.62	— 2
"	Northumberland .....	Haltwhistle (Unthank Hall) ...	35.97	35.18	.79	— 2
"	" .....	Rothbury (Brinckburn) .....	30.86	25.37	5.49	— 18
"	" .....	Pawston [Coldstream] ..	30.00	29.02	.98	— 3
"	Cumberland .....	Borrodale (Seathwaite) .....	129.01	129.50	.49	+ 0
"	" .....	Carlisle Cemetery .....	30.34	34.98	4.64	+ 15
"	Westmoreland .....	Appleby .....	32.75	36.02	3.27	+ 10
XI.	Monmouth .....	Abergavenny (Larchfield) .....	38.65	30.16	8.49	— 22
"	Glamorgan .....	Cardiff Castle .....	39.55	29.27	10.28	— 26
"	" .....	Neath .....	50.13	38.50	11.63	— 23
"	Carmarthen .....	Carmarthen (Jo. Co. Asylum) ...	48.68	38.85	9.83	— 20
"	Pembroke .....	Pembroke (Stackpole Court) ..	41.59	33.58	8.01	— 19
"	" .....	Castle Malgwyn [Llechryd] ..	45.29	29.40	15.89	— 35
"	Brecknock .....	Brecknock (Cantreff) .....	51.27	34.00	17.27	— 34
"	Radnor .....	Rhayader (Nantgwillt) .....	62.80	43.43	19.37	— 31
"	Montgomery .....	Newtown (Dolfor) .....	39.77	27.63	12.14	— 31
"	Denbigh .....	Colwyn (Nant-y-Glyn) .....	31.55	34.41	2.86	+ 9

## ENGLAND &amp; WALES.—Continued.

DIV.	COUNTY.	STATION.	Average, 1880-9.	Depth in 1892.	Difference from average, 1880-9.	
					Per Amount, cent.	
			in.	in.	in.	
XI.	Merioneth .....	Llanderfell (Palé) .....	47·47	38·46	9·01	— 19
„	Carnarvon .....	Llanystumdwy (Talarvor) ..	36·53	37·33	·80	+ 2
„	Anglesea .....	LlanerchymeddLwdiarth Esgob	36·63	42·45	5·82	+ 16
„	Isle of Man ...	Douglas (Victoria Road) .....	40·60	42·89	2·29	+ 6
„	Scilly .....	St. Mary's .....	32·42	28·13	4·29	— 13
„	Jersey.....	St. Aubins (Noirmont) .....	34·75	31·24	3·51	— 10

## SCOTLAND.

XII.	Kirkcudbright.	Dalbeattie (Colvend Manse) ...	36·08	37·17	1·09	+ 3
„	„	Gatehouse (Cally) .....	49·15	44·55	4·60	— 9
„	„	Cargen [Dumfries] .....	39·74	39·45	·29	— 1
„	Dumfries .....	Durrisdeer (Drumlanrig Cas.)	42·00	35·50	6·50	— 15
„	„	Moffat (Ericstane) .....	52·63	44·20	8·43	— 16
„	Roxburgh .....	New Castleton (The Flatt) ...	43·90	49·60	5·70	+ 13
„	„	St. Boswells (Elliston) .....	28·73	27·22	1·51	— 5
XIII.	Peebles .....	Eddlestone (Portmore Res.) ...	37·19	27·03	10·16	— 27
„	Berwick .....	Marchmont House .....	34·01	30·73	3·28	— 10
„	Haddington ...	Haddington Asylum .....	26·24	24·88	1·36	— 5
„	Edinburgh.....	Pentland Hills (Glencorse) ...	39·21	35·63	3·58	— 9
XIV.	Lanark .....	Biggar (Cambus Wallace).....	29·98	28·56	1·42	— 5
„	„	Airdrie (Hillend Res.) .....	35·80	39·63	3·83	+ 11
„	Ayr.....	Girvan (Pinmore) .....	48·25	45·85	2·40	— 5
„	„	Ayr (Auchinlee).....	32·52	34·67	2·15	+ 7
„	„	Ardrossan (Kirkhall).....	34·92	37·71	2·79	+ 8
„	Renfrew.....	Gorbals W.W. (Waulk Glen)..	43·32	49·05	5·73	+ 13
XV.	Dumbarton ...	Helensburgh (Lyleston) .....	45·14	44·30	·84	— 2
„	„	Arrochar .....	74·10	75·02	·92	+ 1
„	Bute .....	Rothsay (Barone Cottage) ...	46·04	51·90	5·86	+ 13
„	Argyll .....	Lochgilphead (Kilmory) .....	58·49	57·92	·57	— 1
„	„	Appin (Airds) .....	53·62	52·98	·64	— 1
„	„	Strontian (Laudale) .....	78·71	70·09	8·62	— 11
„	„	Islay (Eallabus) .....	47·65	44·32	3·33	— 7
„	„	Mull (Quinish) .....	57·28	53·72	3·56	— 6
XVI.	Kinross .....	Kinross (Turfhills) .....	39·48	38·42	1·06	— 3
„	Perth .....	Bridge of Turk .....	66·09	61·75	4·34	— 7
„	„	Dalnaspidal .....	57·61	60·47	2·86	+ 5
„	Forfar .....	Broughty Ferry (Douglas Ho.)	27·27	26·21	1·06	— 4
XVII.	Kincardine ...	Fettercairn .....	32·72	31·23	1·49	— 5
„	Aberdeen .....	Braemar .....	35·57	28·09	7·48	— 21
„	„	Cromar (Logie Coldstn. Manse)	28·62	27·77	·85	— 3
„	„	Aberdeen (Rose Street).....	27·76	27·31	·45	— 2
„	„	Old Deer .....	30·57	33·82	3·25	+ 11
„	Banff .....	Keith .....	29·98	33·70	3·72	+ 12
„	Elgin .....	Grantown .....	28·65	33·31	4·66	+ 16
„	Nairn .....	Nairn (School House) .....	22·61	25·94	3·33	+ 15
XVIII.	Ross, West ...	Strome Ferry .....	60·85	57·52	3·33	— 5
„	„	Strathconan [Beaully] .....	49·76	47·39	2·37	— 5
„	„	Braemore House.....	57·94	58·88	·94	+ 2
„	Ross, East .....	Alness (Ardross Castle).....	35·31	41·37	6·06	+ 17



## SCOTLAND—Continued.

DIV.	COUNTY.	STATION.	Average, 1880-9.	Depth in 1892.	Difference from average, 1880-9.	
					Per Amount.	cent.
			in.	in.	in.	
XVIII.	Inverness, West	Glenquoich .....	102·64	111·99	9·35	+ 9
XIX.	Sutherland.....	Golspie .....	30·47	31·91	1·44	+ 5
”	” .....	Lairg .....	32·82	35·79	2·97	+ 9
”	” .....	Scourie .....	40·58	49·39	8·81	+ 22
”	Caithness .....	Watten .....	27·01	27·79	·78	+ 3
”	Orkney .....	S. Ronaldshay (Roeberry).....	31·61	38·19	6·58	+ 21
”	” .....	Shapinsay (Balfour Castle) ...	31·83	32·50	·67	+ 2

## IRELAND.

XX.	Kerry .....	Kenmare (Derreen) .....	67·99	65·80	2·19	— 3
"	"	Valentia (Telegraph Station) ..	55·86	56·06	·20	+ 0
"	Waterford.....	Waterford (Brook Lodge).....	38·31	32·63	5·68	— 15
"	"	Glenam [Clonmel] .....	42·15	41·25	·90	— 2
"	Tipperary .....	Tipperary (Henry Street) .....	37·78	39·68	1·90	+ 5
"	"	Derry Castle [Killaloe] .....	46·33	47·15	·82	+ 2
"	Limerick .....	Limerick (Kilcornan).....	30·76	30·62	·14	— 0
"	Clare .....	Ennis .....	39·20	37·30	1·90	— 5
"	"	Miltown Malbay.....	44·12	41·94	2·18	— 5
XXI.	Wexford .....	Enniscorthy (Ballyhyland) ...	42·80	40·58	2·22	— 5
"	"	Gorey (Courtown House) .....	35·39	32·39	3·00	— 8
"	Kilkenny .....	Inistiogue (Woodstock).....	41·67	27·62	14·05	— 34
"	Wicklow .....	Bray (Fassaroe) .....	43·28	38·50	4·78	— 11
"	Carlow .....	Carlow (Browne's Hill) .....	33·59	32·52	1·07	— 3
"	King's Co. ....	Parsonstown (Birr Castle) .....	32·22	33·67	1·45	+ 5
"	Dublin .....	Dublin (Fitz William Square) ..	27·47	25·64	1·83	— 7
"	West Meath ...	Athlone (Twyford).....	38·97	36·86	2·11	— 5
"	"	Mullingar (Belvedere) .....	34·69	37·99	3·30	+ 10
"	Louth.....	Dundalk (Farndreg) .....	29·30	33·58	4·28	+ 15
"	Longford .....	Edgeworthstown (Currygrane)	35·43	35·47	·04	+ 0
XXII.	Galway .....	Ahascragh (Clonbrock) .....	39·91	40·76	·85	+ 2
"	"	Tuam Gardenfield .....	44·28	44·49	·21	+ 0
"	Mayo .....	Crossmolina (Enniscoe) .....	51·41	52·15	·74	+ 1
"	Sligo .....	Sligo (Mount Shannon) .....	40·52	43·11	2·59	+ 6
XXIII.	Fermanagh ...	Brookboro' (Colebrook Park)	41·02	40·73	·29	— 1
"	Armagh .....	Armagh Observatory .....	32·16	32·44	·28	+ 1
"	Down .....	Warrenpoint (Summer Hill)...	37·88	38·03	·15	+ 0
"	"	Seaforde .....	37·89	36·98	·91	— 2
"	"	Banbridge (Milltown) .....	31·44	31·20	·24	— 1
"	"	Sydenham (Alma House) ... ..	38·21	36·17	2·04	— 5
"	Antrim .....	Belfast (Antrim Road) .....	34·57	37·24	2·67	+ 8
"	"	Ballymena (Harryville).....	39·41	42·04	2·63	+ 7
"	"	Bushmills (Dundarave) .....	37·87	36·74	1·13	— 3
"	Londonderry...	Garvagh (Moneydig) ....	39·02	38·71	·31	— 1
"	"	Londonderry (Creggan Res.) ..	40·78	43·28	2·50	+ 6
"	"	Bellarena .....	39·18	40·79	1·61	+ 4
"	Tyrone .....	Stewartstown (The Square) ...	34·90	40·21	5·31	+ 15
"	"	Omagh (Edenfel) ... ..	36·63	37·49	·86	+ 2
"	Donegal .....	Raphoe (Convoy House) .....	46·94	46·13	·81	— 2

## EXTREMES OF RAINFALL IN 1892.

Largest Rainfall, at The Sty, Cumberland .....	172·20 in.
Least Rainfall, at Tewkesbury, Gloucester .....	16·25 ,,

## ENGLAND.

GREATEST.		LEAST.	
Div.	in.	Div.	in.
X. The Sty .....	172·20	VI. Tewkesbury .....	16·25
„ Sprinkling Tarn .....	141·18	„ Gloucester (Maisemore Lock) ..	16·96
„ Seathwaite .....	129·50	„ Tewkesbury (Upper Lode) ...	17·29
„ Mickleden .....	129·10	„ Gloucester (Llanthony Lock) ..	17·55
„ Styhead Tarn .....	127·04	„ Cheltenham (Northfield) ...	17·71
„ Scawfell Pike .....	120·28	IX. Patrington (Spurn Head) ...	17·74

## MONMOUTH, WALES AND THE ISLANDS.

GREATEST.		LEAST.	
Div.	in.	Div.	in.
XI. Llanbedr-y-Cennin (Llyndulyn) ..	101·05	XI. Portskewett (Sudbrook) .....	21·56
„ Rhiwbryddir (Oakley Quarries) ..	92·75	„ Churchstoke (Mellington Hall) ..	22·61
„ Llanberis (Glyn Padarn) .....	79·10	„ Meifod (Tanyfron) .....	22·64
„ Capel Curig (Lake Cowlyd) ...	72·55	„ Welshpool (Pool Quay Vic.) ..	22·95
„ Neath (Glyncorrwg) .....	67·88	„ Aberystwith (Castle Grounds) ..	23·84
„ Rhayader (Nant-y-car) .....	64·50	„ Monmouth (Pentwyn) .....	24·31

## SCOTLAND.

GREATEST.		LEAST.	
Div.	in.	Div.	in.
XVIII. Ben Nevis Observatory .....	150·91	XIII. Dalkeith .....	17·35
„ Glenquoich .....	111·99	„ Portobello (Joppa) .....	19·95
„ Loch Shiel (Glenaladale) .....	98·69	„ Leith .....	20·60
XV. Loch Eil (Conaglen) .....	94·47	XVI. Pittenween (The Priory) ...	22·21
XVIII. Glencarron Lodge .....	91·78	XII. Kelso (Springwood Park) ...	22·36
XVI. Glen Gyle .....	89·60	XIII. Edinburgh (Charlotte Sq.) ..	22·41

## IRELAND.

GREATEST.		LEAST.	
Div.	in.	Div.	in.
XX. Mangerton .....	114·30	XXI. Rathmines (Leinster Road). ..	23·88
XXII. Clifden (Kylemore House) ...	81·15	„ „ (Terenure) .....	25·92
„ Clifden (Kylemore Castle) ...	75·10	XXIII. Coalisland Canal (No. 7 Lock) ..	26·41
XX. Keamare (Derreen) .....	65·80	XXI. Balbriggan (Laragh) .....	26·62
„ Dunmanway (Coolkelure) ...	65·63	„ Killkenny (Lavistown) .....	27·47
„ Dingle .....	62·67	„ Inistioge (Woodstock) .....	27·62

## NOTE.

Second gauges, and those at Lighthouses, are excluded from the above, and in selecting the minima, no record is used from any gauge of which the receiving surface is more than 3 ft. above the ground.

**GENERAL TABLES**  
**OF**  
**TOTAL RAINFALL IN 1892,**  
**AT NEARLY**  
**3000 STATIONS**  
**IN THE**  
**BRITISH ISLES.**

## EXPLANATION OF THE ARRANGEMENT OF THE FOLLOWING GENERAL TABLES.

The divisions are the same as those adopted by the Registrars General of England and Scotland, and the counties follow the same order as in the reports of those officers ; but an alphabetical list of the counties is given, whereby the page or pages on which all returns from each county will be found, can be at once ascertained.

The stations in each county are arranged nearly in the order of their latitude from South to North.

To facilitate finding the locality of any gauge, the first name is almost always that of a place given in *Bradshaw*, the *Post Office Guide*, or the *Clergy Directory* ; the second name is generally added to fix accurately the site of Observation ; but, in a very few instances, when in [ ] instead of ( ), it is that of the nearest town in an adjoining county ; *e.g.*, “Lowestoft (Carlton Colville)” means Carlton Colville, near Lowestoft, both 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 that headed “diameter,” figures will be noticed of old-style type ; 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. The letter M indicates a monthly record, *i.e.*, that the observation is made only on the first of each month.

A few entries of total rain will be found in italics—indicating uncertainty either as to possible overflow, or as to the measurement of snow.

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.

In the column of altitudes several symbols are used, their meaning is as follows :— $\overline{\text{A}}$ , that a series of levels has been taken from the gauge to an Ordnance bench mark ; I, 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.

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## ENGLAND AND WALES.

## DIVISION I.—MIDDLESEX.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
MIDDLESEX.						
D Hampton (Southwark W. W.)...	J. W. Restler, Esq., C.E.	5	0 10	...	20·15	104
Sunbury (Hanworth Road) .....	W. B. Bryan, Esq., C.E.	8	1 0	50 T	22·95	153
Teddington (Gomer House) .....	R. D. Blackmore, Esq..	5	0 10	26 T	23·11	156
D Staines.....	J. Gundry, Esq.....	5	1 0	51 T	26·47	193
„ (Knowle Green).....	Miss Pellatt .....	5	5 2	...	24·63	141
Twickenham (Strawberry Hill)	T. Gale, Esq. ....	5	1 5	37 T	22·54	170
D „ (Vale House) .....	L. Gordon Rylands, Esq	5	1 0	20	23·29	166
D Chelsea (Pumping Station) .....	A. R. Binnie, Esq., C.E.	8	1 0	19 T	22·55	154
„ (St. Luke's Gardens) ...	T. W. E. Higgins, Esq. CE	5	1 0	25 T	21·36	151
D Isle of Dogs .....	A. R. Binnie, Esq., C.E.	8	1 0	15 T	22·14	132
D Gunnersbury Station .....	E. Mann, Esq. ....	5	0 11	35	22·25	145
D Acton (Newburgh Road) .....	Miss Baker .....	5	1 0	86 T	22·00	138
Ealing (Public Buildings) .....	C. Jones, Esq., C.E. ...	5	9 0	114	20·83	150
D „ (St. Stephen's Road) ....	General Battersby.....	5	1 0	...	22·71	153
„ (Gordon Road) .....	J. Box, Esq. ....	5	10 0	85 T	21·69	144
D Westminster (Spring Gardens)(3)	A. R. Binnie, Esq., C.E.	8	6 0	35 T	22·30	118
„ ( „ „ )(1)	„ „ „ .....	8	66 4	95 T	20·19	117
„ ( „ „ )(2)	„ „ „ .....	12	65 11	95 T	21·18	117
D Kensington (Edith Road).....	G. von U. Searle, Esq.	5	0 10	13 T	21·68	166
D „ (Holland House) ...	Mr. C. Dixon .....	5	4 6	68 T	21·63	151
D „ (Addison Gardens)...	G. H. M. Whish, Esq..	5	1 1	23 T	22·25	160
D „ (Campden Hill, W.)	M. W. Hervey, Esq., C.E.	8	4 10	130 T	22·36	165
D London (Savile Row, W.) .....	G. S. Johnson, Esq. ...	5	...	...	21·77	157
D „ (Norfolk Terrace, W.)...	A. P. Baker, Esq. ....	5	0 9	64 T	23·49	161
„ (Guildhall), E.C. ....	Col. Haywood, C.E. ...	8	2 6	49 T	21·16	146
„ ( „ ) .....	„ „ „ .....	8	51 0	98 T	21·46	...

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	1892	
			ft. in.	feet.	inches.	
MIDDLESEX—( <i>con.</i> )						
London (Old Street), E.C. ....	The Royal Meteor. Soc.	5	1 0	70 T	23·34	151
Perivale (Sewage Farm) .....	C. Jones, Esq., C.E. ....	5	12 0	56	21·80	142
D London (Gloucester Place W.) ...	W. B. Heberden, Esq..	5	4 0	...	22·75	171
„ (Regent's Pk. R. Bot. Soc.)	W. Sowerby, Esq. ....	8	1 0	126 T	23·89	151
„ (New River Office) .....	J. Searle, Esq. ....	...	...	...	19·91	...
D „ (Old Ford) .....	A. R. Binnie, Esq., C.E.	8	1 0	35 T	21·38	143
„ (West Hampstead) .....	H. T. Wharton, Esq. ...	5	1 0	135	22·49	...
D „ (Canonbury) N. ....	Mrs. Spiller .....	5	1 3	117 T	23·23	164
D† „ (Camden Square), N.W.	G. J. Symons, Esq. F.R.S	8	0 8	111 T	22·61	158
† „ ( „ „ „ ) .....	M. „ „ „ „ „ „ „ „	5	1 0	111 T	22·77	...
Hampstead (Roslyn House) N.W.	C. H. L. Woodd, Esq..	8	1 4	330 T	24·33	...
D „ (Kidderpore Reserv.)	M. W. Hervey, Esq. ....	8	1 6	323 T	26·29	165
D „ (Branch Hill Lodge)	B. Woodd Smith, Esq.	8	0 10	380 T	22·07	134
† „ (Squire's Mount) ...	Rogers Field, Esq. C.E.	5	1 0	388 T	23·87	149
„ (The Pryors) .....	„ „ „ „ „ „ „ „	5	1 0	327 T	23·34	164
D Highgate (Northwood Road) .....	Mrs. Sowerby Wallis...	5	1 0	265 T	23·89	162
D „ (North Hill) .....	T. de C. Meade, Esq., CE	5	5 0	302	24·07	152
D† Child's Hill (Helenslea), N.W. ....	A. J. Woodhouse, Esq.	5	1 6	245 T	23·50	158
*Upper Clapton (The Common) ..	J. Parnell, Esq. ....	5	1 1	98 T	22·19	164
Finsbury Park (Endymion Ter.)	Rev. E. Healy .....	5	1 6	125 T	23·40	...
D Hornsey (High Street) .....	T. de C. Meade, Esq., CE	6	5 0	107	23·88	136
D „ (Burghley Road) .....	„ „ „ „ „ „ „ „	6	4 0	71	24·15	137
D Tottenham .....	J. E. Worth, Esq., C.E.	8	1 0	47 T	22·55	148
D Muswell Hill .....	Miss Abethell .....	5	0 10	310 T	25·06	161
D „ (Irish Corner Sew. Farm)	T. de C. Meade, Esq., C.E.	8	5 0	207 T	24·94	162
Finchley East (Elmhurst) .....	B. C. Wainwright, Esq.	8	0 7	300 T	25·05	153
D† „ (Etchingham Park) ...	J. W. Scott, Esq. ....	5	1 2	295 T	25·49	167
D† „ ( „ „ „ ) .....	„ „ „ „ „ „ „ „	8	1 3	295 T	25·58	167
D Pinner Hill .....	A. Helsham-Jones, Esq.	5	3 6	410 T	24·59	160
D Harrow Weald (Hill House) ...	A. Crossman, Esq. ....	5	0 8	...	25·57	180
Stanmore Observatory .....	S. T. Klein, Esq. ....	5	1 0	268	23·99	151
D Friern Barnet (Sewage Works) ..	Baldwin Latham Esq CE	5	1 0	156 T	23·37	180
D Whetstone .....	„ „ „ „ „ „ „ „	5	1 0	315 T	24·08	152
D Enfield (Old Park) .....	A. L. Ford, Esq. ....	5	1 9	156 T	25·44	181
D „ (Nag's Head Lane) .....	J. Francis, Esq., C.E.	12	3 0	108 T	24·57	169

## DIVISION II.—SOUTH EASTERN COUNTIES.

## SURREY.

D Haslemere .....	J. W. Penfold, Esq. ....	8	4 0	481 T	28·10	146
D „ (Hazelhurst) .....	T. P. Newman, Esq. ....	5	1 0	550 T	28·89	159
„ (Grayswood Hill) .....	B. E. C. Chambers, Esq.	5	1 0	580 T	26·88	...
Godalming (Dunsfold) .....	Mr. W. Underwood ...	5	1 6	66	19·98	...
Haslemere (Weycombe) .....	G. B. Buckton, Esq. FRS.	5	1 0	562 T	24·81	...
Godalming (Hascombe) .....	E. S. Rowcliffe, Esq. ....	8	2 0	273 T	23·35	...
D Cranleigh .....	Adl. Maclear .....	5	1 0	182	25·79	182
D „ (Winterfold) .....	Mr. R. Turvey .....	8	3 6	603 T	24·85	145

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

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which 101 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1892	
			ft. in.	feet.	inches.	
SURREY—(con.)						
D Ewhurst (Heathside) ... <i>new g.</i>	J. Sparkes, Esq. ....	5	1 6	600 $\nabla$	27·08	168
D Godalming (Witley) .....	Mrs. Foster .....	5	1 0	350 $\nabla$	24·92	161
D „ (Charterhouse) .....	O. H. Latter, Esq. ....	5	1 0	200	23·10	169
D Ewhurst (Coneyhurst) .....	Miss Ewart .....	8	1 6	561 $\nabla$	30·22	184
D Wonersh (Shamley Green) .....	Mr. A. Nash .....	5	1 0	400	24·50	146
D Dorking (Abinger Hall) .....	Rt. Hon. Lord Farrer..	8	2 0	320 $\nabla$	26·98	151
† „ (Holmwood) .....	A. Sconce, Esq. ....	5	1 2	320 $\nabla$	26·84	...
„ (Fir Tor) .....	F. Taylor, Esq. ....	5	1 0	260	26·81	...
Brockham (North Lodge) .....	H. R. Kempe, Esq. ...	8	0 9	...	24·98	...
D Farnham (The Bourne Vicarage)	Rev. T. W. Sidebotham	5	1 0	308 $\nabla$	25·48	167
D „ (Great Down, Seale)...	Mrs. Kitchin .....	8	1 0	450 $\nabla$	24·00	149
Guildford (Piccards Rough).....	C. M. Powell, Esq. ...	5	3 0	325 $\nabla$	23·53	...
D „ (Guildown The Beeches)	Miss Hadden .....	5	0 11	220 $\nabla$	23·68	180
D Reigate (Woodhatch Lodge) ...	T. B. Haywood, Esq. ...	5	1 0	270 $\nabla$	25·80	163
D „ (Ringley Mead) .....	R. L. Hesketh, Esq. ...	5	1 0	345 $\nabla$	27·78	171
D „ (Sewage Farm) .....	F. D. Clark, Esq., C.E.	8	1 0	196 $\nabla$	26·04	153
D Dorking (The Denbies) .....	Mr. J. Beesley .....	5	0 9	610 $\nabla$	26·59	146
D Buckland (Shagbrook) .....	Miss Carr Saunders ...	5	1 0	240 $\nabla$	23·37	152
D† Red Hill (Oxford Road) .....	W. H. Tyndall, Esq. ...	8	1 0	300 $\nabla$	27·31	171
„ „ (Montpellier).....	Mrs. Stephenson .....	5	1 0	280	27·22	...
D Reigate (Dovers Lodge) .....	R. W. Clutton, Esq. ...	5	0 7	192	25·17	159
D „ (Holmfels) .....	Miss Baker .....	5	1 0	264 $\nabla$	26·78	165
D „ (Castle Grounds) .....	F. D. Clark, Esq., C.E.	5	1 0	325 $\nabla$	26·01	156
D „ (Doods) .....	G. E. Pym, Esq. ....	5	1 3	350 $\nabla$	27·24	170
D „ (Nutwood) .....	H. E. Gurney, Esq. ...	5	1 4	440 $\nabla$	27·19	150
D Nutfield Priory .....	Mrs. Fielden .....	8	1 2	468 $\nabla$	27·49	162
D „ (Holmesdale) .....	C. T. Maw, Esq. ....	8	2 0	500 $\nabla$	25·44	163
D Guildford (Wern) .....	Miss Mathew .....	5	4 0	170	22·33	147
D Dorking (High Ashurst) .....	The Hon. H. D. Ryder	5	10 0	545	25·65	158
Horsley Towers .....	The Earl of Lovelace...	8	0 6	340	23·50	...
D Bookham Lodge .....	Hon. Rev. H. Waldegrave	8	0 7	140	21·09	145
Leatherhead (Downside) .....	A. Tate, Esq. ....	5	1 0	609 $\nabla$	20·72	...
D Caterham Asylum .....	Dr. Elliot .....	5	1 0	610	28·92	142
D „ Valley (Birchwood Ho.)	Messrs. C. & F. Rutley	5	1 0	471 $\nabla$	27·69	171
D Camberley (Heathcote) .....	Gen. Stotherd, C.B. ...	5	1 0	292 $\nabla$	23·70	153
Coulsdon Grange .....	F. C. Bayard, Esq. ...	5	1 4	525	24·93	..
D Kenley (Ingleside).....	H. Smith, Esq. ....	8	1 0	375 $\nabla$	27·75	196
D Ashtead (D'Abernon Chase) ...	Sir W. Vincent, Bart..	5	1 0	280 $\nabla$	24·18	169
Leatherhead (Oxshott) .....	W. H. Dines, Esq. ...	5	1 0	212	21·90	...
D Cobham (Leigh Hill House) ...	late J. Macaulay, Esq.	5	2 0	79	22·67	151
Banstead (The Larches) .....	Rev. C. J. Taylor .....	8	1 0	488 $\nabla$	23·87	...
Epsom College .....	The Meteor. Council...	8	1 0	300	20·20	141
D Purley (Tudor Cot.).....	F. C. Bayard, Esq. ...	5	1 0	216 $\nabla$	27·60	166
D „ (Reedham) .....	„ „ „ „ .....	5	1 0	375	25·62	157
D Chertsey (Ottershaw) .....	R. H. Otter, Esq. ....	5	1 0	200 $\nabla$	24·24	196
D Windlesham (Erlwood).....	E. S. Currey, Esq. ....	5	1 0	216 $\nabla$	23·41	170
D Weybridge Heath (Netherfield)..	C. H. Parkes, Esq. ...	5	1 0	160	23·33	151



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

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
SURREY—(con.)						
D Weybridge (Field Place) .....	H. Yool, Esq. ....	5	1 0	119 $\nabla$	23·83	161
D „ (St. George's Lodge) .....	Mrs. Smith .....	5	1 9	...	22·92	154
D „ (Church Street) ...M	H. Yool, Esq. ....	5	1 0	55 $\nabla$	24·05	...
D „ (Egerton Road) .....	A. H. Hall, Esq. ....	5	1 0	130	22·78	162
D Esher (Sewage Works) .....	Baldwin Latham Esq CE	5	1 0	42 $\nabla$	19·25	159
Walton-on-Thames (Hersham) ..	W. H. Dines, Esq. ....	8	1 0	55 $\nabla$	23·12	...
D Addington (Hares Bank) .....	F. C. Bayard, Esq. ...	8	1 0	331 $\nabla$	26·39	166
D „ (Park Farm) .....	„ „ „ ..	5	1 0	268 $\nabla$	27·24	171
D „ Hills .....	„ „ „ ..	8	0 9	473 $\nabla$	25·80	164
D Wallington .....	„ „ „ ..	5	4 0	157 $\nabla$	24·66	169
† Sutton (Mulgrave Road) .....	W. Goode, Esq. ....	5	5 6	230 $\nabla$	23·99	158
D Beddington (Riverside) .....	S. Rostron, Esq. ....	5	1 0	120	24·13	168
D Croydon (Waddon House) .....	P. Crowley, Esq. ....	5	1 0	156 $\nabla$	23·05	161
D „ (Wadden New Road) .....	G. Corden, Esq. ....	5	1 0	155	23·73	170
D „ (The Whitgift) .....	A. E. Watson, Esq. ...	5	1 0	191 $\nabla$	25·21	161
D „ (Brimstone Sew. Works) .....	F. C. Bayard, Esq. ...	5	1 0	130 $\nabla$	23·93	136
D*† „ (Addiscombe) .....	E. Mawley, Esq. ....	8	0 9	202 $\nabla$	24·63	167
D „ („ Havelock Rd.) .....	Baldwin Latham Esq CE	8	1 0	205	25·14	194
D „ (Oakfield Road) .....	A. Malden, Esq. ....	5	1 6	180 $\nabla$	23·03	128
D New Malden (Sewage Works) .....	F. C. Bayard, Esq. ...	5	1 0	45	19·22	126
D Thornton Heath (Thornton Rd.) .....	A. Wright, Esq. ....	8	0 8	100	24·39	113
D Surbiton (Seething Wells) .....	R. Hack, Esq., C.E. ...	10	0 6	25	21·17	130
D East Molesey (Palace Road) .....	Lady Jenkyns .....	8	6 0	37	21·95	145
D Kingston Sewage Works .....	F. C. Bayard, Esq. ...	5	1 0	25	25·01	157
D Wimbledon (Mount Ararat) .....	T. Devas, Esq. ....	12	3 0	157 $\nabla$	25·36	150
D „ (Raynes Park) .....	F. C. Bayard, Esq. ....	5	1 0	47	26·10	193
D „ (Sewage Works) .....	„ „ „ ..	5	1 0	58 $\nabla$	24·00	160
D South Norwood (Selhurst Road) .....	„ „ „ ..	5	1 2	210	23·70	167
West Norwood (Thornlaw Road) .....	W. Marriott, Esq. ....	8	1 0	221	23·67	160
Streatham Hill .....	F. Jordan, Esq. ....	5	0 10	178 $\nabla$	23·61	159
D Wandsworth Com. (Patten Rd.) .....	F. C. Bayard, Esq. ...	5	1 0	100	22·11	189
Egham (Cooper's Hill) .....	The Meteor. Council ...	8	1 1	280	25·62	191
D Richmond (Ormond Lodge) .....	J. T. Billett, Esq. ....	5	0 9	51	24·30	173
D Kew Observatory .....	The Kew Committee ...	11	1 9	19 $\nabla$	24·27	163
Brixton (Acre Lane) .....	The Meteor. Council ...	8	1 0	77 $\nabla$	22·98	158
D Nunhead (Southwark W. W.) .....	J. W. Restler, Esq., C.E.	5	...	...	17·78	126
D Battersea Creek .....	A. R. Binnie, Esq., C.E.	8	27 2	41 $\nabla$	17·57	134
D „ (Southwark W. W.) .....	J. W. Restler, Esq., C.E.	5	3 6	...	18·42	130
D Vauxhall Cross (Wandsworth Rd.) .....	A. R. Binnie, Esq., C.E.	8	30 9	48 $\nabla$	20·46	138
KENT.						
Dungeness .....	The Meteor. Council ...	8	...	...	20·57	156
D Hawkhurst (Sandhurst Rec) Gard. .....	Rev. G. Ridout .....	5	1 3	208 $\nabla$	32·25	138
Appledore (Snargate) .....	J. Ellis Mace, Esq. ...	5	1 0	9	24·53	...
Dymchurch Rectory .....	Rev. C. E. Plater .....	8	1 6	0	25·47	...
Rolvenden (Hole Park) .....	A. Curteis Neve, Esq. ...	5	1 0	220	29·44	151
Tenterden (Summerhill) .....	Rev. A. Wilkin .....	12	1 0	149 $\nabla$	28·03	162

## 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	1892	
			ft. in.	feet.	inches.	
KENT—(con.)						
Benenden Vicarage .....	Rev. Canon Joy .....	8	1 6	330	26·74	...
„ (East End) .....	J. Ellis Mace, Esq. ....	8	1 2	193 $\nabla$	27·63	...
D Tenterden .....	„ „ „ .....	8	1 5	190 $\nabla$	27·54	184
„ (Snowdon) .....	„ „ „ .....	8	1 5	190 $\nabla$	27·24	...
„ (Little Westwell) ...	Mr. W. Hilder .....	5	1 0	140 $\nabla$	27·84	...
D† Hythe .....	H. B. Mackeson, Esq. ...	8	0 6	12 $\nabla$	30·23	174
† „ (Hillhurst Farm) .....	G. F. Deedes, Esq. ...	5	2 0	280 $\nabla$	33·16	174
Cranbrook (Swattenden) .....	Miss Appach .....	8	1 2	350 $\nabla$	28·96	155
† „ (Hartley) .....	G. Pile, Esq. ....	5	4 0	405 $\nabla$	30·23	173
Folkestone (Capel Lodge).....	E. Norton, Esq., M.D..	5	1 0	470 $\nabla$	34·06	179
† Hythe (Paddlesworth) .....	Mr. R. Dixon .....	8	1 0	608 $\nabla$	40·68	...
Dover (Castle Knowle W.W.) ..	W. Thomas, Esq., C.E.	8	2 10	215 $\nabla$	33·63	150
D† Acrise (School House) .....	G. C. Woollett, Esq. ...	8	1 0	504 $\nabla$	38·96	171
„ .....	E. C. Mackinnon, Esq.	6	1 0	600	39·10	...
D Tunbridge Wells (Camden Park)	J. Weston, Esq. ....	5	0 9	424 $\nabla$	29·43	190
„ „ (Bredbury) ...	F. G. Smart, Esq. ....	5	1 0	415	30·77	172
D „ „ (Ferndale) .....	A. Keene, Esq. ....	8	1 0	370 $\nabla$	29·33	173
D Cranbrook (Camden Lodge) .....	Mr. A. Habbitts .....	5	1 0	276 $\nabla$	28·76	159
D Ashford (Bethersden) .....	W. H. Mold, Esq. ....	5	4 0	111 $\nabla$	27·90	163
D „ (Beavor Green) .....	T. Nickalls, Esq. ....	5	1 0	155 $\nabla$	33·84	187
D Tunbridge Wells (Etherton Hill)	E. W. Winton, Esq. ...	5	1 5	276 $\nabla$	22·99	128
D „ „ (Pembury) ...	W. Brentnall, Esq. C.E.	8	1 8	181 $\nabla$	25·15	145
D Tunbridge „ (Penshurst Place) ...	The Hon. H. Sidney ...	5	0 11	115 $\nabla$	26·28	...
D „ „ „ (Park) .....	Mr. J. M. Sturgess ...	5	0 4	265 $\nabla$	28·07	142
D „ „ (St. Mary's) .....	W. C. Punnett, Esq. ...	5	1 6	96 $\nabla$	26·50	138
„ „ „ „ (Snowdon) .....	„ „ „ „ .....	5	1 0	96 $\nabla$	26·68	138
„ „ „ „ „ (M) .....	„ „ „ „ .....	8	4 0	98 $\nabla$	25·16	...
D Ashford (Pluckley) .....	Mr. F. Kingsnorth ...	5	5 0	120 $\nabla$	25·45	179
D „ (Westwell) .....	Rev. H. H. D'Ombraïn	5	1 0	293	31·40	153
Edenbridge (Falconhurst) .....	J. G. Talbot, Esq., M.P.	5	1 0	300	25·37	...
D Lower Walmer (Meadow Side)...	Mr. H. R. L. Botting..	5	1 4	20	28·31	140
D† Maidstone (Hunton Court) .....	Mr. E. Hall .....	8	0 6	80 $\nabla$	24·91	151
D „ „ (Linton Park) .....	Mr. C. Pratt ...	5	1 0	...	26·78	152
D „ „ (Lower Tovil) ...	Lawrence Green, Esq..	5	1 0	30 $\nabla$	26·85	167
„ „ (The Mote) .....	Mr. C. R. Fielder .....	...	...	...	25·88	170
D „ „ (Mount House) .....	C. A. Case, Esq. ....	5	1 0	160 $\nabla$	26·90	141
D „ „ (Hospital) .....	M. A. Adams, Esq. ...	5	0 8	200	27·31	128
D „ „ (Town Mallings) .....	Rev. C. H. Fielding ...	5	1 5	155	30·70	210
D „ „ (Debtling) .....	R. Cooke, Esq. ....	5	1 2	330 $\nabla$	27·91	178
Sheldwich .....	Rev. B. S. Malden .....	5	1 0	250 $\nabla$	34·00	178
D† Selling (Harefield) .....	E. Neame, Esq. ....	5	2 6	217 $\nabla$	31·69	170
D Canterbury (Burgate Street) ...	B. Rigden, Esq. ....	5	9 6	58 $\nabla$	29·08	144
D „ „ (Harbledown) .....	late Miss Metcalfe .....	5	1 6	165 $\nabla$	27·64	155
D „ „ (Sewage Works) .....	F. Baker, Esq., C.E. ...	5	0 7	18 $\nabla$	29·10	190
† Seven Oaks (River Hill) .....	J. T. Rogers, Esq. ....	8	4 6	535 $\nabla$	27·07	...
D „ „ (Purleigh) .....	W. W. Wagstaffe, Esq.	7	1 5	380 $\nabla$	35·35	189
D† „ „ (Riverhead Vic.) ...	Rev. J. M. B. Murdoch	5	0 6	300 $\nabla$	29·78	154

## 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	1892	
			ft. in.	feet.	inches.	
KENT—(con.)						
D Seven Oaks (Kemsing) .....	T. Stonham, Esq. ....	5	6 0	...	28·56	155
D Sittingbourne (Sharsted Court) ..	A. J. Rayfield, Esq. ...	5	1 0	276 T	33·00	180
D Lynsted (The Batteries) .....	R. M. Mercer, Esq. ...	5	1 0	140	30·84	167
D Ospringe (Lorenden) .....	W. C. Stunt, Esq. ...	5	1 4	180 P	29·70	136
D Knockholt (Kent Waterworks) ..	F. C. Bayard Esq. ....	5	1 0	785	30·12	...
D Keston (Bradfield) .....	A. Hill, Esq. ....	5	1 0	350 T	26·88	173
D „ (Heathfield) .....	Miss Holland .....	5	0 6	420 T	28·36	176
D „ ( „ ) .....	M „ „ .....	5	0 6	420 T	29·41	...
D „ Tower .....	G. Buchanan, Esq., C.E.	8	0 11	351 T	28·29	160
D Rochester (Halling Cottage) ...	A. F. Bowker, Esq., CE	8	1 0	66 T	26·14	186
D Ash (Pettings House) .....	C. J. G. Hulkes, Esq. ..	5	5 0	530 T	24·15	169
D Herne Bay (Eddington) ...	Miss Hawksworth .....	5	1 0	4P	31·30	...
D Birchington (Thor) .....	Mr. W. H. Euden .....	5	1 0	40 T	27·20	137
D Reculver (Brook) .....	A. Collard, Esq. ....	5	6 3	40	25·51	156
D Hayes (Layham's Farm) .....	W. Ashcroft, Esq. ....	5	1 0	500	28·53	147
D „ Common (The Warren) ..	Miss Akers .....	5	1 4	296	26·86	181
D Orpington (Kent Waterworks) ...	F. C. Bayard, Esq. ...	5	1 0	220	25·03	138
D Farningham Hill .....	„ „ „ .....	5	3 0	300	26·99	177
D Chatham .....	The Meteor. Council ...	8	1 3	137	31·24	163
D Rochester (Knights Place) .....	J. Pye, Esq. ....	5	2 3	320	30·06	173
D North Foreland .....	The Meteor. Council ...	8	...	...	25·21	152
D Margate (Apsley House) .....	J. Stokes, Esq. ....	5	1 5	84 L	27·91	166
D „ ( „ „ ) .....	„ „ „ .....	5	1 0	84 L	28·00	165
D Sheppey (Leysdown) .....	Rev. A. Farbrother ...	5	1 2	47	26·51	173
D Frindsbury (Manor Farm) .....	F. Baker, Esq. ....	5	1 0	100	27·74	134
D Bickley (Highfield) .....	J. Batten, Esq. ....	5	1 2	295	28·05	180
D Chislehurst (Abbey Lodge) .....	Col. Silver .....	5	1 5	...	23·64	130
D „ (The Chestnuts) .....	J. B. Snell, Esq. ....	5	1 0	325 T	25·92	154
D Wilmington (Kent Waterworks) ..	F. C. Bayard, Esq. ...	5	1 0	25	25·62	141
D Beckenham (Foxgrove) .....	Percy Bicknell, Esq. ...	5	0 6	142 T	21·37	141
D „ ( „ „ ) .....	„ „ „ .....	5	4 0	145 T	20·72	132
D „ ( „ „ Road) .....	C. S. Pringle, Esq. ...	8	1 0	147	23·87	144
D Sidecup (Hatherley Road) .....	Dr. L. Burrell .....	5	1 2	350	24·99	144
D Rochester (Abbot's Court, Hoo) ..	Warwick Stunt, Esq. ...	5	1 0	10	24·30	158
D Sheerness (Water Works) .....	W. W. Copland, Esq., CE	8	1 0	9 T	25·25	148
D Forest Hill (Newfield House) ...	F. C. Bayard, Esq. ...	5	1 0	220	24·06	...
D „ (The Nurseries) .....	Messrs. J. Carter & Co.	5	0 5	76	25·59	162
D „ (Barr Beacon) .....	J. W. Restler, Esq., C.E.	5	1 0	344 T	22·84	167
D Gravesend (Park Place) .....	Mrs. Walker .....	5	1 0	24P	24·54	144
D Rochester (Cooling Castle) .....	W. Wood, Esq. ....	5	4 10	10	24·32	...
D „ (Hoo St. Mary) .....	H. Pye, Junr., Esq. ...	5	5 6	146 T	24·93	171
D Lewisham (Hither Green) .....	E. J. C. Smith, Esq. ...	5	1 0	100P	22·60	...
D Blackheath .....	J. Glaisher, Esq., F.R.S.	8	1 0	150	22·89	160
D „ (Westcombe Park Rd.) ..	Rev. W. H. K. Soames	8	1 4	120 T	22·26	127
D „ Park (Elmsdale) ...	C. Lethbridge, Esq. ...	5	0 11	90	22·69	178
D Greenwich (Royal Observatory) ..	W. H. Christie, Esq. FRS	8	0 5	155 T	22·31	170
D Deptford (Kent Waterworks) ...	F. C. Bayard, Esq. ...	5	1 0	20	21·30	139
D „ (Pumping Station) .....	A. R. Binnie, Esq., C.E.	10	1 6	15	25·79	141

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

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of	Days on which ·01 or more fell.
		Diameter	Height	Height	Rain.	
			Above Ground.	Above Sea Level	1892	
<b>KENT—(con.)</b>						
D Woolwich (Powis Street) .....	Mr. J. G. Waller .....	5	30 0	65	21·22	166
Erith (Crossness) .....	No. 1 A. R. Binnie, Esq., C.E. ....	14	2 0	16 T	20·06	158
„ ( „ ) .....	No. 3 „ „ „ .....	14	2 0	24 T	20·29	158
<b>WEST SUSSEX.</b>						
Bognor (Lidsey Lodge) .....	H. Neale, Esq. ....	8	1 2	...	26·88	137
Littlehampton (Surrey House)...	G. Neame, Esq. ....	5	1 8	20 T	25·01	...
D Worthing (Heene) .....	W. J. Harris, Esq. ...	8	1 0	34 T	23·73	141
D Arundel (Yapton) .....	W. A. Hounsom, Esq..	5	1 0	24 T	26·06	146
„ ( „ Drove Farm) .....	„ „ „ .....	5	1 0	14 T	24·97	144
Angmering .....	Rev. J. B. Orme .....	5	1 3	...	26·07	...
Chichester (WestgateMeadow)...	Dr. Tyacke .....	8	0 6	40	26·74	123
D Arundel (Clapham Rectory) ...	Rev. A. H. S. Barwell	5	1 0	150 T	26·83	162
„ (Patching) .....	J. Drewitt, Esq. ....	5	1 0	180	26·68	148
„ ( „ ) .....	Mrs. Joad .....	5	0 10	130 T	27·81	162
D „ (The Parade) .....	R. Holmes, Esq. ....	8	3 1	75	27·62	129
Steyning (Annington) .....	Mr. H. J. Hide .....	5	1 0	90 T	29·14	122
† „ .....	Col. Ingram .....	5	1 0	80 T	28·72	...
Chichester (Eartham House) ...	Sir P. Milbanke, Bt....	3	4 6	316 T	24·61	...
„ (Selhurst Park) ..	C. O. Newman, Esq....	5	0 10	300 T	28·67	132
D „ (Forest Side Vic.) ...	Mrs. J. C. Parson .....	5	1 0	341	29·42	148
D „ (Watergate Gardens) ..	R. Christy, Esq. ....	5	3 6	220 T	28·15	155
„ (Singleton Rectory)...	Rev. F. A. Bowles .....	5	1 0	240	27·90	...
† „ (Chilgrove) .....	J. W. Woods, Esq. ...	5	0 6	284 T	27·62	...
D Compton [Petersfield] .....	Rev. H. M. Langdale...	5	1 0	255 T	31·04	161
† Petworth Rectory .....	Rev. C. Holland .....	5	4 0	180 T	31·02	135
Cowfold (The Laurels) .....	Mr. S. Ford .....	6	1 6	273	26·99	...
D Midhurst (Borden Wood) .....	T. J. Hare, Esq. ....	5	1 2	280 T	29·80	153
„ (Lynch Farm) .....	G. Eames, Esq. ....	5	0 6	160 T	30·04	...
D Horsham (Bourne Hill) .....	F. W. Pigott, Esq. ....	5	1 0	250 T	26·17	138
„ (Manor House) .....	H. Padwick, Esq. ....	8	0 10	140 T	27·53	161
D „ (Wimblehurst) .....	Miss Allcard .....	5	1 5	220 T	27·58	153
<b>EAST SUSSEX.</b>						
Beachy Head .....	M Miss Brodie Hall .....	5	1 0	515 T	20·94	...
D Eastbourne (East Dean) .....	E. W. Adamson, Esq..	5	1 0	180	23·52	124
„ (WilmingtonSquare) .....	R. Sheward, Esq. ....	8	0 6	39	29·71	140
D† „ (Osborne House) ...	Miss Brodie Hall .....	5	1 0	12 T	29·35	158
D† „ (Cemetery) .....	„ „ „ .....	5	4 0	160 T	28·81	138
† Brighton (Kemp Town) .....	Mr. Wyatt .....	5	1 0	82 T	23·53	117
D† „ (Old Steine) .....	Dr. Newsholme ..	5	1 0	32 T	26·18	155
„ (GoldstoneVillas,Hove) ..	W. J. Treutler, Esq., MD	5	1 0	60	25·63	135
D „ (Prestonville Road) ...	F. H. Phillips, Esq. ...	5	1 0	185 T	26·49	170
D „ ( „ „ ) .....	„ „ „ .....	8	1 0	185 T	26·58	170
D „ (W. W. Goldstone Botm) ..	J. Baker, Esq. ....	5	1 0	140 T	25·92	125
D „ (W. W., Lewes Road) ..	„ „ .....	5	3 8	105	29·56	148
Bexhill .....	The Royal Meteor. Soc.	8	1 0	45	27·06	...
St. Leonards (London Road) ...	The Meteor. Council ...	5	1 0	166 T	26·87	...

## 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		1892
			ft.	in.	feet.	inches.	
EAST SUSSEX—(con.)							
D St. Leonards (The Grove).....	W. B. Young, Esq. ...	5	1	1	110 T	28·76	160
D Hailsham.....	Rev. F. Clyde Harvey..	5	1	0	105	29·46	120
D†Falmer.....	R. R. Verrall, Esq. ...	5	3	0	312 T	30·47	116
D Lewes (Iford).....	A. Hillman, Esq. ....	5	1	0	33 T	31·05	141
D „ (Bedford Lodge).....	Mrs. Kemp.....	5	1	0	85 T	24·90	151
D „ (Saxonbury) .....	A. Hillman, Esq. ....	5	1	0	75 T	29·43	135
D „ (Southmalling) .....	Miss M. H. Rickman...	5	1	0	40 T	23·16	140
D Hastings (Newgate Res.) .....	P. H. Palmer, Esq. ...	8	0	10	240	27·64	162
† „ (High Beech Hollington) .....	Col. Lewis .....	5	1	0	320 T	27·15	161
Lewes (Conyborough Park) .....	Lord Monk Bretton ..	...	...	...	...	30·54	...
D Hurstpierpoint (Danny Park) ..	Mr. J. Bunney .....	...	1	3	180	29·64	102
„ (Hampton Lodge) .....	I. F. H. C. Gregg, Esq.	5	1	0	174 T	26·00	...
D Winchelsea (The Friars) .....	Miss Stileman.. .....	5	1	2	115 T	27·76	121
Battle (Whatlington) .....	F. Gripper, Esq. ....	5	1	3	...	30·75	136
†Waldron (Bryckden).....	J. Graham, Esq., M.D.	5	1	0	320 T	29·21	...
† „ „ „ .....	„ „ „ .....	8	1	0	320 T	29·17	...
D Uckfield House .....	Miss L. Day .....	8	0	10	200 B	27·32	168
D Cross in Hand (Montpellier).....	A. Brown, Esq.....	5	1	0	475	31·19	168
D Haywards Heath .....	C. E. Saunders, Esq. MD	5	1	1	281	24·00	125
Buxted (Strawberry Hall) .....	C. Rintoul, Esq.....	5	1	0	220	25·63	..
D†Maresfield (Forest Lodge).....	Capt. W. Noble .....	8	1	2	247 T	29·45	200
D Cuckfield (Borde Hill House) ..	Mr. R. Inglis.....	5	3	0	270 B	28·05	142
„ (Workhouse) .....	The Meteor. Council ..	...	...	...	...	26·50	144
D†Mayfield Vicarage.....	Rev. H. T. M. Kirby...	8	0	8	425 T	32·51	150
D†Crowborough (The Observatory).	C. L. Prince, Esq.....	8	0	8	770 T	33·18	163
D Balcombe Place .....	Mr. Warren .....	8	1	3	289 T	30·33	157
D „ (Highley Manor) .....	Mrs. Nichols .....	8	1	6	422 T	30·56	126
Ticehurst .....	Mr. Jordan .....	5	4	9	423 T	30·85	121
D Wadhurst (Lower Cousley Wood)	F. Wilkin, Esq.....	5	1	0	416 T	30·55	154
Frant (Eridge Castle) .....	Mr. J. Rust.....	5	2	0	400	31·21	126
D Withyham (Leyswood) .....	Mr. T. C. Moorhouse ..	8	1	4	420	30·44	143
Forest Row (Ashdown Cottage) ..	H. J. Slack, Esq. ....	8	4	0	386 B	28·11	...
Worth (South Hill) .....	P. E. Ravenshaw, Esq.	5	1	6	558 T	33·22	190
„ Rectory.....(East gauge)	Rev. G. W. Banks ...	5	1	10	300 T	30·23	153
East Grinstead (Old Stone House)	P. E. Wallis, Esq.....	5	4	0	448 T	28·80	...
D „ „ Station .....	Mr. G. Mitchell .....	8	2	2	410	26·85	153
„ „ (Halsford Park). .....	W. V. K. Stenning, Esq.	5	1	3	365 T	29·93	154
HAMPSHIRE.							
ISLE OF WIGHT.							
Niton (St. Catherine's House) ...	H. J. Dore, Esq. ....	...	...	...	200	21·63	...
Ventnor .....	J. Ineson, Esq. ....	10	2	6	70	27·65	150
D Sandown (Lake Hill) .....	W. E. Green, Esq. ...	5	1	0	105	27·25	126
Brading Vicarage .....	Rev. E. Summers .....	5	1	6	60	25·53	...
D Newport (Lugley House) .....	Rev. E. W. Watts ...	5	1	0	...	24·97	141
Yarmouth (National School) ...	Mr. F. C. Spray .....	5	1	0	8	21·46	143
D Ryde (Thornbrough) .....	Col. Clarke .....	5	1	0	143 T	26·16	159
D „ (Town Hall).....	F. Newman, Esq. ....	8	1	0	83 T	25·24	153

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which .01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1892	
			ft. in.	feet.	inches.	
HAMPSHIRE—(con.)						
ISLE OF WIGHT—(con.)						
Wootton (Fernhill) .....	F. Brodie, Esq. ....	8	0 6	118 T	25·59	...
d† Osborne (Newbarn Cottage) .....	J. R. Mann, Esq., C.E.	8	0 8	172 T	22·87	136
d West Cowes (Holmwood) .....	C. T. Maw, Esq. ....	8	0 8	40 T	22·22	151
Hurst Castle .....	The Meteor. Council ...	8	0 11	9	23·25	154
d Bournemouth (Wellington House) .....	Messrs. Primavesi Bros	5	1 0	100 T	24·72	155
d " (Lansdowne Road) .....	Miss Sworn .....	5	1 2	123 T	25·20	146
d Christchurch (Mudford) .....	F. H. D. Eyre, Esq. ...	5	0 3	15 L	23·56	136
d Lymington (Pennington) .....	Miss E. S. Lomer .....	5	0 9	96 T	26·97	138
Christchurch (Heron Court) .....	Earl of Malmesbury ...	8	0 5	...	27·02	158
d Portsmouth (Fort Cumberland)..	P. Murch, Esq., C.E...	8	0 9	16 T	20·02	108
d " (Milton) .....	Dr. Mumby .....	5	1 0	18	23·27	146
d North Hayling .....	F. Padwick, Esq. ....	5	1 0	10	22·09	109
d Porchester (Noel Cottage) .....	Miss Montgomery Frost	5	1 0	...	24·03	169
d Havant (Farlington) .....	H. R. Smith, Esq., C.E.	5	1 0	77 T	23·01	145
" { " } .....	M	5	1 0	77 T	22·90	...
d Emsworth (Redlands) .....	F. Jacob Hood, Esq. ...	5	1 0	90 T	27·16	140
d Southampton (Cadland) .....	J. Laurie, Esq. ....	8	4 6	52 T	24·52	160
Lyndhurst (Cuffnells) .....	R. G. Hargreaves, Esq.	5	0 9	200 T	28·51	...
d Southampton (Netley) .....	Prof. J. Lane Notter ...	8	0 5	37 T	26·36	145
d " { " Lake Ho.) .....	Col. Pennington .....	8	1 0	54 T	23·87	158
" (Ordnance Surv. Off.) .....	Col. Sir C. Wilson, FRS.	5	1 0	79 T	23·93	134
d Wickham (West Lodge) .....	Rev Stanhope Rashleigh	5	0 11	315 T	25·75	154
d Botley (Hall Court) .....	Adml. Murray-Aynsley	8	1 6	105	24·84	135
" (Botley Hill) .....	A. Jenkyns, Esq. ....	5	1 6	36 T	21·88	...
d " (Beechcroft, Curdridge) .....	Miss Pasley .....	8	2 0	100	27·60	167
d Horndean (St. Catherine's) .....	Miss Barnes .....	8	1 7	417 T	30·01	167
Southampton (Millbrook) .....	A. Spooner, Esq. ....	5	1 1	10	25·53	...
d† " (Red Lodge) .....	R. C. Hankinson, Esq..	5	0 6	206	24·03	130
" { " } .....	M	5	4 0	200 T	25·13	...
d Fordingbridge (Oaklands) .....	Mrs. Westlake .....	8	1 0	135 T	25·37	104
d Hambledon (Rosecroft) .....	Mr. L. Dawes .....	5	2 6	200	27·62	155
Bishops Waltham (Swanmore House)	W.H. Myers, Esq., M.P.	8	1 0	390 T	25·45	110
" " (Northbrook Ho.) .....	H. W. Trinder, Esq. ...	5	1 0	140	26·23	123
Droxford (Fir Hill) .....	Rev. S. King .....	5	3 6	212	26·75	159
Fordingbridge (Wood Green) ..	H. Hinxman, Esq. ....	5	1 2	140 T	25·13	..
Otterbourne Hill Reservoir ... M	W. Matthews, Esq., CE	5	18 0	273 T	16·91	...
" (W.W., Shawford). .....	" " "	5	1 0	113 T	22·75	128
" { " } .....	M	5	1 0	113 T	22·52	...
Petersfield (Liss Place) .....	F. Coryton, Esq. ....	7	0 7	250 T	28·47	...
" (Lingwood, Lyss) ..	R. Barnes, Esq., M.D.	5	0 9	510	28·27	112
d Alresford (Hinton Ampner) .....	Rev. J. Heberden .....	8	4 4	330	27·93	128
d " (Ovington) .....	Rev. A. H. Stocker ...	5	1 0	221 T	27·47	151
" House .....	Mrs. Wood .....	5	1 6	238 T	27·03	129
d Alton (East Tisted Rectory) .....	Rev. F. Howlett .....	5	1 1	420 T	29·11	143
d " (Rotherfield Pk.) .....	Mr. A. C. Hunter .....	5	1 6	540	29·36	152
d Winchester (Harestock) .....	Col. Knight .....	5	1 0	302 T	26·25	164

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which -0·1 or more fell
		Diameter	Height Above Ground	Height Above Sea Level	1892	
			ft. in.	feet.	inches.	
<b>HAMPSHIRE—(con.)</b>						
Liphook (White Hill Chase) ...	Col. R. H. Maude .....	5	1 0	300 ▴	25·90	119
" (Bramshott Rectory).....	Mr. W. Steptoe .....	5	1 0	414	27·29	...
d Headley (Arford House) .....	A. F. Parbury, Esq. ...	5	1 0	252 ▴	26·21	118
" { " ) Snowd.M	" " .....	5	0 11	289 ▴	25·04	...
" { " ) .....	Rev. " " " .....	10	5 9	287 ▴	24·87	118
d Alresford (Swarraton Rectory)...	Rev. W. L. W. Eyre...	5	1 0	310 ▴	25·48	145
Alton (Thedden Grange) .....	J. G. Wood, Esq. ....	8	3 0	600 ▴	28·16	...
d† " (Ashdell).....	F. Crowley, Esq. ....	8	3 6	433 ▴	26·83	137
" (Eagles Nest) .....	" " .....	5	52 4	505	16·42	...
d Whitchurch (Long Parish) .....	C. Durnford, Esq. ....	...	...	...	23·88	147
Andover (The Knoll) .....	G. H. Westbury, Esq..	6	0 10	196 ▴	23·46	152
d Tedworth House [Ludgershall]..	Mr. G. A. Inglefield ...	5	1 8	357 ▴	27·36	142
d Aldershot .....	A. Brown, Esq. ....	5	1 8	250 ▴	24·76	123
d Basingstoke (Chapel Hill).....	G. Stephens, Esq. ....	5	1 0	328 ▴	24·38	174
Rotherwick (Tylney Hall) ...	C. E. Harris, Esq. ....	5	0 8	330	22·25	..
Basingstoke (Monk Sherborne)..	Rev. Canon Willes ...	5	1 6	314 ▴	25·00	...
d† " (Sherborne St. John)	Rev. D. W. Chute.....	5	1 2	267 ▴	24·88	162
d Winchfield (Elvetham Park) ...	Mr. T. Jones .....	8	1 0	217 ▴	21·92	142
Farnborough (The Grange) .....	Major Holt .....	5	1 0	232 ▴	27·41	162
Hartley Wintney .....	Mr. W. G. Machin ...	5	1 2	210	23·89	149
" Grange .....	F. Walkinshaw, Esq...	5	1 0	221 ▴	22·76	134
" Wespall .....	Rev. J. C. Keate.....	8	0 9	233 ▴	20·44	...
d† Strathfield Turgiss.....	Rev. C. H. Griffith.....	5	3 0	200 ▴	23·72	189
Heckfield (Park Corner) .....	J. Martineau, Esq. ....	5	1 2	257	22·20	121
<b>BERKS.</b>						
d Sandhurst Lodge .....	Sir W. J. Farrer .....	8	2 9	260	24·88	166
d Sunninghill (Lynwood).....	G. Rodie Thompson, Esq.	5	1 0	260	25·92	122
Newbury (Donnington Sq.) .....	W. J. Cowper, Esq. ...	5	3 6	286 ▴	22·36	141
Hungerford (Kintbury) .....	Sur.-Gen. Woolfryes, CB	5	0 11	297 ▴	27·26	176
d Wokingham (Wellington Coll.)..	S. A. Saunder, Esq. ...	5	1 0	283 ▴	25·07	154
Hungerford (Denford Park) .....	Gen. Cherry-Garrard...	5	1 2	430 ▴	25·95	169
d Bracknell (Warfield).....	Rev. B. C. Littlewood .	5	0 4	199 ▴	24·56	182
d Wokingham (Binfield Park) ...	W. R. Cookson, Esq....	8	1 1	...	22·94	151
Old Windsor (Beaumont College)	Rev. R. Swift .....	5	1 0	105	24·43	...
d Windsor (Royal Gardens).....	Mr. T. Edwards.....	5	1 0	...	24·41	181
d Reading (Englefield).....	R. Benyon, Esq. ....	5	1 1	...	23·59	134
d " (Portland Place).....	C. N. Pearson, Esq. ...	5	1 0	120	23·05	180
d " { " " ) .....	" " " " " " " " " "	8	2 6	120	23·63	180
d " (Forbury Gardens).....	A. E. Collins, Esq., C.E.	5	1 5	145 ▴	20·35	145
" (East Thorpe) .....	A. Palmer, Esq. ....	5	3 0	157 ▴	22·04	153
" (Earley) .....	M. J. Sutton, Esq. ...	8	1 6	...	20·78	...
Twyford (Hurst Grove) .....	Mrs. Finch.....	5	1 0	...	20·97	131
Newbury (Welford Park)...old g.	Mr. C. Ross.....	5	1 0	335 ▴	24·37	163
d " ( " " ) new g.	" " " " " " " " " "	5	1 0	341 ▴	24·37	163
d " (Weston) .....	R. Osmond, Esq. ....	5	0 6	338 ▴	25·14	169
d Yattendon Court .....	A. Waterhouse, Esq. RA.	5	1 0	450	21·65	157
d Lamborne .....	H. P. Dixon, Esq. ....	5	0 9	415 ▴	23·58	132

## 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	1892	
BERKS—(con.)						
D Maidenhead (Lowood) .....	Major-Gen. Davies ...	8	1 0	167 T	23·56	148
D „ (Castle Hill House) .....	F. C. Young, Esq. ....	6	1 0	163	24·86	172
D „ (Cookham Vic.) ...	Rev. R. W. Rogers ...	5	1 3	90 T	23·91	139
D Wantage (Letcombe Regis) .....	S. W. Silver, Esq. ....	5	0 9	...	21·86	144
„ .....	Mr. W. Hanson.....	5	1 0	304	21·18	120
Wallingford Castle .....	J. Kirby Hedges, Esq..	5	0 9	175 T	20·08	150
Little Wittenham Rectory .....	Rev. Percy Burd .....	5	1 0	187 T	18·75	136
D „ „ .....	T. Latham, Esq. ....	5	2 0	187	18·46	113
D Long Wittenham (Manor Ho.)...	Capt. Clutterbuck, R.N.	12	1 0	165 T	20·70	133
„ „ (Lovegrove's Cott.) .....	Rev. F. C. Clutterbuck	5	1 0	165	21·14	133
D Abingdon (Sutton Courtney) ...	Mrs. Black.....	5	1 0	170 T	20·37	163
Faringdon (The Elms) .....	W. Dundas, Esq. ....	5	1 0	340 T	21·32	150

## DIVISION III.—SOUTH MIDLAND COUNTIES.

## HERTS.

D Southgate (The Lawns) .....	G. A. Church, Esq. ...	5	0 6	240 T	24·72	186
D† Rickmansworth (Moor Park) ...	Rt. Hon. Lord Ebury ..	5	2 0	340	28·43	167
D Watford (Kytes) .....	Mrs. Horsman .....	5	1 0	239	23·91	156
D „ (Oaklands) .....	E. Harrison, Esq. ....	5	5 6	273	26·52	179
Barnet (Gas Works) .....	J. Hopkinson, Esq. ...	8	0 9	212	23·40	134
D Cheshunt Old Nurseries .....	Messrs. Paul & Son ...	5	1 0	92 T	24·03	149
D „ College .....	Rev. Dr. Reynolds .....	5	1 1	94	23·27	128
D Broxbourne (Stafford House) ...	G. J. Newbery, Esq....	5	1 0	118 T	24·83	187
Hemel Hempstead (Nash Mills)..	Messrs. J. Dickinson & Co.	12	3 9	237 T	25·27	164
D „ „ (Apsley Mills) .....	„ „ „ .....	24	0 9	260	25·69	158
D St. Albans (The Grange) .....	J. Hopkinson, Esq. ...	5	1 0	380 T	25·84	179
† „ (Gorhambury) .....	Rt. Hon. Earl Verulam	6	2 6	425 T	25·19	...
D Great Berkhamstead (Rosebank)	E. Mawley, Esq. ....	8	1 0	401 T	25·93	176
„ „ (Fairhill) ...	„ „ „ .....	8	1 0	401 T	25·54	...
D „ „ (Gt. Gaddesden) .....	W. B. Hopkins, Esq....	5	1 0	550 T	25·73	168
D „ „ (Hoddesdon) .....	Rev. W. Tyrwhitt Drake	8	1 0	426 T	24·83	159
Hoddesdon (Fieldes Weir) .....	Major Lamorock Flower	8	...	...	22·00	...
Hertford (Bayfordbury) .....	W. C. Baker, Esq. ....	8	1 2	250	23·93	168
„ (Marden Hill, Tewin) .....	R. L. Hoare, Esq. ....	5	0 6	251 T	25·71	157
D Tring (Pendley Manor) .....	J. G. Williams, Esq....	5	2 0	...	24·87	200
D „ (Cowroast) .....	H. Thomas, Esq., C.E.	5	4 2	345 L	24·18	115
Harpenden (Rothamstead) .....	Messrs. Lawes & Gilbert	5	0 9	420 T	24·09	166
„ „ „ .....	„ „ „ .....	8	0 9	420 T	23·79	175
D „ „ „ .....	„ „ „ .....	72x87	0 9	420 T	25·29	179
D Ware (Red House) .....	J. Francis, Esq., C.E..	12	3 0	114 T	22·83	148
D „ (Fanham's Hall) .....	Miss Joyce Croft .....	8	1 0	253 T	22·30	156
D Welwyn Rectory .....	Rev. Canon Wingfield.	5	0 4	228 T	24·93	171
D „ (Danesbury) .....	A. M. Blake, Esq. ....	5	0 9	405 T	23·70	154
D „ (Datchworth Rectory) ..	Rev. J. Wardale .....	5	1 0	386 T	21·41	164
D Much Hadham .....	T. W. Mott, Esq. ....	5	1 0	222 B	25·60	152
D Kensworth [Dunstable] .....	Miss Jones .....	5	1 0	630 B	24·80	148
D Bennington House .....	Rev. Dr. Parker .....	5	1 0	408 T	25·04	178



## 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	1892	
HERTS.—(con.)						
D Buntingford (Hamels Park).....	Mr. E. Wallis .....	5	1 ' 0	400 T	26·30	139
† Hitchin (Wratten).....	W. Lucas, Esq. ....	5	2 1	238 T	22·99	164
D „ (The Maples) .....	W. Hill, Esq.....	8	1 1	220 T	23·22	146
„ (High Down) .....	J. Pollard, Esq. ....	5	1 1	422 T	23·93	160
Stevenage (Weston Park).....	M. R. Pryor, Esq.....	5	0 8	470 T	25·35	127
D Buntingford (Throcking Rectory)	Rev. C. W. Harvey ...	5	1 0	484 T	25·62	171
D Royston (Therfield Rectory).....	Rev. J. G. Hale .....	5	4 3	500 P	28·03	173
D† „ .....	H. Wortham, Esq.....	8	0 6	269 T	24·91	151
BUCKINGHAMSHIRE.						
D Slough (Langley) .....	R. H. Major, Esq.....	8	0 10	85 T	23·48	142
D „ (Upton Hall).....	G. Bentley, Esq. ....	5	3 0	90 T	20·83	139
„ „ „ .....	„ „ „ .....	8	...	...	20·63	...
D Taplow Court .....	W. H. Grenfell, Esq., MP	8	1 0	217 T	22·96	130
Greenlands [Henley-on-Thames].	Hon. F. Smith, M.P....	8	1 3	116	24·30	127
D Great Marlow .....	J. Ford, Esq. ....	8	1 3	...	27·93	140
High Wycombe ..	H. S. Wheeler, Esq....	8	0 9	253 T	21·19	...
Amersham (The Plantation).....	G. Weller, Esq.....	8	0 6	465 T	25·19	150
D Wendover (Halton Gardens) ...	Mr. Sanders .....	5	1 10	400	23·40	146
Aylesbury (New Road) .....	J. Copcutt, Esq.....	12	1 0	280 T	23·70	...
„ (Waddesdon) .....	Mr. J. Jaques.....	8	1 0	364	20·67	144
„ (Mentmore) .....	J. Smith, Esq. ....	5	1 6	...	20·94	...
D† Winslow (Addington Manor) ...	Rt. Hon. Lord Addington	8	1 0	309 T	20·72	159
D† Buckingham (Adstock).....	J. E. S. Weston, Esq...	5	0 9	350 T	20·82	155
D Stony Stratford (Thornton) .....	Mr. W. Sturdy .....	5	1 6	...	21·55	144
Woburn Sands (Sandymount)...	C. P. Stuart, Esq.....	5	1 0	...	22·75	167
D Newport Pagnell .....	R. Littleboy, Esq. ....	5	2 0	196 T	20·73	136
Olney (Filgrave Rectory).....	Rev. J. Tarver .....	8	0 8	280	25·07	...
OXFORD.						
D Whitechurch Rectory .....	Rev. J. Slatter .....	10	1 0	150 T	19·83	148
Henley-on-Thames (Greys) .....	Rev. N. Pinder .....	5	2 6	370 T	23·00	...
D „ „ „ (Assenton) ...	Mr. J. Ratty .....	5	1 0	281	23·75	135
D Dorchester ...	Col. Blunt .....	5	0 6	169	18·91	131
D Abingdon (Culham) .....	Rev. F. C. Clutterbuck	5	1 0	200 T	19·93	147
D Watlington (Pyrton Manor).....	Cecil Hamersley, Esq..	5	1 0	321 T	23·29	156
Abingdon (Nuneham Park) .....	A. Harcourt, Esq. ....	8	3 0	280 T	20·92	165
D Oxford (Potlands, Baldon) ...	Miss Clinkard.....	5	1 0	288	20·21	154
D† „ (Mag. Coll. Laboratory).	E. Chapman, Esq. ....	5	1 0	186 T	18·71	131
„ „ „ „ „ .....	„ „ „ „ „ .....	5	33 11	223 T	16·47	...
„ „ (Radcliffe Observatory) ..	E. J. Stone, Esq., F.R.S.	8	1 8	210 T	20·51	151
D „ „ „ „ „ .....	„ „ „ „ „ .....	11	2 4	210 T	20·76	118
„ „ „ „ „ .....	„ „ „ „ „ .....	10	22 0	230 T	20·62	124
„ „ „ „ „ .....	„ „ „ „ „ .....	10	112 0	320 T	14·68	123
D „ (St. Giles') .....	Miss Tawney .....	8	1 3	211 T	20·52	151
D „ (Norham Road).....	Rev. C. B. Mount .....	10	1 2	220 P	21·24	123
D „ (Headington Hill) .....	Miss Davenport .....	5	0 10	354	19·80	...
D „ (Elsfield)..... <i>New gauge</i>	H. Parsons, Esq. ....	5	1 0	330	21·50	168

## 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	1892	
OXFORD—(con.)						
Stanton St. John's.....	Miss Thomson.....	8	1 0	340	21·55	165
„ „ „ (Woodperry)...	J. Thomson, Esq. ....	6	1 0	399 †	21·99	173
Chipping Norton (Kingham).....	E. Lockwood, Esq. ...	5	4 0	442	19·01	...
D Bicester (Middleton Park) .....	Mr. B. Hope .....	5	2 6	380	20·99	140
„ (Stratton Audley Pk.)...	Colonel Gosling .....	5	2 4	...	18·83	122
Steeple Aston.....	B. S. Ogle, Esq. ....	5	0 5	400 †	21·45	168
D „ „ (The Grange).....	Adl. Bradshaw, C.B....	8	1 0	400 †	20·40	165
D Banbury (Bloxham Grove) .....	Rev. G. Warriner .....	8	3 10	387 †	19·12	132
D „ ( „ ) .....	Col. O. Ommanney ...	8	2 0	400 †	18·55	165
D „ (Sibford Ferris) .....	J. Lamb, Esq. ....	5	1 0	590 †	20·03	185
„ (Ark House School) ...	A. J. Beale, Esq. ....	5	1 0	310	18·55	155
NORTHAMPTON.						
Brackley (Market Place) .....	Messrs. Durran & Smith	8	6 10	400 †	20·66	141
„ (East Hill) .....	C. A. Markham, Esq....	...	...	...	20·50	158
D Grimsbury [Banbury] ..	W. E. Wood, Esq....	5	1 3	320 †	18·28	132
Thorpe Mandeville [Banbury]...	Mr. S. Baines .....	5	1 0	530	21·27	139
D Towcester (Whittlebury) .....	W. S. Miller, Esq.....	5	1 6	350	23·23	169
D „ .....	P. Phipps, Esq. ....	5	1 0	290	22·73	139
„ (Easton Neston) .....	Mr. E. Slarke .....	8	1 0	340 †	25·01	144
D Stoke Bruerne Rectory.....	Rev. W. Wilson... ..	8	1 0	320 †	20·55	150
Blisworth .....	C. A. Markham, Esq....	...	...	...	23·32	132
D Litchborough .....	E. Grant, Esq. ....	5	1 1	500	25·16	164
D Daventry (Fawsley) .....	Lady Knightley .....	5	1 0	477 †	20·58	183
D Easton Mauduit Vicarage .....	Rev. H. A. Boys.....	8	1 0	245 †	21·21	171
Castle Ashby .....	R. G. Scriven, Esq. ...	5	1 0	263 †	21·19	167
D Northampton (Little Houghton).	Mr. J. Brawn .....	5	2 4	...	20·36	169
„ (Hazlewood Road) .....	C. A. Markham, Esq....	5	5 0	253	18·46	...
D „ (Gold Street) .....	Mr. S. Law .....	5	6 6	230 †	18·80	155
„ (Elysium Terrace) .....	C. A. Markham, Esq....	...	...	...	19·39	164
D „ (Pythchley Street)...	Mr. E. Ball .....	5	1 6	270	19·32	162
D Althorp House .....	C. S. Groom, Esq. ....	8	3 10	310 †	20·37	178
Great Brington .....	C. A. Markham, Esq....	...	...	...	19·63	142
D Pitsford (Sedgebrook) .....	„ „ „ .....	5	1 0	311 †	20·70	162
„ ( „ ) .....	„ „ „ .....	5	1 0	311 †	20·36	...
D Daventry (Waterloo).....	F. F. Rodhouse, Esq... 5	1 3	436 †	20·85	179	
Earls Barton Vicarage .....	C. A. Markham, Esq... 5	1 4	280 †	19·24	191	
D Holdenby Rectory .....	Mr. C. Bond .....	5	1 6	...	20·87	173
D Wellingborough (Swanspool) ...	N. P. Sharman, Esq. ... 5	0 2	155	21·09	164	
D „ (Croyland Abbey) .....	E. Sharman, Esq. .... 5	0 5	...	21·25	176	
D Thrapstone (Hargrave) .....	Rev. R. S. Baker .....	5	1 0	220 †	21·56	124
D Ravensthorpe (Coton Mill) .....	G. S. Eunson, Esq. ... 5	1 0	355	21·45	159	
Hazelbeach .....	C. A. Markham, Esq... 5	3 0	566 †	21·60	140	
D Kettering (Montague Street) ...	Mrs. J. Wallis .....	8	1 3	300 †	22·27	154
D „ .....	C. W. Lane, Esq. .... 5	1 0	280	22·24	174	
D Welford (Salford House) .....	J. Gee, Esq. ....	5	1 3	...	22·71	174
Rothwell .....	J. More, Esq., M.D. ... 12	1 2	300	20·40	151	
Aldwinkle St. Peter .....	C. A. Markham, Esq... ..	...	...	...	22·21	141

## 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	1892	
NORTHAMPTON—(con.)						
Oundle .....	J. M. Siddons, Esq. ...	5	4 6	105 T	20·54	122
D Rockingham Castle .....	Mr. H. Watt .....	5	3 0	400 L	22·11	125
Kingscliffe (Fineshade).....	C. A. Markham, Esq....	...	...	...	22·28	133
Peterborough (Thorpe Hall) .....	Col. C. I. Strong .....	...	...	...	20·67	...
D Easton [Stamford].....	Mr. H. Watkins .....	5	0 9	271 T	20·89	168
D Maxey Vic. [Market Deeping]...	Rev. W. D. Sweeting...	5	1 0	32 T	20·67	188
"    "    "    "    "    ] M	"    "    "    "    "	5	1 0	32 T	20·61	...
HUNTS.						
D St. Neots (Waresley Park) .....	Lady C. Duncombe ...	5	0 11	190	27·48	129
D Huntingdon (Brampton) .....	Miss May Bird .....	5	1 1	...	25·23	169
D " .....	F. J. Howson, Esq. ...	5	0 11	...	24·31	146
D Alconbury .....	Rev. R. Conway.....	5	1 0	...	20·80	150
Whittlesea Mere .....	A. Lunn, Esq. ....	8	1 6	...	19·25	167
BEDFORD.						
D Luton (Pumping Station).....	T. R. Roscoe, Esq., C.E.	5	1 0	343 T	23·36	175
Amphill (Silsoe) .....	H. Trethewy, Esq. ....	5	1 0	214 T	25·49	142
"    (Wrest Park) .....	Mr. G. Ford .....	5	1 1	...	24·70	...
D† Aspley Guise (Oaklands) .....	E. E. Dymond, Esq. ...	5	1 0	410 T	21·54	162
D Woburn (Crawley Farm) .....	A. C. Elliott, Esq.....	5	3 8	300	22·22	137
D Stotfold [Baldock].....	Dr. Swain .....	5	1 0	220 T	24·84	182
Amphill .....	Mr. J. Brown .....	5	1 0	313 T	24·53	146
"    (Maulden) .....	Mr. S. Street .....	6	2 0	...	22·38	...
D Woburn (Hulcote Rectory) .....	Rev. B. Chernocke Smith	5	1 0	310	22·29	142
Biggleswade (Old Warden) .....	Mr. G. R. Allis .....	8	1 2	...	21·67	126
D "    (Brooke House) ...	R. F. Conder, Esq.....	5	1 0	103	21·89	129
D Potton (Wrestlingworth) .....	H. J. King, Esq. ....	5	1 0	...	23·08	157
"    (Vicarage) .....	Rev. G. E. Gwynne ...	5	0 10	145	19·90	...
D Sandy (The Lodge) .....	Rt. Hn. A. W. Peel, M.P.	5	1 0	...	22·50	146
Bedford (Western Street).....	D. Robie, Esq. ....	5	0 10	112 T	21·49	174
D "    (The Grove) .....	W. B. Graham, Esq....	5	1 0	108 T	21·88	142
"    (St. Peter's Street) .....	Mr. W. Godfrey .....	5	1 0	114 T	21·81	...
Tempsford Hall .....	Col. W. Stuart .....	5	0 9	80 T	22·56	177
Bedford (Milton Ernest) .....	F. Newbery, Esq. ....	5	5 0	137 T	23·09	107
CAMBRIDGE.						
D Odsey [Royston] .....	H. Geo. Fordham, Esq.	5	1 0	260 T	24·14	173
D† Guilden Morden [Royston] .....	J. G. Johnson, Esq. ...	5	1 2	106 T	21·76	134
Abington Pigotts [    "    ] ...	H. F. Fryer, Esq. ....	...	0 8	130	24·12	153
Trumpington .....	F. Parsons, Esq. ....	6	1 0	...	28·95	152
D "    (Gilmerton).....	S. Nutter, Esq. ....	8	0 9	...	26·39	182
Granchester Mill .....	H. F. Fryer, Esq. ....	5	5 0	31 T	25·93	157
D Cambridge (Fulbourne Pumping Sta)	W. W. Gray, Esq., C.E.	5	1 0	37 T	28·97	189
D "    (W. W. Cherryhinton).	"    "    "    "    "	5	1 0	35 T	26·45	198
D "    (Sidney Street) .....	W. E. Pain, Esq. ....	8	60 0	92 T	23·89	203
"    (Trinity College) ...	Dr. J. W. Glaisher, FRS.	8	4 0	40	25·09	167
D† "    Observatory .....	Mr. Todd .....	5	1 0	84 T	25·70	163

## DIVISION III.—SOUTH MIDLAND COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which -01 or more fell.
		Diameter	Height Above Ground.		Height Above Sea Level	
			ft.	in.	feet.	inches.
<b>CAMBRIDGE—(con.)</b>						
Cambridge Observatory.....	Mr. Todd .....	8	1	0	84 $\nabla$	25·69 ...
Quy Hall .....	Mrs. Francis .....	5	0	5	61	26·38 163
<sup>D</sup> Ely (Stretham) .....	Mr. J. Housley .....	9	4	9	13 $\nabla$	26·10 149
<sup>D</sup> " ( " Ferry) .....	Mr. C. Wright, Junr....	8	5	0	...	23·22 161
Mepal Engine.....	H. F. Fryer, Esq. ....	...	20	6	25	17·79 ...
Littleport (Highfield House) ...	H. G. Martin, Esq. ...	8	3	0	67	24·33 157
Chatteris (Aylesby House) .....	A. H. Ruston, Esq. ...	8	0	6	45 $\nabla$	22·89 133
<sup>D</sup> " (The Priory) .....	H. F. Fryer, Esq.....	5	0	6	45	24·02 131
" (Horseway Lock) .....	A. Lunn, Esq. ....	8	15	0	...	17·88 161
March .....	" " .....	9	2	0	...	24·52 138
Stanground Sluice .....	" " .....	8	1	6	..	18·24 ...
* March (Stags Holt) .....	W. C. Little, Esq.....	5	1	0	11 $\nabla$	23·40 ..
Upwell (Marmont Priory Lock)..	A. Lunn, Esq. ....	8	1	1	...	22·08 166
" (Euximoor House) .....	H. West, jun., Esq. ...	5	0	8	15 $\nabla$	23·32 142
<sup>D</sup> Thorney (Wryde House) .....	S. M. Egar, Esq. ....	5	1	0	11 $\nabla$	22·23 157
<sup>D</sup> Wisbech (Bank House).....	A. Peckover, Esq. ....	8	0	8	6	25·19 148

## DIVISION IV.—EASTERN COUNTIES.

## ESSEX.

<sup>D</sup> Shoeburyness .....	The Asst. Super. Expts.	5	7	3	18	21·52 152
<sup>D</sup> West Ham (Abbey Mills).....	A. R. Binnie, Esq., C.E.	8	1	0	11 $\nabla$	22·34 145
<sup>D</sup> Southend (Water Works) .....	C. S. Bilham, Esq. ...	8	1	0	112 $\nabla$	21·83 141
<sup>D</sup> Romford (North Ockendon) .....	Rev. R. T. Crawley ...	5	1	3	100 $\nabla$	22·35 137
" (Bulvan).....	the late E. D. Mee, Esq.	5	4	0	37 $\nabla$	23·97 .
<sup>D</sup> Manor Park (Albany Road) .....	A. J. Wilmshurst, Esq.	5	3	0	...	21·41 172
Ilford (Great Gearies) .....	Mr. J. Douglas .....	5	1	0	120	18·83 ...
<sup>D</sup> Upminster Hall ...	G. P. Hope, Esq. ....	5	1	0	120	24·78 189
<sup>D</sup> Walthamstow (Forest Road).....	F. W. Freir, Esq. ....	5	1	0	70 $\nabla$	23·73 158
" (Prospect Hill Lodge) .....	J. E. Goodchild, Esq...	5	1	3	140 $\nabla$	23·36 150
<sup>D</sup> Woodford (Brancepeth House)...	Albert Spicer, Esq. M.P.	5	1	0	...	22·02 104
" (Hagger Lane) .....	W. B. Bryan, Esq., C.E..	8	1	0	176 $\nabla$	21·50 125
<sup>D</sup> Billericay (Burghstead Lodge)...	General Branfill.....	5	1	0	310 $\nabla$	25·06 159
<sup>D</sup> Havering .....	Mrs. Pemberton-Barnes	5	1	0	...	21·33 168
Brentwood (Sawyers Hall) .....	Rogers Field, Esq., C.E.	5	1	0	270 $\nabla$	25·72 112
Loughton (High Beech) .....	W. B. Bryan, Esq., C.E.	8	1	0	376 $\nabla$	22·45 171
Maldon (Norton Hall) .....	C. Clarke, Esq. ....	5	2	6	130 $\nabla$	24·95 116
Waltham Abbey.....	W. B. Bryan, Esq., C.E.	8	1	0	62 $\nabla$	24·12 175
<sup>D</sup> " " (Gunpr Factory) .....	The Superintendent ...	5	1	6	70	20·50 108
Epping (The Hemnalls) .....	J. Nicholl, Esq. ....	8	0	8	345	29·63 137
<sup>D</sup> Bradwell-on-Sea (Bradwell Hall)	J. C. Chillingworth, Esq.	5	1	1	27	23·76 104
" (Down Hall) ...	R. Page, Esq.....	5	1	0	20	24·97 105
<sup>D</sup> Chelmsford (Writtle).....	E. Rosling, Esq. ....	5	0	9	140 $\nabla$	22·79 133
" (High Street).....	F. Chancellor, Esq. ...	8	1	0	86 $\nabla$	23·16 112
" .....	The Royal Meteor. Soc.	5	1	0	135	24·33 161

DIVISION IV.—EASTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
<b>ESSEX—(con.)</b>						
Chelmsford (Roxwell) .....	R. W. Christy, Esq. ....	5	1 0	190 T	24·75	116
„ (Broomfield) .....	W. Impey, Esq. ....	5	1 4	144 T	22·04	...
D East Mersea Rectory .....	Rev. F. J. Ball .....	5	1 0	56 T	25·59	189
D Harlow (Moor Hall) .....	Mr. W. Monk .....	5	1 3	240	25·27	122
D „ (Sheering) .....	Rev. Canon Hill .....	5	1 0	214 T	24·13	155
Witham (Little Braxted Hall) ..	J. Taber, Esq. ....	5	1 0	50	26·37	146
„ (Rivenhall) .....	Rev. F. Bridges .....	5	1 0	138 T	27·10	...
Great Bentley (The Lodge) .....	Miss Delf .....	6	0 6	150	29·08	...
Colchester (Surrey Villa) .....	J. C. Hopwood, Esq. ....	5	1 0	110 T	27·35	141
D „ .....	H. Goodyear, Esq., C.E. ....	8	16 6	82 T	26·68	136
D „ (Hill House, Lexden) .....	S. F. Hurnard, Esq. ....	5	1 0	90 T	25·97	152
D „ .....	„ .....	5	0 4	90 T	25·95	151
D Braintree (Bocking, Fennes) .....	H. S. Tabor, Esq. ....	5	1 0	240 T	25·15	166
„ ( „ Place) .....	S. Courtauld, Esq. ....	8	2 3	212 T	26·97	143
Dunmow (Saling Grove) .....	Capt. J. Nicolls Harrison ..	8	0 8	290 T	23·11	...
Earls Colne (Chalkney House) ..	H. F. Hills, Esq. ....	5	1 0	180 T	28·49	...
Harwich (Ramsey) .....	A. Hempson, Esq. ....	5	0 6	150	32·01	128
D Dedham (The Rookery) .....	W. H. Penrose, Esq. ....	8	1 6	43	27·25	168
Langham Rectory .....	Rev. T. S. Raffles .....	5	0 7	134	30·39	173
D Saffron Walden (Newport) .....	Rev. G. F. Tamplin ..	5	4 0	208 T	25·19	159
<b>SUFFOLK.</b>						
Erwarton Hall [Harwich] .....	J. A. Hempson, Esq. ....	8	0 6	...	31·37	109
Sudbury (Assington) .....	P. Gurdon, Esq. ....	5	4 0	...	28·03	174
D Ipswich (Orwell Park) .....	Mr. J. Wallis .....	8	1 0	60 T	31·99	170
D „ (Belstead Hall) .....	A. Harwood, Esq. ....	8	9 0	120 T	28·09	141
D Sudbury (Friars Street) .....	E. Ransom, Esq. ....	5	1 7	93 T	26·92	178
D „ (Newton Road) .....	J. Alexander, Esq. ....	5	1 2	130 T	26·71	163
Ipswich (Bishop's Hill) .....	G. A. Biddell, Esq., C.E. ....	5	1 0	104 T	30·10	...
D „ (Clare Lodge) .....	E. R. Turner, Esq., C.E. ....	5	1 0	178 T	30·92	169
Lavenham Hall .....	W. Biddell, Esq. ....	5	1 11	220	27·56	123
D Woodbridge (Bank House) .....	S. Alexander, Esq. ....	5	1 0	...	31·49	172
D „ (Co. Asylum Melton) ..	Dr. Eager .....	8	1 4	100 T	27·52	143
D „ (The Cedars, Melton) ..	W. P. T. Phillips, Esq. ....	5	...	...	31·76	165
D Lavenham (Preston Rectory) ..	Rev. T. Hewitt .....	5	1 9	300 T	32·57	149
D Rendlesham Hall .....	Rt Hon Lrd. Rendlesham ..	5	1 9	88 T	32·60	156
D Haverhill (Great Thurlow) .....	A. Boa, Esq. ....	5	1 0	241 T	27·02	153
Clare (Stansfield) .....	J. Slater, Esq. ....	5	1 0	...	30·20	...
D „ (Hawkedon Rectory) .....	Rev. B. P. Oakes .....	5	3 4	305 T	29·03	197
Ash Bocking Vicarage .....	Rev. M. B. Cowell .....	5	7 3	231 T	27·19	146
Aldborough (Aldringham Ho.) ..	F. Garrett, Esq. ....	8	4 5	50 B	30·17	...
D Bury St. Edmunds (Drinkstone Pk)	Mr. G. Palmer .....	8	1 2	220 T	28·51	164
D Framlingham (Mount Pleasant) ..	Mr. R. Whitehead .....	5	3 0	...	31·00	155
D Bury St. Edmunds (Abbeygate St.)	Mr. O. A. Clark .....	5	65 0	...	24·08	129
D „ „ (Westley) new g ..	R. Burrell, Esq. ....	5	1 0	226 T	30·20	152
„ „ (Hengrave) ..	Mr. W. Nichol .....	5	1 2	91	28·05	...
Darsham (Sibton Vicarage) .....	Rev. J. L. M. Moore .....	5	1 0	86	29·79	...
D Ixworth (Walsham-le-Willows) ..	Miss M. C. Martineau ..	5	1 0	...	31·88	183

## DIVISION IV.—EASTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
<b>SUFFOLK—(con.)</b>						
†Ixworth (Barningham) .....	Miss A. K. Lingwood...	8	1 0	136 †	28·52	...
„ Kessingland .....	Rev. E. L. Puxley.....	5	0 4	10?	31·13	194
„ Beccles (Sotterley Hall Gardens) .....	Col. St. J. Barne .....	5	0 10	...	31·40	185
„ (The Staith) .....	Clifford Smith, Esq. ...	5	4 0	...	27·68	120
†Lowestoft (Carlton Colville).....	G. Edwards, Esq., C.E.	8	0 9	6 †	30·18	...
„ (Bryn-y-Môr) .....	S. H. Miller, Esq. ....	5	1 0	86	30·57	169
„ (The Clyffe, Corton).....	J. J. Colman, Esq., M.P.	5	4 0	65 †	30·83	...
„ (Somerleyton Rect.).....	The Royal Meteor. Soc	8	1 0	50	29·95	182
„ Belton [Yarmouth] .....	Miss A. P. Howes .. ...	5	0 8	15 †	29·17	177
<b>NORFOLK.</b>						
„ Scole Rectory .....	Rev. F. Page Roberts..	5	2 0	90	29·97	204
„ Diss .....	T. E. Amyot, Esq.....	5	1 0	96	30·65	176
„ Harleston (Rushall Vicarage) ...	Rev. C. Gape .....	5	1 1	117 †	26·89	177
„ North Lopham .....	Mrs. Pitt .....	8	1 2	...	28·82	...
„ Thetford (Croxtan) .....	Mrs. Wharton.....	5	0 10	...	25·31	135
„ Santon [Brandon] .....	Rev. A. M. Gathercole.	5	0 10	...	27·39	188
„†Geldeston [Beccles] .....	E. T. Dowson, Esq. ...	5	1 0	38 †	28·48	191
„ [ „ ] .....	R. Dashwood, Esq.....	8	1 0	38 †	28·50	...
„ [ „ ] .....	H. Youngman, Esq. ...	5	1 0	49 †	29·24	170
„ Ellingham [ „ ] .....	H. Youngman, Esq. ...	5	3 0	...	28·20	...
„ Loddon (Bergh Apton) .....	Rev. T. F. Lloyd .....	8	2 4	...	30·03	172
„ Wymondham .....	E. B. Pomeroy, Esq....	8	1 3	118 †	28·12	179
„ Watton .....	W. Martin, Esq. ....	5	2 0	166 †	27·84	...
„ Hingham .....	T. W. Dobbs, Esq. ...	5	1 1	188	27·98	185
„ Denver .....	Rev. Canon Du Port...	8	1 0	80 †	27·16	162
„ Stoke Ferry (Wereham) .....	Miss Mason .....	5	6 0	66	27·87	157
„ Wymondham (Hethersett) .....	Mrs. Pinwill .....	6	1 3	163	30·53	...
„ Swaffham (Pickenham Hall) ...	H. Applewhaite Esq....	5	1 0	104 †	32·00	200
„ Outwell Sluice .....	A. Lunn, Esq. ....	9	...	16	23·42	126
„ Yarmouth (Sailors' Home) .....	The Meteor. Council ...	8	4 0	12	30·50	200
„ (Market Place).....	W. C. Steward, Esq....	5	1 0	...	33·75	178
„ (Halvergate Hall) .....	H. S. Gillett, Esq.....	5	3 3	48 †	27·94	...
„ Norwich (Postwick) .....	Miss Cross .....	5	1 1	5	28·02	189
„ (Carrow House) .....	J. J. Colman, Esq., M.P.	5	4 0	35 †	29·29	112
„ (Thorpe High House) ...	W. Birkbeck, Esq. ...	5	1 0	137 †	28·89	179
„ (Essex Street) .....	F. Dix, Esq. ....	9	2 6	85 †	28·92	159
„ (Newmarket Road) .....	G. J. Holblack, Esq....	8	1 2	89	30·47	199
„ (Heigham) .....	J. R. Everitt, Esq. ...	5	3 2	37 †	28·41	...
„ Blofield .....	A. W. Preston, Esq....	5	1 0	50 †	31·05	198
„†Acle Rectory .....	Rev. R. W. Kennion...	8	0 9	40	27·31	123
„ .....	F. Cufaude, Esq. ....	5	0 6	51	28·16	...
„*Swaffham (London Street) . ...	H. R. Heyhoe, Esq. ...	5	1 10	242 †	27·59	167
„ „ .....	W. H. Plowright, Esq.	5	5 0	250 †	27·69	172
„ Costessey .....	A. J. Culley, Esq.....	5	1 0	...	28·19	152
„ Honingham. ....	Rev. Canon Du Port...	...	...	...	29·35	...

## DIVISION IV.—EASTERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
NORFOLK—(con.)						
D Sprowston (Oak Lodge).....	T. Cozens Hardy, Esq.	5	1 0	101 N	29·43	197
D South Walsham.....	J. E. T. Pollard, Esq.	5	3 3	22	30·42	177
East Dereham.....	G. H. Cooper, Esq. ...	8	3 0	161	26·66	131
Drayton.....	Miss Howell.....	5	1 2	50	27·87	...
D Swaffham (Dunham).....	A. G. Copeman, Esq....	5	1 1	320	28·92	188
Salhouse.....	Rev. T. F. Boddington	8	1 8	50	28·91	...
Wiggenhall (Outlet Syphons)...	A. Lunn, Esq. ....	8	1 6	...	23·44	141
D Tilney St. Lawrence (Aylmer Hall)	W. B. Parsons, Esq....	8	1 0	9	23·85	166
D Terrington.....	J. T. Seccombe, Esq., M.D	5	1 0	15 N	24·03	165
D Felthorpe.....	Mrs. Bouchier.....	5	1 1	75	28·69	119
D Bylaugh Park Gardens.....	Mr. A. Fenn.....	5	1 0	130 T	30·14	199
D Reepham (Whitwell).....	Rev. W. H. Freeman...	8	2 0	120	27·11	175
Cawston.....	Rev. T. H. Marsh.....	5	1 0	135 T	27·66	199
Aylsham (Woodgate).....	B. J. W. Purdy, Esq..	5	1 0	100 T	29·45	177
D North Walsham (Dilham).....	Rev. J. A. Lawrence...	5	0 8	...	28·72	210
D " " (Worstead).....	R. Cross, Esq. ....	8	1 0	...	29·11	172
Hillington Rectory.....	Rev. H. Ffolkes.....	8	1 0	89 N	27·09	184
D† " School.....	" " " ".....	5	3 6	94 N	27·04	184
Dersingham.....	Rev. E. W. Penny.....	5	1 0	85	26·17	...
D Fakenham (Cranmer Hall).....	Sir L. Jones, Bart.....	5	1 0	144	28·96	196
Cromer (Northrepps).....	R. H. J. Gurney, Esq..	5	0 4	...	31·20	...
Holt (Letheringsett Hall).....	W. Cozens Hardy, Esq.	8	1 0	...	27·53	132
D " Lodge.....	E. Knight, Esq.....	5	1 3	210	29·47	192
D " (Field Dalling).....	J. H. Pearson, Esq. ...	5	1 0	...	26·24	168
Hunstanton Hall.....	Mr. Nisbet.....	11	3 8	60 N	24·15	...

## DIVISION V.—SOUTH WESTERN COUNTIES.

## WILTS.

D Larmer Grounds [Shaftesbury]...	General Pitt Rivers, FRS	5	3 0	500 T	29·46	134
D Rushmore [Shaftesbury].....	" " " ".....	5	3 0	500 T	29·29	163
Landford.....	P. E. Wigram, Esq. ...	5	1 10	167 N	24·83	141
D Donhead St. Mary (Charlton Ho.)	Col. G. Best.....	5	0 7	514	28·31	165
D Broad Chalke.....	H. P. Dixon, Esq.....	8	0 8	315	25·67	166
D† Salisbury (Alderbury).....	Rev. R. S. Hutchings...	5	0 8	263 N	23·16	144
† " (West Dean).....	Rev. W. L. W. Eyre...	5	1 0	137 B	23·96	...
D " (Britford).....	H. P. Dixon, Esq.....	5	1 0	...	24·27	137
D† " (Wilton House).....	" " " ".....	8	0 5	180 N	24·00	170
D† Mere.....	" " " ".....	5	1 0	...	26·21	157
† " Vicarage.....	Rev. J. A. Lloyd.....	5	3 0	...	23·76	...
D† " Down.....	T. H. Baker, Esq.....	5	1 0	702 T	26·76	187
D Winterslow.....	H. P. Dixon, Esq.....	5	1 0	470	24·45	132
† Maiden Bradley.....	Lord Percy St. Maur ..	8	1 6	626 T	30·09	165
D† Warminster (Rye Hill).....	S. E. Jeffery, Esq.....	8	2 0	466 T	27·94	179
D Amesbury.....	H. P. Dixon, Esq.....	5	1 0	...	22·50	142
Salisbury Plain (Chitterne House)	R. Hayward, Esq.....	11	4 0	319 T	21·48	145
D Warminster (Downside).....	H. P. Dixon, Esq.....	8	2 3	393	25·56	175

## 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	1892	
			ft. in.	feet.	inches.	
WILTS—(con.)						
Amesbury (Figheldean) .....	H. P. Dixon, Esq. ....	5	1 0	260 T	21·30	...
Ludgershall .....	Rev. W. H. Awdry ...	8	0 8	422 A	25·07	150
" (Everleigh) .....	H. P. Dixon, Esq. ....	5	1 2	590	25·90	146
" (Conholt Park) .....	the late Lady C Wellesley	5	1 0	750 T	27·26	162
" (Collingbourne Kingston)	Baldwin Latham Esq CE	5	1 0	470 A	21·41	128
Market Lavington .....	H. P. Dixon, Esq. ....	...	...	...	21·24	...
" Trowbridge (Water Works, Biss)	W. W. Gray, Esq. ....	5	1 0	311	22·25	116
" (Steeple Ashton Vic.)	H. P. Dixon, Esq. ....	5	1 0	240 T	21·19	179
" (Wingfield) .....	T. H. Clark, Esq. ....	5	1 0	190 T	22·55	146
" (Rodney House) ...	W. J. Mann, Esq. ....	5	1 1	140	21·43	152
" (Lovemead) .....	G. C. Tayler, Esq., M.D.	5	1 2	125 B	22·60	134
" Bradford .....	H. P. Dixon, Esq. ....	...	...	...	21·58	155
" (Holt) .....	" " "	...	...	...	22·48	191
" Devizes (Southgate House) .....	Miss Cunningham .....	8	1 0	436 T	19·77	151
" (Wilts Co. Asylum) ...	Dr. Ireland Bowes .....	8	2 3	385 A	20·41	149
" Buttermere .....	H. P. Dixon, Esq. ....	5	4 9	...	26·82	179
" Alton Barnes Rectory .....	Rev. W. Humphreys ...	5	1 1	334	22·14	155
" Burbage (Wolfhall) .....	H. P. Dixon, Esq. ....	8	1 0	546	21·47	...
" Shalbourne .....	" " " "	5	1 0	...	25·47	152
" Bishop's Cannings .....	Rev. C. W. Hony .....	5	1 0	446 A	23·62	165
" Devizes (Shepherd's Shore) .....	H. P. Dixon, Esq. ....	5	1 6	555	22·13	155
" Chippenham (Lacock) .....	Miss Awdry .....	5	0 11	250	24·01	160
" Marlborough (Preshute House)...	H. P. Dixon, Esq. ....	...	...	...	24·76	172
" (Mildenhall) .....	The Royal Meteor. Soc.	5	1 0	424	23·89	176
" Corsham .....	Rev. C. Soames .....	5	1 0	456	23·13	139
" Calne (High Street) .....	H. P. Dixon, Esq. ....	5	1 0	350 ?	21·70	154
" (Compton Bassett) .....	Mr. H. Wilkins .....	5	3 6	244	24·02	193
" Ramsbury .....	Mr. W. A. Cook .....	8	1 0	395 T	26·17	181
" Ogbourne Maizy .....	H. P. Dixon, Esq. ....	5	1 0	411	21·37	154
" Broad Hinton .....	" " " "	5	1 0	...	22·91	115
" Wootton Bassett .....	Rev. Vere Awdry .....	5	1 1	631 T	26·17	213
" Swindon Bassett .....	H. P. Dixon, Esq. ....	5	1 0	...	23·09	158
" Swindon, New .....	H. J. Southwell, Esq. ...	8	0 11	378	22·59	162
" (Pen Hill) .....	H. Arkell, Esq. ....	5	0 10	400	20·24	...
" Malmesbury (The Priory) .....	A. W. Chubb, Esq. ...	5	2 6	...	23·46	114
" (Charlton Cott.) ...	H. P. Dixon, Esq. ....	...	1 0	...	23·89	131
" ( " Park) ...	Countess of Suffolk ...	8	0 11	...	22·12	146
" Highworth (Hannington Hall)...	A. D. Hussey Freke, Esq.	5	1 0	400 T	19·95	136
DORSET.						
" Portland (The Manse) .....	Rev. W. R. Waugh ...	5	1 6	125 T	26·42	134
" Weymouth (Wyke Regis) .....	Mrs. Pretor .....	5	0 9	80 B	26·30	127
" Corfe Castle (Smedmore) .....	Col. G. P. Mansel .....	5	...	130	19·05	...
" Swanage (The Bank) .....	J. Andrews, Esq. ....	5	1 0	8	25·29	130
" Weymouth .....	Rev. H. Pix .....	5	2 0	60	25·28	124
" (Langton Herring) ...	The Royal Meteor. Soc.	5	1 0	79	24·40	127
" Corfe Castle (Creech Grange) ...	Rev. C. H. Gosset .....	8	1 0	158 A	24·61	148
	T. Tyler, Esq. ....	5	1 2	200	29·51	...



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

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which -01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
<b>DORSET—(con.)</b>						
d Corfe Castle (Furzebrook) .....	L. W. Pike, Esq. ....	5	1 2	147 †	28·62	109
d Portisham .....	W. Symes, Esq. ....	5	1 3	...	26·70	125
d Wareham (Castle Gardens) .....	S. W. Bennett, Esq. ...	5	2 6	18	26·70	149
„ (Binnegar Hall) .....	O. C. Farrer, Esq. ....	5	1 0	65	27·16	...
Poole (West Street) .....	F. Styring, Esq. ....	5	1 2	6	23·91	115
d „ (The Yarrells) .....	„ „ .....	5	1 1	60 †	24·85	120
„ (Hamworthy) .....	J. M. Henderson, Esq..	5	1 6	12	23·29	...
d „ (Parkstone) .....	R. H. Barnes, Esq. ...	5	0 11	198 †	25·15	141
Bere Regis (Bloxworth Rectory) ..	Rev O. P. Cambridge FRS	8	1 6	205	29·14	114
d „ „ ( „ House) ...	Col. Cambridge .....	5	2 0	100	28·17	104
d Maiden Newton (Cattistock Lodge)	H. Hamilton Palairé Esq	5	1 0	350	31·44	168
d Beaminster Vicarage .....	Rev. A. A. Leonard ...	5	1 0	216 †	28·52	159
d Blandford (Whatcombe) .....	J. Mansel-Pleydell, Esq.	5	0 10	270 †	29·26	129
„ (Tarrant Keynston)...	G. Galpin, Esq. ....	5	1 0	100 †	25·76	...
Cerne Abbas (Melbury) .....	Mr. R. Rintoul .....	5	1 4	...	28·80	...
d Beaminster (Chedington) .....	Miss Creed .....	5	1 6	604 †	31·99	158
d* Wimborne Minster (Chalbury)...	Rev. G. H. Billington..	5	2 0	338 †	24·99	139
d Hazelbury Bryan Rectory .....	Rev. Canon Wheeler...	5	1 0	305 †	37·30	129
d Sturminster Newton (Riverside).	A. R. Hallett, Esq. ...	5	1 0	200	26·18	126
d Shaftesbury .....	T. Ackland, Esq. ....	5	1 4	722 †	26·74	143
d Gillingham .....	S. H. Stephens, Esq....	5	1 2	244 †	24·91	160
<b>DEVON.</b>						
Salcombe (Prawle Point) .....	The Meteor. Council ...	8	1 9	350	20·95	171
d „ (The Knoll) .....	Dr. Twining .....	5	1 0	106 †	26·10	139
d Kingsbridge .....	W. H. Webb, Esq., M.D.	5	1 0	84	26·59	145
d Revelstoke (Membland) .....	Mr. G. Baker .....	5	1 0	180 †	29·67	133
d Dittisham (Chipton) .....	Mr. H. Bond .....	5	1 6	342	30·77	140
Plymouth (Drake's Reservoir)...	E. Sandeman, Esq., C.E.	5	1 0	149 †	28·57	173
d* Devonport (Rowdens Res.) .....	H. Francis, Esq., C.E.	5	1 0	201 †	25·88	163
d Ivybridge (Langham Hill) .....	Miss Glanville .....	5	1 0	400 †	35·73	177
Brixham (Lupton) .....	Mr. J. Gibson .....	5	1 6	220 †	22·26	...
Plympton (Hemerdon) ... garden	Rev. G. L. Woolcombe	5	4 0	360	32·16	...
„ ( „ ) tennis court	„ „ „	5	1 0	365	34·28	...
Totnes .....	D. A. Fraser, Esq., M.D.	5	1 6	70	29·84	...
Bere Ferrers .....	Rev. F. T. W. Wintle.	5	1 0	100	31·52	177
d Bickley (Roborough Reservoir)..	E. Sandeman, Esq., C.E.	5	1 0	550 †	34·52	177
Torquay (Cary Green) .....	C. Shapley, Esq. ....	5	1 0	12	24·13	145
d „ (The Rosery) .....	A. Chandler, Esq. ....	5	1 0	36	25·80	135
d „ (Grey's Lodge) .....	Col. J. R. Currie .....	5	1 0	260	24·85	164
d† „ (Babbacombe) <i>Snowdon</i>	E. E. Glyde, Esq. ....	5	1 0	294 †	24·16	160
d „ (Watcombe Park) .....	Col. C. Ichabod Wright	5	1 0	500 †	25·25	154
† Lee Moor Clay Works .....	T. Martin, Esq. ....	8	1 6	900	45·68	...
Buckfastleigh (Bossel Park) ...	J. Hamlyn, Esq. ....	5	1 0	250	40·40	144
† Sheepstor (Head Weir) .....	E. Sandeman, Esq., C.E.	5	1 0	690 †	43·86	184
d† Walkhampton (Lowery) .....	H. Francis, Esq., C.E.	5	1 0	890 †	44·95	165
† Dartmoor (Deancombe Farm) ...	E. Sandeman, Esq., C.E.	5	1 0	830 †	43·28	174
† „ (Leather Tor Farm)...	„ „ „	5	1 0	910 †	47·92	205

## 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		1892
			ft.	in.	feet.	Inches.	
DEVON—(con.)							
Dartmoor (Siward's Cross) .....	E. Sandeman, Esq., C.E.	5	1	0	1200 N	51·97	...
† „ (Leeden Tor).....	„ „ „	5	1	0	1270 N	40·67	...
D Abbotskerswell (Court Grange)..	Mrs. Hare .....	5	1	0	130 B	26·77	105
D Ashburton (Holne Vic.)...new g.	Rev. J. Gill.....	5	1	6	650	43·68	185
D† „ (Druid House) .....	Fabyan Amery, Esq....	5	1	0	572 T	38·03	161
D Kingsteignton (Teignbridge Ho.)	F. H. Plumptre, Esq....	5	1	2	27 N	25·63	132
Teignmouth (Bitton Street).....	The Royal Meteor. Soc.	...	...	...	...	23·01	147
„ (Woodlands).....	W. B. Harris, Esq.....	8	1	2	98 T	23·31	133
„ (Reservoir) .....	W. C. Lake, Esq., M.D.	5	1	0	138	24·14	146
D „ (Bonnicliff) .....	Capt. J. Horner .....	5	1	0	260 T	23·18	149
D† Tavistock (Public Library) .....	Mr. R. Westington ...	8	20	0	283 T	34·78	200
D „ (West Street) .....	H. A. Gibson, Esq ....	5	1	1	272 T	38·99	209
D† Ilstington (Middlecott House) ...	Alfred Lyon, Esq. ....	9	3	6	649 T	33·35	115
Princetown (Cowsic Valley).....	H. Francis, Esq., C.E.	8	1	6	1352 N	59·35	...
D Chudleigh (Ideford) ...	Rev. G. J. Ford.....	4	1	0	300 N	25·56	159
D Bovey Tracey (Colehays) .....	Mr. E. E. Underdown.	5	1	3	415 T	33·38	157
† Milton Abbot (Endsleigh).....	Mr. F. Yole .....	5	1	0	180 T	36·14	...
D Dawlish (Mamhead Rect.) .....	Rev. W.C. Plenderleath	5	1	0	467	27·52	184
D Chudleigh (Torquay Waterworks)	T. S. Weeks, Esq., C.E.	8	4	0	718 N	32·33	174
„ (Trusham) .....	Rev. O. H. Cary .....	5	1	0	322 T	27·86	176
D Budleigh Salterton (Ravenshaw)	Col. Carlile.....	6	0	6	50	23·44	133
D „ „ (Bickton) ...	Mr. Mayne .....	5	1	0	90	24·13	138
D Kenton (Southtown House) .....	Major Courtenay .....	8	2	6	56 N	24·08	139
Coryton (Lew Down) .....	T. M. Symons, Esq. ....	5	4	0	445	41·17	179
D Polapit Tamar [Launceston] ...	E. Coode, Esq. ....	5	2	9	300	30·98	235
D Christow (Torquay W. W.).....	T. S. Weeks, Esq., C.E.	8	1	0	842 N	32·70	176
D Chagford (Batworthy) .....	F. N. Budd, Esq. ....	8	1	0	1282 N	46·60	177
† Sidmouth (Sidmount) .....	The Royal Meteor. Soc.	5	1	0	149 N	25·36	178
D Rousdon [Lyne Regis].....	C. E. Peek, Esq. ....	5	1	0	516 T	25·75	150
„ „ „ ..... M	„ „ „ .....	3	1	0	516 T	24·39	...
D† Cleveland [Lyne Regis] .....	Mr. H. Munro .....	5	1	11	476 N	27·40	135
Exeter (Aylesbeare) .....	Rev. Dr. Dixon .....	5	1	0	351 N	26·15	184
D „ (Devon & Exet. Inst.) ...	late Mr. E. Parfitt.....	6	13	7	155 N	23·24	114
D „ (Manston Terrace) .....	Miss Dymond .....	5	1	0	166 N	23·36	155
D† Okehampton (Oaklands) .....	W. H. Holley, Esq. ...	5	1	0	521 T	39·31	173
Axminster (Great Trill) .....	F. J. Sparks, Esq.....	5	1	0	300 T	24·15	108
D† Exeter (Brampfod Speke) new g.	Miss Gamlen .....	5	1	0	114 T	26·54	170
„ „ „ .....	„ „ „ .....	8	0	1	113	26·27	...
D Axminster (South Street).....	Mr. S. Griffin .....	5	3	6	138 T	27·63	105
D Honiton (Feniton Court) .....	Miss Pinckney .....	5	1	0	229 T	26·94	146
D „ (Ivedon) .....new gauge	G. E. Stanley, Esq. ...	5	1	0	400 T	27·98	177
Hatherleigh (Broomford Manor)	Mr. Hawking .....	5	1	4	484 N	35·49	132
„ (Ash House) .....	J. S. Osbourne, Esq....	5	1	0	332 N	32·08	124
D Culmpton .....	T. Turner, Esq. ....	5	1	0	202 N	28·17	167
D Petrockstow (Heanton Satchville)	Mr. A. Eames .....	5	1	0	332 T	34·99	189
D Tiverton (Broomhill).....	Mrs. Dickinson .....	5	1	0	380	32·25	171
D „ (St. Peter's St.) .....	Miss Gill.....	5	6	0	270	31·14	175
D Witheridge (Bradford Cottage) ..	Rev. J. H. Thompson..	5	1	0	600	33·25	194

DIVISION V.—SOUTH WESTERN COUNTIES—*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which '01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
<b>DEVON—(con.)</b>						
Torrington (Beare Ho., Langtree)	Mr. A. R. J. Broderick	5	1 0	451 $\pi$	36.21	...
„ (Stevenstone) .....	Mr. W. Gillies .....	5	1 0	...	36.21	184
„ (Little Silver) .....	F. Lipscomb, Esq.....	5	1 0	395	36.15	189
<sup>D</sup> Bampton (Huntsham) .....	Col. Troyte .....	8	1 0	640	38.40	210
<sup>D</sup> South Molton (Rose Ash) .....	Mrs. Tanner Davy.....	8	0 6	766 $\pi$	34.57	163
<sup>D</sup> Hartland Abbey.....	Mr. G. Sleep .....	5	1 6	222 $\Gamma$	35.51	156
<sup>D</sup> South Molton (East Street) .....	N.C.Hatherly, Esq.M.D	5	1 0	430 $\pi$	40.83	177
„ „ (Castle Hill) .....	Mr. R. Nicholas .....	12	3 9	320 $\Gamma$	40.72	180
„ „ „ „ „ School) .....	The Royal Meteor. Soc.	8	1 0	363	37.90	219
<sup>D</sup> Bideford (Water Works).....	Baldwin Latham Esq CE	5	1 0	335 $\pi$	36.07	162
*† „ (Horwood) .....	Rev. J. Dene .....	5	1 0	288 $\Gamma$	30.69	192
„ (St. Helen's, Northam) .....	Miss L. Bowles .....	5	0 10	67 $\Gamma$	27.09	219
<sup>D</sup> *† „ (Northam) .....	Rev. M. D. Churchward	5	1 0	173 $\pi$	29.05	192
<sup>D</sup> Barnstaple Athenæum .....	Mr. Knill .....	8	1 0	31 $\pi$	25.99	152
<sup>D</sup> „ (Pilton) .....	Miss Hibbert .....	5	1 0	73	32.14	201
<sup>D</sup> „ (Arlington Court) ...	Lady Chichester.....	5	1 1	613 $\pi$	43.86	211
Lynton (Parracombe) .....	Rev. J. F. Chanter ...	5	3 0	795 $\Gamma$	38.35	160
<sup>D</sup> † Ilfracombe Hotel .....	The Royal Meteor. Soc.	12	9 0	35	23.24	186
† Lynton (Lee Abbey) .....	C. F. Bailey, Esq. ....	5	0 6	340 $\Gamma$	27.58	...
Lymmouth (Glenthorne) .....	W. Halliday, Esq.....	5	0 9	93	34.79	171
<b>CORNWALL.</b>						
Penzance (Penlee) .....	J. Branwell, Esq. ....	5	1 0	71 $\Gamma$	37.20	190
<sup>D</sup> „ (St. Clare) .....	Rev. Preben. Hedgeland	5	1 0	213 $\Gamma$	38.29	234
Marazion .....	T. W. Field, Esq. ....	5	2 0	30 $\pi$	32.96	185
<sup>D</sup> Falmouth (New Observatory) ...	E. Kitto, Esq. ....	11	2 0	169 $\Gamma$	35.46	166
„ „ „ „ „ „) .....	„ „ „ „ „ „) .....	8	1 9	169 $\Gamma$	35.21	172
St. Just .....	R. B. Searle, Esq.....	5	1 0	400	41.15	...
Morvah (Bosporthenis) ..	Mr. J. H. Thomas .....	5	3 6	600 $\pi$	35.15	...
Falmouth (Kennal Vale) .....	F. H. Davey, Esq.....	5	1 2	...	37.50	...
<sup>D</sup> „ (Carclew) .....	Mr. J. Simmons .....	5	0 9	...	35.94	139
<sup>D</sup> St. Ives (Phillack Rectory) .....	Rev. Canon Hockin ...	5	1 0	70	30.09	153
<sup>D</sup> Redruth (Trevince) .....	E. B. Beauchamp, Esq.	8	0 8	240 $\Gamma$	36.80	200
<sup>D</sup> „ (Trewirgie) .....	A. H. Jenkin, Esq. ...	5	1 0	400 $\Gamma$	36.27	203
<sup>D</sup> „ (Tehidy Park) .....	Mr. A. Mitchell .....	8	1 1	287 $\pi$	33.24	188
<sup>D</sup> † Truro (Royal Institution) .....	H. Crowther, Esq.....	5	40 0	56 $\pi$	31.90	187
<sup>D</sup> Probus (Lamellyn).....	H. Tresawna, Esq.....	5	0 6	...	35.71	132
St. Agnes .....	Mr. Opie .....	5	1 3	278 $\pi$	33.07	163
<sup>D</sup> *† St Austell (Trevarna).....	W. Coode, Esq. ....	5	0 6	300 $\pi$	36.09	210
Par Station (Penellick).....	W. E. Geach, Esq. ...	5	0 9	240 $\Gamma$	27.81	...
Empacombe [Devonport] .....	J. Sandercock, Esq. ...	5	0 7	20	27.68	170
Cremyll [ „ ] .....	Mr. W. E. Marchant...	5	18 0	25	26.46	188
<sup>D</sup> St. John's [ „ ] .....	Rev. J. H. Kirwan.....	5	1 0	20	28.19	167
<sup>D</sup> Lostwithiel (Lanwithan) .....	Miss Foster .....	10	1 0	80	35.71	179
<sup>D</sup> Liskeard (Herodsfoot Vic.) .....	Rev. G. B. Hooper.....	8	2 0	295	34.00	194
<sup>D</sup> † „ (Dean Terrace) .....	S. W. Jenkin, Esq., C.E.	5	1 1	375 $\pi$	37.22	189
† Saltash (Pentillie Castle) .....	Mr. A. W. Cove.....	5	1 6	150 $\pi$	35.97	173
<sup>D</sup> † Bodmin (Lanhydrock) .....	Rev. Prebendary Every	5	1 0	390	41.82	216
<sup>D</sup> † „ (Fore Street) .....	Mr. A. Hambly .....	8	2 6	336 $\Gamma$	40.03	221

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

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which 101 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1892	
			ft. in.	feet.	inches.	
<b>CORNWALL—(con.)</b>						
Callington(Hingston Down) <i>new g</i>	Mr. Wadge .....	5	3 0	850 T	35·97	168
†Launceston (Altarnon) .....	Rev. A. H. Malan .....	5	1 0	570 B	49·40	247
D Bude .....	J. Arthur, Esq. ....	5	1 0	16 B	26·31	132
D Stratton (Trelana, Poughill) ...	Col. Field .....	5	1 0	200 T	30·02	213
<b>SOMERSET.</b>						
Chard (Cricket St. Thomas) .....	RtHn. Viscount Bridport	5	1 0	444	31·17	101
D Crewkerne (Bincombe House) ...	F. J. Sparks, Esq. ....	5	1 2	250 T	26·67	108
D Yeovil (West Coker).....	Major Aldworth.....	5	1 0	260 T	26·44	189
D „ (Hendford).....	J. Curtis, Esq. ....	5	1 0	132 T	26·77	120
D „ (Summerlands) .....	R. W. Burnell, Esq. ...	5	2 0	229 T	25·46	...
D Ilminster (White Lackington) ...	Rev. Prebendry Gowring	5	1 0	136 A	25·58	156
D „ (Ilton Vicarage).....	Rev. R. B. Poole .....	5	1 0	100 A	23·24	182
D South Petherton .....	W. Blake, Esq. ....	8	0 8	110 T	22·90	158
D Wellington (Sunnyside) .....	W. Elworthy, Esq. ...	5	1 0	...	27·22	175
D Temple Combe (Stowell Rect.)...	Rev. H. J. Poole .....	8	1 0	376 A	27·09	177
D Taunton (Claremont) .....	E. Ball, Esq. ....	8	1 2	80 B	22·96	166
D Langport (Huish Episcopi) .....	J. Kelway, Junr., Esq.	8	1 0	74 T	19·39	126
D Milverton .....	R. Bere, Esq. ....	5	1 0	198	27·39	162
D Wincanton .....	Rev. W. Farrer .....	8	1 0	240	24·86	154
Cothelston House .....	C. E. J. Esdaile, Esq. ...	5	1 0	500	29·60	167
D Somerton (Butleigh Court) .....	R. Neville Grenville, Esq	8	1 2	80	25·42	135
D Glastonbury (Street) .....	W. S. Clark, Esq. ....	8	0 6	100	21·23	159
D „ (High Street) .....	J. Spire, Esq. ....	8	7 0	94 T	23·80	149
D „ (Ynyswytryn) .....	Major Swayne .....	5	1 8	245 T	23·81	145
D „ (Magdalene House).....	J. G. L. Bulleid, Esq. ..	5	1 6	52 T	22·35	140
Bridgwater (Nurseries) .....	H. Corder, Esq. ....	5	0 6	...	21·33	154
D „ (Ashford).....	F. Parr, Esq. ....	...	...	...	23·87	151
D Dunster (Knowle).....	Worsley Battersby, Esq.	5	1 4	260 T	29·13	139
D Wells .....	T. W. D. Manning, Esq.	5	44 0	181 T	28·10	163
D „ (Garden) .....	„ „ „ .....	5	1 3	139 T	28·24	163
D Frome (Mells Rectory) .....	Rev. G. Horner .....	5	1 0	344 A	26·91	169
D „ (Rock House, Mells).....	W. A. Fussell, Esq. ...	7	1 8	326 A	27·81	165
Radstock (Downside) .....	Registrar Genl. Returns	...	...	596	33·91	166
Chewton Mendip (The Priory)...	Mr. J. Batt .....	5	1 5	550 T	38·57	172
Ston Easton .....	H. E. Hippisley, Esq. .	5	3 0	480 A	28·31	150
E. Harptree (Sherborne Reservoir)	Bristol Water Works...	5	1 0	338 T	30·27	166
D „ (Harptree Court) ...	W. W. Kettlewell, Esq.	5	1 0	346 A	35·96	172
Axbridge (Winscombe).....	Rev. R. F. Follett .....	8	1 0	200 T	25·11	124
D Pensford (Sutton Court) .....	Sir E. Strachey, Bt. ...	8	1 0	...	30·45	182
Bath (Freshford) .....	W. Gee, Esq. ....	5	0 9	150	24·58	
Weston-super-Mare (High St.)...	The Royal Meteor. Soc.	5	1 0	20	24·34	151
D „ „ „ (Bryn-y-mor).....	H. Alford, Esq. ....	5	1 0	...	22·85	167
D „ „ „ (Worle Vic.).....	Rev. W. F. Rose .....	5	1 0	16	25·21	174
Wrington (The Rectory) .....	Rev. G. M. Ashdown...	5	5 0	68	29·91	137
Chew Magna .....	Bristol Water Works...	5	1 0	160 T	28·97	173
†Bath (Bathwick) .....	Mrs. Dunn .....	5	1 0	50	24·07	
D „ (Ensleigh, Lansdowne).....	C. H. Weston, Esq. ...	8	1 0	740 A	26·46	179
D „ (Charlcombe).....	C. Gilby, Esq., C.E. ...	8	2 0	325 T	25·57	152

## 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	1892	
			ft. in.	feet.	inches.	
SOMERSET—(con.)						
D Batheaston Reservoir.....	C. Gilby, Esq., C.E. ...	6	2 0	248 $\nabla$	22·07	175
Yatton (Chelvey) .....	Bristol Water Works...	7	0 6	...	28·46	136
Barrow Gurney Reservoir .....	„ „ „ .....	5	1 0	320 $\nabla$	30·06	166
D Long Ashton Estate Office .....	T. Dyke, Esq.....	8	1 0	134	27·60	168
Flax Bourton (Tyntesfield) .....	A. Gibbs, Esq. ....	5	1 7	320	28·52	179
Bristol (Coronation Road).....	H. C. Martin, Esq. ...	5	0 10	50	24·36	...

## DIVISION VI.—WEST MIDLAND COUNTIES.

## GLOUCESTER.

D Monkswood Reservoir [Bath] ...	C. Gilby, Esq., C.E. ...	6	2 0	363	24·72	172
Bristol (Small Street) .....	Bristol Water Works...	12	33 10	52	23·21	146
„ (Redland Green) .....	J. D. Sibley, Esq.....	8	1 3	282	24·24	157
D Clifton (Royal York Crescent)...	Miss Bridge .....	5	8 2	226 $\nabla$	25·61	181
D „ (Pembroke Road) .....	R. F. Sturge, Esq. ...	8	1 0	215	26·35	166
D „ (College) ... ..	D. Rintoul, Esq. ....	8	1 2	230	25·78	160
Pucklechurch.....	Rev. S. G. Gillum.....	5	0 10	370 $\nabla$	24·52	151
D Bristol Docks (Underfall Yard) .	J.M. McCurrieh, Esq, CE	8	...	...	24·07	151
„ (Over Court) Park .....	R.C.C. Lippincott, Esq..	5	0 9	148 $\nabla$	27·42	...
„ „ „ „ Garden ...	„ „ „ „ .....	8	1 0	137	26·49	...
ChippingSodbury (FramptonCotl)	J. Marsh, Esq. ....	5	1 0	180 $\nabla$	24·24	168
D „ „ (StanshawesCt)	R. N. Hooper, Esq. ...	5	1 3	280 $\nabla$	24·55	166
D Almondsbury .....	Rev. C. O. Miles.....	5	2 0	144	25·24	167
D Wickwar Rectory .....	Rev. R. J. Lyon ...	5	2 0	260 $\nabla$	25·53	175
D Thornbury (Prospect House).....	T. H. Taylor, Esq.....	5	2 3	150 $\nabla$	28·59	195
Tortworth Court .....	Mr. T. Shingles .....	8	1 0	264	24·36	140
D Dannel Hill [Chepstow] .....	Mrs. Cowburn .....	8	1 0	573 $\nabla$	27·82	142
D Fairford (Kempsford) .....	A. T. Iles, Esq.....	5	1 0	...	19·55	145
D „ (Horcott).....	R. A. Iles, Esq.....	5	0 8	...	20·81	125
D Berkeley (Salter Street) .....	H. E. Cooke, Esq.....	5	8 0	60	20·61	176
D „ (Sharpness New Docks)	F. A. Jones, Esq., C.E.	8	3 9	50	22·23	139
D Lechlade .....	T. Arkell, Esq. ....	5	0 9	253	19·68	143
D Amberley (Highlands) .....	Mrs. Blackwell .....	8	0 10	550 $\nabla$	27·09	125
Lydney (Clanna) .....	Capt. Marling .....	5	1 0	260	26·68	...
„ .....	G. W. Keeling, Esq. C.E.	10	5 0	87	21·94	136
„ (Priors Mesne) .....	H. Cook, Esq., M.D. ...	5	1 0	500 $\nabla$	28·54	...
D Cirencester (Claremont Place) ...	R. Gorton, Esq.....	8	1 0	356 $\nabla$	24·79	166
„ „ „ „ .....	„ „ „ .....	8	2 0	357 $\nabla$	24·93	166
„ „ „ „ .....	„ „ „ .....	8	0 6	356 $\nabla$	24·91	166
„ „ „ „ .....	„ „ „ .....	8	11 0	366 $\nabla$	23·30	166
D „ (Royal Agricultural Coll.)	J. Hendrick, Esq. ....	5	1 0	443 $\nabla$	23·75	169
D „ (Further Barton) .....	Miss Brown .....	5	1 0	425	24·10	170
D Stroud (Stanley Park) ... ..	W. J. Paley Marling, Esq	8	1 0	365	23·91	180
D „ (The Acre) .....	P. Witchell, Esq. ....	5	1 0	300	21·77	136
D „ (Upfield).....	Miss Stanton .....	5	1 0	226 $\nabla$	22·56	183
Stonehouse (Haywardsfield).....	H. A. Sibley, Esq.....	5	0 6	...	21·54	...
D Fairford (Hatherop Rectory) ...	Rev. R. P. Davies .....	8	1 3	411 $\nabla$	21·06	145
D Whitminster .....	F. A. Jones, Esq., C.E.	5	1 0	32	20·99	143
Coleford (The Coombs) .....	I. Trotter, Esq. ....	5	1 0	660	34·06	194

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1892	
			ft. in.	feet.	inches.	
<b>GLOUCESTER—(con.)</b>						
Newnham-on-Severn.....	D. J. Wintle, Esq.....	5	0 10	56 $\nabla$	25·14	...
D Coleford (Staunton Rectory) ...	Mrs. Jay Jones .....	5	0 8	726 $\nabla$	29·60	178
D Westbury-on-Severn .....	H. S. Grant, Esq. ....	5	1 0	120 $\nabla$	21·94	157
Northleach (Yanworth).....	T. Arkell, Esq. ....	5	1 0	...	22·59	133
„ (Sherborne House).....	Mr. Scott .....	5	1 0	405	23·38	120
D* „ (Hampnett Rectory).....	Rev. W. Wiggin .....	5	1 0	653 $\nabla$	23·05	171
Gloucester (Quedgeley House)...	W. G. Robinson, Esq..	5	1 0	65 $\nabla$	20·64	158
D „ (Birdlip Hill) .....	A. S. Helps, Esq. ....	5	1 0	800 $\nabla$	19·99	166
D „ (Witcombe Res.).....	R. Read, Esq., C.E. ...	8	3 0	297 $\nabla$	20·37	155
D Mitcheldean (Blaisdon).....	P. Stubs, Esq. ....	5	1 0	117 $\nabla$	22·81	166
„ „ „.....	M „ „ „.....	5	1 0	117 $\nabla$	22·67	...
D Gloucester (Llanthony Lock) ...	E.D. Marten, Esq., C.E.	5	1 2	39 $\nabla$	17·55	137
D „ (Lower Barton Street) ..	W. P. Brown, Esq. ..	5	1 0	65 $\nabla$	19·13	154
D „ (Churcham) .....	L. H. Hall, Esq. ....	5	2 1	90	19·79	116
„ (Wotton Hill) .....	A. Stephens, Esq. ....	5	1 0	80 $\nabla$	18·87	...
D „ „ „ Asylum).....	Dr. Johnson .....	8	0 9	90 $\nabla$	19·45	173
D Mitcheldean (Edge Hill House)...	W. H. M. Phillips, Esq.	5	1 0	725 $\nabla$	26·08	158
D Cheltenham (Dowdeswell).....	J. Hall, Esq., C.E.....	5	1 0	375	21·94	146
D† Gloucester (Maisemore Lock) ...	E.D. Marten, Esq., C.E.	5	1 1	39 $\nabla$	16·96	163
D Bourton-on-the-Water .....	E. W. Kendall, Esq....	5	1 0	434 $\nabla$	22·33	149
D Cheltenham (Battledown).....	Sir Brook Kay, Bt. ...	5	0 8	393 $\nabla$	19·59	165
„ (Northfield) .....	J. Hall, Esq., C.E.....	8	2 5	637 $\nabla$	17·71	152
„ (Hewletts Res.) ...	„ „ „ .....	8	1 6	417 $\nabla$	19·87	152
„ (Sandford) .....	„ „ „ .....	5	2 0	210	18·81	148
D „ (Naunton Pk. Villas).....	M. Llewellyn Evans, Esq.	5	0 9	250	20·30	169
D „ (Heath Lodge) ...	Rev. M. A. Smelt .....	8	1 0	206	19·51	169
D „ (Southam Villa) .....	R. Tyrer, Esq. ....	5	1 0	184 $\nabla$	19·45	175
„ „ „.....	„ „ „ .....	5	1 0	184 $\nabla$	18·00	...
Moreton-in-Marsh (Longborough) ..	W. Arkell, Esq.....	5	0 9	...	23·33	155
D „ „ „ „ „.....	„ „ „ .....	5	1 0	...	22·98	155
D† Tewkesbury (Upper Lode) .....	E.D. Marten, Esq., C.E.	5	1 0	41 $\nabla$	17·29	107
„ „ „.....	J. Hall, Esq., C.E.....	5	0 9	44	16·25	152
D „ (Beckford) .....	F. Slade, Esq., C.E. ...	8	1 0	120 $\nabla$	18·77	173
<b>HEREFORD.</b>						
D Ross (Croome Hall) .....	W. E. Hancock, Esq...	9	2 0	284 $\nabla$	21·05	114
D† „ (The Graig) .....	H. Southall, Esq. ....	5	1 0	213 $\nabla$	22·81	166
„ (Perrystone Court) .....	Mr. T. Greenway ...	5	1 3	...	19·23	128
Much Dewchurch (Bryngwyn).....	J. Rankin, Esq., M.P.	5	0 9	416 $\nabla$	25·44	152
D Much Marcle (Homme House)...	Mr. J. Maxton .....	5	0 11	280 $\nabla$	22·38	168
D „ „ (Caerswall) .....	T. Charles, Esq.....	5	1 0	423 $\nabla$	24·19	155
D Ledbury (Orchardleigh) .....	M. A. Wood, Esq.....	5	3 0	160	20·68	135
„ (Underdown) .....	S. H. Bickham, Esq....	5	1 0	...	22·86	174
„ (Putley Court) .....	J. Riley, Esq.....	5	1 0	290	23·63	140
Hereford (The Elms).....	C. Anthony, Esq. ....	8	2 0	277 $\nabla$	24·97	157
„ „ „.....	Rev. Canon Phillott ...	5	1 1	182	22·53	...
„ (St. Michael's Priory).....	Reg. General's Returns	...	...	361	27·44	177
„ (Hagley Park) .....	A. Hutchinson, Esq....	5	0 6	300 $\nabla$	22·04	...

## DIVISION VI.—WEST 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	1892	
			ft. in.	feet.	inches.	
HEREFORD—(con.)						
D Ledbury (Canon Frome Vic.) ...	Rev. M. Hopton.....	8	1 3	252 T	23·65	159
Hereford (Brinsop Vic.) .....	Rev. Preb. Elliot .....	5	1 0	300 T	21·02	137
D „ (Burghill) .....	No. 3 T.A.Chapman, Esq. M.D.	5	1 0	275	21·64	159
D „ ( „ ) .....	No. 4 „ „ „ „ ..	5	1 0	275	21·29	159
Bodenham Vicarage .....	Rev. H. C. Sturges ...	5	1 0	260 T	23·41	...
D Hope-u-Dinmore (Hampton Ct.)	J. H. Arkwright, Esq..	8	1 2	212 B	23·14	142
D Weobley (Dilwyn).....	T. L. Hall, Esq., M.D.	5	0 8	290 T	23·85	167
D Kington (Lynhales) ..	S. Robinson, Esq. ....	8	1 0	...	23·36	175
D Pembridge (Marston) .....	H. Langston, Esq.....	5	1 5	347 A	23·21	153
Bromyard (Buckenhill).....	R. Phipps, Esq.....	8	1 9	...	22·06	129
D Leominster (Farm) .....	Mrs. Southall.....	5	1 6	245	26·65	164
D Kington (Eywood).....	RtHonLd.Ormathwaite	8	12 0	600 T	25·34	158
D Stoke Bliss .....	Rev. G. E. Alexander..	5	1 0	420 T	26·29	158
SHROPSHIRE.						
D Ludlow (Ashford) .....	Rev. J. Selwood Tanner	5	1 2	265 T	24·28	163
D „ ( „ House) .....	W. Downes Hall, Esq.	5	0 5	315 T	26·84	190
D „ (Priors Halton).....	Miss Beddoes .....	5	1 0	300	24·61	192
Dowles [Bewdley] .....	J. M. Downing, Esq..	5	1 3	162 A	23·66	134
Cleobury Mortimer (Neen Savage)	Rev. F. Burd ..	5	0 11	367 T	27·58	157
D Ludlow (Bromfield Vicarage) ...	Rev. W. Selwyn .....	5	1 0	300 T	25·82	172
Clun (Bettws).....	Mr. R. F. Brand .....	5	2 0	1150 T	28·21	...
D Craven Arms (Stokesay Vicarage)	Miss La Touche.....	5	1 0	371 A	21·61	151
D Burwarton .....	Rev. A. James .....	5	1 0	830	30·32	165
D Bridgnorth (Coton Hall) .....	Col. Wakeman .....	3	3 0	460 T	23·67	129
D Bishop's Castle (Totterton) .....	W. H. Whitaker, Esq.	5	0 7	...	23·93	147
„ „ (Castle Street)...	E. Griffiths, Esq. ....	5	2 0	720 B	22·72	166
D Much Wenlock (Larden Hall) ...	Miss F. Rouse Boughton	8	1 3	658 A	25·93	178
D Church Stretton .....	Dr. Barnett .....	5	0 4	...	30·56	183
D Bridgnorth (Aldenharn Park) .	W. F. De Wend, Esq..	5	3 9	430 T	24·80	147
Church Stretton (Preen Manor)...	A. Sparrow, Esq. ....	5	1 0	700 T	25·94	167
„ „ „ (Woolstaston)...	Rev. E. D. Carr .....	5	1 0	800 A	27·00	194
D Middleton in Chirbury .....	Rev. W. Brewster.....	5	1 2	702 A	22·39	203
D Much Wenlock (Willey Park)...	Rt. Hon. Lord Forester	5	1 0	502 A	26·42	165
Minsterley (Hampton Hall) .....	J. Whitaker, Esq.....	...	1 0	630 T	24·20	...
D „ (Wallop) .....	J. E. Severne, Esq. ...	6	2 0	700 T	26·50	162
D Pontesbury (The Villa).....	Mr. W. R. Croft .....	5	1 6	350 T	23·76	149
Shifnal (Neachley).....	Hon. F. Bridgeman, MP	5	1 6	280 T	27·66	181
D Wem (The Clive Vic.) .....	Rev. J. Cooper Wood...	5	1 0	299 T	25·79	206
D Cheswardine (Knighton Res.) ...	G. R. Jebb, Esq., C.E.	8	0 3	351 A	34·15	183
Oswestry (Hengoed) .....	Rev. A. R. Lloyd .....	5	6 0	470 A	26·46	...
Market Drayton (Buntingsdale).	Mrs. Tayleur .....	5	1 0	276 A	29·25	169
D Ellesmere (Oteley).....	Mr. Pearse .....	...	1 0	337	27·94	198
D Adderley Rectory .....	Rev. A. Corbet .....	5	0 9	290 T	31·63	186
STAFFORD.						
Dennis [Stourbridge] .....	E.B. Marten, Esq., C.E.	8	6 6	270 B	24·43	163
D Netherton (Lodge Farm Res.) ...	G. R. Jebb, Esq., C.E..	5	1 0	445 A	21·27	172

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

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which ·01 or more fell
		Diameter	Height above Ground.	Height above Sea Level		
			ft. in.	feet.	inches.	
STAFFORD—(con.)						
D Dudley (Shavers End) .....	W. Vawdrey, Esq., C.E.	5	1 0	770 T	22·60	161
D Perry Hall [Birmingham] .....	Mr. G. B. Mitchison ...	5	2 6	343 T	24·81	200
D West Bromwich .....	J. T. Eayrs, Esq., C.E.	8	4 6	547 T	22·19	153
Walsall .....	E. B. Marten, Esq., C.E.	8	4 0	463 T	26·90	186
D „ Sewage Farm .....	R. H. Middleton, Esq.	8	0 11	376	23·42	155
Wolverhampton (Town Hall) ..	REW Berrington Esq CE	5	15 6	481 T	24·98	155
„ Park .....	Mr. W. Thomas .....	5	1 0	435 T	25·87	179
D „ (Tettenhall) ..	R. Smith, Esq., C.E.	5	1 0	454 T	26·66	204
D „ (Wrottesley) ..	Mr. E. Simpson .....	8	1 0	500	26·76	156
D Bloxwich (Sneyd Res.) .....	G. R. Jebb, Esq., C.E.	5	1 0	507 T	20·61	148
D Hammerwich (Cannock Chase Res)	„ „ „ „ .....	5	1 0	475 T	20·70	166
Lichfield Museum .....	Mr. J. P. Roberts ...	5	2 0	220 T	24·25	182
D Weston Park [Shifnal] .....	Rt. Hon. Earl of Bradford	5	1 6	400 T	26·84	181
D Brewood (Belvide Res.) .....	G. R. Jebb, Esq., C.E.	8	1 0	367 T	24·16	132
D Penkridge (Rodbaston) .....	H. Ward, Esq. ....	5	1 0	324 T	28·91	150
D Hednesford .....	W. Vawdrey, Esq., C.E.	5	1 0	770 T	20·67	168
D Burton (Rangemoor) .....	Mr. Bennett .....	5	5 6	424 T	24·09	178
D „ (Shobnall) .....	late R. W. Abbotts, Esq.	5	6 0	156 T	21·60	147
D „ (Derby Road) .....	J. G. Wells, Esq. ....	5	1 0	151 T	22·15	179
D „ (Hoar Cross) .....	F. W. Lycett, Esq. ...	8	4 0	400 T	27·53	133
D Uttoxeter (Brook House) .....	Mr. J. J. Gibbons .....	5	1 0	283 T	33·43	224
D Market Drayton (Old Springs) ..	F. E. Harding, Esq. ...	5	0 8	422	30·89	200
D† Cheadle (The Heath House) .....	J. C. Philips, Esq. ....	5	1 0	647 T	31·34	186
D† „ (Tean Vicarage) .....	Rev. G. T. Ryves .....	5	1 1	470 T	32·23	196
D Longton (The Meir) .....	J. B. Piercy, Esq. ....	5	1 0	618 T	30·99	208
D Newcastle (Madeley) .....	„ „ „ „ .....	5	1 0	348 T	32·15	174
Stoke (Stanley Reservoir) .....	E. B. Smith, Esq., C.E.	5	3 1	550 T	29·29	114
Etruria .....	„ „ „ „ .....	5	4 2	440	30·86	114
Alstonfield Vicarage .....	Rev. W. H. Purchas ...	5	1 0	909 T	38·18	164
D Leek (Wall Grange) ... new g.	J. B. Piercy, Esq. ....	5	1 0	458 T	33·45	177
Knypersley [Congleton] .....	E. B. Smith, Esq., C.E.	5	14 0	500 T	35·54	172
WORCESTER.						
D Pendock Rectory [Tewkesbury] ..	Rev. W. A. Strong ...	5	4 9	95 T	16·77	152
Blockley .....	R. B. Belcher, Esq. ...	5	1 0	500	21·33	...
Northwick Park .....	Lady Northwick .....	8	1 6	410 T	19·64	...
Upton-on-Severn (Willow Bank)	J. S. Cowley, Esq. ....	5	1 3	...	18·90	116
D Evesham (Lansdowne) .....	R. Burlingham, Esq. ...	5	5 0	108 T	16·58	108
† Great Malvern (Church Street) ..	J. E. Palmer, Esq. ....	5	1 0	361 T	21·33	...
† „ „ (Davenham Bank) ..	Mr. A. Bradshaw .....	8	1 0	290 T	22·71	...
† „ „ (Belle Vue House) ..	D. B. Coldwell, Esq. ...	5	4 0	530	21·40	146
† „ „ (Madresfield Rect.) ..	Rev. G. S. Munn .....	5	1 4	124 T	20·73	160
† „ „ ( „ Court) ..	Mr. W. Crump .....	8	2 6	135 T	20·19	142
D† Worcester (Diglis Lock) .....	E. D. Marten, Esq., C.E.	5	1 0	49 T	18·37	144
D „ (Belmont Road) .....	G. B. Wetherall, Esq. ...	5	1 6	175	18·91	165
D „ (Water Works) .....	S. G. Purchas, Esq. ...	5	0 8	52	18·45	148
D† „ (Bevere Lock) .....	E. D. Marten, Esq., C.E.	5	1 1	52 T	20·35	154
D „ (Hawford Lodge) .....	F. Ames, Esq. ....	5	1 1	...	21·40	100



## DIVISION VI.—WEST 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	1892	
			ft. in.	feet.	inches.	
<b>WORCESTER—(con.)</b>						
D† Droitwich (Holt Lock) .....	E. D. Marten, Esq., C.E.	5	1 1	55 A	21·64	145
„ .....	B. Godfrey, Esq., C.E.	5	4 0	161 A	20·73	164
D Tenbury (Orleton) .....	No. 2 T. H. N. Davis, Esq....	5	0 9	193 A	24·75	168
„ { „ } .....	No. 1 „ „ „ „ ..	5	0 9	193 A	25·13	168
„ { „ } .....	No. 3 „ „ „ „ ..	5	0 9	193 A	24·55	168
D Redditch (Prospect Hill) .....	H. Page, Esq., M.D....	5	1 0	425 T	20·87	170
D Bromsgrove (Stoke Refor.) <i>new g.</i>	Mr. J. Salter .....	5	4 6	225 L	18·28	127
D „ (Tardebigge Res.) ..	F. A. Jones, Esq. C.E.	5	3 0	433 T	21·69	163
D† Stourport (Lincombe Lock).....	E. D. Marten, Esq., C.E.	5	1 0	62 A	20·96	145
„ (Hartlebury) .....	J. Watson, Esq.....	5	1 0	320	21·67	...
D Bromsgrove (Lower Bittal Res.)..	F. A. Jones, Esq. C.E.	5	3 0	430 T	23·67	158
D Bewdley (Winterdyne Gardens)	Mr. W. Wrather .....	8	2 0	...	22·21	137
D Kidderminster (Woodfield) .....	Rev. J. R. Burton ...	5	3 0	167	22·74	146
D „ (Prospect Hill)...	Mr. J. T. Cowderoy ...	..	1 0	161 A	22·38	180
Stourbridge (Pedmore) .....	E. B. Marten, Esq., C.E.	8	0 11	350 A	24·33	179
„ (Longlands) .....	„ „ „ „ ..	...	...	...	24·37	154
King's Heath [Birmingham] ...	R. Godfrey, Esq., C.E.	5	8 0	523 A	23·09	144
D Moseley [Birmingham].....	G. F. Lyndon, Esq. ...	5	1 0	478 T	24·60	160
<b>WARWICK.</b>						
D Shipston (Compton Wynyates)...	J. Sargent, Esq.....	5	2 6	480	18·59	162
Radway (Ivy Lodge).....	Rev. G. Miller .....	5	1 1	400	20·26	168
D Farnborough Vicarage .....	Miss Prater .....	5	1 0	520 T	21·34	169
Kineton (Fenny Compton) .....	Miss Knott .....	5	4 0	436	15·70	...
D Stratford-on-Avon (Guild Street)	Rev. F. Smith .....	12	4 0	135 T	17·14	172
D Alcester (Ragley Hall) .....	The Marquis of Hertford	5	1 0	260 T	20·34	192
D „ ( „ Gardens) .....	Mr. A. Christie .....	5	1 0	150 T	20·75	197
D Snitterfield .....	A. H. Campbell, Esq., C.E.	5	3 0	304 T	18·36	153
D Warwick (Barford Rect.) .....	Rev. C. Mills.....	8	0 11	167 A	20·73	166
D Southam (Stockton) .....	Rev. W. Tuckwell.....	5	1 0	289	19·47	176
Leamington (St. John's Vic.) ..	Rev. H. Trethewy ...	5	1 0	250	22·55	185
„ (The Parade).....	J. Barnitt, Esq. ....	5	0 8	195 A	19·91	158
Henley-in-Arden (Barrells Park)	T. H. G. Newton, Esq.	5	1 0	318 T	21·24	166
D Kenilworth (Park Hill).....	T. G. Hawley, Esq. ...	8	0 8	300	21·69	170
D „ (The Spring) .....	W. Evans, Esq. ....	5	1 0	312 A	20·81	168
D Rugby School.....	H. P. Highton, Esq....	5	1 3	383 T	20·99	150
Coventry (Ryton on Dunsmore) ..	Mr. Franklin .....	5	1 2	261 T	20·82	174
D „ (Priory Row) .....	J. Gulson, Esq. ....	8	1 3	279 A	22·98	171
„ (Stoke) .....	„ „ „ „ ..	8	1 3	241	22·22	174
D „ (Coundon) .....	Colonel Caldicott .....	8	1 11	375 T	23·09	170
D Birmingham (Sheldon Rectory) ..	Mrs. Jones Bateman ...	8	1 0	323	24·59	156
D† „ (Botanic Gardens) ..	Mr. Latham .....	5	5 2	505 T	23·30	162
D „ (The Crescent) .....	J. J. Gilbert, Esq.....	5	21 0	495 T	21·95	160
„ { „ „ } .....	M. „ „ „ „ ..	5	7 0	480 T	22·93	...
D Bedworth Cemetery .....	Mr. D. Bosworth .....	5	1 0	385 T	22·77	163
D Castle Bromwich Hall .....	Mr. E. Gibson .....	5	1 2	363 A	23·26	190
D Sutton Coldfield.....	C. F. Marston, Esq., C.E.	5	1 0	366 A	23·34	155
D Atherstone .....	Baldwin Latham Esq CE	5	1 0	286 T	19·42	165

## DIVISION VII.—NORTH MIDLAND COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which 101 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
<b>LEICESTER.</b>						
D Market Harborough (Fairlawn) ..	Mrs. Symington.....	8	4 0	324 T	19·40	160
Fleckney .....	J. B. Putt, Esq.....	5	1 0	411 T	22·04	...
D† Kibworth Beauchamp .....	T. Macaulay, Esq.....	5	2 6	355 T	21·36	160
D Leicester (Town Hall Square) ...	E. G. Mawbey, Esq., C.E.	9	1 7	212 T	19·03	157
„ ( „ „ ) .....	„ „ „ „ „ „	5	0 6	211 T	19·01	157
„ (Humberstone Asy.) n g	J. E. M. Finch, Esq., M.D	8	1 0	244 T	20·20	177
D† Thornton Reservoir .....	F. Griffith, Esq., C.E.	8	1 2	371 T	21·83	149
D Barkby .....	Rev. E. N. Pochin.....	8	0 4	221 T	22·84	176
D Thurcaston Rectory .....	Rev. T. A. Preston ...	5	1 0	253 T	19·32	158
D „ (Cropston) .....	F. Griffith, Esq., C.E.	8	1 0	246 T	22·63	177
Swithland .....	„ „ „ „ „ „	8	1 0	...	21·45	167
„ (The Brand) .....	„ „ „ „ „ „	8	1 0	...	24·03	171
„ (Broombriggs Hill)...	„ „ „ „ „ „	8	1 0	...	21·00	171
D Ratcliffe College.....	Rev. J. Hirst .....	5	1 0	288 T	20·33	171
D Rotherby Hall .....	J. Hames, Esq. ....	5	1 0	240 T	21·27	186
D Melton Mowbray (Thorpe Arnold)	Rev. J. S. Swift.....	8	2 3	336 T	22·34	137
D Loughborough (Nan Pantan Res.)	A. W. Cross, Esq., C.E.	8	2 11	269 T	21·12	167
„ ( „ „ ) M	„ „ „ „ „ „	8	2 0	269 T	21·03	...
D „ (Forest Road) ...	W. Berridge, Esq., C.E.	5	0 9	147 T	21·05	176
„ ( „ „ ) ...	„ „ „ „ „ „	8	1 0	147 T	21·02	176
D Waltham-le-Wolds .....	Captain Emmerson ...	5	1 0	568	26·05	175
D† Belvoir Castle .....	W. Ingram, Esq. ....	8	1 0	237 T	25·49	190
D Bottesford .....	Rev. R. M. Norman ...	8	0 8	100	18·49	110
<b>RUTLAND.</b>						
D Uppingham (West Deyne) .....	Rev. G. H. Mullins ...	8	1 6	485 T	21·09	169
D Ketton Hall [Stamford] .....	F. Coventry, Esq. ....	5	1 0	130 B	21·93	182
D Toilethorpe Hall [Stamford] .....	C. O. Eaton, Esq. ....	8	0 8	160 T	19·98	150
Burley-on-the-Hill .....	Mr. W. Temple .....	8	1 0	506	23·47	121
D Oakham (Greetham) .....	Rev. C. A. Holmes ...	5	0 4	377 T	22·58	139
D Market Overton .....	Miss H. E. G. Wingfield	8	0 11	475 T	23·29	183
<b>LINCOLN.</b>						
Stamford (Castle Cottage).....	T. Booth, Esq. ....	5	6 0	...	20·98	...
D „ (Northfields) .....	Mr. W. Hayes .....	5	1 0	166 T	23·00	110
D Market Deeping (Wilsthorpe) ...	J. C. Gill, Esq., C.E.	8	3 10	55 T	18·92	146
* Bourne (Wytham-on-the-Hill) ..	A. C. Johnson, Esq. ...	5	1 0	167 P	19·94	...
Long Sutton .....	Mr. J. Tilson .....	5	4 0	18	24·19	157
Spalding (Pode Hole) .....	Mr. W. Grigg .....	12	1 0	20 T	22·75	...
D Grantham (Stainby) .....	Rev. W. A. H. Thorold	4	0 9	...	22·40	127
D „ (Denton Manor) .....	Sir W. Welby Gregory Bt.	5	1 6	280 T	24·29	190
D „ (Little Ponton Rect.) ..	Rev. P. R. Worsley ...	5	1 0	...	25·91	202
„ (Saltersford) .....	H. Preston, Esq. ....	5	0 6	188 T	21·00	161
D „ (Guildhall) .....	J. Evans, Esq. ....	5	13 6	202 T	22·30	176
„ (Heydour Vicarage) ..	Rev. G. Deedes .....	5	1 10	244 T	21·99	...
Swineshead .....	The Meteor. Council ...	...	...	...	21·48	...
D Boston (Grand Sluice) .....	J. E. Williams, Esq., C.E	8	6 0	22	22·36	186
D „ .....	W. H. Wheeler, Esq., C.E	5	6 6	16 T	22·12	127

## 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	1892	
			ft. in.	feet.	inches.	
LINCOLN—(con.)						
D Sleaford (Ranceby Hall) .....	Col. Willson .....	5	0 6	125 T	22·10	115
Leake (Lade Bank Engines).....	J.E. Williams, Esq., C.E. ....	...	...	...	21·88	155
D Wrangle .....	A. Spurr, Esq. ....	5	1 0	10 T	26·85	186
D Stubton [Newark].....	G. Nevile, Esq. ....	5	4 6	94 T	23·73	135
Sleaford (Bloxholm) .....	Mr. D. Lumsden .....	5	3 0	80	22·45	135
D Navenby .....	Rev. J. Hays ...	8	1 2	216 T	24·84	195
Kirkstead .....	Mr. R. H. Brett.....	5	1 2	...	22·10	...
„ (Woodhall Spa) .....	C. J. Williams, Esq....	5	1 0	37 T	22·66	...
D Skegness .....	H. V. Tippet, Esq.....	8	1 6	7	24·64	121
Horncastle (Miningsby) .....	W.H. Wheeler, Esq. C.E. ....	5	0 6	135 T	24·90	125
D Spilsby .....	Dr. J. W. Walker.....	5	1 0	160 T	29·20	179
D „ (Boston Road) .....	Mr. J. J. Rainey .....	8	0 6	130 T	28·08	152
D „ (Hagworthingham) .....	Mr. R. Wright .....	5	1 1	252 T	29·13	187
D „ (Dalby Grange) .....	W. Wright, Esq. ....	5	2 0	200	29·41	187
D Horncastle (Bucknall) .....	W. Carter, Esq.....	5	1 0	100	22·37	133
„ (Queen Street) .....	H. George, Esq., M.D..	5	1 0	100	21·49	...
D Lincoln (Branston) .....	A.S. Leslie Melville, Esq. ....	5	1 0	120	28·45	155
D† „ (Boultham) .....	Mr. F. Terrill.....	5	1 0	18 T	28·90	146
D „ (Moorlands, Skellingthorpe) .....	Capt. Warrenner .....	5	1 2	27 T	27·65	152
† „ (St. Botolphs) .....	H. Teague, Esq.....	5	1 0	25 T	27·07	...
„ (St. Catherine's) .....	J. H. Teague, Esq.....	5	5 0	33 T	26·99	...
D „ (Doddington) .....	Rev. R. E. Cole .....	5	1 2	92 T	22·98	172
„ .....	M. S. & L. R. Co.† ..	9	3 6	26	23·10	145
„ (The Close) .....	The Royal Meteor. Soc. ....	8	1 0	174	25·78	212
„ (D'Isney Place) .....	A.H. Leslie Melville Esq. ....	4	1 0	215 L	25·49	141
D „ (Brayford Wharf) .....	Mr. J. W. Horton ..	5	5 8	28 T	25·69	194
„ (The Quarry) .....	R. Swan, Esq. ....	8	1 8	186 T	22·85	151
„ (Skellingthorpe Hall) .....	R. C. B. Coupland, Esq. ....	5	1 1	...	23·67	155
D Horncastle (Hemingby) .....	Rev. E. S. Bengough ..	5	1 0	158	28·18	178
D Alford (The Burial Ground).....	Mr. E. Hodgson.....	5	1 0	29 T	26·75	195
D Farforth (Maidenwell House) ..	Miss H. E. Browne ..	5	1 0	380 T	33·07	216
D Brattleby .....	Rev. J. H. White .....	8	1 1	84	21·28	156
Gate Burton .....	M. S. & L. R. Co. ....	9	3 6	96	22·25	133
D† Louth (Gospelgate) .....	T. W. Wallis, Esq. ....	5	6 0	111 T	32·10	180
† „ (Westgate) .....	Dr. F. Fawcett .....	5	0 9	120 T	31·93	157
„ (Water Works) .....	Mr. J. Harrison .....	5	1 0	100 T	29·23	...
D Market Rasen.....	Mr. W. B. Jevons .....	5	0 8	84	26·25	149
„ „ .....	M. S. & L. R. Co. ....	9	...	100	20·27	149
„ „ (Tealby) .....	The Meteor. Council ..	...	4 6	255	29·34	...
Gainsborough .....	M. S. & L. R. Co. ....	9	...	76	18·14	139
Stockwith .....	„ „ „ .....	9	3 6	21	20·30	172
D North Thoresby .....	Rev. H. Garrett.....	5	1 0	46 T	27·67	191
Caistor .....	Rev. R. Thomas .....	5	0 9	283 T	23·78	119
Brigg .....	M. S. & L. R. Co. ....	9	3 6	16	23·69	158
D „ .....	A. Atkinson, Esq., C.E. ....	8	1 2	10 T	25·54	177
D Grimsby (Aylesby) .....	S. McAulay, Esq. ....	5	1 6	...	24·29	169

† Kept for the Canals Department of the Manchester, Sheffield, and Lincolnshire Railway Company.  
Returns supplied by G. Taylor, 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	1892	
			ft. in.	feet.	inches.	
<b>LINCOLN—(con.)</b>						
Grimsby .....	M. S. & L. R. Co. ....	9	15 0	42	24·64	182
Barnetby.....	A. " " " " .....	9	3 6	51	24·24	141
N. Level Engine [Thorne Donc'st'r] .....	A. L. Peace, Esq., C.E. ....	5	2 3	...	20·76	157
Crowle (Keadby) .....	M. S. & L. R. Co. ....	9	...	10	20·52	162
Barton-on-Humber (Saxby Rec.) .....	Rev. R. Drummond Ash .....	5	2 6	...	26·72	176
Burton-on-Stather Vicarage .....	Rev. F. A. Jarvis .....	5	0 6	212 T	24·88	198
Ferriby Sluice .....	A. Atkinson, Esq., C.E. ....	5	1 0	18 T	23·40	113
New Holland .....	M. S. & L. R. Co. ....	9	3 6	18	22·04	170
<b>NOTTS.</b>						
Kingston Hall [Loughborough] .....	Mr. W. English.....	5	0 8	...	21·08	139
Plumtree (Normanton-on-Wolds) .....	T. A. Hill, Esq. ....	8	1 0	170 T	21·42	156
Cropwell Bishop (Cropwell Grove) .....	H. Smith, jun., Esq. ....	5	1 1	160 T	21·52	...
Bingham (Whatton Manor) .....	M. H. Hall, Esq. ....	5	1 5	101 T	21·16	124
Nottingham (Beeston Fields) ...	G. Fellows, Esq. ....	5	0 9	206 T	24·59	170
" (The Castle) .....	A. Brown, Esq., C.E. ....	8	1 2	192 T	21·58	154
" ( " " ) .....	" " " " " " .....	8	76 0	268 T	19·46	147
" (Stoke Bardolph Sew Fm) .....	Mr. J. Avis.....	8	6 7	80	20·81	158
" (Strelley Hall) .....	T. L. K. Edge, Esq. ...	8	1 0	396 T	27·83	183
" (Mapperley Hill) ...	E. Powell, Esq. ....	8	1 0	400 T	23·41	142
" ( " Hall) .....	Col. Ichabod Wright ...	5	1 0	325 T	24·70	166
" (Basford) .....	A. Brown, Esq., C.E. ....	...	0 10	170	20·71	164
" (Woodthorpe Grange) .....	H. Ashwell, Esq. ....	8	1 0	270	24·84	144
Nuttall .....	J. J. Taylor, Esq. ....	5	5 3	293	24·56	...
Bulwell (Springfield) .....	G. W. Walker, Esq. ...	5	0 9	166 T	25·81	...
Newark (Shelton Rectory) .....	Rev. R. W. Marriott ...	5	2 2	80 P	21·80	...
Bulwell (Bestwood) .....	A. Brown, Esq., C.E. ....	...	1 0	320	24·31	168
Eastwood Colliery .....	Mr. E. Lindley .....	5	1 0	245 T	24·98	165
Hucknall Torkard (Forge Mills) .....	J. D. Walker, Esq. ....	5	1 0	200 P	23·10	200
Southwell (Oxton Hall) .....	W. Sherbrooke, Esq. ...	5	0 9	182	26·99	...
Papplewick (Water Works) .....	A. Brown, Esq., C.E. ....	...	1 2	320	25·78	166
Southwell (Grants) .....	T. L. K. Edge, Esq. ...	5	1 0	97 T	24·69	166
Farnsfield .....	Dr. C. Wills .....	5	1 0	220 T	28·53	156
Mansfield (Forest Villa) .....	S. W. Wright, Esq. ...	5	3 0	450	27·51	...
" (Market Place) .....	Mr. P. J. Shacklock ...	5	1 0	350	29·51	198
Ollerton (Thoresby Gardens) ...	Mr. A. Henderson .....	8	0 10	175	27·06	144
Worksop .....	M. S. & L. R. Co. ....	9	3 6	127	20·92	160
" (Osberton Gardens) .....	S. A. Woods, Esq. ....	5	4 0	70	21·77	156
Retford .....	M. S. & L. R. Co. ....	9	3 6	52	20·72	173
" (Babworth Hall) .....	Col. Denison .....	5	0 6	92 T	21·62	143
" (W. Retford House) .....	Mrs. Overend .....	5	1 0	...	20·41	134
Worksop (Gateford) .....	A. V. Machin, Esq. ....	8	1 4	164	23·46	166
" (Hodsock Priory) .....	H. Mellish, Esq. ....	8	1 0	56 T	22·22	168
" ( " " ) .....	" " " " " " .....	5	1 0	56 T	21·64	...
The Gardens [Bawtry Hall] ...	L. T. Baines, Esq. ....	5	1 0	31 T	22·73	106
Hesley Hall [Tickhill] .....	B. I. Whitaker, Esq. ....	8	0 11	61 T	21·31	166

## 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	1892	
DERBY.						
D Stapenhill [Burton] .....	late R. W. Abbotts, Esq.	5	4 0	170	21.36	185
D " [ " ] .....	A. J. Brown, Esq. ....	5	1 0	...	23.68	...
D Bretby Park [ " ] .....	Mr. J. Read .....	5	4 0	405 T	23.66	147
D Melbourne (The Grange) .....	Miss Tasker .....	5	0 3	...	24.99	171
D " Vicarage .....	Rev. Canon Singleton ..	5	2 0	...	24.08	168
D " .....	Mr. W. Garratt .....	5	1 0	182 T	21.56	...
D Willington .....	Rev. G. A. Smallwood	5	1 0	150 T	21.31	161
Derby (Findern) .....	Rev. B. W. Spilsbury..	5	0 9	186 T	21.32	...
D " (Etwall) .....	Mr. R. Giles .....	5	1 0	...	20.86	150
D " (Elvaston) .....	H. Chambers, jun. Esq	5	1 0	...	19.90	165
Mickleover Manor .....	Mr. J. Campbell .....	5	2 0	280	23.19	...
D Derby (All Saints' Works) .....	Messrs. J. Davis & Son	5	1 0	174	23.90	169
D " (Midland Railway) .....	W. Langdon, Esq. ....	5	1 5	156 T	23.34	176
D " (Holmside, Hazelwood) ...	C. H. B. Hambly, Esq.	5	1 3	500 T	28.09	193
D " (Breadsall Lodge) .....	W. B. Woodforde, Esq	5	1 3	280 T	22.36	170
Belper (Chevin, Hazelwood) .....	Sir J. G. N. Alleyne, Bart.	5	4 0	545	26.00	153
D " (Northfield) .....	J. Hunter, Esq., C.E. ...	8	0 8	244 T	30.22	184
D Matlock (The Gables) .....	R. Wildgoose, Esq. ...	5	1 0	459 T	33.09	162
† " Bath .....	Mrs. Chadwick .....	5	1 6	500 T	25.23	...
D " (North Darley) .....	A. Clay, Esq. ....	5	1 0	400 T	34.34	200
D Stretton (Lindway Res.) .....	Mr. Peers .....	5	4 3	447 T	19.07	131
D Stuffynwood Hall [Mansfield] ..	J. Paget, Esq. ....	5	1 3	389 T	25.90	180
Chesterfield (Hardwick Hall) ...	Mr. Wilson .....	8	2 6	594 T	30.53	167
D Chatsworth Gardens .....	W. Chester, Esq. ....	8	5 9	404 T	33.32	191
D Chesterfield (Gas Works) .....	C. E. Jones, Esq., C.E.	5	1 0	279	26.97	166
D " .....	M. S. & L. R. Co. ....	9	3 6	248	25.44	154
D " (Linacre Reservoir) ..	C. E. Jones, Esq., C.E.	8	3 6	490 T	26.24	154
D " (Tapton Grove) .....	M. F. Mills, Esq. ....	5	2 6	400	25.75	105
Brimington .....	G. Bond, Esq. ....	5	3 0	400	25.62	...
† Buxton (Devonshire Hospital) ...	F. H. Bowden, Esq. ...	5	1 0	986 T	51.58	213
Stony Middleton .....	Mr. Wadlow .....	5	4 0	660	34.47	179
† Comb's Moss .....	M. S. & L. R. Co. ....	9	3 6	1669 T	34.56	...
† " Reservoir .....	" " " .....	9	3 6	710 T	36.52	210
† Chapel-en-le-Frith .....	" " " .....	9	3 6	965 T	35.55	214
† Killamarsh (Norwood) .....	" " " .....	9	3 6	238 T	23.75	175
Norton [Sheffield] .....	Col. Creswick .....	6	0 9	700 T	34.27	197
Hathersage (Bamford) .....	W. C. Moore, Esq. ...	5	1 0	530 T	30.23	...
† Glossop (Spire Hollin) .....	F. Hawke, Esq. ....	8	0 10	612 T	45.92	...
Woodhead Station .....	M. S. & L. R. Co. ....	9	3 6	878 T	47.22	223

## DIVISION VIII.—NORTH WESTERN COUNTIES.

## CHESHIRE.

D Baddiley (Nantwich W. W.) ...	Baldwin Latham Esq CE	5	1 0	231	30.41	151
D Nantwich (Dorfold Hall) .....	J. A. Saner, Esq., C.E.	8	1 6	190	31.42	165
Crewe .....	G. Eaton-Shore, Esq., CE	12	30 8	209 T	30.73	141
Eccleston .....	E. Wells, Esq. ....	5	1 1	94 T	32.66	190

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

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which -01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
CHESHIRE—(con.)						
D Congleton (Buglawton Vic.).....	Rev. W. Besant.....	8	5 0	347 T	30·29	164
Bosley Reservoir .....	M. S. & L. R. Co. ....	9	3 6	590 T	29·76	196
„ Minns .....	„ „ „ .....	9	3 6	1210 T	28·17	215
Macclesfield (Wincle) .....	E. B. Smith, Esq., C.E. 5	3	0	500	35·87	176
D Chester (Rowton Grange) .....	T. R. Fleming, Esq. ... 5	1	0	100 T	33·03	190
D „ (Christleton Hall) .....	Mr. T. Weaver .....	5	1 2	142 T	33·51	190
D „ (Waterworks) .....	A. Bell, Esq. ....	5	0 10	85 T	31·98	190
„ (Northgate Station).....	M. S. & L. R. Co. ....	9	3 6	84 T	31·20	156
D† „ (The Nurseries) .....	Messrs. Dicksons, Lim. 5	1	0	62 T	33·61	190
D „ (Hoole Lodge) .....	Mrs. Hamersley.....	5	1 4	108 T	31·30	160
Middlewich (Bostock Hall) .....	Col. France Hayhurst.. 5	2	0	157 T	33·02	146
D Macclesfield (The Park) .....	Mr. J. Dale.....	5	1 0	501 T	35·43	189
D Chelford (Astle Hall) .....	G. Dixon, Esq. ....	5	1 0	250 T	30·52	147
„ ( „ „ ) .....	M „ „ „ „ .....	8	1 0	250 T	30·83	...
Northwich .....	M. S. & L. R. Co. ....	9	3 6	76 T	30·34	161
D „ (Highfield) .....	J. A. Saner, Esq., C.E.. 8	3	4	118 T	34·35	200
D „ (Winnington).....	Messrs. Brunner Mond & Co. 5	3	8	110 T	30·63	238
„ (Wincham Hall) ...	H. Neumann, Esq. ....	8	2 0	120 T	33·70	187
D Macclesfield (Swanscoe Park) ...	T. C. Horsfall, Esq. ... 5	1	0	676 T	37·77	213
D* Neston (Hinderton) ..	Reginald Bushell, Esq. 5	1	0	215 T	33·05	201
* „ { „ } .....	M „ „ „ „ .....	8	1 0	215 T	33·00	...
* „ { „ Lodge } .....	M „ „ „ „ .....	5	1 0	145 T	32·13	...
Frodsham (Fox Hill).....	J. Reynolds, Esq. ....	5	0 10	330 T	31·87	181
D „ (Dunsdale) .....	J. Simpson, Esq. ....	5	1 1	206	33·07	189
D Knutsford (Heath Side) .....	W. Tyrer, Esq. ....	5	1 0	210	34·00	219
Bollington (Spond's Hill).....	M. S. & L. R. Co. ....	9	3 6	1279 T	35·12	...
Wilmslow (Southside) .....	G. Pearson, Esq. ....	8	1 0	255 T	32·45	171
„ (Poplar House).....	J. Holden, Esq. ....	5	1 0	237 T	30·81	181
† Whaley .....	M. S. & L. R. Co. ....	9	3 6	602 T	43·72	217
D Runcorn (Weston Point) .....	J. A. Saner, Esq., C.E. 4	2	4	18	29·47	171
D West Kirby (Greenfield) .....	H. Bell, Esq. ....	5	1 0	75 T	30·36	204
Hill Cliffe [Warrington] .....	J. Marson, Esq. ....	5	1 0	159 T	35·97	198
Bowdon (The Firs).....	R. Swindells, Esq., C.E. 5	0	8	215 T	32·51	...
D „ (Erlesdene) .....	E. J. Sidebotham, Esq. 5	1	0	211 T	28·26	197
D Thelwall (Highfields) .....	T. G. Rylands, Esq. ... 5	1	0	118 T	31·47	196
„ { „ } .....	M „ „ „ „ .....	5	1 0	118 T	31·34	...
D „ (Millington House) new g L. W. Reynolds, Esq. 5	1	0	85 T	34·57	187	
Altrincham (Norman's Place) ...	A. Griffiths, Esq. ....	5	1 0	150 T	35·30	171
„ (Barrington House). J. Newton, Esq., C.E. 8	3	0	105	34·85	...	
D Cheadle (Harthill).....	R. A. Grundy, Esq. ... 5	1	0	142 T	33·78	176
Hoylake (The Chase East) .....	J. F. Leigh Clare, Esq. 5	1	0	29 T	27·03	196
† Birkenhead (Bidston Obs.) ....	W. E. Plummer, Esq. . 8	1	0	189 T	33·03	211
D Northenden (Wythenshawe).....	T. E. Tatton, Esq. ... 5	1	0	114 T	33·26	177
Marple Top Lock ...	M. S. & L. R. Co. ....	9	3 6	543 T	39·36	198
„ Aqueduct .....	„ „ „ „ .....	9	3 6	321 T	34·80	189
New Brighton (Stanley Rock) ...	A. C. Abraham, Esq. ... 5	1	0	130 B	31·05	195
Godley Reservoir .....	G. H. Hill, Esq., C.E.. 12	...	...	500	34·77	...
Newton .....	M. S. & L. R. Co. ....	9	3 6	396 T	34·82	174

## 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	1892	
<b>CHESHIRE—(con.)</b>						
Mottram (Hill End) .....	M. S. & L. R. Co. ....	9	3 6	680 T	39·81	195
" (Matley's Field) .....	" " " " .....	9	3 6	399 T	38·49	194
D Hadfield (Millbrook) .....	J. Sidebottom, Esq. ....	12	3 10	442 T	43·49	205
D " ( " ) .....	" " " " .....	8	3 10	442 T	42·83	205
Arnfield Reservoir .....	G. H. Hill, Esq., C.E. ....	12	2 6	550	44·14	...
†Rhodes Wood Reservoir .....	" " " " .....	12	1 0	520	47·99	...
†Torrside Reservoir .....	" " " " .....	12	1 6	680	47·12	...
Staleybridge (Swineshaw) .....	" " " " .....	8	3 0	884 T	62·05	...
†Woodhead Reservoir .....	" " " " .....	12	0 10	660	50·49	...
<b>LANCASHIRE.</b>						
D Garston (Grassendale Park) .....	Miss E. C. Abraham ...	5	1 0	35 T	38·38	202
D Aigburth (Kelton) .....	J. Sing, Esq. ....	5	1 0	150 T	37·30	199
D " (Holmfield) .....	Miss Maxwell .....	5	1 0	100 T	37·66	198
D Warrington (Howley) .....	T. Longdin, Esq. ....	10	0 10	19 T	35·46	201
" (Cemetery) .....	M. " " " .....	10	1 0	32	34·97	...
D " (Training College) ..	Miss Feniman .....	8	0 9	34 T	31·81	186
" (Central Station) ...	M. S. & L. R. Co. ....	9	3 6	59 T	32·95	175
Liverpool (Grove Park) .....	J. R. Darsie, Esq. ....	3	6 0	160	35·25	183
D " (Hope Street) .....	G. Jevons, Esq. ....	5	1 0	150	36·84	203
" (Huskinson Station) ...	M. S. & L. R. Co. ....	9	3 6	40 T	35·39	202
D Heaton Moor [Stockport] new g.	F. W. Jordan, Esq. ....	5	1 0	235	35·53	216
D Manchester (Withington) No. 2	J. King, jun., Esq. ....	5	1 3	110 T	33·57	195
D " ( " ) No. 3	" " " " .....	8	1 6	110 T	33·04	195
D " (Stretford) .....	H. Royle, Esq., C.E. ....	5	1 0	86 T	35·58	193
D " ( " ) .....	A. E. Barker, Esq. ....	5	7 10	...	32·26	193
" (Lady Barn, Fallowfield)	Miss C. Herford .....	5	1 0	122 T	35·90	...
D St. Helens (Eccleston Hill) .....	D. M. Gaskin, Esq., C.E. ....	12	2 9	268	34·84	182
Denton Reservoir .....	G. H. Hill, Esq., C.E. ....	...	...	324 T	34·48	...
Gorton .....	" " " " .....	...	...	263 T	33·73	...
D Manchester (Plymouth Grove) ..	J. F. Roberts, Esq. ....	5	4 2	150 T	34·93	185
† " (Piccadilly) .....	M. S. & L. R. Co. ....	9	40 0	194 T	31·93	149
" (Fairfield) .....	" " " " .....	9	6 0	312 T	39·70	202
D " (Oldham Road) .....	Dr. Tatham .....	5	1 0	191 T	38·55	198
" (Alexandra Park) ...	J. Casartelli, Esq. ....	8	3 0	100 T	34·69	187
Eccles (Worsley Hall) .....	Mr. W. B. Upjohn .....	8	8 6	80 L	33·80	161
Blundellsands (Park Corner) ...	T. M. Reade, Esq. C.E. ....	5	1 0	33 T	32·52	...
D Manchester (Newton Heath) .....	J. Warren, Esq. ....	5	1 0	275 T	42·50	198
D " (Cheetham Hill) .....	W. B. Worthington, Esq. ....	5	0 11	255	39·35	201
Ashton (Waterhouses) .....	M. S. & L. R. Co. ....	9	3 6	345 T	37·97	203
Prestwich Asylum .....	The Meteor. Council ...	8	1 0	295	42·42	211
" Reservoir .....	G. H. Hill, Esq., C.E. ....	...	...	356 T	39·28	...
†Oldham (Gas Works) .....	" " " " .....	5	4 0	600 T	40·09	...
" (Honeywell Lane) .....	M. S. & L. R. Co. ....	8	...	553	42·53	179
" (Brushes Clough) .....	G. H. Hill, Esq., C.E. ....	5	4 0	930 T	43·76	...
" ( " ) New g	" " " " .....	5	5 0	955 T	39·98	...
Ormskirk (Aughton Springs) ...	G. Cooke, Esq. ....	5	0 6	150	34·73	...
D Wigan Waterworks .....	W. Bolton, Esq. ....	8	1 6	225 T	37·86	201

## 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	1892		
			ft.	in.			feet.
LANCASHIRE—(con.)							
D Bolton (The Park) .....	W. W. Midgley, Esq..	5	1	0	390 T	40.08	202
„ (Heaton) .....	RHSwindlehurstEsqCE	6	1	3	500	41.60	226
D „ (Ash Lawn, Heaton). ...	F. Taylor, Esq. ....	5	1	0	406	49.08	225
D „ (Hurst Bank „ ) ...	J. Watkins, Esq. ....	5	3	10	442 T	46.75	214
D „ (Moss Bank) .....	R. H. Ainsworth, Esq..	6	1	6	575 T	49.59	184
D „ (Smithills Hall) .....	„ „ „ „	8	1	2	507 T	47.31	168
Bury (Gin Hall) .....	T. Rigby, Esq. ....	8	1	0	475	45.29	160
† Milnrow (Piethorne, Kiteliff) ...	G. H. Hill, Esq., C.E.	5	4	0	767 T	35.34	...
„ ( „ Coldgreave) .....	„ „ „ „	5	4	2	894 T	38.37	...
Rochdale (Deeplish Hill) .....	J. H. Lancashire, Esq.	5	1	0	475 T	43.62	217
D „ (Park Observatory) ...	Dr. Henry .....	8	0	6	472	45.38	217
D „ (Fieldhead) .....	S. S. Platt, Esq., C.E..	8	12	0	484 T	45.20	197
D Ormskirk (Rufford) .....	J. Porter, Esq. ....	5	0	8	38 T	35.01	202
Bolton (Belmont) .....	RHSwindlehurstEsqCE	6	0	9	800	57.10	227
D Southport (Birkdale).....	J. Baxendell, Esq.....	5	1	0	29 T	33.90	203
„ ( „ ).....M	„ „ „ „	5	1	0	29 T	33.60	...
Rochdale (Nayden Dean) .....	J. Diggle, Esq. ....	5	1	3	948 T	43.43	...
D† „ (Facit) .....	T. S. Smithson, Esq....	5	0	6	855 T	54.48	217
Southport (Hesketh Park) newg.	J. Baxendell, Esq. ...	5	1	0	22 T	34.35	...
„ (Lord Street Station). ..	M. S. & L. R. Co. ....	9	...		21 T	30.19	161
Entwistle .....	RHSwindlehurstEsqCE	7	1	0	700	50.20	234
Blackstone Edge (Hollingworth)	Rochdale Canal Compy†	10	1	5	600	36.70	...
† „ „ (Windy Bank) .....	„ „ „ „	10	1	6	600	41.50	...
† „ „ „ „	„ „ „ „	10	1	9	1225	35.60	...
† „ „ (Canal Summit) .....	„ „ „ „	10	1	10	700	36.40	...
† „ „ (Chelbourn) ...	„ „ „ „	10	1	3	800	37.80	...
„ „ (Lenches) .....	„ „ „ „	10	1	10	800	46.70	...
† „ „ (Calf Lee).....	„ „ „ „	10	1	6	960	38.10	...
D Chorley (Crooke Hall) .....	Carlton Cross, Esq. ...	5	2	6	265 T	40.48	173
„ (Whittle le Woods Vic.)	Rev. W. B. Jacques ...	5	1	0	...	39.68	186
Haslingden (Holden Wood) .....	T. Rigby, Esq. ....	8	1	0	670	46.83	160
„ (Calf Hey).....	„ „ „ „	8	1	0	800	44.10	160
Over Darwen (Sunnyhurst Hey).	W. Stubbs, Esq., C.E..	8	1	8	915 T	39.64	201
„ „ (Earnsdale Res.)...	„ „ „ „	8	1	8	705 T	46.61	201
D „ „ (St. James's Vic.) ..	Rev. W. H. Blamire ...	5	1	0	564 T	46.78	205
„ „ (Hoddlesden Res.) ..	J. B. McCallum Esq., C.E	8	4	0	680	48.97	188
„ „ (Daisy Green) No.1 ..	„ „ „ „	8	1	0	969	48.93	189
„ „ „ „ No.2 .....	„ „ „ „	8	1	0	969	47.18	189
„ „ (Pickup Bank) No.1 ..	„ „ „ „	8	1	0	720	45.06	189
D Todmorden (Water Works) No. 1	J. Radcliffe, Esq. ....	8	1	0	980 T	52.37	237
D „ „ „ „ No. 2 .....	„ „ „ „	5	1	0	1326 T	49.17	226
Blackburn (Guide Reservoir) ...	J. B. McCallum, Esq. C.E	8	1	0	650	38.90	191
„ (Pleasington) .....	„ „ „ „	8	2	6	232 T	43.02	...
„ (Witton) .....	„ „ „ „	8	2	6	315 T	40.73	190
„ (Store Yard) .....	„ „ „ „	8	30	0	373 T	33.63	154
„ (Water Works Office)	„ „ „ „	8	60	0	436 T	29.22	174
„ (Pumping Station) ...	„ „ „ „	8	6	0	600 T	40.93	157

† Returns supplied by C. R. Dykes. Esq.



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

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which 01 or more fell.	
		Diameter	Height above Ground.	Height above Sea Level			
LANCASHIRE—(con.)							
Accrington (Milnshaw Grounds).	Mr. Hargreaves.....	5	1 6	464 $\nabla$	37.98	182	
D Preston (Corporation Offices) ...	H. Reah, Esq. ....	8	16 0	123	35.75	174	
† Rawtenstall (Clough Bridge Res.)	T. Rigby, Esq. ....	8	1 0	900 $\nabla$	46.51	160	
Burnley Waterworks	† Causeway Side .....	8	2 0	1116	39.93	...	
	† Sheddin .....	8	2 0	960	41.00	...	
	† Cant Clough, S. Side .....	8	2 0	900	41.29	210	
	† „ „ N. Side .....	8	2 0	900	38.83	208	
	† Rams Clough Head .....	8	2 0	1260	37.26	...	
Huncoat (Burnley Road Res.) ...	C. Harrison, Esq. ....	9	1 6	620 $\nabla$	39.81	194	
Clayton-le-Moors (Oakenshaw) ..	J. H. Calvert, Esq. ...	5	9 6	290 $\nabla$	41.47	...	
† Burnley (Yorkshire Street) .....	W. Williamson, Esq. ...	8	30 0	420 $\nabla$	41.87	207	
† „ (Swinden, Upper) .....	„ „ „ .....	8	12 0	820 $\nabla$	42.00	209	
† „ ( „ Lower) .....	„ „ „ .....	8	2 0	745 $\nabla$	43.87	209	
† „ (Extwistle Moor) .....	„ „ „ .....	8	2 0	1310 $\nabla$	40.41	...	
D Preston (Haighton) .....	J. J. Myres, Esq., C.E.	5	1 2	255 $\nabla$	38.12	192	
Alston .....	H. Reah, Esq. ....	8	1 2	320 $\nabla$	38.70	...	
Kirkham (Weeton) .....	C. Arthur, Esq. ....	10	1 0	95 $\nabla$	37.15	...	
Blackpool .....	The Royal Meteor. Soc.	...	...	...	35.93	183	
D Barton (Anderton Fold) .....	W. H. Mason, Esq. ...	5	0 6	90 $\nabla$	37.47	196	
Nelson (Coldwell Reservoir) .....	J. Newton, Esq., C.E.	8	2 0	950	31.45	...	
D Eccleston (Elswick Lodge) <i>old g.</i>	S. King, Esq. ....	10	1 4	50 $\nabla$	34.16	197	
„ ( „ „ ) Field .....	„ „ „ .....	5	1 0	50 $\nabla$	36.88	...	
„ ( „ „ ) „ .....	„ „ „ .....	5	6 0	56 $\nabla$	35.17	...	
Stonyhurst College .....	Rev. W. Sidgreaves ...	11	1 0	376 $\nabla$	48.70	198	
D „ „ „ .....	„ „ „ .....	11	2 0	377 $\nabla$	48.30	198	
„ „ „ .....	M „ „ „ .....	11	1 0	376 $\nabla$	48.18	...	
Preston W. Works.	{ Knowle Green .....	M	8	1 2	400 $\nabla$	37.05	...
	{ Loud-scales .....	M	8	1 2	400 $\nabla$	43.10	...
	{ Spade Mill .....	M	8	1 2	400 $\nabla$	39.05	...
	{ Jeffrey Hill .....	M	8	1 2	900 $\nabla$	45.80	...
D St. Michael's-on-Wyre Vic. No. 3	Rev. P. J. Hornby ....	5	1 0	26 $\nabla$	37.20	203	
D Beaton Fell (Barnsfold Res.) ...	J. J. Myres, Esq., C.E.	5	1 6	506 $\nabla$	39.15	199	
„ ( „ „ ) M .....	„ „ „ .....	5	1 6	506 $\nabla$	39.41	...	
D Garstang (Calder Mount) .....	Sydney Wilson .....	5	10 0	110 $\nabla$	34.47	181	
„ ( „ „ ) M .....	„ „ „ .....	5	0 6	71 $\nabla$	36.95	...	
Clitheroe (Downham Hall) .....	R. Assheton, Esq. ....	10	1 6	464 $\nabla$	41.48	..	
Chatburn (Middlewood) .....	W. K. Wilkinson, Esq.	5	1 3	363 $\nabla$	42.24	133	
Garstang (Barnacre Reservoir) ...	C. Arthur, Esq. ....	10	1 0	617 $\nabla$	47.46	...	
„ (Grizedale Reservoir) ..	„ „ „ .....	10	1 0	519 $\nabla$	45.98	...	
Wyresdale (Abbeystead) .....	J. Cook, Esq., C.E. ...	8	1 0	366 $\nabla$	48.19	167	
Quernmore (Old Gauge Basin) M	„ „ „ .....	8	1 0	963 $\nabla$	44.95	...	
Wyresdale (Wardstone) .....	„ „ „ .....	8	1 0	1440 $\nabla$	45.20	...	
Quernmore (Brow Top) .....	„ „ „ .....	8	1 0	552 $\nabla$	41.61	148	
D Heysham .....	Mr. Lomas .....	5	3 6	96	41.28	207	
Lancaster (Marton Street Yard).	J. Cook, Esq., C.E. ...	8	1 9	70 $\nabla$	41.96	182	
„ (Escowbeck, Caton) ...	A. Greg, Esq. ....	10	3 0	150 $\nabla$	44.13	183	
D „ (Overton Vicarage) ...	Rev. W. J. Locke .....	5	1 0	65 $\nabla$	34.59	184	
Hest Bank .....	T. Ransome, Esq. ....	5	2 0	58 $\nabla$	37.49	171	

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

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which 91 or more fell.
		Diameter	Height Above Ground.	Height Above Sea level	1892	
					ft. in.	
LANCASHIRE—(con.)						
D Wray Vicarage .....	Rev. C. L. Reynolds...	5	1 0	165 T	46·12	202
Melling (Hornby Castle) .....	Col. Foster .....	8	1 8	100	43·87	139
Barrow-in-Furness .....	W. Fergusson, Esq. ...	11	1 6	36 T	37·65	193
Arkholme (Storrs Hall) .....	F. F. Pearson, Esq. ...	5	1 0	220	50·63	...
D Ulverston (Urswick) .....	Rev. R. B. Billinge ...	5	0 6	...	44·79	204
†Cartmel (Holker) .....	Mr. W. Fox .....	8	4 8	155 T	45·76	205
Grange (Kents Bank House) ...	Eli Milnes, Esq. ....	5	1 0	20 T	44·97	168
D†Ulverston (Poaka Beck) . . . . .	Mr. W. Fergusson.....	11	1 6	512 T	53·66	217
D Cartmel (Pit Farm) .....	Mr. W. R. Nash .....	5	1 0	122 T	48·84	220
„ (Broughton Hall) .....	Col. Ainsworth .....	5	2 8	210 T	50·22	211
D Ulverston (Colton) .....	Rev. A. Christopherson	5	1 0	226 T	58·75	202
D Broughton-in-Furness .....	Rev. F. A. Malleeson ...	5	1 3	40	61·54	161
D Blawith .....	Rev. J. Ashburner.....	5	0 10	185 T	60·86	195
Hawkshead (Grizedale Hall) ...	W.G.Ainslie, Esq., M.P.	5	1 0	325	66·39	201
D „ (Esthwaite Lodge).....	Major Alcock-Beck ...	5	3 6	232 T	71·56	216
„ „ ( „ Strickland Ease)M	„ „ „ „ .....	5	3 6	254 T	62·33	...
D†Duddon Valley (Seathwaite Vic.)	Rev. S. R. M. Walker	5	1 0	330 T	80·99	210
D†Monk Coniston Park .....	Mr. Etty... ..	5	1 4	305 T	84·99	213
Hawkshead (Black Fell) .....	M S. A. Marshall, Esq....	5	1 6	1055 T	63·90	...
D Skelwith Fold [Ambleside] .....	„ „ „ „ .....	5	1 0	333	81·60	240
„ „ [ „ „ ] .....	M „ „ „ „ .....	5	1 0	333	80·36	...

## DIVISION IX.—YORKSHIRE.

## WEST RIDING.

†Sheffield (Brincliffe Rise) .....	A. W. Chadburn, Esq.	5	1 0	500 T	31·78	153
† „ ( „ Edge) .....	M. S. & L. R. Co. ....	9	3 6	336 T	30·84	157
† „ (Redmires) .....	E. M. Eaton, Esq., C.E.	10	5 0	1110 T	39·70	200
„ „ ( „ ) .....	„ „ „ „ .....	8	4 0	1110 T	39·79	...
„ „ (Tylecote, Ranmoor) ...	J. Dixon, Esq. ....	5	1 0	610 T	35·27	155
† „ „ (Broomhall Park) .....	D. Doncaster, Esq.....	10	2 0	330 T	30·22	170
„ „ (Rivelin) .....	E. M. Eaton, Esq., C.E.	10	4 0	564 T	35·71	190
„ „ ( „ ) .....	„ „ „ „ .....	8	4 0	564 T	35·62	..
† „ „ (Crookes) .....	„ „ „ „ .....	10	2 0	629 T	29·68	166
† „ „ ( „ ) .....	„ „ „ „ .....	8	2 0	629 T	29·69	...
„ „ (Weston Park) .....	E. Howarth, Esq. ....	8	1 0	430 T	34·06	182
† „ „ (Victoria Station) .....	M. S. & L. R. Co. ....	9	3 6	188 T	22·99	160
† „ „ (Tinsley Locks) .....	„ „ „ „ .....	9	...	143 T	24·57	141
„ Tickhill (Sandbeck Park) ...	Mr. G. Summers.....	8	1 0	150 T	23·56	166
†Rotherham (Moorgate Grove) ...	R. Chrimes, Esq. ....	5	1 0	262 T	26·99	188
„ „ (Thrybergh) .....	W.H.Crabtree, Esq. C.E.	8	1 0	184 T	25·28	173
„ Tickhill .....	G. G. Phillips, Esq. ...	8	1 0	61 T	22·72	174
„ Sheffield (Chapelton) .....	Mr. D. Bell.....	8	5 0	582 T	29·51	190
„ Doncaster (Firsby) .....	W.H.Crabtree, Esq. C.E	8	1 3	189 T	26·71	176
„ „ (Wadworth Hall) .....	Rev. J. C. Ross .....	8	1 0	190 T	23·60	172
„ „ ( „ „ ) .....	„ „ „ „ .....	5	1 0	190 T	23·54	172
„ Bolsterstone (Waldershaigh) ...	C. M. Wilson, Esq.....	8	3 1	950 T	32·29	208

## 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	1892	
			ft. in.	feet.	inches.	
WEST RIDING—(con.)						
Wortley .....	M. S. & L. R. Co. ....	9	...	548	31·00	156
Elsecar .....	" " " .....	9	...	175 T	24·97	149
D Wath-upon-Dearne (Chapel St.)	Dr. Burman .....	8	1 0	185 T	25·38	172
D " (West Melton)	W. Jackson, Esq. ....	6	0 10	172 T	23·20	115
Worsborough .....	M. S. & L. R. Co. ....	9	...	225 T	26·43	155
D Stainborough (Wentworth Castle)	W. Fisher, Esq. ....	8	2 6	520 T	29·29	163
Doncaster .....	M. S. & L. R. Co. ....	9	...	35 T	22·78	154
" (Pumping Station) ..	WHR. Crabtree, Esq. CE	8	0 6	30 T	22·51	125
D " (Magdalens) .....	Mr. C. Parkin .....	5	4 9	46 T	23·03	154
† Dunford Bridge Station .....	M. S. & L. R. Co. ....	9	3 6	954 T	53·39	184
† " (Reservoir) .....	G. H. Hill, Esq., C.E..	12	2 0	1100 T	47·55	...
Greenfield (Chew Mount) .....	" " " .....	...	...	...	55·40	...
" (Yeoman Hey) .....	" " " .....	...	...	759	54·50	...
† Penistone (Carlcotes) .....	M. S. & L. R. Co. ....	9	3 6	1075 T	38·10	203
† " .....	" " " .....	9	3 6	717 T	33·31	177
" (Hazlehead) .....	" " " .....	9	...	868 T	41·33	148
" (Ingbirchworth Res.) ..	J. H. Taylor, Esq. C.E.	8	1 3	853 T	38·75	181
D Holmbridge (Yateholme) .....	O. J. Kirby, Esq., C.E.	7	1 0	861 T	59·60	143
" (Holme Styes) .....	Mr. L. Hinchliffe .....	7	2 0	830 T	48·40	...
" (Boshaw Whams) ...	" " " .....	7	2 6	930 T	52·10	...
" (Bilberry Reservoir) ..	" " " .....	7	2 6	820 T	57·90	...
D Barnsley (Church Street) .....	Dr. Sadler .....	5	5 2	350 T	26·76	175
D " (Wellington Street) ...	J. H. Taylor, Esq., C.E.	8	15 0	350	27·89	158
" .....	M. S. & L. R. Co. ....	9	...	175 T	23·23	165
† Saddleworth Station .....	M. L. K. Jones, Esq. ....	5	4 2	630 T	42·36	...
Barnsley (Cawthorne) .....	Rev. C. T. Pratt .....	5	1 6	340 T	30·02	135
Strinesdale [Oldham] .....	G. H. Hill, Esq., C.E..	5	4 0	815	34·18	...
† Meltham (Harden Moss) .....	J. W. Schofield, Esq. ....	8	1 2	1212 T	45·44	...
" " " ) new g.	" " " .....	8	1 0	1212 T	47·38	...
Wessenden Head .....	" " " .....	8	1 0	1270 T	52·87	...
" (Holly Bank Moss) ...	" " " .....	8	1 0	1360 T	28·15	...
" (Great Butterley) ...	" " " .....	8	1 0	1110 T	35·46	...
" (Bobus) .....	" " " .....	8	1 0	1200 T	33·98	...
Standedge (Castleshaw) .....	G. H. Hill, Esq. C.E..	...	...	876 T	42·55	...
" (Redbrook Res.) new g.	L. K. Jones, Esq. ....	8	1 6	1150	44·60	...
† Meltham (Brow Grains) .....	J. W. Schofield, Esq. ....	8	1 0	900 T	47·06	...
Denshaw (Ox Hey) .....	G. H. Hill, Esq., C.E..	...	...	1030	41·06	...
" (New Year's Bridge) ...	" " " .....	5	4 0	1012 T	42·66	...
" (Ready Con Dean) .....	" " " .....	...	...	1414	38·16	...
Meltham (Royd Edge) .....	C. L. Brook, Esq. ....	8	1 0	585 T	50·27	...
D " (Harewood Lodge) new g.	" " " .....	8	1 0	510 T	44·48	208
† " Grange .....	J. W. Schofield, Esq. ....	8	1 2	850 T	38·72	...
† Marsden (Deer Hill) .....	" " " .....	8	1 0	1149 T	42·25	...
" " ) new g.	" " " .....	8	1 0	1149 T	42·55	...
D Doncaster (Kirk Bramwith) .....	B. S. Brundell, Esq. C.E.	5	1 0	17 T	22·63	179
D " (Owston) .....	H. Ripley, Esq. ....	8	1 0	55 T	23·83	168
D " (Burghwallis Rec.) ...	Rev. F. W. Peel .....	5	1 6	86 T	24·45	183
" ( " " ) M	" " " .....	5	1 6	86 T	23·78	...

## DIVISION IX.—YORKSHIRE—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which 1/2 or more fell
		Diameter	Height Above Ground	Height Above Sea Level	1892	
			ft. in.	feet.	inches.	
WEST RIDING—(con.)						
D <sup>+</sup> Slaithwaite (Blackmoorfoot).....	J. W. Schofield, Esq....	8	1 0	800 T	42·51	190
† Honley (Northgate House) ...M	W. Brooke, Esq. ....	5	1 0	350 T	36·17	...
D Wakefield (Walton) .....	E. Simpson, Esq. ....	5	1 0	140 T	23·41	160
Huddersfield (Bankfield, Golcar)	J. E. Ramsden, Esq....	5	1 0	400 T	42·21	...
D <sup>+</sup> „ (Dalton) .....	J. W. Robson, Esq. ...	8	1 0	350 T	34·68	186
Longwood (Bilberry Edge) .....	J. W. Schofield, Esq....	8	1 0	1090 T	33·12	...
D Ackworth (Nostell Priory) .....	Mr. J. Easton.....	5	4 0	...	25·50	137
„ (Flounders Institute) ..	The Students .....	5	0 3	170	25·76	...
D Pontefract (Purstone Hall) .....	P. C. Hall, Esq .....	5	1 0	190 T	25·01	187
D Mirfield (Cote Wall) .....	E. B. W. Balme, Esq..	8	0 9	200	27·98	159
D <sup>+</sup> Wakefield Prison .....	Dr. H. Clarke.....	8	1 0	96 T	26·37	135
„ (Alverthorpe Hall) ...	H. Clarkson, Esq. ....	5	1 0	150 T	29·69	181
D Rastrick .....	late J. T. Clay, Esq....	5	1 3	410 T	29·67	147
D Wakefield (Field Head) .....	R. Porter, Esq. ....	8	1 6	250 T	24·47	141
D „ (Stanley Grange) .....	F. E. Haworth, Esq....	5	1 0	180 T	25·77	192
Goole (Swinfleet) .....	Mr. G. Harrison.....	5	6 0	...	26·60	...
D „ .....	W. E. Grayburn, Esq.	5	1 0	18 T	22·22	156
Batley (Staincliffe Reservoir) ...	O. J. Kirby, Esq., C.E.	7	1 0	492 T	23·10	...
D Sowerby Bridge (Haugh End) ...	J. S. Rawson, Esq. ...	5	0 8	550 T	41·65	194
Halifax (Bents, Norland) .....	„ „ „ .....	5	0 8	800 T	36·80	...
D „ (Bermerside Observatory)	J. Gledhill, Esq. ....	8	0 6	500	34·25	187
„ (Hall Ings, S. Oworm)...	Rev. G. E. Aspinall ...	5	0 7	750 T	35·34	...
„ (Thorpe) ... ..M	J. S. Rawson, Esq. ...	8	0 8	345 T	44·12	...
„ ( „ ) .....	„ „ „ .....	5	0 8	345 T	44·51	204
D „ (Public Library) .....	J. Whiteley, Esq. ....	12	1 0	625 T	33·06	164
† „ (Albert).....	J. A. Paskin, Esq., C.E.	5	1 0	795 T	33·94	...
† „ (Gibbet).....	„ „ „ .....	5	6 0	568 T	33·49	...
† „ (Ramsden Wood) .....	„ „ „ .....	8	1 2	816 T	39·34	...
D Leeds (Methley Park) .....	J. Richardson, Esq. C.E.	5	0 9	98 T	26·01	111
Hebden Bridge .....	A. R. Crossley, Esq....	4	1 0	479	48·11	207
Halifax (Castle Carr) .....	J. A. Paskin, Esq., C.E.	...	...	1060 T	38·17	...
† „ (Midgley Moor) .....	„ „ „ .....	7	0 6	1350 T	47·45	...
† „ (Warley Moor).....M	„ „ „ .....	7	0 6	1425 T	41·72	...
† „ (Ogden) .....	„ „ „ .....	8	1 3	990 T	46·20	...
„ (Ovenden) .....	„ „ „ .....	...	...	1375	46·34	...
„ (Widdop) .....	„ „ „ .....	...	...	1050	50·60	...
† „ (Walshaw Dean).....M	„ „ „ .....	8	0 3	1380 T	47·67	...
D South Milford Rectory .....	Rev. F. J. Young .....	5	1 2	70 T	26·69	181
Leeds (Wortley Res.) .....	T. Hewson, Esq., C.E..	8	0 9	307 T	28·44	170
Bradford (Queensbury).....	R. J. Foster, Esq.....	8	2 2	1050	38·39	137
„ (Brayshaw Reservoir) ..	J. Watson, Esq., C.E..	5	1 0	982 T	38·87	197
„ (Merton Road) .....	A. Wilson, Esq.....	5	0 6	443 T	35·79	205
D „ (The Exchange).....	A. E. Preston, Esq. C.E.	8	65 6	395 T	28·88	193
„ (Stubden) <i>old gauge</i> ...	J. Watson, Esq., C.E..	8	1 0	1075 T	49·27	231
„ ( „ ) .....	„ „ „ .....	5	1 0	1071 T	45·21	231
„ (Nan Scar, Oxenhope)M	„ „ „ .....	5	1 0	1101 T	46·43	...
„ (Stairs) .....	„ „ „ .....	5	1 0	1401 T	50·21	...
„ (Leeming Res.) .....	„ „ „ .....	5	1 0	850 T	43·63	...

## DIVISION IX.—YORKSHIRE—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft in.	feet.	inches.	
WEST RIDING—(con.)						
Bradford (Doe Park) <i>old gauge</i> ..	J. Watson, Esq., C.E.	8	1 0	810 $\pi$	45·39	226
„ { „ „ } .....	„ „ „ „	5	1 0	811 $\pi$	38·68	226
„ (Manningham) .....	J. McLandsborough, Esq	5	6 6	428 $\pi$	28·34	...
„ (Leeshaw Res.) .....	M J. Watson, Esq., C.E.	5	1 0	875 $\pi$	45·39	..
„ (Chellow Dean) .....	„ „ „ „	5	1 0	645 $\pi$	32·94	190
„ (Hewenden Res.) <i>old g.</i>	„ „ „ „	5	1 0	700 $\pi$	38·47	213
„ { „ „ } .....	„ „ „ „	5	1 0	701 $\pi$	35·33	213
„ (Heaton Res.) <i>old g.</i>	„ „ „ „	8	1 0	530 $\pi$	32·86	180
„ { „ „ } .....	„ „ „ „	5	1 0	531 $\pi$	29·59	177
D Leeds (Holbeck) .....	Messrs. J. Rhodes & Co.	10	32 0	127 $\pi$	24·35	126
D „ { „ „ } .....	„ „ „ „	5	...	...	26·07	143
D „ { „ „ W. Works Depot } .....	T. Hewson, Esq., C.E.	8	0 9	93 $\pi$	28·69	175
D „ (Museum) .....	E. R. Waite, Esq.	10	46 0	137	27·88	193
„ (Woodhouse Moor) .....	T. Hewson, Esq., C.E.	8	0 9	307 $\pi$	29·13	178
D „ { „ „ Cliff } .....	R. Reynolds, Esq.	5	1 0	330	29·05	178
D „ (Elmete Hall, Roundhay) ..	J. H. Kitson, Esq.	5	1 6	400 $\pi$	30·30	175
„ (Weetwood Reservoir) ..	T. Hewson, Esq., C.E.	8	0 9	328 $\pi$	28·75	174
Shipley (Moor Head) .....	G. Knowles, Esq.	8	10 0	500	28·22	.
D Leeds (Allerton Hill) .....	T. Fenwick, Esq., C.E.	5	0 7	418 $\pi$	29·29	202
„ (Lawns Wood, Adel) .....	Mr. C. S. Irvine	5	1 0	475 $\pi$	31·27	190
D „ (Oliver Hill, Horsforth) ..	C. France, Esq.	3	1 0	250 $\pi$	33·91	227
Bingley (Gilstead Filters) .....	J. Watson, Esq., C.E.	5	1 0	572 $\pi$	27·59	201
Leeds (Eccup South) .....	T. Hewson, Esq., C.E.	8	0 9	390 $\pi$	30·13	186
„ { „ „ East } .....	„ „ „ „	8	0 9	375 $\pi$	31·36	179
† Bingley (Sunnydale) .....	J. Watson, Esq., C.E.	5	1 0	975 $\pi$	32·82	191
Harewood (Arthington) .....	T. Hewson, Esq., C.E.	8	0 9	139 $\pi$	30·99	142
Skipton (Gill Grange, Silsden) ..	M J. Watson, Esq., C.E.	5	1 0	883 $\pi$	31·89	...
D Ilkley .....	G. W. Worfolk, Esq.	5	19 0	331 $\pi$	35·86	156
† „ (Cherry Bank) .....	H. Richardson, Esq.	8	1 3	600	35·49	...
Skipton (Silsden Reservoir) .....	J. Watson, Esq., C.E.	5	1 0	560 $\pi$	29·83	176
Leathley (Lindley Wood S) .....	T. Hewson, Esq., C.E.	8	0 9	312 $\pi$	33·60	202
„ { „ „ N } .....	„ „ „ „	8	0 9	320 $\pi$	34·33	202
Slaidburn (Hareden Brook) ..	M H. Reah, Esq.	8	1 2	540	75·57	...
„ (Langden Brook) ..	M „ „ „	8	1 2	556	74·77	...
„ (Whiteholme) .....	W. K. Wilkinson, Esq.	5	1 3	475 $\pi$	51·47	173
Skipton (Cringle's Reservoir) ..	J. Watson, Esq., C.E.	5	1 0	760 $\pi$	30·71	176
„ (Counter Hill) .....	M „ „ „	5	1 0	951 $\pi$	30·20	...
„ (Chelker Reservoir) ..	M „ „ „	5	1 0	730 $\pi$	33·80	...
† „ (Craven Herald Office) ..	E. Townsend, Esq.	8	0 8	360	30·00	175
Slaidburn (Dunsop Houses) .....	J. B. McCallum Esq., C.E.	8	1 0	450 $\pi$	64·07	179
„ (Middle Knoll) .....	M „ „ „	8	2 6	1298 $\pi$	54·81	...
„ (Brennand) .....	„ „ „ „	8	1 0	820 $\pi$	70·50	189
„ (Whitendale) .....	„ „ „ „	8	1 0	830 $\pi$	72·21	191
„ (Cabin Hill) ..	M „ „ „	8	3 1	1559 $\pi$	59·41	...
„ (Baxton Fell) ..	M „ „ „	8	2 6	1540 $\pi$	58·06	...
D York (Mount Villas) .....	J. S. Rowntree, Esq.	5	0 9	70	25·04	201
D „ (Cherry Hill) .....	H. Richardson, Esq.	5	1 6	60 $\pi$	24·54	185
„ (Phil. Soc. Gardens) .....	The Meteor. Council	8	1 9	53 $\pi$	24·65	188

## DIVISION IX.—YORKSHIRE—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain 1892	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
WEST RIDING—(con.)						
York (Phil. Soc. Gardens).....	The Meteor. Council....	8	1 9	53 $\nabla$	24·75	191
D „ (Bootham) .....	J. E. Clark, Esq. ....	5	...	...	25·84	166
D Wetherby (Ribston) .....	Mr. Jones .....	5	1 2	130 $\nabla$	23·25	107
Fewston (Swinsty E).....	T. Hewson, Esq., C.E.	8	0 9	460 $\nabla$	41·34	201
„ ( „ W).....	„ „ „ .....	8	0 9	425 $\nabla$	41·43	201
„ (Timble) .....	„ „ „ .....	8	0 9	720 $\nabla$	39·46	214
„ South .....	„ „ „ .....	8	0 9	525 $\nabla$	38·79	209
„ North .....	„ „ „ .....	8	0 9	525 $\nabla$	34·89	209
„ (Spinksburn) .....	„ „ „ .....	8	0 9	636 $\nabla$	34·42	208
Blubberhouses .....	„ „ „ .....	8	0 9	575 $\nabla$	39·54	219
D† Harrogate (Bog Valley Gardens)	J. Farrah, Esq. ....	5	1 0	344	29·38	202
D „ (The Stray) .....	Mr. Gledhill .....	5	1 0	...	30·38	206
D „ .....	„ „ „ .....	5	1 0	...	30·80	206
Skipton (Barden Res.) <i>old g.</i> ...	J. Watson, Esq., C.E..	8	1 2	746 $\nabla$	43·95	226
„ ( „ „ ) .....	„ „ „ .....	5	1 0	746 $\nabla$	43·53	226
Otterburn-in-Craven.....	W. Gomersall, Esq. ...	5	1 0	510 $\nabla$	43·66	178
West End .....	T. Hewson, Esq., C.E.	8	0 9	787 $\nabla$	44·03	223
„ „ (Thruscross) .....	„ „ „ .....	8	0 9	900 $\nabla$	41·03	223
Skipton (Upper Res., Barden)...	J. Watson, Esq., C.E..	5	1 0	1250 $\nabla$	43·43	224
„ (Thorpe Fell „ )...M	„ „ „ .....	5	1 0	1661 $\nabla$	39·49	...
„ (Sandbed Beck, Burnsall)M	„ „ „ .....	5	1 0	676 $\nabla$	42·12	...
Knaresborough .....	G. Paul, Esq.....	5	1 0	214 $\nabla$	27·64	196
† „ (Conyngh'm Hall) .....	B. T. Woodd, Esq.....	5	1 3	190 $\nabla$	26·75	179
D „ (Farnham) .....	R. Elmhirst, Esq. ....	5	1 0	170 $\nabla$	25·35	188
D Ripley Castle .....	Mr. J. Tunnington....	5	1 0	230 $\nabla$	28·49	203
D Settle (The Terrace) .....	J. W. Shepherd, Esq..	8	1 2	525 $\nabla$	44·45	212
D† Pateley Bdg. (Castle Stead) .....	G. Metcalfe, Esq. ....	5	1 0	410	42·19	190
„ „ (Grimwith Res) <i>old g.</i> .....	J. Watson, Esq., C.E..	8	1 0	890 $\nabla$	44·01	217
„ „ { „ „ } .....	„ „ „ .....	5	1 0	893 $\nabla$	44·60	217
„ „ { „ „ Trunla Hill)M	„ „ „ .....	5	1 0	1201 $\nabla$	36·46	...
Pateley Moor (Smaden Head) ...	T. Hewson, Esq., C.E..	8	0 9	793 $\nabla$	27·94	174
D† Malham Tarn.....	Mr. Coulthard .....	5	1 0	1296 $\nabla$	57·07	214
D „ „ ..... <i>new gauge</i> .....	„ „ „ .....	8	1 0	1296 $\nabla$	57·06	214
Dallow Moor (High Skeldon) ...	T. Hewson, Esq., C.E..	8	0 9	719 $\nabla$	32·04	185
„ „ (Harper Hill) .....	„ „ „ .....	8	0 9	859 $\nabla$	34·10	193
† Ripon (North Lodge).....	F. D. Wise, Esq. ....	5	1 0	120	24·79	...
D „ (W.W. Lumley Moor) ...	Mr. G. Craggs .....	8	2 0	582 $\nabla$	35·27	187
† Ramsgill (Raygill House) .....	J. Watson, Esq., C.E..	5	1 0	925 $\nabla$	54·47	226
„ „ .....	„ „ „ .....	5	1 0	450 $\nabla$	43·99	207
D† Arncliffe Vicarage .....	Rev. Canon Boyd .....	8	3 0	734 $\nabla$	58·89	201
D „ (Amerdale).....	J. Hammond, Esq. ...	8	1 6	730	58·67	214
Nidderdale (East Gill) .....	J. Watson, Esq., C.E..	5	1 0	1710 $\nabla$	50·75	...
„ (High Riggs) .....	„ „ „ .....	5	1 0	1010 $\nabla$	51·55	207
„ (Rain Stang) .....	„ „ „ .....	5	1 0	1470 $\nabla$	44·01	...
„ (West Houses).....	„ „ „ .....	5	1 0	1150 $\nabla$	55·55	136
„ (New Houses) .....	„ „ „ .....	5	1 0	755 $\nabla$	43·69	197
Kirkby Malzeard (Drovers' Inn)..	T. Hewson, Esq., C.E.	8	0 9	633 $\nabla$	32·65	169
„ „ (Hawset) .....	„ „ „ .....	8	0 9	820 $\nabla$	34·76	208

## 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	1892	
			ft. in.	feet.	inches.	
WEST RIDING—(con.)						
Kirkby Malzeard (Hambleton Hill)	T. Hewson, Esq., C.E.	8	0 9	1106 $\nabla$	37·52	...
„ „ (Bagwith Brae).	„ „ „	8	0 9	697 $\nabla$	36·48	211
„ „ (Stone and Ears Wham)	„ „ „	8	0 9	1118 $\nabla$	43·32	...
d Ripon (High Bank, Mickley) ...	Miss Harrison .....	5	1 6	225 $\nabla$	30·54	201
Masham Moor (Benjy Guide) ...	T. Hewson, Esq., C.E.	8	0 9	1412 $\nabla$	45·95	...
„ „ (W. Somerside)...	„ „ „	8	0 9	960	38·04	175
„ „ (High Sour Mire)	„ „ „	8	0 9	884 $\nabla$	35·88	201
„ „ (Leighton) .....	„ „ „	8	0 9	636 $\nabla$	34·56	189
„ „ (Low Houses) .....	„ „ „	8	0 9	693 $\nabla$	33·77	186
Oughtershaw Hall .....	C. H. L. Woodd, Esq.	8	1 6	1175 $\nabla$	68·03	186
d† Sedbergh (Brig Flatts) .....	J. Handley, Esq. ....	5	1 0	300 $\nabla$	58·87	207
† „ (Thorns Hall) .....	Miss Sedgwick ...	5	1 0	400 $\nabla$	59·82	210
EAST RIDING.						
Patrington (Spurn Head) .....	The Meteor. Council ...	8	1 0	27	17·74	181
d „ „ .....	W. B. Pugh, Esq. ....	5	3 0	46 $\nabla$	24·12	153
Hull „ (Nelholme, Ferriby) .....	W. R. King, Esq. ....	5	5 0	125 $\nabla$	25·74	...
d „ „ (Tranby Park) .....	G. Bohn, Esq., C.E. ...	5	1 0	181 $\nabla$	25·67	202
d „ „ (Derringham) .....	W. Lawton, Esq. ....	5	2 2	10 $\nabla$	24·34	163
d „ „ (Pearson Park) .....	Mr. E. Peak .....	5	0 6	6	27·69	199
d Hedon (The Vicarage) .....	Rev. J. H. Richardson	5	1 0	...	24·52	193
d Brough (Brantinghamthorpe) ...	Mr. R. C. Kingston ...	5	1 6	150 $\nabla$	31·36	149
d Cottingham .....	J. H. Hill, Esq. ....	8	1 3	26 $\nabla$	27·43	189
Market Weighton (Houghton)...	Canon J. Wells .....	5	1 0	175 $\nabla$	27·52	...
d Beverley (East Riding Asylum).	Dr. Macleod .....	5	1 0	175 $\nabla$	27·20	192
„ „ (Alexandra Terrace)...	T. Dyson, Esq. ....	12	6 0	64 $\nabla$	25·96	149
d „ „ (Hull Bridge) .....	J. Tiffen, Esq. ....	5	2 6	11 $\nabla$	26·33	192
d Market Weighton (Dalton Hall)	Mr. J. Allsop .....	8	1 4	150 $\nabla$	28·99	184
d Hornsea (Elim Lodge) .....	T. B. Holmes, Esq. ...	8	1 3	30	25·79	198
d Brandesburton (Hempholm) .....	J. Tiffen, Esq. ....	5	2 6	11 $\nabla$	26·66	186
d Pocklington (Warter) .....	J. Coxon, Esq. ....	5	1 10	230 $\nabla$	32·50	182
Catton Rectory [York] .....	Rev. H. L. Puxley .....	5	0 2	50 $\nabla$	27·31	...
d Driffield (Beverley Road) .....	Rev. J. T. Harwood ...	8	8 0	68 $\nabla$	27·49	196
d „ „ (York Road) <i>Snowdon</i> .	J. Lovel, Esq. ....	5	1 0	76 $\nabla$	28·44	209
„ „ (Water Works) .....	Messrs. Fairbank & Son	5	0 6	200 $\nabla$	27·16	162
Wetwang .....	Rev. E. M. Cole .....	5	1 0	235 $\nabla$	28·87	166
d Thixendale .....	Rev. W. H. Fox .....	10	0 10	425 $\nabla$	36·12	200
d Lowthorpe (The Elms) .....	H. Onslow Piercy, Esq.	5	1 0	63 $\nabla$	27·32	173
d Malton (Norton) .....	E. K. Spiegelhalter, Esq.	5	1 0	66 $\nabla$	28·17	184
d Ganton Hall [Scarborough] .....	Mr. Sherwood .....	...	...	...	29·91	134
NORTH RIDING.						
Terrington Manor House .....	A. Hugh Douglas, Esq.	5	1 5	300	26·26	...
† Old Malton .....	H. Hurtley, Esq. ...	10	1 0	75 $\nabla$	28·42	...
Melmerby (Baldersby) .....	W. Gregson, Esq. ....	5	1 0	101 $\nabla$	24·43	162
d Thirsk (Sowerby) .....	C. M. Swarbreck, Esq.	5	1 0	105 $\nabla$	29·03	190
d „ „ „ .....	A. C. Bamlett, Esq. ...	5	1 0	118	23·78	134
d Pickering (The Rectory) .....	Rev. G. H. Lightfoot..	5	1 6	150	29·30	187

## DIVISION X—NORTHERN COUNTIES.

D	Darlington (Hurworth Grange) ..	J. E. Backhouse, Esq. ..	5	1	0	161	7	26.10	201
D	„ (Elcott, Hurworth) ..	Rev. W. E. Stewart ...	5	1	0	121	7	25.16	212
„	„ (Dinsdale Rectory) ..	Rev. J. W. Smith .....	5	2	0	54		24.64	138
D	Egglescliffe [Yarm] .....	Rev. Canon Powell ...	5	1	0	...		20.97	134
D	Darlington (South End) .....	Mr. N. Black ..	8	0	10	140		26.93	204
D†	„ (Cleveland Parade) ..	S. Hare, Esq. ....	5	1	0	160	7	25.51	194
„	„ (Langholme Crescent) ..	J. H. Simpson, Esq. ...	5	1	6	165	7	25.52	161
„	„ (Hummersknott) ...	Mr. J. Short .....	5	1	0	...		27.88	174
D	„ (Brinkburn) .....	Mr. H. Waud .....	8	1	6	165		24.55	130
D	Barnard Castle (Whorlton) .....	Miss Dodgson .....	5	0	11	424	7	28.58	174



## DIVISION X.—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	1892	
			ft. in.	feet.	inches.	
DURHAM—(con.)						
D Barnard Castle (County School).	E. Wells, Esq. ....	5	1 6	540 T	31·40	190
D† Staindrop (Raby Castle) .....	Mr. R. W. Smith .....	8	1 0	460 T	30·96	117
Stockton (Howden House) .....	W. Anderson, Esq., C.E.	5	1 0	150 T	26·69	192
D Bishop Auckland (Mt. Pleasant)	E. Lingford, Esq. ....	6	3 0	408	28·82	169
" " (The Castle)...	Mr. J. Larkin .....	5	1 0	300	30·47	189
D Witton-le-Wear (Witton Tower)	W. R. I. Hopkins, Esq.	5	0 8	420 T	30·41	156
West Hartlepool (Lynn Street)...	Mr. H. Lamb .....	5	30 0	45	24·35	182
D Hartlepool (Heugh Lighthouse)...	W. Belk, Esq., C.E. ...	5	0 6	34 T	22·72	209
D " (Hurworth Burn) ...	T. Fenwick, Esq., C.E.	5	0 7	360	27·24	159
D " (Hart Reservoir).....	" " " " " "	8	0 9	164	24·17	155
D† Wolsingham .....	Mr. A. Mitchell .....	5	1 0	464 T	34·65	205
Tow Law .....	G. Hood, Esq., M.D. ...	5	4 0	1014	32·26	...
D " " .....	Rev. T. E. Espin .....	5	1 0	990	35·04	218
Durham .....	The Meteor. Council ...	12	4 0	340	28·08	209
D " (Ushaw College) .....	Rev. J. Corbishley .....	5	0 10	600 T	28·50	190
Weardale W.W. (Waskerley 6)	R. Askwith, Esq., C.E.	8	4 2	1229 T	31·17	...
" " { " 3)	" " " " " "	8	4 6	1433 T	32·08	...
" " { " 4)	" " " " " "	8	4 7	1321 T	31·45	...
" " { " 5)	" " " " " "	8	4 2	1244 T	31·46	...
" " { " 2)	" " " " " "	8	4 5	1367 T	32·70	...
" " { " 1)	" " " " " "	8	4 4	1317 T	31·75	...
D Seaham Harbour Cemetery .....	Mr. R. Leith .....	8	1 6	150	26·09	197
" " Vicarage .....	Rev. A. Bethune .....	5	0 6	80 T	26·32	...
D Houghton-le-Spring (Myre Hall)	D. Balfour, Esq., C.E.	5	1 0	261 T	28·77	170
D Shotley Bridge ..	Mr. J. Coulson .....	5	0 8	345 T	29·62	144
D Sunderland (W. Hendon Ho) No. 5	T. W. Backhouse, Esq.	5	1 0	130 T	26·65	180
" " ( " " " ) No. 6	" " " " " "	5	1 0	130 T	27·04	...
D Gateshead (Eighton Cottage) ...	Miss Favell .....	5	3 1	515	27·88	193
D " (Southdene Tower) ..	R. C. Clephan, Esq. ...	5	0 9	150	27·28	190
NORTHUMBERLAND.						
D Haltwhistle (Shaft Hl Herdley Bk)	Mr. R. Hetherington ...	5	0 9	626 T	38·53	143
D " (Unthank Hall) ...	Rev. Dixon Brown .....	5	0 9	380 T	35·18	196
D Ovingham (W. Tyne Colliery)...	J. K. Guthrie, Esq. ...	8	2 0	179 T	30·99	198
D Haydon Br. (Beltingham).....	Rev. G. Reed .....	5	2 8	340 T	39·89	204
D Newcastle (Clifton Road).....	R. Foster, Esq. ....	8	1 6	314 T	26·22	181
" " ( " " " ) .....	" " " " " "	5	1 0	314 T	26·40	181
D " (Philos. Society) .....	H. Richardson, Esq. ...	8	65 0	170 T	25·23	130
" " (Gladstone Terrace)...	W. Smurthwaite, Esq.	2	6 0	156 T	29·21	110
" " (Portland Road) .....	Mr. T. Bone .....	4	9 6	...	28·56	...
D " (Town Moor) .....	A. Wright, Esq. ....	5	2 0	201 T	28·07	192
D " (Wellburn, Jesmond)...	W. H. Holmes, Esq. ...	5	1 6	161 T	27·14	168
North Shields (Wallsend).....	R. R. Dees, Esq. ....	10	0 6	100 T	24·60	...
" " (Post Office) .....	The Meteor. Council ...	8	1 4	100	24·21	180
D " (Tynemouth) .....	P. J. Messent, Esq., C.E.	5	1 8	65 T	23·35	194
D " (Monkseaton).....	T. Green, Esq. ....	5	4 0	132	26·70	...

## DIVISION X.—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	1892	
			ft. in.	feet.	inches.	
<b>NORTHUMBERLAND—(con.)</b>						
Newcastle and Gateshead W. W. { Whittle Dean .....	G. Smith, Esq. ....	10	...	...	29.29	...
{ Swinburn (Woodford).....	" " " .....	10	0 6	500 $\nabla$	35.93	...
{ North Tyne (Green Crag) ...	" " " .....	10	0 6	800 $\nabla$	32.78	...
{ Hallington .....	" " " .....	10	0 6	469 $\nabla$	32.14	...
{ " (Fawcett) .....	" " " .....	10	0 6	563 $\nabla$	31.50	...
{ Gunnerton Burn (Camphill)..	" " " .....	10	0 6	676 $\nabla$	32.01	...
D Morpeth (Meldon Park) .....	Mr. J. Finlay .....	5	1 0	...	32.56	186
D " (Bothalhaugh Garden)..	Hon. & Rev. W. C. Ellis	5	0 10	35 $\nabla$	28.42	195
" { " " " " M	" " " " "	5	0 10	...	28.15	...
D " { " " Lawn).....	" " " " "	5	0 10	130	27.36	185
" { " " " " M	" " " " "	5	0 10	135	29.53	...
D Scots Gap (Rothley Lake).....	J. Daglish, Esq. ....	5	0 6	665 $\nabla$	34.43	221
Redesdale (Horsley) .....	G. Smith, Esq. ....	8	...	...	30.42	...
Rothbury (Brinckburn) .....	A. Cadogan, Esq. ....	8	1 2	257 $\nabla$	25.37	...
" (Crag-side) .....	Lord Armstrong, C.B..	8	1 0	400 $\nabla$	31.81	156
Redewater (Blakehope).....	G. Smith, Esq. ....	8	...	...	31.71	...
" (Ellis Crag) .....	" " .....	8	...	...	37.17	...
" (Chattlehope) .....	" " .....	8	...	...	34.87	...
" (Cateleugh) .....	" " .....	8	...	...	35.37	...
D Alwinton (Harbottle Castle) ...	Mr. R. Elliott .....	5	1 0	500	32.33	163
" (Biddleston Hall) .....	P. Dodds, Esq. ....	5	1 0	820 $\nabla$	31.14	160
Alnwick Castle .....	The Meteor. Council ...	5	0 4	178	30.12	208
" (Glanton Pyke) ... ..	F. W. Collingwood, Esq.	8	4 4	517	25.72	...
D Howick Hall .....	Rt. Hon. Earl Grey, K.G.	8	0 10	121 $\nabla$	28.19	173
Ilderton (Lilburn Tower).....	E. J. Collingwood, Esq.	10	6 0	300 $\nabla$	27.53	...
Cheviot (Broadstruther) .....	G. P. Hughes, Esq. ...	8	1 8	1694	76.50	...
Wooler .....	Dr. R. Walker .....	5	0 10	176 $\nabla$	31.79	...
D Bamburgh .....	Mr. W. C. Good .....	5	1 0	75 $\nabla$	26.67	175
D Pawburn [Coldstream] .....	B. P. Selby, Esq. ....	8	1 0	328 $\nabla$	29.02	199
Wooler (Milfield) .....	G. Grey, Esq. ....	5	0 6	215 $\nabla$	27.07	...
" { " Hill) .....	" " .....	5	4 6	695 $\nabla$	19.92	...
<b>CUMBERLAND.</b>						
D Millom (Leyfield) .....	Cedric Vaughan, Esq. CE	5	1 2	81	44.57	207
D† Duddon Valley (Ulpha Vic.) ...	Rev. W. Kewley .....	5	1 3	175	75.27	215
D Eskdale .....	Rev. R. H. Snape .....	5	1 6	150 $\nabla$	65.08	221
D Seascale (Whinthwaite) . .....	Dr. Hellon .....	5	1 0	52 $\nabla$	37.25	184
Braystones .....	W. H. Watson, Esq. ....	10	3 6	36	37.30	...
Seawfell Pike .....	M. G. J. Symons, Esq. F.R.S.	4	0 6	3200	120.28	...
Sprinkling Tarn .....	" " .....	4	0 6	1985	141.18	...
Wastdale Head .....	" " .....	4	0 6	204 $\nabla$	83.01	...
Styehead Tarn .....	" " .....	4	0 6	1472 $\nabla$	127.04	...
† The Stye .....	" " .....	4	0 6	1077 $\nabla$	172.20	...
† " " New S.E. gauge M	" " .....	4	1 0	1077 $\nabla$	162.35	...
Gable Hawes .....	" " .....	8	...	1077 $\nabla$	80.30	...
Egremont .....	J. Sherwen, Esq. ....	5	1 0	170 $\nabla$	49.18	228
† Seathwaite .....	M. G. J. Symons, Esq., F.R.S.	4	0 6	422 $\nabla$	126.95	...

## DIVISION X.—NORTHERN COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which -01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches	
CUMBERLAND—(con.)						
d†Seathwaite .....	G. J. Symons, Esq., F.R.S	5	1 0	423 T	129.50	215
*† „ .....	The Royal Meteor. Soc.	5	0 10	422 T	127.36	215
*† „ .....	M John Marshall, Esq. ...	5	1 0	420 T	117.27	...
Ullscarf .....	M G. H. Hill, Esq., C.E..	7	1 0	2100 T	110.40	...
d Whitehaven (The Floss, Cleator)	D. Ainsworth, Esq. M.P.	5	1 11	208 T	47.72	163
† Helvellyn (Birkside) .....	M G. H. Hill, Esq., C.E..	7	1 0	1900 T	74.70	...
† Wythburn .....	M „ „ „	7	1 0	580 T	82.80	...
d Borrowdale Vicarage .....	Rev. A. J. Heelis .....	5	1 0	330 T	95.67	216
d† Buttermere (Hassness) .....	Mr. S. Stewart .....	5	1 0	355	101.09	223
d† Borrowdale (Grange) .....	Mr. Threlkeld .....	5	0 9	271 T	82.27	216
Armboth .....	G. H. Hill, Esq., C.E..	7	1 0	550 T	65.60	...
„ Fells (The Pewitts) .....	„ „ „	7	1 0	1650 T	80.10	...
Helvellyn (Whiteside) .....	„ „ „	7	1 0	2100 T	68.40	...
d† Whitehaven (Irish Street) .....	Dr. P'Anson .....	5	1 1	21 T	41.12	155
d† Keswick (Barrow House) .....	Miss Langton .....	8	0 6	282 T	65.38	233
Ullswater (Hallsteads) .....	A. Marshall, Esq. ....	5	2 0	497 T	47.58	...
† Keswick (Derwent Island) ...old	John Marshall, Esq. ..	5	0 7	280 T	49.71	238
„ ( „ „ ) ...new	„ „ „	5	0 6	290	55.98	240
† „ (Bank) .....	J. F. Crosthwaite, Esq.	8	6 4	270 T	53.11	214
† „ ( „ ) .....	„ „ „	5	1 0	265 T	50.84	214
d „ (The Beeches) .....	T. „ Paulin, Esq. ....	5	1 0	396	60.71	221
d† „ (Shu-le-crow) .....	A. Mitchell Dawson, Esq.	5	0 7	296 T	57.45	221
d Cockermouth (Whinfell Hall) ...	W. Robinson, Esq. ...	5	2 0	265 T	51.33	228
d „ (Brandlingill) .....	Col. F. R. Sewell .....	5	1 0	320 T	49.84	212
† Threlkeld Rectory .....	Rev. J. Brunskill .....	5	4 0	488 T	56.88	206
d Bassenthwaite (Mire House) ...	Miss Spedding .....	5	0 6	300 T	49.08	152
d „ (Bassenfell) .....	Mrs. S. G. Rathbone...	8	1 0	384	40.94	197
d† Cockermouth (Higham) .....	Miss Hoskins .....	5	1 0	478 T	45.89	220
d „ (Broughton Grange) .....	G. S. Wilson, Esq. ...	5	1 3	209 T	43.95	168
Penrith (Culgaith Vic.) .....	Rev. G. W. Atkinson..	5	0 10	500 T	36.75	...
„ (Nandana) .....	G. Varty Smith, Esq...	5	4 0	650 T	35.10	186
† „ (Fell Lane, Fir Bank) ..	T. Lester, Esq. ....	5	1 0	575 T	35.31	187
„ (Greystoke) .....	A. Tremayne Buller, Esq	5	...	700	40.20	...
d† „ (Newton Reigny) .....	T. G. Benn, Esq. ....	8	1 0	580 T	35.61	197
† „ ( „ ) .....	M „ „ „	8	1 0	580 T	35.65	...
d „ (Edenhall Vicarage) ...	B. W. Lovejoy, Esq....	5	1 4	310 T	37.35	203
„ (Kirkland Vicarage) ..	Rev. A. Edwards .....	5	1 0	640	39.99	...
d† Blencowe School .....	T. Fawcett, Esq. ....	8	0 9	601 T	39.10	208
d Penrith (Nunwick Hall) .....	Mrs Heywood Thompson	5	1 0	297 T	34.97	197
Maryport (Netherhall) .....	H. P. Senhouse, Esq...	8	0 6	27 T	38.42	147
d Kirkoswald (Melmerby) .....	Rev. A. C. Pittar ...	5	0 8	...	40.60	207
d Mealsgate (Uldale Rectory) .....	Rev. J. Greenwood ...	5	1 4	550	51.43	189
d Aspatria (Brayton Hall) .....	Mr. W. Stewart .....	8	2 0	200	43.25	205
d „ (Brookfield) .....	M. Lidbetter, Esq.....	5	0 9	124 T	41.19	227
Carlisle (Wreay Vicarage) .....	Rev. T. Lees .....	5	2 0	310 T	34.57	223
† „ (Cemetery) .....	S. Cartmell, Esq. ....	8	3 0	114 T	34.98	196
„ (Rickerby House) .....	M. MacInnes, Esq., M.P.	8	1 0	50 T	30.83	...
„ (Castletown) .....	Mr. A. Smith .....	5	1 6	...	29.68	...

## DIVISION X.—NORTHERN COUNTIES—(continued.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which 101 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
<b>CUMBERLAND—(con.)</b>						
Carlisle (Scaleyby) .....	The Royal Meteor. Soc.	5	1 0	112	35·26	212
▮ Brampton (Denton House) .....	Mr. J. Charlton .....	5	1 5	541 $\nabla$	38·19	191
„ ( „ „ ) ... M	„ „ .....	5	1 2	541 $\nabla$	38·16	...
<b>WESTMORELAND.</b>						
Witherslack (Halecote) .....	Rev. Canon Cross .....	5	1 0	100 $\nabla$	53·61	208
▮ Kendal (Natland Park) .....	Mrs. Shipley .....	5	1 0	260 $\nabla$	52·38	195
„ (Hill Top) .....	C. J. Holdsworth, Esq..	5	1 0	560 $\nabla$	57·83	194
„ (Kent Terrace) .....	R. J. Nelson, Esq. ....	5	1 6	146 $\nabla$	55·75	207
▮ „ (St. George's Vic.) .....	Rev. G. Crewdson .....	5	0 8	...	52·99	215
▮ „ (Underfell) .....	W. H. Crewdson, Esq.	8	1 0	300 $\nabla$	55·66	179
„ ( „ ) .....	„ „ .....	8	1 0	300 $\nabla$	53·54	...
▮ „ (Hawesmead) .....	G. F. Braithwaite, Esq.	8	0 6	175 $\nabla$	56·29	206
„ (Ellergreen) .....	J. Cropper, Esq. ....	5	1 3	270 $\nabla$	63·00	220
▮ Bowness (Fallbarrow) .....	H. E. Rawson, Esq. ....	8	1 0	135 $\nabla$	66·19	200
▮ Windermere (Woodland Terrace)	Rev. T. Mackereth ...	5	6 5	376	60·71	224
▮ Longsleddale .....	Mrs. Burrows .....	5	6 0	512 $\nabla$	80·60	229
Ambleside (Skelwith Bridge) ..	S. A. Marshall, Esq. ....	5	...	...	80·72	232
Little Langdale (Fell Foot) ... M	„ „ „ .....	5	2 2	380	108·30	...
▮ † Ambleside (Nook Cottage) .....	Mr. E. Hird .....	5	1 0	227 $\nabla$	75·14	224
† „ (Lesketh Howe) .....	F. M. T. Jones, Esq. ....	5	2 6	175 $\nabla$	77·97	196
▮ Elterwater (Birch Hill) .....	J. Robinson, Esq. ....	5	1 1	243	87·88	223
▮ Dungeon Ghyli .....	S. A. Marshall, Esq. ...	5	0 5	310	110·04	223
„ „ .....	„ „ „ .....	5	1 6	311	108·10	...
Mickleden .....	„ „ „ .....	5	1 6	490	129·10	...
▮ † Grasmere (High Close) .....	E. B. W. Balme, Esq. ...	8	0 9	553 $\nabla$	82·69	223
▮ „ (Pavement End) .....	T. A. Green, Esq. ....	5	1 0	214 $\nabla$	85·73	229
▮ Ravenstonedale (Brownber) .....	J. Fothergill, Esq. ....	5	3 0	826 $\nabla$	45·61	179
Orton Vicarage .....	Rev. E. Holme .....	5	3 6	770 $\nabla$	57·91	195
▮ † Kirkby Stephen .....	Mrs. Mason .....	5	1 0	574 $\nabla$	49·27	195
Haweswater (Mardale Green) M	G. J. Symons, Esq., FRS	5	1 0	...	68·80	...
Fairfield .....	T. A. Green, Esq. ....	5	1 0	2860 $\nabla$	79·38	...
„ .....	„ „ „ .....	8	1 0	2860 $\nabla$	80·47	...
Asby (Town Head) .....	Mr. J. Clemmet .....	5	1 0	685 $\nabla$	47·07	209
Grisedale (Ruthwaite Lodge) M	Mr. A. Milne .....	8	1 6	1750	91·85	...
▮ † Patterdale Hall .....	„ „ „ .....	7	1 3	490 $\nabla$	76·31	227
† „ (Greenside Mine) .....	Mr. T. Taylor .....	7	1 6	1000 $\nabla$	79·93	...
▮ † Appleby .....	Dr. Armstrong .....	5	1 0	442 $\nabla$	36·02	205
▮ „ (Castle Bank) .....	C. R. Rivington, Esq. ...	5	1 2	440 $\nabla$	37·01	208
Ullswater (Swarth Fell) .....	G. J. Symons Esq. F.R.S.	5	1 3	1000 $\nabla$	47·10	...
Lowther Castle [Penrith] .....	Mr. F. Clarke .....	8	3 6	750 $\nabla$	37·26	166

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

## MONMOUTH.

▮ † Marshfield (Llwynarthan) .....	F. G. Evans, Esq. ....	5	1 1	72 $\nabla$	30·47	166
▮ Portskewett (Sudbrook) .....	T. D. Roberts, Esq., C.E.	8	1 6	33 $\nabla$	21·56	129
Newport (Clytha Park) .....	J. H. Canning, Esq. ...	5	1 6	100 $\nabla$	31·93	...

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which ·01 or more fell
		Diameter	Height above Ground.	Height above Sea Level		
			ft. in.	feet.	inches.	
<b>MONMOUTH—(con.)</b>						
D Chepstow (Shirenewton Hall) ...	E. J. Lowe, Esq., F.R.S.	8	1 0	571 T	32·36	183
D „ (The Mount).....	H. A. Smith, Esq.....	5	1 0	220 T	26·58	153
D Llanfrechfa Grange .....	F. J. Mitchell, Esq. ...	5	4 0	326 A	30·77	151
Tredunnoch .....	Rev. C. T. Salusbury...	5	2 3	170 A	28·43	161
D Chepstow (Piercefield Park).....	H. Clay, Esq.....	5	1 6	270	27·87	154
D „ (Itton Court).....	E. Curre, Esq. ....	8	4 0	390	29·08	204
Abersychan.....	E. Cooke, Esq. ....	5	1 0	620 A	38·37	...
„ (The Hawthorns)...	J. W. Mulligan, Esq, MD	5	1 0	755 T	39·83	192
D Tredegar (Bedwellty House) ...	J. Colquhoun, Esq. ...	8	1 0	972 A	41·07	165
D „ (The Willows) .....	G. A. Brown, Esq. M.O.H	8	1 0	1024 T	46·00	177
Blaenavon Gas Works.....	C. White, Esq. ....	5	0 9	980	41·39	...
D Monmouth (The Hendre).....	H. A. Rolls, Esq. ....	8	1 0	176 T	26·49	182
Abergavenny (Larchfield) .....	Dr. Glendinning .....	5	1 0	240 B	30·16	162
„ (Dyne House) .....	Dr. Steel.....	5	1 2	220 T	30·80	169
D „ (The Chain).....	W. Baker Gabb, Esq...	5	1 0	250	31·93	194
Llantilio Court .....	Sir H. M. Jackson, Bt.	5	0 10	207 A	27·16	...
D Llanvihangel Court .....	Col. Sturt ... ..	5	2 4	508 A	29·56	170
„ „ .....	M „ „ .....	5	2 4	508 A	30·18	...
„ Crucorney .....	M Mr. J. Winfield .....	5	1 0	489	29·15	...
D Monmouth (Pentwyn) .....	Rev. J. T. Harding ...	5	1 0	191 B	24·31	127
<b>GLAMORGAN.</b>						
* Cowbridge (Fonmon Castle)....	O. H. Jones, Esq. ....	8	1 2	130	32·83	145
Barry & Cadoxton W. W. (Biglis)	J. A. B. Williams, Esq CE	...	...	20	26·35	143
„ „ (Pencoedtre)	„ „ „	...	...	200	30·99	...
Cardiff (Cogan Pill, Landough)...	„ „ „	5	1 0	122 A	27·10	131
D „ Castle .....	Mr. A. Pettigrew .....	5	1 0	38 A	29·27	147
D Porthcawl (The Rest) .....	G. Evans, Esq. ....	5	1 0	60	29·64	139
Cowbridge (Ash Hall) .....	D. Owen, Esq. ....	8	1 0	315 A	37·58	173
D Cardiff (Ely) .....	J. A. B. Williams, Esq CE	8	1 0	53 A	32·60	167
D „ (Lisvane) .....	„ „ „	5	1 0	136 A	26·91	162
„ (New Filters, Heath)....	„ „ „	5	1 0	132	31·30	160
„ (Llanishen Res.) .....	„ „ „	5	1 0	155	29·31	162
Gower (Penmaen) .....	Miss Bostock .....	5	1 0	300 T	36·79	157
Oystermouth (Newton) .....	Rev. S. Jones .....	5	0 9	279 T	35·16	...
D Swansea (Sketty) .....	T. T. Wood, Esq. ....	5	1 0	281 A	35·45	182
D „ (South Dock Lock).....	W. Law, Esq. ....	12	14 9	40	32·11	181
D Pontypridd (The Reservoir).....	W. Jones Esq. ....	5	1 0	300	40·47	142
D Swansea (Morriston) .....	J. Naysmith, Esq.....	5	1 0	53 A	36·41	185
D Neath .....	E. C. Pole, Esq. ....	5	1 0	204 A	38·50	190
D „ (Fairy Land) .....	E. Ll. Green, Esq. ...	5	1 9	170 B	36·86	201
D† „ (Glyncorwg) .....	T. F. Brown, Esq., C.E.	5	4 6	717 B	67·88	205
D Mountain Ash (Maesydderwen)..	M. Morgan, Esq. ....	5	1 0	483 A	41·52	207
Treherbert .....	Sir W. T. Lewis, C.E...	5	1 0	670	63·48	207
D Castell Llwhchw (Penllergare)...	Sir J. T. D. Llewellyn, Bt.	5	3 0	240 T	36·97	180
D Rhondda (Castell-nos Res.) .....	W. Jones, Esq. ....	5	1 0	1110	44·99	135
D Aberdare (Cwmaman) .....	J. Daglish, Esq.....	5	1 6	740 T	55·16	160
„ (The Mardy).....	Sir W. T. Lewis, C.E...	5	2 2	431 A	43·40	166

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ".01 or more fell.
		Diameter	Height Above Ground.	Height Above Sea Level	1892	
			ft    in.	feet.	inches.	
<b>GLAMORGAN—(con.)</b>						
d†Aberdare (Abernant).....	Evan Jones, Esq. . . . .	5	1   0	425	44·47	143
d Felindre (Lliw Reservoir).....	R. H. Wyrill, Esq., C.E.	8	1   3	426 †	38·81	193
d Merthyr Tydfil (Plymouth Wks.) ..	T. H. Bailey, Esq. . . . .	5	0   6	497	41·53	152
d Dowlais (Cwm Bargoed) .....	G. A. Lundie, Esq., C.E.	5	1   0	1237 ‡	34·83	169
d Ystalyfera (Tan-yr-allt) .......	D. H. Lewis, Esq. ....	8	1   6	300 l	48·12	168
<b>CARMARTHEN.</b>						
d Llanelly (Old Market Place) ...	G. Watkeys, Esq., C.E.	5	10   0	35 †	33·77	176
d " (Cwmlledi W.W.).....	H. S. Morgan, Esq. ...	5	3   0	240 ‡	40·13	202
Tegfynydd [Narberth] .....	H. S. Morgan, Esq. ...	5	1   0	158 ‡	40·09	138
d†Carmarthen (Joint Co. Asylum)..	Dr. Hearder .....	8	1   0	189 ‡	38·85	207
Llandilo (Dynevov Castle) .....	Rt. Hon. Lord Dynevor	8	1   0	202 †	39·91	185
d Llandovery .....	J. Watkins, Esq. ....	5	1   0	217 †	36·73	225
<b>PEMBROKE.</b>						
Pembroke (Stackpole Court).....	Rt.Hon. Earl of Cawdor	6	1   6	60 ‡	33·58	194
St. Ann's Head .....	The Meteor. Council ...	8	0   8	150	26·56	207
d Haverfordwest (Picton Castle)...	Sir C. Philipps, Bart...	5	1   0	100	35·70	144
d* " (High Street) ...	E. P. Phillips, Esq. ...	5	1   0	95 †	37·45	227
d Clarbeston (Penty Park) .....	Capt. F. Lloyd Philipps	5	1   0	320	38·10	193
d St. David's .....	Dr. W. P. Propert.....	5	1   0	216	30·02	205
d Newport (The Castle) .....	Genl. C. S. Sturt .....	8	1   2	240	33·34	190
d Castle Malgwyn [Llechryd] ...	Mr. W. Ward .....	5	1   0	...	29·40	135
<b>CARDIGAN.</b>						
d Troedyraur Rectory .....	Rev. R. J. Lloyd .....	5	1   0	140 ?	31·33	177
d Tregaron.....	Rev. T. Phillips.....	5	...	...	41·76	218
d Aberaeron (Dolaeron) .....	T. H. Maddy, Esq. ...	5	1   11	50	29·88	191
d Strata Florida (Hafod).....	T.J. Waddingham, Esq	5	0   10	580	45·86	211
Aberystwith (Castle Grounds) ...	The Royal Meteor. Soc.	8	1   0	60	23·84	192
d " (Gogerddan) .....	Sir Pryse Pryse, Bart..	5	1   0	80 B	39·13	170
<b>BRECKNOCK.</b>						
†Nanthir Reservoir [Aberdare] ...	O. Williams, Esq., C.E.	5	1   0	860 ‡	44·35	209
d Colbren (Penwyllt) .....	Mr. G. Palmer .....	5	1   0	1108	54·21	173
d Taff Fechan (Pentwyn Res.) ...	T. F. Harvey, Esq., C.E.	5	1   0	1120	45·96	213
" " " " "M	" " " " " "	5	1   0	1120	46·81	...
†Cardiff WW(Cwm Taff Fawr No5)	JABWilliams, Esq.C.E.	5	1   0	1143 ‡	44·55	...
† " " " " "No1)M	" " " " " "	5	1   0	2350 †	51·01	..
" " " (Cantref Res ) ...	" " " " " "	5	1   0	1120	47·20	213
" " " (Cwm Taff Fawr No6)	" " " " " "	5	1   0	1328 ‡	59·04	210
d Taff Fechan (Neuadd Res.) .....	T. F. Harvey, Esq., C.E.	5	1   0	1460	45·13	215
" " " " "M	" " " " " "	5	1   0	1460	45·41	...
Crickhowel (Glanusk Park) .....	Sir J. R. Bailey, Bt. ...	5	1   0	290	30·80	131
" " (Gwernvale) .....	Mrs. Lloyd .....	5	1   0	373 ‡	31·94	188
" " (Penmyarth) .....	S. H. Cowper Coles, Esq.	5	1   0	330	28·61	136
Brecknock (Cantref Rect.) .....	Rev. J. J. Evans .....	5	1   0	630 †	34·00	148
d " " (Llandeafaelog-fach)..	Rev. W. Williams.....	5	1   0	660	32·74	212

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which ·01 or more fell.
		Diameter	Height Above Ground.	Height Above Sea Level		
			ft. in.	feet.	inches.	
<b>BRECKNOCK—(con.)</b>						
d Hay (Gwernyfed Park).....	Major Wood .....	5	1 0	350 T	26·50	201
d Builth (Abergwessin Vic.) .....	Rev. J. Jones .....	5	1 0	904 A	52·62	230
Towey Valley (Nant-y-stalwyn) M	" " " .....	5	1 3	...	55·04	...
d Newbridge (Llysdinam) .....	Mrs. Lister Venables...	5	1 3	640 T	26·05	198
<b>RADNOR.</b>						
Glasbury (Woodlands) .....	A. Battiscombe, Esq....	5	1 0	300 T	24·40	181
d Disserth (Glanhowey) .....	Rev. A. W. Powell ...	5	1 0	700 P	27·59	254
d New Radnor (Downton) .....	Col. Pearson .....	5	0 8	712	31·97	182
" " (Ednol) .....	Mr. W. Jones .....	5	1 0	950	33·58	202
Llandegley (Gwern-i-Arglwydd)	Mr. J. Campbell .....	5	2 0	1000	26·56	201
d Pen-y-bont.....	Mr. J. Hamer.....	5	3 6	788	24·59	185
Rhayader (Nant-y-car) .....	M. G. J. Symons, Esq., FRS	5	1 0	1545	64·50	...
d " (Nantgwillt) ...old g.	R. L. Lloyd, Esq. ....	5	1 0	768 A	43·43	228
d " ( " ) new g...	" " " .....	5	1 0	764 A	45·41	228
" (Bwlchyrhendre) ...M	G. J. Symons, Esq., FRS	5	1 0	1585	54·00	...
d " (Claerwen) .....	" " " .....	5	1 0	1250	50·80	178
" (Pryddellau) .....	" " " .....	5	1 0	1710	56·90	...
d " (Abergwngy) .....	" " " .....	5	1 0	1200	49·25	166
<b>MONTGOMERY.</b>						
† Llangurig (Esgair Clochfan) M	G. J. Symons, Esq., FRS	5	1 2	1330	51·90	...
† " (Ystrad-olwyn-fawr) ...M	" " " " .....	8	1 0	950	40·30	...
d Newtown (Dolfor) .....	W. B. Pugh, Esq.....	5	0 3	1027 T	27·63	184
d Churchstoke (Mellington Hall) ..	P. Wright, Esq. ....	5	1 6	540 A	22·95	161
" ( " " ) M	" " " .....	5	1 6	540 A	22·61	...
Welshpool (Park Lane).....	Mrs. Hawksworth .....	5	1 0	280	25·51	123
d " (Pool Quay Vic.).....	Rev. R. J. Roberts ...	5	1 0	230	22·95	178
Meifod (Tanyfron).....	A. George, Esq.....	5	1 0	...	22·64	...
d Lake Vyrnwy .....	E. D. Marten, Esq. C.E.	5	0 7	770	45·23	205
<b>FLINT.</b>						
d Hawarden .....	Dr. Burlingham .....	5	1 0	245 T	35·90	193
d† Flint (Soughton Hall, Northop).	J. Scott Bankes, Esq... St. Asaph (Nantillys).....	5	1 0	418	39·03	187
P. P. Pennant, Esq. ...	" " " .....	5	1 0	173 A	30·78	...
d† Halkyn .....	Capt. Williams .....	5	1 3	895 A	38·70	169
d Holywell (Bagillt).....	H. T. Barker, Esq. ...	5	1 6	20 T	34·55	188
d Rhyl (Sedgley House) .....	W. T. Girdlestone, Esq.	5	2 6	21 A	26·52	170
<b>DENBIGH.</b>						
d Chirk (Brynkinalt) .....	Rt. Hon. Lord Trevor..	5	0 10	425	30·66	127
d Ruabon (Wynnstay).....	Mr. Middleton .....	5	1 6	484 A	36·53	206
Llangollen (Plas Berwyn).....	Col. Tottenham .....	5	0 5	440	39·38	159
Cerrig-y-druidion .....	C. S. Mainwaring, Esq.	5	1 0	905 T	40·88	177
Wrexham (Pack Saddle Res.) ...	F. Storr, Esq. ....	5	0 9	370 A	30·36	163
" (Cae Llwyd Res.) ...	" " .....	8	0 9	918 A	39·14	180
" ( " " " ) ...	" " .....	5	0 9	918 A	39·55	180
d " (Is-y-coed) .....	Rev. L. Wickham .....	8	1 2	110 T	26·36	126
d " (Coed Efa) .....	J. S. Hollings, Esq. ...	5	1 3	450 T	36·66	171

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which -01 or more fall.
		Diameter	Height Above Ground.	Height Above Sea Level		
			ft. in.	ft. in.	inches.	
<b>DENBIGH—(con.)</b>						
Wrexham (Brymbo) .....	J. H. Darby, Esq. ....	5	1 0	675	29·17	121
d Rosset (Trevalyn Hall) .....	Capt. Griffith Boscawen.	5	1 0	58 $\nabla$	29·70	178
Nantglyn (Pant-y-maen) .....	W. Barker, Esq. ...	8	1 0	1320 $\nabla$	49·47	...
d Llangerniew (Hafodunos) .....	H. R. Sandbach, Esq...	5	1 0	512 $\nabla$	45·73	166
Penbedw [Nannerch] .....	Mr. W. McMurray .....	8	0 6	650 $\nabla$	42·14	...
d Denbigh (Garn) .....	W. D. W. Griffith, Esq.	5	1 0	447 $\nabla$	35·51	181
d Dolben [St. Asaph] .....	T. G. Dixon, Esq. ....	5	1 2	...	33·85	207
d Trefnant (Maes Elwy) .....	Major Birch .....	5	2 0	200 $\nabla$	30·66	149
d Colwyn Bay (Nant-y-Glyn) ..	A. O. Walker, Esq. ...	5	1 0	180 $\nabla$	34·41	189
„ (Bryn Euryr) .....	Mr. T. Hutchings .....	5	1 0	125 $\nabla$	33·37	184
<b>MERIONETH.</b>						
†Dolgelly (Werngoch) .....	O. Hill, Esq. ....	5	1 6	465 $\nabla$	56·60	...
d Bala (Eryl Arran) .....	Mrs. Wilson .....	8	1 0	590 $\nabla$	45·68	176
d Llanderfel (Palé Gardens) .....	Mr. T. Ruddy .....	8	1 0	606 $\nabla$	38·46	235
Rhiwbryfdir = Oakley Quarries..	Mr. R. Roberts .....	5	10 0	1100	92·75	...
d Corwen (Rhug Gardens) .....	Mr. J. Bennett .....	5	1 0	500	34·90	163
<b>CARNARVON.</b>						
*Llanystumdwy (Talarvor) .....	Dr. J. Roberts .....	5	2 0	49	37·33	184
Llandwrog (Glynllivan Park) ...	Hon. F. G. Wynn .....	5	1 0	100	42·84	...
„ ( „ Garden) ...	„ „ .....	5	1 0	170	44·51	...
„ ( „ Fort) .....	„ „ .....	8	1 0	180	40·25	...
d Llanberis (Glyn Padarn) .....	Major Allen .....	6	6 0	370	79·10	190
Capel Curig (Lake Cowlyd) .....	T. B. Farrington, Esq.	8	1 3	1168	72·55	157
Carnarvon (Belan Fort) .....	Hon. F. G. Wynn .....	5	1 0	12	34·81	...
d „ (Cocksidia) .....	J. Jackson, Esq. ....	5	1 0	120	41·06	214
„ (North Road) .....	W. T. Morgan, Esq. M.D.	5	1 0	60	38·20	...
Llanbedr-y-Cennin .....	E. P. Stephenson Esq. CE	8	1 0	535 $\nabla$	56·60	148
„ „ (Llyndulyn) .....	„ „ „ .....	8	1 6	1622 $\nabla$	101·05	...
Llanfairfechan .....	R. Luck, Esq. ....	5	0 8	150 $\nabla$	40·42	197
d† Llandudno (Warwick House) ...	Dr. Nicol .....	8	0 8	99 $\nabla$	33·46	200
<b>ANGLESEA.</b>						
d Llangadwaladr (Bodorgan) .....	Mr. J. Gray .....	8	3 6	...	37·75	193
Holyhead .....	The Meteor. Council ...	8	...	...	31·86	217
Llanerchymedd Llwydiarth Esgob	T. Prichard, Esq. ....	5	1 0	112 $\nabla$	42·45	232
<b>ISLE OF MAN.</b>						
Castletown (Langness) .....	Bd. of Northern Lights	...	...	...	27·25	...
Derbyhaven .....	A. W. Moore, Esq. ....	5	1 0	20	27·69	101
d Douglas (Derby Square) .....	P. Killey, Esq. ....	5	1 1	78	34·13	181
d „ (Victoria Road) .....	H. Story, Esq. ....	5	0 9	160 $\nabla$	42·89	199
„ (Cronkbourne) .....	A. W. Moore, Esq. ...	8	0 10	138 $\nabla$	41·99	201
„ (Clypse, Onchan) .....	„ „ .....	8	1 0	439 $\nabla$	43·40	218
The Dhoon .....	„ „ .....	5	1 0	450 $\nabla$	55·33	...
Bishops Court .....	„ „ .....	...	...	...	33·51	...
Ramsey .....	„ „ .....	8	1 3	18	32·26	187
Point of Ayre .....	Bd. of Northern Lights	...	...	...	24·72	...



DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.	
		Diameter	Height Above Ground.		Height Above SeaLevel		1892
<hr/>							
ISLES OF SCILLY.			ft.	in.	feet.	inches.	
St. Mary's .....	The Meteor. Council ...	8	1	6	77 l	28·13	186
d†Tresco Abbey .....	T. A. D. Smith, Esq....	11	3	0	40	30·10	170
JERSEY.							
St. Aubins (Noirmont) .....	The Meteor. Council ...	8	1	0	270	31·24	185
St. Saviours (The Ainges) .....	W. A. Gunner, Esq....	5	1	3	250 B	32·04	149
GUERNSEY.							
d Les Ruettes Brayes {Le Hechet}	A. Collenette, Esq. ...	5	1	0	255 l	30·56	195
" " " " " " " " " " " "	" " " " " " " " " " " "	5	1	0	255 l	30·26	...
d Villa" Carey.....	Dr. Carey .....	8	1	7	180	27·90	178

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which -01 or more fell.
		Diameter	Height Above Ground.	Height Above Sea Level	1892	
			ft. in.	feet.	inches.	
<b>WIGTON.</b>						
Mull of Galloway .....	Bd. of Northern Lights ...	...	...	...	30·81	137
d Garliestown (Galloway Ho.).....	Mr. J. Day .....	5	4 6	20 ?	36·52	166
Stoneykirk (Ardwell House).....	Sir M.J.Stewart,Bt.MP	8	5 0	125	38·86	...
d Newton Stewart (Corsbie).....	The Hon. Mrs. Stewart	6	0 10	100	43·99	157
Loch Ryan Lighthouse .....	Bd. of Northern Lights ...	...	...	...	34·76	102
Corsewall .....	" " " ...	...	3 4	22 ?	25·60	112
<b>KIRKCUDBRIGHT.</b>						
Little Ross .....	Bd. of Northern Lights ...	...	3 3	130 ?	28·16	125
d Kirkcudbright (Senwick) .....	A. J. Corrie, Esq. ....	5	1 0	113 $\nabla$	37·14	195
" " ( " )..... M	" " " ...	5	1 0	113 $\nabla$	36·60	...
St. Mary's Isle ...	Mr. Browning .....	5	0 4	...	42·94	...
Auchencairn (Torr House) .....	W. Owens, Esq. ....	5	0 8	30	43·67	...
Dalbeattie (Colvend Manse).....	Rev. J. Fraser .....	5	1 6	120 $\nabla$	37·17	...
Gatehouse (Cally) .....	Dr. Buchan.....	5	1 0	...	44·55	191
Creetown (Cassencary) .....	J. A. Caird, Esq. ....	8	0 8	40	37·12	...
*Dalbeattie (Station Road).....	Mr. W. McBride .....	5	1 1	50	44·75	146
Castle Douglas (Slogarie).....	H. A. Timms, Esq. ...	5	1 0	300	49·22	...
d Kirkpatrick Durham (Glenlair)..	A. W. Maxwell, Esq... 4	4	1 0	250	41·80	131
d Cargen [Dumfries] .....	P. Dudgeon, Esq. ....	5	0 4	80 $\nabla$	39·45	176
d New Galloway (Glenlee) .....	Mr. W. Melville.....	5	1 3	208	53·46	210
Irongray (Drum park).....old g.	D. J. Kay, Esq.....	3	0 6	230	50·62	...
" ( " " ) .....	" " " .....	5	1 0	230	47·55	...
Dalry (Dalshangan) .....	T. R. Bruce, Esq. ....	8	0 6	500	45·14	...
Carsphairn(Holm of Dalquhairn)	R. McMillan, Esq.....	5	1 2	800	44·58	..
<b>DUMFRIES.</b>						
d Dumfries (Ivy Bank) .....	Rev. W. Andson .....	7	0 10	70 $\nabla$	35·61	201
Canobie (Byreburnfoot).....	W. Doughty, Esq.....	3	0 3	160	46·10	...
Langholm (Westwater).....	W. Elliot, Esq. ....	5	2 0	550 $\nabla$	55·92	..
" .....	Mr. D. Elder .....	5	1 0	270 $\nabla$	54·44	192
Moniaive (Glencrosh) .....	R. McMillan, Esq.....	5	1 2	350	48·11	...
d " (Maxwelton House) ...	Rev. Sir E. Laurie, Bt.	8	1 2	400 $\nabla$	42·26	158
Langholm (Ewes School) .....	Mr. J. C. Lyall .....	3	1 0	445 $\nabla$	46·30	...
" ( " Burnfoot).....	J. C. Little, Esq. ....	3	1 0	541 $\nabla$	50·15	...
Moffat (Craigielands).....	W. Walthew, Esq. ...	5	0 9	360 ?	47·91	...
" (Ericstane) .....	J. J. Welsh, Esq. ....	3	0 6	550	44·20	...

DIVISION XII.—SOUTHERN COUNTIES (*continued*).

STATIONS.	AUTHORITIES.	Rain Guage.			Depth of Rain	Days on which ·01 or more fell
		Diameter	Height Above Ground.	Height Above SeaLevel	1892	
ROXBURGH.						
New Castleton (The Flatt) .....	J. Elliot, Esq. ....	3	ft. in.	feet.	inches.	...
Hawick (Branhholme) .....	J. G. Winning, Esq.....	5	0 6	457 T	31·92	167
„ (Ladylaw) .....	The Meteor. Council ...	8	0 10	440	29·63	214
d*Jedburgh (Sunnyside) .....	G. Hilson, Esq. ....	5	6 0	351 T	28·98	166
d St. Boswell's (Ellistoun).....	The Hon. G. Dalrymple	5	1 0	352	27·22	187
Kelso (Springwood Park) .....	Mr. W. Chaplin .....	10	1 0	150 L	22·36	156
„ (Broomlands) .....	Dr. Buchan.....	...	...	205	23·30	234
d Melrose (Asylum).....old g	Mr. Pattman .....	5	0 6	480 T	28·19	221
„ ( „ ) .....	„ „ .....	5	1 0	480 T	27·65	221
d „ (Abbey Gate) .....	Mr. A. B. Dodds .....	5	0 6	280 T	30·12	197
d Wooplaw [Galashiels] .....	J. Murray, Esq.....	5	1 0	880 T	26·27	177

## DIVISION XIII.—SOUTH EASTERN COUNTIES.

SELKIRK.						
d Selkirk (The Hangingshaw) ...	Miss Johnstone .....	5	0 6	670 T	31·91	163
Galashiels (Abbotsford Rd.) .....	Dr. Somerville .....	5	0 6	416 T	28·72	222
PEEBLES.						
d Peebles (Kailzie) .....	Captain W. C. Black ...	5	0 4	559 T	33·28	134
Eddlestone (Portmore Res.) . ...	W. Anderson, Esq. ....	11	0 6	1000	27·03	179
d N. Esk Reservoir [Penicuik] ...	Mr. W. Tod .....	11	0 6	1150 T	33·40	154
BERWICK.						
d Coldstream (The Hirsell) ... new g.	Mr. Cairns .....	5	1 0	94	25·25	200
" (Milne Graden) .....	Dr. Buchan .....	...	...	103	28·59	113
d Marchmont House .....	Mr. P. Loney .....	5	1 0	500 T	30·73	197
Dunse (Clouds) .....	C. Watson, Esq. ....	8	0 6	500 T	29·12	...
d " Castle .....	Mr. R. Aikman .....	5	1 0	500	27·15	137
St. Abb's Head .....	Bd. of Northern Lights	...	0 4	211	18·15	143
HADDINGTON.						
Garvald (Donolly Reservoir) ...	Mr. J. Henderson .....	11	0 2	600 T	30·21	...
d Whittinghame Gardens .....	Mr. J. Garrett .....	5	1 0	348 T	25·16	138
d Haddington (Asylum) .....	J. Mowat, Esq. ....	5	0 9	238 T	24·88	231
North Berwick Reservoir ... ..	Mr. J. Henderson .....	11	0 2	150 T	24·29	...
EDINBURGH.						
Moorfoot Hills (Bowbath) .....	W. Anderson, Esq. ....	...	...	...	40·43	..
" " (Gladhouse Res.) .....	" " .....	11	0 6	900	30·45	190
" " (Rosebery) .....	" " .....	11	0 6	750	25·77	140
d Gorebridge (Middleton) .....	Miss Anstruther .....	5	1 0	750	32·33	212
Penicuik (Edgelaw Res.) .....	W. Anderson, Esq. ....	11	0 6	654	25·60	140
Pentland Hills (Harper rig) .....	" " .....	11	0 6	900	44·01	...
" " (Harehill) .....	" " .....	11	0 6	1470	54·15	...
" " (Loganlea) .....	" " .....	11	0 6	850	45·20	...
West Calder (Addiewell) .....	J. Fyfe, Esq. ....	5	0 6	600	32·43	...

## DIVISION XIII.—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	1892	
			ft. in.	feet.	inches.	
EDINBURGH—(con.)						
Pentland Hills (Swanston) .....	W. Anderson, Esq. ....	11	0 6	550	46·40	...
„ „ (Glencorse Res.)..	„ „ „ .....	11	0 6	787	35·63	147
„ „ (Harlaw) .....	„ „ „ .....	11	0 6	800	31·73	...
„ „ (Clubbiedean Res)	„ „ „ .....	11	0 6	750	28·90	...
„ „ (Harbour Hill) ...	„ „ „ .....	11	0 6	1112	32·83	...
Dalkeith .....	Dr. Buchan .....	...	...	190	17·35	112
Colinton (Fernelaw).....	Messrs. Leslie & Reid..	11	0 6	500	30·30	...
D Dalmahoy .....	Countess D. of Morton...	5	0 10	358	29·50	181
Portobello (Joppa).....	R. Muirhead, Esq. ....	5	1 0	20 †	19·95	...
D Edinburgh (Blacket Place) .....	R. C. Mossman, Esq. ....	5	0 8	252 †	25·55	190
„ (Charlotte Square)...	Messrs. Leslie & Reid..	11	0 6	230	22·41	...
„ ( „ „ ) ..	„ „ „ .....	12	63 0	300	18·17	..
„ (Royal Observatory).	Dr. Copeland .....	5	23 0	370 †	16·32	130
D „ ( „ „ ) ..	„ „ „ .....	5	1 0	347 †	24·37	157
„ (Streatham Ho.).....	Dr. Buchan .....	...	...	...	25·10	...
„ (Napier Road).....	„ „ .....	...	...	...	24·83	...
Leith .....	The Meteor. Council ...	8	1 8	22	20·60	176
„ (Navigation School) .....	Dr. Buchan .....	5	0 5	70	24·17	186
LINLITHGOW.						
D Whitburn (Polkemmet) .....	Lady Baillie .....	5	1 0	600 †	43·12	201
Uphall .....	J. Fyfe, Esq. ....	5	0 9	380	29·24	...
Linlithgow (Rockville).....	Mrs. Adie .....	3	0 9	260	31·99	...
Bo'ness (Grange) .....	H. M. Cadell, Esq. ....	3	1 0	20	29·90	...

## DIVISION XIV.—SOUTH WESTERN COUNTIES.

LANARK.						
Douglas (Newmains).....	Mr. J. Kerr .....	3	0 4	783	47·62	...
D Biggar (Cambus Wallace) .....	Captain Paul .....	6	0 6	748 †	28·56	180
Carmichael House .....	Sir W. C. Anstruther, Bt.	6	1 0	786 †	28·87	...
Cleghorn .....	W. Elliott Lockhart, Esq.	3	0 3	720	30·19	...
D Dalzell House .....	Lord Hamilton .....	6	5 6	89 †	30·69	135
Hamilton Water Works .....	Mr. R. Watson .....	7	1 0	436 †	36·30	...
Bothwell Castle .....	Mr. W. F. B. Archibald	10	18 0	146 †	27·59	162
D Airdrie (Hillend Reservoir) .....	Mr. W. A. Ritchie .....	6	4 6	620 †	39·63	124
Glasgow Observatory .....	J. Connell, Esq. ....	11	2 0	182	37·07	191
„ (Belvedere Hospital)....	Dr. Buchan .....	...	...	54	36·08	189
AYR.						
Barrhill (Dochroyle) .....	Mr. J. Scott .....	6	0 6	548 †	47·03	...
D Colmonell .....	R. Aitken, Esq. ....	6	0 6	100 †	43·70	179
Girvan (Pinnore) ..	Capt. Hamilton .....	5	1 0	187 †	45·85	195
Ailsa Craig .....	Bd. of Northern Lights	...	...	...	24·02	...
Girvan (Turnberry) .....	„ „ „ .....	...	...	...	32·83	128

## DIVISION XIV.—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	1892	
			ft. in.	feet.	inches.	
AYR—(con.)						
D Dalmellington (Benquhat).....	A. Gillespie, Esq. ....	...	1 6	1068	47·89	222
Maybole (Culzean Gardens) .....	Mr. D. Murray .....	9	3 0	200	37·10	115
Ayr (Auchinlee).....	Mrs. Drennan .....	6	3 0	36 T	34·67	...
D Old Cumnock (Townhead) .....	Mr. H. Neal .....	5	1 0	370 T	36·49	208
Mauchline .....	Mr. A. Muir .....	5	4 4	483 T	37·86	...
Kilmarnock (North Craig) .....	R. Blackwood, Esq. ...	12	1 0	319 T	43·70	...
Ardrossan .....	The Meteor. Council ...	8	1 0	10	30·70	160
D „ (Kirkhall) .....	H. F. Weir, Esq. ....	8	2 9	106 T	37·71	185
Paisley W. W. (Camphill) .....	R. Sharp, Esq. ....	12	1 6	611	62·30	...
Wemyss Bay (Asheraig) .....	Miss Stewart .....	10	2 10	30	58·42	...
Shaws W. Works (Kelly Dam)...	J. Wilson, Esq., C.E... 6	1 0	640 ?	62·80	...	...
RENFREW.						
Lochwinnoch (Garthlands) .....	J. Wilson, Esq., C.E... ..	...	...	...	71·16	...
„ (Castle Semple) ...	Mr. R. Orr .....	7	30 0	240	50·32	207
Paisley Gorbals & W. Works Dist.	Ryat Lynn .....	J. M. Gale, Esq., C.E.. 8	0 5	310	50·20	...
	Waulk Glen .....	„ „ „ 12	0 5	280	49·05	...
	Middleton .....	„ „ „ 12	0 5	550	55·05	...
	Nether Cairn.....	„ „ „ 12	0 5	700	59·75	...
	Stanely ...	R. Sharp, Esq..... 12	1 0	190	41·45	...
	Back Thornleymuir.....	„ „ „ 12	1 0	646	45·62	...
	Muirhead .....	„ „ „ 12	1 0	482 T	54·42	...
Shaws Water Works.	Springside .....	„ „ „ 12	1 0	532 T	59·80	...
	D Glasgow (Queen's Park) .....	D. McLellan, Esq..... 8	0 9	144 T	33·84	172
	Paisley (Crookston) .....	Major Hotchkis .....	3 0 5	...	33·35	122
	„ (The Coats Observatory)	Dr. Buchan..... 10	1 0	100	41·40	179
	Creuch Hill .....	J. Wilson, Esq., C.E... 6	1 0	1100	54·00	...
	Green Water .....	„ „ „ 6	1 0	788 T	68·50	...
	Gryfe Reservoir .....	„ „ „ 6	1 0	640 T	60·70	...
	Mansfield .....	„ „ „ 5	1 0	573 T	62·05	237
	Compensation Reservoir .....	„ „ „ 5	1 0	600	61·15	...
	Loch Thom .....	„ „ „ 5	1 0	643 T	62·06	253
	Shielhill .....	„ „ „ 6	1 0	962 T	57·40	...
	Spango Burn .....	„ „ „ 6	0 9	757 T	57·20	...
	Hole Glen.....	„ „ „ 5	1 0	603	60·09	232
	New Yetts Dam .....	„ „ „ 5	1 0	800	59·67	231
	D Prospect Hill .....	„ „ „ 5	1 0	200	61·09	210
	Port Glasgow (Douglichill Res.)	„ „ „ 5	1 0	549 T	47·15	137
	„ „ (Auchendoors Res)	„ „ „ 5	1 0	321 T	42·65	137

## DIVISION XV.—WEST MIDLAND COUNTIES.

## DUMBARTON.

New Kilpatrick (Chesters) .....	J. Kennedy, Esq. ....	5	1 0	240 T	43·88	...
D Dumbarton (Leven Shipyard) ...	Messrs. Denny, Bros... 5	1 0	21 T	43·85	208	...
Helensburgh (Lyleston) .....	Forrest Frew, Esq..... 6	0 6	120	44·30	...	...
D „ (Ferniegair) .....	J. R. Wilson, Esq. ... 6	0 6	18	48·01	191	...



## DIVISION XV.—WEST 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	1892	
<hr/>						
ARGYLL—(INSULAR)—(con.)			ft. in.	feet.	inches.	
Cantire (Skipness Castle) ... ..	Mr. P. McLean ... ..	5	1 6	20	50·38	...
„ (Stonefield, Tarbert) ...	Colin G. Campbell, Esq	5	0 9	90	68·88	158
D Islay (Ardbeg) .....	C. Hay, Esq. ....	5	7 0	46	44·15	213
„ (Rhinn) .....	Bd. of Northern Lights	...	3 0	74 ?	34·05	142
„ (Lochindaul).....	„ „	...	...	...	41·25	162
„ (McArthurshead).....	„ „	...	...	...	45·15	122
D „ (Eallabus).....	J. S. R. Ballingal, Esq..	5	1 0	68 T	44·32	192
D* „ (Gruinart School Ho ) old g	Mr. D. Mac Gilp .....	5	1 0	214 T	54·17	250
Jura (Bay of Small Isles).....	H. Evans, Esq. ....	...	...	80 ?	60·40	...
„ (Lowlandmansbay) .....	Bd. of Northern Lights	...	...	...	47·10	175
„ (Fladda) .....	„ „	...	...	...	55·65	131
„ (Ardfin) .....	Miss J. H. Campbell ...	5	0 6	130	54·89	...
Lismore (Mousedale) .....	Bd. of Northern Lights	...	3 4	37 ?	40·82	124
D Mull (Quinish) .....	J. N. Forsyth, Esq. ...	5	0 9	35	53·72	218
„ (Sound of).....	Bd. of Northern Lights	...	...	...	46·45	148
Coll (The Manse) .....	Rev. N. MacDougall..	5	1 0	100	46·29	...

## DIVISION XVI.—EAST MIDLAND COUNTIES.

## CLACKMANNAN.

Alloa (Mar Street) .....	J. Melville, Esq. ....	5	0 6	70	32·17	...
Alva House .....	Mr. McDerment .....	5	1 2	...	38·91	...
D Dollar .....	Mr. A. Blackwood .....	9	1 0	178	35·33	153

## KINROSS.

Blairingone [Dollar] .....	Rev. J. F. Cameron ...	5	1 6	300 T	40·90	...
Cleish Castle .....	Dr. Buchan .....	...	...	...	42·50	...
Loch Leven Sluice .....	Mr. W. Clark .....	7	0 7	360 L	30·10	...
D Kinross (Turffhills) .....	G. Henderson, Esq. ...	5	0 6	400 T	38·42	178

## FIFE.

D Culross (West Grange) .....	J. J. Dalgleish, Esq. ....	5	0 2	116 T	29·55	149
D Dunfermline (Keavil) .....	L. Dalgleish, Esq. ....	5	0 2	150	25·66	179
Carnock (Luscar House) .....	Col. Mitchell .....	5	0 10	430 T	32·41	...
„ „ „ „ „ No. 2	„ „ „ „ „	5	0 10	430 T	32·44	...
Pittenweem (The Priory) .....	Rev. F. K. Lloyd .....	5	0 10	50	22·21	...
Kilconquhar (Balcarres) .....	Mr. E. Tate .....	5	0 6	300 T	31·05	198
D Kennoway (Kilmux) .....	D. J. Russel Duncan, Esq.	5	1 0	500	27·73	188
Cupar (Fife & Kinross Asylum).	Dr. Turnbull .....	5	0 4	210	22·91	136
Kilmany (Mountquhanie House).	D. Gillespie, Esq. ....	3	1 3	240	26·10	...
Tayport .....	A. W. Donaldson, Esq.	5	1 0	27	24·22	126

## PERTH.

Tulliallan (F. C. Manse) .....	Rev. J. W. Laurie .....	5	1 11	50	29·60	...
Aberfoyle .....	J. M. Gale, Esq., C.E..	8	0 6	60	58·60	...
Dunblane (Kippenross) .....	Col. Stirling .....	3	0 4	150 T	36·80	...
D Doune (Gartincaber) .....	G. Burn Murdoch, Esq.	5	0 10	...	40·28	151

## DIVISION XVI.—EAST MIDLAND COUNTIES—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which 101 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level		
			ft. in.	feet.	inches.	
PERTH—(con.)						
Sheriffmuir (Lynns Farm) .....	Col. Stirling .....	...	1 0	680	41·13	...
Loch Dhu .....	J. M. Gale, Esq., C.E..	8	0 6	325	72·30	...
Ledard .....	" " "	...	...	1500	57·40	...
Loch Drunkie .....	" " "	8	0 6	420	62·75	...
" Vennachar .....	" " "	8	0 6	275	55·95	...
D Lanrick Castle .....	Mr. J. Begg .....	3	1 0	...	45·40	153
D Cromlix Gardens .....	Mr. W. D. Moir .....	5	1 0	450	56·73	183
Bridge of Turk .....	J. M. Gale, Esq., C.E..	8	0 6	275	61·75	...
Loch Katrine (Tunnel Hill Top) .....	" " "	8	0 6	830	76·30	...
Between Glen Finlas & Ben Ledi. ....	" " "	8	0 6	1800	47·00	...
Callander (The Gart) .....	C. A. Ainslie, Esq. ....	5	0 7	250	57·85	...
" (Leny) .....	J. B. Hamilton, Esq. ...	3	0 4	345 T	50·90	...
Glen Gyle .....	J. M. Gale, Esq., C.E..	...	...	380	89·60	...
D Balquhiddie (Stronvar) .....	J. Dickson, Esq. ....	6	1 0	422 T	68·67	221
D Crieff (Ochertyre) .....	Mr. G. Croucher .....	5	3 0	326 T	34·13	182
Perth (Rosebank) .....	Dr. Buchan .....	...	...	140	30·42	155
" (Huntingtower Field) ..	Mr. A. Bayne .....	6	1 0	40	28·10	...
D Coupair Angus Station .....	Mr. J. Robertson .....	5	1 3	183 T	24·10	172
Pitlochry (Donavoured) .....	W. Maxwell, Esq. ....	6	1 3	450	25·50	...
D Rannoch (Gauer) .....	W. Granger, Esq. ....	...	...	...	57·14	164
D Blair Athol (The Store) .....	Mr. A. Cameron .....	5	1 0	420	28·11	173
D Dalnaspidal (H.R.S.) .....	The Station Agent .....	5	3 0	1414 T	60·47	259
FORFAR.						
Buddonness .....	A. W. Donaldson, Esq. ...	5	1 0	17	23·58	151
Dundee (Harbour) .....	" " "	5	0 10	14	27·26	196
D Broughty Ferry (Douglas Ho.) ...	Mr. K. Graham .....	5	5 6	60 T	26·21	158
D Dundee (Eastern Necropolis) ...	late W.R. McKelvie, Esq. ...	3	0 4	199 T	26·60	134
D " ( " " ) new	" " "	5	0 4	199 T	27·11	187
" (Dens Works) .....	Messrs. Baxter Bros. ...	5	...	119 T	24·39	...
D " (Camperdown Jute Works) ..	Messrs. Cox Bros. ....	5	3 8	290	22·98	100
Monifieth (Fountain Brae) .....	Messrs. Laird & Sinclair	6	1 0	55	27·84	155
D " (Sea View) .....	W. Low, Esq. ....	8	1 0	83 T	24·51	173
D† Craigton .....	G. Baxter, Esq. ....	8	1 0	481	38·57	161
† " .....	" " "	11	0 3	481	35·16	...
† Crombie Reservoir .....	" " "	11	0 3	522 T	34·29	...
† Hill Head .....	" " "	11	0 3	570 T	34·50	...
D Arbroath (Waterworks) .....	W. Stewart, Esq., C.E. ...	5	0 11	70	22·71	152
D Inverarity .....	Rev. P. Stevenson .....	5	1 0	301	31·41	126
Kirriemuir (Lednathie) .....	Mr. W. Morrison .....	5	1 0	720	39·60	...
D " (Lintrathen) .....	G. Baxter, Esq. ....	8	1 0	700	32·22	144
" ( " " ) .....	" " "	8	1 0	700	31·65	...
" ( " " , Creich Hill) M	" " "	8	1 0	1500	31·25	...
Montroseness .....	Bd. of Northern Lights	...	...	...	27·81	...
Montrose (Melville Gardens) ...	Mr. A. Bruce .....	5	9 0	...	25·52	159
D " (Sunnyside Asylum) ...	Dr. J. C. Howden .....	5	0 10	200	27·57	127



## DIVISION XVII.—NORTH EASTERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which "01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1892	
<b>KINCARDINE.</b>						
The Burn [Brechin] .....	Col. McInroy .....	5	0 6	250	31·40	...
Fettercairn (Arnhall) .....	J. H. Hay, Esq.....	5	0 6	194	32·36	...
„ .....	A.C.Cameron, Esq.LL.D	5	0 4	237	31·23	169
<b>ABERDEEN.</b>						
† Braemar .....	J. Aitken, Esq. ....	8	0 9	1114	28·09	203
Forest of Glen Tana ...	Sir W. C. Brooks, Bt..	5	1 0	576	26·31	109
◦ Cromar (Logie Coldstone Manse).	Rev. Dr. Davidson.....	5	1 0	694	27·77	192
◦ „ ( „ „ School).	Mr. H. Cowie .....	5	1 0	607	27·46	196
„ ( „ „ Loanhead)	Mr. A. Farquharson ...	5	1 0	743	28·30	177
„ (Tillypronie) .....	Mr. R. Littlejohn .....	5	1 0	1120	27·69	205
◦ Aberdeen (Cranford) .....	D. McHardy, Esq. ...	5	1 0	120	29·81	229
† „ (Rose Street) .....	Dr. A. Cruickshank ...	5	0 5	95	27·31	...
„ (Gordon's Hospital) ...	Dr. Buchan .....	8	1 6	66	29·39	222
„ (King's College) .....	The Meteor. Council ...	8	...	48	29·81	217
◦ Midmar (Dun Echt Observatory)	Dr. Copeland .....	8	0 11	461	26·82	187
Inverurie (Manor Farm) .....	Mr. J. Walker .....	8	15 0	...	26·42	...
Ellon (Kermuck) .....	Mr. T. Mair .....	11	0 6	300	32·18	...
Haddo House .....	Mr. J. Forrest .....	5	0 8	197	31·95	...
Peterhead (Buchanness) .....	Bd. of Northern Lights	...	...	...	27·38	161
◦ New Deer (Artamford Cottage)..	J. Joiner, Esq.....	5	1 0	551	37·13	230
◦ Old Deer .....	J. Walker, Esq.....	5	2 0	135	33·82	244
Kinnairdhead .....	Bd. of Northern Lights	...	...	...	28·17	...
<b>BANFF.</b>						
◦ Keith (H.R.S.) .....	The Station Agent.....	5	1 0	364	33·70	187
◦ Banff (Earl Hill) .....	A. Ramsay, Esq. ....	5	1 0	115	30·81	218
◦ Boyndie (Whitehills) .....	Rev. W. Anderson ...	5	1 0	68	29·77	235
Cullen House .....	Mr. J. F. Smith.....	5	1 0	100	35·90	...
<b>ELGIN OR MORAY.</b>						
Grantown .....	Mr. W. Duncan.....	5	1 1	712	33·31	200
Craigellachie(WesterElchiesSch)	Mr. J. Milne .....	5	1 0	560	39·01	191
◦ Forres (H.R.S.) .....	The Station Agent.....	5	1 0	25	25·36	165
„ (Grange Hall) .....	J. Grant Peterkin, Esq.	5	1 0	52	28·15	...
◦ Gordon Castle .....	Mr. C. Webster .....	8	1 0	107	33·48	204
◦ Elgin (Highfield) .....	A. Cameron, Esq. ....	5	1 0	80	30·16	200
<b>NAIRN.</b>						
◦ Nairn (Achareidh).....	Col. Clarke .....	8	1 0	50	26·76	206
„ (School Ho.) .....	The Meteor. Council ...	8	1 9	84	25·94	210

## DIVISION XVIII.—NORTH WESTERN COUNTIES.

## WEST ROSS. ‡

◦ Strome Ferry (H.R.S.) .....	The Station Agent .....	5	1 0	40	57·52	233
Applecross Gardens .....	Mr. D. McCowan .....	5	1 0	70	56·63	...
Strathconan [Beauly] .....	Mr. D. McIver .....	5	1 0	450	47·39	107

‡ 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	1892	
			ft. in.	feet.	inches.	
<b>WEST ROSS—(con.)</b>						
D Glencarron Lodge .....	D. D. Munro, Esq.....	5	1 0	504	91·78	250
Loch Torridon (Bendamph) .....	Rt. Hon. Earl Lovelace	5	0 11	25	81·73	...
Loch Vraon.....	Sir J. Fowler, Bt. ....	8	0 7	750	57·50	...
Braemore House.. .....	" " " .....	8	0 7	750	58·88	...
" " Lodge = Foich .....	" " " .....	8	0 7	100	56·31	...
D Ullapool (Rhidorroch) .....	W. R. Cookson, Esq....	...	...	...	48·51	228
Isle of Lewis (Stornoway) .....	Bd. of Northern Lights	...	3 4	31 ?	31·06	202
" " " .....	The Meteor. Council...	8	1 0	24	36·15	264
" (Butt of Lewis) ..	Bd. of Northern Lights	...	3 6	...	28·62	133
<b>EAST ROSS.†</b>						
Contin (Kinnahaird) .. .	W. Ross, Esq. ....	5	1 2	74 †	30·44	178
D Strathpeffer Spa.....	J. T. Fox, Esq. ....	5	0 10	120	31·61	225
Cromarty .....	Bd. of Northern Lights	...	...	...	24·97	150
D Alness (Ardross Castle).....	Mr. R. Massie.....	5	1 0	450 †	41·37	198
Fearn (Lower Pitkerrie) .....	R. Gordon, Esq., C E..	5	1 0	95	24·34	152
" (Geanies Mains) .....	Miss Hope Douglas ...	5	1 5	200	22·87	...
Tarbetness .....	Bd. of Northern Lights	...	3 4	61 ?	21·66	...
<b>WEST INVERNESS.</b>						
D Ben Nevis Observatory.....	Dr. Buchan.....	5	...	4407	150·91	271
D Fort William (Public School) ...	C. Livingstone, Esq. ...	5	1 0	36 †	79·92	238
" " (Observatory).....	The Meteor. Council ...	8	...	...	72·71	226
Moidart (Roshven) .....	Prof. Blackburn .....	5	1 0	68 †	60·47	252
D Loch Shiel (Glenaladale) .....	Major Macdonald .....	5	1 2	50 ?	98·69	252
D Borrodale (Arisaig) .....	Mr. A. Grant.....	5	1 0	20 ?	61·81	238
D Glenquoich .....	Mr. D. Grant .....	8	2 4	660	111·99	256
Isle of Skye (Oronsay) .....	Bd. of Northern Lights	...	0 6	15 ?	49·33	191
Rona .....	" " " .....	...	...	...	40·32	129
Barra (Barrahead).....	" " " .....	...	3 0	640 ?	25·51	121
S. Uist (Ushenish).....	" " " .....	...	0 4	157 ?	54·70	167
N. Uist (Monach) .....	" " " .....	...	...	...	45·85	160
D " (Loch Maddy) .....	J. M. Fraser, Esq.....	5	1 0	...	52·30	218
Harris (Island Glass).....	Bd. of Northern Lights	...	...	...	35·88	...
<b>EAST INVERNESS.</b>						
D Loch Treig (Luibruaridh) .....	W. Granger, Esq.....	...	...	...	71·91	166
Invergarry .....	Mrs. Ellice .....	5	1 0	...	56·04	121
D Fort Augustus .....	Rev. M. Wall... ..	5	1 6	68	44·49	241
D Aviemore (H.R.S.).....	The Station Agent.....	5	1 0	710	34·01	239
D Loch Ness (Drumnadrochit).....	Mr. A. Grant.....	5	1 0	104	39·32	233
Inverness (High School) .....	Dr. Buchan.....	...	...	114	29·14	...
† " (Culloden House)....	D. Forbes, Esq. ....	6	4 0	104 †	24·82	...
D Cawdor [Nairn] .....	J. Joss, Esq. ....	5	1 0	250 †	31·04	213

‡ Including Cromarty.

## DIVISION XIX.—NORTHERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1892	
<b>SUTHERLAND.</b>						
Invershin .....	Mr. G. Young .....	5	4 0	20 f	29·27	...
d Golspie (H.R.S.) .....	The Station Agent.....	5	0 9	27	31·91	141
d „ (Dunrobin Castle) .....	Mr. D. Melville .....	5	1 0	14 f	29·86	174
„ ( „ „ ).....M	„ „ .....	3	0 3	13 f	28·45	...
Lairg .....	The Meteor. Council ..	5	0 10	332	35·79	268
Stourhead .....	Bd. of Northern Lights	...	..	...	43·80	177
d Scourie .....	J. Simpson, Esq. ....	5	0 4	28	49·39	210
Cape Wrath .....	Bd. of Northern Lights	3	3 6	355	45·96	156
<b>CAITHNESS.</b>						
Wick .....	The Meteor. Council ...	8	1 9	77	33·64	241
† „ (Nosshead) .....	Bd. of Northern Lights	8	4 8	127 ?	27·33	150
d† Watten (H.R.S.) ...	The Station Agent.....	5	2 6	75 f	27·79	219
Thurso (Holburnhead) .....	Bd. of Northern Lights	3	0 8	60 ?	32·20	145
Dunnethead .....	„ „ „	...	3 0	...	31·71	151
Pentland Skerries .....	„ „ „	...	3 3	72 ?	27·72	164
<b>ORKNEY.</b>						
d South Ronaldshay (Roeberry) ...	J. Gray, Esq. ....	5	1 2	101 f	38·19	246
Hoy (Cantickhead) .....	Bd. of Northern Lights	...	0 6	...	27·95	122
„ (Graemsay Sound, East=High)	„ „ „	...	3 4	27 ?	29·25	160
„ ( „ „ West=Low)	„ „ „	...	3 4	...	35·41	186
Pomona (Deerness) .....	The Meteor. Council ..	...	1 0	170	37·05	203
„ (Kirkwall) .....	Mr. Alex. Smith.....	3	1 8	12	39·05	...
Shapinsay (Balfour Castle) .....	Mrs. Balfour .....	5	0 6	50	32·50	...
Auskerry .....	Bd. of Northern Lights	...	...	...	24·93	119
Sanda (Start Point) .....	„ „ „	11	0 6	29 ?	31·02	119
<b>SHETLAND.</b>						
Sumburghhead .....	Bd. of Northern Lights	...	...	...	25·03	154
„ (Dunroseness) ...	The Meteor. Council ...	8	1 0	84	36·45	290
Bressay Lighthouse .....	Bd. of Northern Lights	5	0 4	60	42·00	171

## IRELAND.

## DIVISION XX.—MUNSTER.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1892	Days on which 101 or more fell.
		Diameter	Height above Ground.		Height above Sea Level	
			ft.	in.	feet.	inches.
<b>CORK.</b>						
D Castletownshend (Glen Barrabane)	E. B. Coghill, Esq. ....	5	3	0	25 L	39.28 185
D Dunmanway (Coolkelure) .....	Col. Shulldham .....	5	2	0	500 T	65.63 222
Roche's Point .....	The Meteor. Council ...	8	1	9	32	49.53 173
D Cork (Clarence Place) .....	W. Miller, Esq. ....	5	1	0	106 A	42.85 194
D „ (St. Ann's Hill) .....	Dr. M. Altdorfer .....	5	1	0	240	44.11 207
D Mallow (Old Dromore) .....	B. Williamson, Esq. ....	5	1	11	291 A	43.63 203
D Fermoy (Gas Works) .....	Mr. J. Grant .....	5	1	1	...	42.29 157
<b>KERRY.</b>						
D Darrynane Abbey ..	D. O'Connell, Esq. ....	5	1	0	13 A	54.35 250
D Kenmare (Derreen) .....	Mr. W. Holbrow .....	5	1	0	74 T	65.80 206
Valencia (Telegraph Station) ...	The Meteor. Council ...	8	1	0	12	56.06 251
Mangerton .....	Ven Archdeacon Wynne	8	0	8	1760 B	114.30 ...
D Killarney (Woodlawn) .....	„ „ „	5	1	1	96 A	57.02 239
Dingle .....	Rev. J. B. Anderson ...	5	1	0	20	62.67 ...
Ballyheigue .....	Ven Archdeacon Wynne	5	1	2	30	39.03 ...
<b>WATERFORD.</b>						
D Knockaderry .....	M. J. Fleming, Esq. C.E.	5	0	9	230 T	37.62 203
D Waterford (Brook Lodge) .....	C. P. Bolton, Esq., C.E.	5	1	0	100 T	32.63 173
„ (Cove Lodge) .....	T. N. Harvey, Esq. ...	11	7	3	90	32.70 ...
D „ (Ticor) .....	M. J. Fleming, Esq. C.E.	5	0	7	171 T	31.65 149
D Portlaw (Mayfield) .....	J. Anderson, Esq. ....	5	4	0	70	39.32 190
D Glenam [Clonmel] .....	Miss Grubb .....	8	1	4	80 T	41.25 193
<b>TIPPERARY.</b>						
D Tipperary (Henry Street) .....	J. Dowling, Esq., M.D.	5	1	0	400 ?	39.68 198
D Fethard (Mobarnane) .....	Dr. Donaldson .....	5	1	1	370 L	37.17 187
D Derry Castle [Killaloe] ...	Mr. T. Manly .....	5	1	6	580 T	47.15 225
D Nenagh (Clashnevin) .....	J. Mounsey, Esq. ....	5	1	2	300 A	34.46 212
„ (Castle Lough) .....	A. Parker, Esq. ....	5	1	3	120 T	37.02 212
D Ballingarry (Hazelfort) .....	Mrs. Fraser .....	5	1	0	...	34.74 227
<b>LIMERICK.</b>						
Newcastle West (Churchtown) ...	J. Horan, Esq. ....	5	1	0	234 T	37.43 225
Jane Ville [Tipperary] .....	R. Harding, Esq. ....	5	1	0	366	58.09 ...
Foynes .....	The Meteor. Council . .	..	...	...	...	39.08 220
Limerick (Roxborough) .....	A. W. Shaw, Esq. ....	8	1	6	112 T	34.80 194
D „ (Kilcornan) .....	Mr. J. Smyth ...	5	1	0	...	30.62 143

## DIVISION XX.—MUNSTER—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter	Height		1892	
			Above Ground	Above SeaLevel		
<hr/>						
			ft.	in.	feet.	inches.
CLARE.						
D O'Briensbridge (Ross) .....	J. Digan, Esq. ....	10	2	0	93	35·09 201
Sixmilebridge (Kilkishen).....	Rev. Canon Lloyd .....	5	4	4	113 $\nabla$	34·49 161
D Broadford (Hurdlestown).....	Capt. Bentley.....	5	1	0	164	32·44 219
D Ennis ..	J. Hill, Esq., C.E.....	10	18	0	21 $\perp$	37·30 189
„ (Roslevan) .....	Mrs. Scott .	5	1	11	40	36·74 185
D Miltown Malbay .....	M. Molohan, Esq. ....	5	1	0	400 $\nabla$	41·94 244

## DIVISION XXI.—LEINSTER.

## WEXFORD.

D New Ross (Longraigue).....	J. W. Deane, Esq.....	5	1 0	210 $\perp$	37·56	195
D Wexford (Bann-aboo) .....	Col. Magrath .....	8	5 2	10	31·16	179
D „ (Alma) .....	E. K. Ryan, Esq., C.E.	5	1 5	50 $\nabla$	31·67	165
D „ (Felt House) .....	W. Charlton, Esq.....	5	3 3	0	21·96	105
D Enniscorthy (Ballyhyland) .....	J. Moffat, Esq. ....	5	1 0	365 $\perp$	40·58	213
Oulart (Wells) .....	C. M. Doyne, Esq.....	5	1 0	207	35·10	236
D Gorey (Courtown House) .....	RtHon Earl of Courtown	5	3 0	80 $\perp$	32·39	161

## KILKENNY.

Rosbercon Castle [New Ross] ...	A. E. Graves, Esq. ...	8	2 6	60	28·27	125
D Inistioge (Woodstock) .....	Lady Louisa Tighe ...	5	1 0	400 $\perp$	27·62	159
Graigie (Brandondale).....	R. R. Burtchaell, Esq.	5	2 0	90 $\perp$	34·60	...
Kilkenny (Lavistown) .....	D. A. Milward, Esq....	5	2 0	180 $\perp$	27·47	178
D „ (Inch House) .....	J. O'Connell, Esq., C.E.	5	1 0	192	31·11	212
„ Castle.....	The Meteor. Council ...	8	...	...	32·10	193

## WICKLOW.

Laragh (Glendalough) .....	Wyndham H Wynne Esq	5	2 9	460 $\perp$	51·30	229
Greystones (Knockdolian).....	RCatheartDobbsEsq CE	5	0 6	68 $\perp$	33·24	179
D†Bray (Fassaroe).....	R. M. Barrington, Esq.	10	5 0	250	38·50	190

## CARLOW.

D Borris .....	Hon. E. S. Stopford ...	5	1 0	281	32·43	206
Bagnalstown (Fenagh House) ...	D. R. P. Beresford, Esq	5	1 0	340	33·56	192
D Carlow (Browne's Hill).....	W. Browne Clayton, Esq	5	1 0	291 $\nabla$	32·52	196

## QUEEN'S COUNTY.

Abbey Leix (Blandsfort) .....	J. L. Bland, Esq. ....	5	3 0	532 $\nabla$	35·64	218
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## KING'S COUNTY.

Parsonstown (Birr Castle) .....	The Meteor. Council ...	8	0 11	180	33·91	185
D „ ( „ „ ) .....	RtHonEarlofRosseFRS	8	0 7	176	33·67	186

## KILDARE.

D Straffan House .....	Mr. F. Bedford .....	5	2 0	240 $\nabla$	31·54	176
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## DUBLIN.

Glen-na-Smoel Lodge .....	F. P. Dixon, Esq., C.E.	5	0 10	800 $\perp$	47·87	251
„ (Water Works) .....	„ „ .....	5	0 10	516 $\nabla$	43·99	253

## 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	1892	
<b>DUBLIN—(con).</b>						
D Killiney (Cloneevin) .....	R. O'B. Furlong, Esq..	5	1 0	250 T	29·12	180
Rathmines (Terenure) .....	F. P. Dixon, Esq., C.E.	8	0 6	125 A	25·92	194
„ (Leinster Road) .....	E. H. Cannon, Esq. ...	5	1 0	170	23·88	216
D† Dublin (Fitz William Square) ..	J. W. Moore, Esq., M.D.	5	3 2	54 T	25·64	196
D „ (Phoenix Park) .....	Col. Kirkwood, R.E. . .	8	1 0	155 A	29·12	226
D Lucan (The Garden).....	Mr. P. Reid .....	5	1 0	105 A	30·78	184
D Glasnevin (Botanic Gardens) ...	F. W. Moore, Esq. ...	8	1 0	68 A	29·23	177
D Balbriggan (Laragh).....	Rev. S. P. Warren .....	5	1 0	57 T	26·62	201
<b>MEATH.</b>						
D Athboy .....	J. Penrose, Esq.....	8	1 3	227	32·59	169
Old Bridge [Drogheda] .....	Col. Coddington .....	10	5 4	62 A	32·91	...
Kells (Headfort) .....	Major Somerset Maxwell	5	3 6	230	36·63	220
Moynalty (Westland) .....	„ „ „	5	1 2	260	38·58	203
D Aclare House .....	Capt. Singleton, R.N...	5	3 0	170 T	32·78	152
<b>WESTMEATH.</b>						
D Athlone (Twyford) .....	J. P. Hodson, Esq.....	5	5 0	188 A	36·86	229
D Mullingar (Belvedere) .....	Mr. J. Bayliss .....	5	1 0	367 T	37·99	174
D Street [Edgeworthstown] .....	Major Somerset Maxwell	8	...	...	39·81	221
<b>LOUTH.</b>						
D Ardee (Lissrenny) .. . . .	T. F. Filgate, Esq.....	8	0 10	75 T	34·27	216
Dundalk (Farndreg) .....	J. Barton, Esq. ....	5	1 0	90 T	33·58	...
D Ravensdale (Annaverna) .....	Miss Stephen .....	8	1 9	255 T	34·84	195
„ School .....	Mr. Locke .....	8	1 6	200	35·91	157
D Greenore .....	T. Chambers, Esq.....	5	1 0	4 L	31·08	150
<b>LONGFORD.</b>						
D Edgeworthstown (Currygrane Ho)	J. M. Wilson, Esq.....	5	1 0	265 T	35·47	207

## DIVISION XXII.—CONNAUGHT.

<b>GALWAY.</b>						
Shannon Grove [Banagher] .....	F. A. Waller & Co. ...	5	2 0	...	31·78	111
D Galway (Queen's College).....	Prof. Anderson .....	5	1 0	22	38·68	212
D Ballinasloe .....	W. H. Kempster, Esq.	5	0 6	150 A	37·62	208
D „ (Garbally) .....	Earl of Clancarty .....	8	1 0	157 A	43·23	198
D Woodlawn .....	Mr. A. Porter.....	5	3 6	300 T	41·59	178
D Ahascragh (Clonbrock) .....	Rt. Hon. Lord Clonbrock	10	5 4	200 T	40·76	169
D Clifden (Kylemore House) .....	Mr. T. McNab .....	5	1 0	105	81·15	242
D „ ( „ Castle) .....	Mr. W. Farmer .....	5	0 9	...	75·10	251
Tuam (Castle Hacket) .....	Mrs. Percy Bernard ...	5	1 0	...	42·29	208
„ (Gardenfield) .....	M H. Kirwan, Esq. ....	5	1 0	155 T	44·49	...
„ ( „ ) ... Snowdon	„ „ „ .....	5	6 0	160 T	44·05	...
<b>ROSCOMMON.</b>						
D Donamon (Castle Coote) .....	Mr. A. Chute .....	5	0 10	197 T	39·20	201

## DIVISION XXII.—CONNAUGHT—(continued).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1892	
<hr/>						
MAYO.						
Ballinrobe (Cranmore) ..:	Miss Knox .....	5	0 9	99	47·35	...
d Crossmolina (Enniscoe) .....	J. Pratt, Esq.....	5	0 11	74 T	52·15	262
Belmullet .....	The Meteor. Council ...	8	...	...	49·30	260
SLIGO.						
d Collooney (Markree Observatory)	A. Marth, Esq. ....	5	1 0	130 T	41·83	249
d " " " " " " " " " " " "	" " " " " " " " " " " "	5	16 6	148 T	38·10	250
d Ballysadare Bay (Glen Lodge)...	Vernon Cockram, Esq..	5	1 0	20	46·19	238
d Sligo (Mount Shannon).....	F. M. Olpherts, Esq....	5	4 5	70 B	43·11	209
Mullaghmore .....	The Meteor. Council ...	8	1 2	40	36·85	241
LEITRIM.						
d Ballinamore (Lawderdale) ....	J.O. Lawder, Esq., C.E.	5	1 0	275 T	40·79	208

## DIVISION XXIII.—ULSTER.

<b>CAVAN.</b>						
d Lough Sheelin (Arley).....No. 2	Major S. H. Maxwell...	8	1 0	225 L	39·99	244
d " " ( " ) ...No. 1	" " " " " " " " " " " "	5	1 0	210 L	36·07	237
d " " ( " ) ...No. 3	" " " " " " " " " " " "	5	1 0	270 L	37·67	239
d " " (Fortland) .....	" " " " " " " " " " " "	5	1 0	325	38·77	240
d Virginia (The Lodge) .....	" " " " " " " " " " " "	5	1 0	320	38·90	213
d Bailieboro' (The Laurels) .....	" " " " " " " " " " " "	5	1 0	520	41·37	222
d Stradone House .....	" " " " " " " " " " " "	5	1 0	280	34·99	202
d Cavan (Water Works) .....	M " " " " " " " " " " " "	8	...	...	31·67	...
d " (Farnham) .....	" " " " " " " " " " " "	5	1 0	210	34·30	208
d Killeshandra (Cas. Hamilton) ...	" " " " " " " " " " " "	5	1 0	250	33·94	196
d Belturbet (Cloverhill) .....	" " " " " " " " " " " "	5	1 0	...	31·80	205
d " (Red Hills) .....	" " " " " " " " " " " "	5	0 9	208 T	34·31	194
d Bawnboy House .....	" " " " " " " " " " " "	5	1 0	240	39·78	201
d Belturbet (Quivvy) .....	" " " " " " " " " " " "	...	...	...	34·33	217
d Dowra .....	" " " " " " " " " " " "	5	1 0	225	40·81	236
<b>FERMANAGH.</b>						
d Newtownbutler (Crom Castle) ..	Major Somerset Maxwell	5	1 0	200?	34·94	170
d Enniskillen (Florence Court) ...	The Earl of Enniskillen	8	1 9	250 T	52·42	197
d Brookboro' (Colebrook Park) ...	Major Somerset Maxwell	...	1 0	279	40·73	205
<b>MONAGHAN.</b>						
d Dartrey [Cootehill] .....	Major Somerset Maxwell	5	3 0	270	37·73	210
d Castleblayney .....	" " " " " " " " " " " "	12	1 6	350	35·10	192
d Monaghan .....	" " " " " " " " " " " "	5	5 6	240	34·18	204
d " (Ballinode) .....	W.J. O'Neill, Esq., C.E.	5	1 0	...	31·45	161
d Glaslough House .....	Major Somerset Maxwell	12	3 6	150	38·29	196

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth o Rain.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1892	
			ft. in.	feet	inches.	
ARMAGH.						
D Edward St. Station [Newry] ...	J. L. D. Meares, Esq...	5	1 0	22 A	36·76	106
D Armagh Observatory.....	Dr. Dreyer ..	8	1 0	205 A	32·44	217
D Rich Hill (Fruitfield) .....	Messrs. Lamb Bros. ...	5	3 9	...	30·61	200
D Charlmont Lock [Moy].....	W.J. O'Neill, Esq., C.E.	5	1 0	61	27·74	132
D Lurgan (Belle Vue) .....	F. W. Bell, Esq. ....	5	0 5	200 I	28·13	202
DOWN.						
D Warrenpoint (Summer Hill).....	Mr. B. M. Kernan.....	5	1 0	30 L	38·03	124
Newcastle (Fairleigh) .....	Rev. J. H. Seymour ...	5	1 2	12	43·43	192
D Rathfriland (Ballynagappoge)...	J. Smyth, Esq., C.E....	5	3 0	300	28·24	143
D Castlewellan (Lough Island) ...	" " "	5	1 0	440 I	41·26	147
Banbridge (Katesbridge) .....	A. Mulligan, Esq. ....	5	1 0	230	29·27	...
D Seaforde .....	Col. Forde .....	8	0 5	180 A	36·98	196
D† Banbridge (Milltown) .....	J. Smyth, Esq., C.E....	8	0 8	200 I	31·20	209
D† Waringstown .....	Col. Waring, M.P. ....	8	0 8	191 A	36·09	208
D Lisburn (Union Locks).....	W.J. O'Neill, Esq., C.E.	5	1 0	138	33·42	176
Sydenham (Alma House) .....	R. Reade, Esq. ....	5	1 0	60	36·17	201
Hollywood Water Works .....	Mr. R. McLean .....	5	3 6	310 A	27·21	157
Donaghadee .....	The Meteor. Council ...	8	1 6	30	30·97	233
ANTRIM.						
Aghalee [Lurgan].....	F. L. Turtle, Esq.....	5	0 6	130	28·38	158
Storyford (Belfast W. W.) ...	L.L.Macasseay, Esq., CE	5	0 7	470 A	34·21	232
" "						



G. J. S.



ARRANGEMENTS  
FOR THE  
SYSTEMATIC OBSERVATION  
AND  
RECORD  
OF THE  
RAINFALL OF THE BRITISH ISLES.

COMPILED BY

G. J. SYMONS, F.R.S.,

*Secretary Royal Meteorological Society ; Membre du Conseil Société Météorologique de France ;  
Member Scottish Meteorological Society ; Korrespondirendes Mitglied Deutsche  
Meteorologische Gesellschaft ; Registrar Sanitary Institute ; Fellow Royal  
Colonial Institute ; Membre correspondant étranger Soc. Royale de  
Médecine Publique de Belgique ; Socio correspondiente Sociedad  
Científica Antonio Alzate, Mexico, &c., &c.*

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EIGHTH EDITION.

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LONDON :  
EDWARD STANFORD, COCKSPUR STREET, S.W.  
1893.

**Introductory and Historical.**—I cannot help this section appearing to be egotistical ; the rainfall organization being entirely my own creation, it is impossible for it to be otherwise.

In the early part of the year 1859 I began collecting copies of records of the fall of rain, and early in 1861 wrote to all the observers of whom I was then aware, and asked them to send me all the records for the year 1860 that they could. I received 168 returns, and printed a table showing the total fall at all those places, being a larger number than had ever before been classed together. This publication gave a stimulus to observers, and from that time onwards their number has steadily increased until it is now nearly 3,000.

The amount of information published has increased even more, for whereas at first I printed only the total annual fall, I now publish essays on various branches of rainfall enquiry, and full abstracts of the most remarkable falls in short periods (ten minutes, half-an-hour, and so on), the heaviest falls in one day, tables of the monthly fall at several hundred stations, and, in short, give all the information which I can collect and which it seems expedient to print.

From the foregoing it will be evident that the compilation of the present annual volume (of which the short title is "British Rainfall, 1892," &c.) is a very serious labour. The mere checking of more than two thousand returns takes a long time, and so does the due arrangement of the various facts reported, and by no means the least onerous matter is ensuring the accuracy of the printing of the whole.

During the first few years I not only gave my own time gratuitously to the work, but also bore all the cost of postages and of printing. It soon, however, became far too great for me to bear, and my correspondents kindly offered to share it with me. In 1865 the price of the annual volume was fixed at five shillings, and, although the size and cost of the volume has since so largely increased, that the price to the general public has had to be doubled, those observers who desire it are still allowed one copy at the old price. There are two reasons for this : (1) Because as the book could not be compiled without the help of observers, they ought to be allowed to have it as cheaply as possible ; (2) Because a small number of the observers (about 300, whose subscriptions are duly published) contribute annually from one to ten guineas towards the general expenses of the work.

The existing state of matters is, therefore, shortly as follows. There

are nearly 3000 persons, well spread over England and Wales, Scotland and Ireland, each of whom is, I hope, strictly obeying the rules on page 5. To each of them I send on December 31st each year, blank forms for them to return to me filled with the facts observed by them. At the same time I send a list of the various publications, and invite such pecuniary aid as it may be agreeable to them to send.

I ought, perhaps, to say what becomes of the subscriptions. I will mention some of the outlets. (1) There are nearly a thousand observers whose returns have to be collected, examined, discussed, and printed, who do not contribute sixpence towards the cost thereof. (2) In some localities it is impossible to obtain volunteer observers, and there the observers receive regular salaries. (3) The mass of office work, correspondence, &c., is far beyond what I can myself accomplish; two regular assistants are, therefore, employed, and besides that, considerable sums are paid for extra assistance at times of pressure. (4) The expenditure for printing and postages is very large.

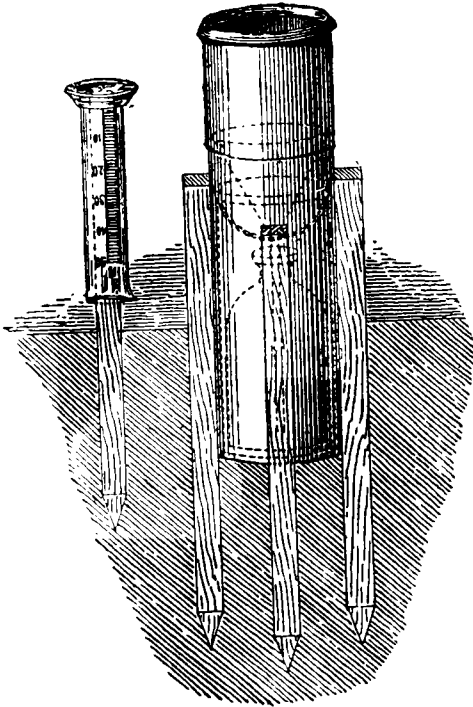
In addition to the annual volume, I publish a monthly periodical, *Symons's Monthly Meteorological Magazine*, giving, in addition to a full chronicle of the progress of meteorology, details of rainfall at about 100 stations. This is sent free to subscribers.

It may, perhaps, be added that it always affords me pleasure to reciprocate as far as possible the assistance which the observers render to me, either by affording them meteorological information, data as to the height of their stations above sea level, or advice as to the purchase of instruments.

In short, the state of the case is this: I have given myself up to the collection of statistics of rainfall—old ones and current ones; I invite everybody to help me, both with observations and with funds, and I promise, in return, to render to all my correspondents all the help that is in my power.

**Patterns of Rain Gauges, and where to Buy them.**—This is not a pleasant section to write, for there is considerable jealousy among the manufacturers, and I am almost certain to be accused of favouritism by some one. However, I have never patented any pattern of rain gauge, and therefore leave the field open to all.

Upon one point it is necessary to be despotic, viz., that amateurs never try to make their own gauges; they are almost certain to go wrong in some respect, and nothing is more vexing, both to the observers and to myself, than for it to be discovered after observations have been recorded for a long time that the labour of years is vitiated by an inaccurate instrument.



For use in ordinary localities I recommend the Snowdon gauge; it is five inches in diameter, is easily fixed by four stakes, as shown; the glass jar, each division on which denotes  $\frac{1}{100}$ th of an inch of rain, when filled up to the top division holds 0·50 in., or half an inch; the bottle holds about three inches of rain, and, of course, in the very rare case of the fall exceeding that, the excess is saved by the can, and must be carefully measured. It costs 12s. 6d. or £1 1s., according as it is made of galvanized iron, or of copper. Where cost is no object, it is, by some, thought better to have a larger gauge, viz., eight inches diameter, cost-

ing from £2 to £3, but I do not advise it.

Snowdon pattern rain gauges can be obtained from any optician, but it may be convenient to give, in alphabetical order, the names and addresses of a few of the principal makers:—

CASELLA, L., 147, Holborn, E.C.

HICKS, J. J., Hatton Garden, E.C.

NEGRETTI & ZAMBRA, Viaduct, E.C., and Regent Street, W.

PASTORELLI, F., 10, New Bond Street, W.

**Testing.**—Wherever, and of whomsoever, a rain-gauge may be bought it is very desirable that the purchaser should insist upon having a certificate of its accuracy. Rain gauges are examined, and certificates issued, by Kew Observatory, and by myself, the charge in each case is the same, namely, 2s. 6d.

**Blank Forms.**—All blank forms required for returns to myself and additional ones wherever desired, are supplied gratuitously, and even those sold are charged at little more than their actual cost.

**Change of Residence.**—Each observer is requested to decide upon a specific name for his station, and to notify immediately any change in the position of the gauge or the discontinuance of his record.

## SUGGESTIONS FOR SECURING UNIFORMITY OF PRACTICE AMONG RAINFALL OBSERVERS.

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I.—SITE.—A rain gauge should not be set on a roof, a slope, or a 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 observed at the same time, and recorded for comparison. Changes, where inevitable, are least objectionable if made on January 1st.

III.—LEVEL AND FIXING.—The funnel of a rain gauge must be set quite level, and the gauge 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 funnels 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. Copper gauges are free from this evil, and far the best.

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, or placed on a level slab; 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.

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. There must always be two figures to the right of the decimal point. Even 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. Never copy a total, always cast the column afresh. 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  $\cdot 01$ .

XIII.—ABSENCE.—Every observer should train some one as an assistant ; but where this is not possible, instructions should be given that the gauge 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 written down, and added to the subsequent measurement.

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 rough, all the snow is blown out of a flat-funnelled rain gauge. Snowdon pattern gauges are much the best.

XVI.—OVERFLOW.—Hardly a year passes in which some gauges are not allowed to overflow, it is therefore necessary to call attention to the fact that there does not seem to be any part of the British Isles where 4 inches may not fall in 24 hours. It is not desirable to purchase any gauge which will not hold 6 inches.

XVII.—SECOND GAUGES.—It is desirable that observers should have two gauges, and that one of them should be capable of holding 8 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. Observers having two gauges and recording both daily, should keep the records distinct, and forward a copy of each. Never take a mean of two.

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 be visited only 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, and as except by watching all night it is never possible to be certain that small amounts are wholly dew, it is best to count all entries of .01 in. or upwards as days with rain.

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, the business of Opticians; but the continuity and permanent accuracy of the records of his correspondents is of such importance, that any assistance in his power is always at their service.

XXI.—LEAKAGE.—Observers should test their gauges occasionally to see that the amount collected is neither increased nor decreased by leakage.

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