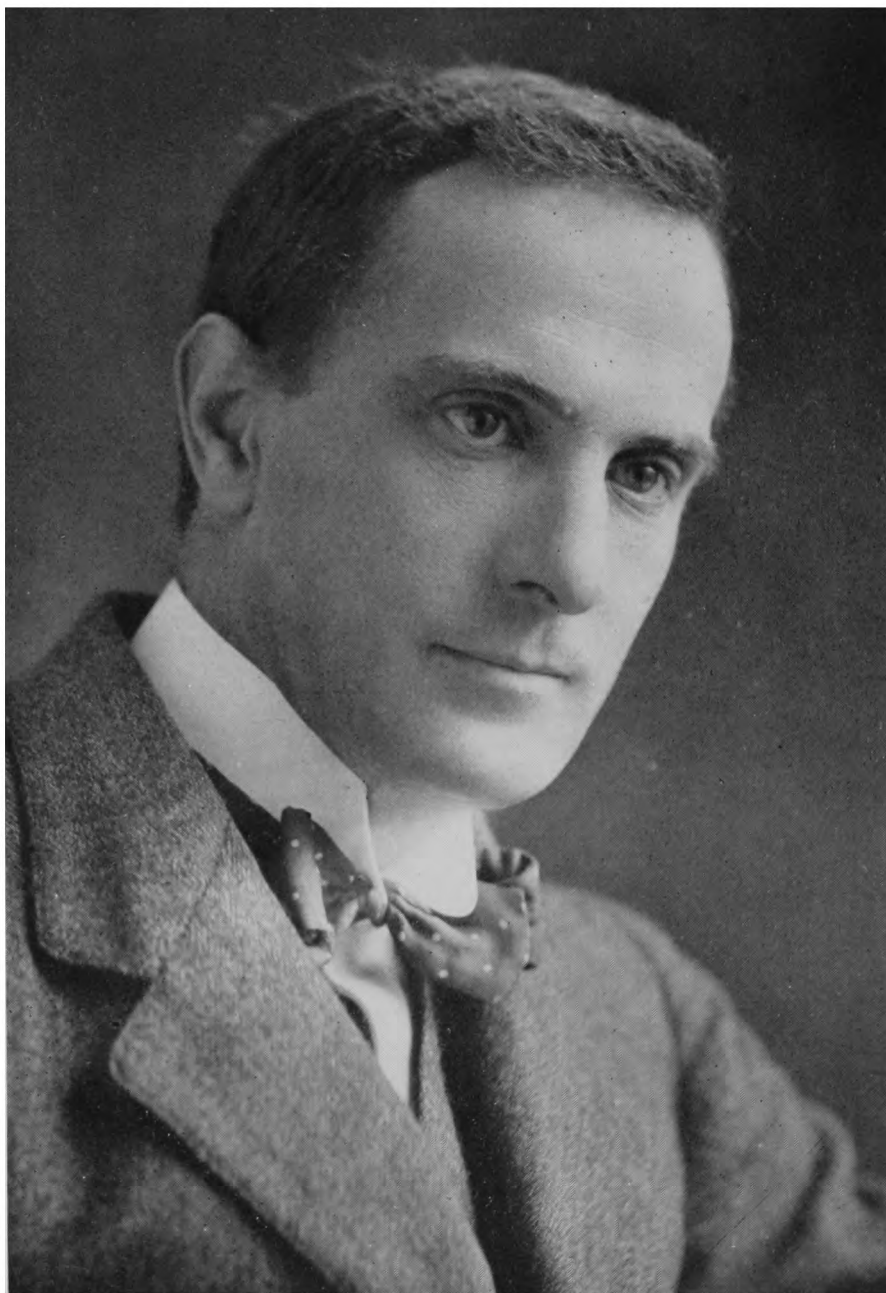


To lending library,

BRITISH RAINFALL,  
1922.







*Elliott & Fry, Photographers.*

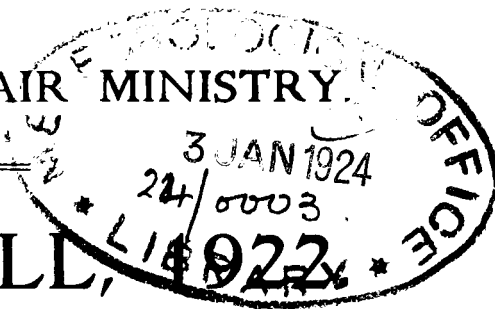
MORTYN DE CARLE S. SALTER, 1880-1923.

BRITISH RAINFALL, 1922.]

[*Frontispiece.*

METEOROLOGICAL OFFICE—AIR MINISTRY

# BRITISH RAINFALL,



THE SIXTY-SECOND ANNUAL VOLUME OF THE  
BRITISH RAINFALL ORGANIZATION.

REPORT ON

## THE DISTRIBUTION OF RAIN

IN SPACE AND TIME OVER

## THE BRITISH ISLES

DURING THE YEAR

# 1922

AS RECORDED BY MORE THAN 5,000 OBSERVERS  
IN GREAT BRITAIN AND IRELAND.

*WITH MAPS AND ILLUSTRATIONS.*

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ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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1923.

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ERRATUM IN "BRITISH RAINFALL, 1908-1921."

Glamorgan, 6. Treharris Service Reservoir. Height above sea level, *for* 865  
*read* 765 ft.

ERRATA IN "BRITISH RAINFALL, 1920-1921."

Cheshire, 2. *For* Crewe (Queen's Park) *read* Crewe (Weston Lane).

Oxfordshire, 3. Wroxton. Height above sea level, *for* 700 *read* 500 ft.

South Lancs., 1. *For* Great Crosby (Carnegie Library) *read* Great Crosby  
(Farnley).

ERRATA IN "BRITISH RAINFALL, 1921."

p. 130, *for* last two lines *read* Ireland. Mean of 98 stations. 4·89, 1·77, 4·09,  
1·26, 2·34, ·52, 4·05, 4·46, 1·70, 3·91, 4·40, 4·14, 37·53. British  
Isles. Mean of 394 stations. 5·45, 1·09, 4·08, 1·41, 2·34, ·62, 2·61,  
4·22, 1·90, 3·26, 3·16, 4·60, 34·74.

p. 169, Kent, 2. Charing Pumping Station. Height above sea level, *for* 593  
*read* 295 ft.

p. 197, Cornwall, 2. Gwennap (Trevince) *for* 752 mm., 29·60 in. *read* 759 mm.,  
29·90 in.

p. 197, Cornwall, 3. Devonport (Cremyll) *for* 532 mm., 20·95 in. *read* 525 mm.,  
20·69 in.

p. 240, Guernsey. Rohais (Colborne Villa) *for* 413 mm., 16·28 in. *read* 430 mm.,  
16·94 in.

p. 258, Ross and Cromarty, 10. Stornoway Lighthouse. Height above sea  
level, *for* 20 *read* 60 ft.

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## INTRODUCTION.

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Since the appearance of the last volume of *British Rainfall*, the British Rainfall Organization has suffered a most serious loss by the death of Mr. Mortyn de Carle Sowerby Salter, which occurred after a brief illness on May 21st, 1923. By Mr. Salter's death, meteorology is deprived of the services of a man whose ripe judgment and experience in all connected with the measurement of rainfall and the application of the results were of the highest value. His colleagues feel the loss of a trusty friend. The obituary notice written by Dr. H. R. Mill for the *Meteorological Magazine* is reprinted below, together with a bibliography of Mr. Salter's meteorological work.

Mr. F. J. W. Whipple, M.A., F.Inst.P., who has been on the staff of the Meteorological Office since 1912, first as Superintendent of the Instrument Division, and later of the Climatology Division, has been appointed to the Superintendentship of the British Rainfall Organization.

The volume of *British Rainfall* for 1922 which is presented herewith was prepared in great part under the superintendence of Mr. Salter. Like its predecessors, it is arranged in four parts. Part I. is devoted to matters connected with the organization of rainfall observations and the arrangements for their discussion and utilization. Part II. deals with various aspects of the rainfall of the year 1922. In Part III. the total for the year of the rainfall at each observing station is set out. Part IV. is reserved for articles of a general character; in this case it contains two papers by Mr. J. Glasspoole on rainfall statistics.

G. C. SIMPSON,  
*Director.*

Meteorological Office,  
*November, 1923.*



BRITISH RAINFALL, 1922

PART I

THE WORK  
OF THE  
BRITISH RAINFALL  
ORGANIZATION.

# BRITISH RAINFALL, 1922.

## PART I.

---

### THE WORK OF THE BRITISH RAINFALL ORGANIZATION.

---

#### THE STAFF OF OBSERVERS.

---

The observations which form the basis of the following account of the rainfall of the British Isles in the year 1922 were made principally by voluntary observers. It is satisfactory to be able to record that the total number of observers sending in reports continues to increase. As the actual number cannot be stated with precision, it is convenient to take as an index of observing activity the number of entries in the table of *British Rainfall* showing the total rainfall for the year; all the complete records are included in this table. The number of entries steadily increased up to the time of the War, and in *British Rainfall*, 1914, it was 5,453. By 1919 the number had fallen to 4,898, a drop of 555. The corner was turned in 1920, and in the present volume the number of annual totals in the General Table is 5,126.

There are, of course, numerous changes in the list each year, old stations dropping out and new or revived ones taking their place. In recent years the number of losses each year has been about 300, the number of gains rather larger.

Of the gains in *British Rainfall*, 1922, some represent the restoration of stations that have only been missing for a year or two, but the majority are stations that are entirely new to us. In some cases, however, the record has been maintained already for a number of years. For example, the record for "Windermere," Bromley Hill, covering the years from 1914 onwards, was received in 1923. Such data for the earlier years form a useful source of information, and are filed for reference, as are also some of the records which are incomplete and, therefore, not available for the General Table.

In England the more important gains include a group of records from the Corporations of Bolton and of Rotherham. The net gains in Kent and in South Devon, 11 stations in each, are worthy of notice.

In Wales, records are received for the first time from a group of gauges in Glyn Ceiriog, in Denbighshire.

The Channel Islands show an increase of six records, which must be attributed mainly to the inspection of Mr. Salter of nearly all the existing rain-gauges in Guernsey during the summer vacation of 1921.

*British Rainfall, 1922, compared with 1921.  
Number of Records Published.*

			Gain.		Loss.	Difference.	Per cent. change in year.
England	..	..	259	..	235	.. + 24	.. +0·7
Wales, etc.	..	..	49	..	25	.. + 24	.. +5·4
Scotland	..	..	38	..	37	.. + 1	.. +0·1
Ireland	..	..	28	..	29	.. - 1	.. -0·4
British Isles	..	..	374	..	326	.. + 48	.. +0·9

*Number of Rainfall Records Published in the Volumes of  
"British Rainfall" for the undermentioned Years.*

Years.	England.	Wales, etc.	Scotland.	Ireland.	British Isles.	Change from previous year.	No. of Stations per 100 sq. mi.
1861	.. 333	.. 9	.. 109	.. 20	.. 471	.. + 47	.. 0·4
1871	.. 1038	.. 88	.. 311	.. 67	.. 1504	.. + 5	.. 1·2
1881	.. 1548	.. 131	.. 313	.. 153	.. 2145	.. + 41	.. 1·8
1891	.. 2091	.. 168	.. 359	.. 181	.. 2799	.. + 23	.. 2·3
1901	.. 2616	.. 253	.. 442	.. 195	.. 3506	.. + 13	.. 2·9
1911	.. 3705	.. 397	.. 701	.. 271	.. 5074	.. + 198	.. 4·2
1914	.. 3962	.. 450	.. 753	.. 288	.. 5453	.. + 83	.. 4·5
1919	.. 3419	.. 436	.. 766	.. 277	.. 4898	.. - 101	.. 4·1
1920	.. 3460	.. 453	.. 758	.. 281	.. 4952	.. + 54	.. 4·1
1921	.. 3577	.. 446	.. 784	.. 271	.. 5078	.. + 126	.. 4·2
1922	.. 3601	.. 470	.. 785	.. 270	.. 5126	.. + 48	.. 4·2
Difference from 1921 :	+ 24	.. + 24	.. + 1	.. - 1	.. + 48	.. —	.. + 0·04

In Scotland, where there had been a noteworthy increase in the number of gauges in 1921, the total remained stationary in 1922. Additional records have been received from Loch Spey, Loch Ossian and Loch Treig, in Southern Inverness-shire, and the important station at Loch a'Bhraoin, near Braemore, in Ross-shire, has been re-established. Among the records which were commenced during the year, those at Achnashellach and Ullapool in Ross-shire, at Bonar Bridge and Forsinard in Sutherland, and at Altnabrean in Caithness, call for special mention as being from districts where few rainfall records are available. In these cases the gauges were issued on loan by the Meteorological Office.

In Ireland the number in *British Rainfall, 1922*, is practically the same as in the previous volume. The "gains," however, are not so well distributed as were those records which have ceased. The long records at Glanleam, near Valencia, in Kerry, at Ennistymon House, in Clare, at Woodlawn, in Galway, have come to an end, and the data for the important station at Ballybunion, in Kerry, which was established in 1921, are not complete for the year owing to the gauge having

County.	Records in 1921.	Records Lost.	Records Gained.	Records in 1922.	Records per 100 sq. mi. of area.	County.	Records in 1921.	Records Lost.	Records Gained.	Records in 1922.	Records per 100 sq. mi. of area.
<b>ENGLAND.</b>						<b>SCOTLAND.</b>					
LONDON .. ..	75	1	2	76	65	WIGTOWN .. ..	10	0	0	10	2
SURREY .. ..	196	19	18	195	27	KIRKCUDBRIGHT..	19	1	3	21	2
KENT .. ..	154	10	21	165	11	DUMFRIES .. ..	19	0	1	20	2
SUSSEX .. ..	153	12	17	158	11	ROXBURGH .. ..	16	1	1	16	2
HAMPSHIRE ..	171	10	12	173	11	SELKIRK .. ..	8	1	0	7	3
BERKSHIRE ..	51	7	6	50	7	PEEBLES .. ..	19	3	0	16	5
MIDDLESEX ..	63	4	7	66	28	BERWICK .. ..	12	0	0	12	3
HERTFORDSHIRE..	79	7	6	78	12	HADDINGTON ..	10	1	0	9	3
BUCKINGHAMSHIRE	39	0	4	43	6	MIDLOTHIAN ..	54	2	1	53	14
OXFORDSHIRE ..	58	6	1	53	7	LINLITHGOW ..	18	0	0	18	15
NORTHAMPTON ..	68	3	4	69	7	LANARK .. ..	39	1	1	39	4
HUNTINGDONSHIRE	7	1	3	9	2	AYR .. ..	34	1	0	33	3
BEDFORDSHIRE ..	24	2	2	24	5	RENFREW .. ..	40	0	3	43	18
CAMBRIDGESHIRE	43	6	6	43	5	DUMBARTON ..	23	0	1	24	9
ESSEX .. ..	103	8	7	102	7	STIRLING .. ..	38	2	0	36	8
SUFFOLK .. ..	54	4	6	56	4	BUTE .. ..	8	1	1	8	4
NORFOLK .. ..	85	9	6	82	4	ARGYLL .. ..	64	1	1	64	2
WILTSHIRE .. ..	57	8	2	51	4	CLACKMANNAN ..	5	0	0	5	9
DORSETSHIRE ..	68	0	3	71	7	KINROSS .. ..	4	0	0	4	5
SOUTH DEVON ..	141	5	16	152	9	FIFE .. ..	34	3	2	33	7
NORTH DEVON ..	40	2	5	43	5	PERTH .. ..	77	1	5	81	3
CORNWALL .. ..	74	7	7	74	5	FORFAR .. ..	41	2	2	41	5
SOMERSETSHIRE..	148	14	9	143	9	KINCARDINE ..	8	1	0	7	2
GLOUCESTERSHIRE	96	5	4	95	8	ABERDEEN .. ..	40	2	1	39	2
HEREFORDSHIRE..	51	9	1	43	5	BANFF .. ..	9	0	2	11	2
SHROPSHIRE ..	52	3	4	53	4	MORAY or ELGIN.	10	1	1	10	2
STAFFORDSHIRE ..	51	4	5	52	4	NAIRN .. ..	5	0	0	5	3
WORCESTERSHIRE	59	6	3	56	7	INVERNESS .. ..	63	6	7	64	1.5
WARWICKSHIRE ..	44	3	3	44	5	ROSS & CROMARTY	21	3	3	21	0.6
LEICESTERSHIRE..	36	2	2	36	4	SUTHERLAND ..	8	1	1	8	0.4
RUTLANDSHIRE ..	1	0	1	2	1.3	CAITHNESS .. ..	10	2	0	8	1.1
LINCOLNSHIRE ..	73	7	4	70	3	ORKNEY .. ..	12	0	1	13	3
NOTTINGHAMSHIRE	59	1	4	62	7	SHETLAND .. ..	6	0	0	6	1.1
DERBYSHIRE ..	77	1	6	82	8	<b>IRELAND.</b>					
CHESHIRE .. ..	81	5	5	81	8	CORK .. ..	29	3	3	29	1.0
SOUTH LANCs ..	105	1	10	114	17	KERRY .. ..	14	3	0	11	0.6
CENTRAL LANCs ..	84	2	1	83	15	WATERFORD ..	12	3	0	9	1.3
NORTH LANCs ..	68	5	0	63	10	TIPPERARY .. ..	18	3	3	18	1.1
YORKSHIRE, W.R.	331	17	19	333	12	LIMERICK .. ..	10	0	3	13	1.3
YORKSHIRE, E.R.	32	2	0	30	3	CLARE .. ..	6	4	3	5	0.4
YORKSHIRE, N.R.	108	9	3	102	5	WEXFORD .. ..	6	0	2	8	0.9
DURHAM .. ..	42	2	5	45	4	KILKENNY .. ..	6	0	1	7	0.9
NORTHUMBERLAND	48	5	3	46	2	WICKLOW .. ..	13	0	0	13	1.7
CUMBERLAND ..	64	2	2	64	4	CARLOW .. ..	5	0	0	5	1.4
WESTMORLAND ..	64	0	5	69	9	QUEEN'S COUNTY	4	0	0	4	0.6
<b>MONMOUTH, WALES, ETC.</b>						KING'S COUNTY..	8	2	0	6	0.8
MONMOUTH .. ..	36	4	3	35	7	KILDARE .. ..	3	0	1	4	0.6
GLAMORGAN ..	62	3	3	62	8	DUBLIN .. ..	31	4	3	30	8.0
CARMARTHEN ..	17	0	1	18	2	MEATH .. ..	6	0	1	7	0.8
PEMBROKE .. ..	12	0	4	16	3	WESTMEATH ..	10	1	0	9	1.3
CARDIGAN .. ..	19	0	1	20	3	LOUTH .. ..	4	0	0	4	1.3
BRECON .. ..	89	4	3	88	12	LONGFORD .. ..	4	0	0	4	0.9
RADNOR .. ..	24	0	0	24	5	GALWAY .. ..	7	1	0	6	0.3
MONTGOMERY ..	26	0	0	26	3	ROSCOMMON ..	2	0	0	2	0.2
FLINT .. ..	14	0	2	16	6	MAYO .. ..	10	2	1	9	0.4
DENBIGH .. ..	36	3	11	44	7	SLIGO .. ..	3	0	0	3	0.4
MERIONETH .. ..	17	2	3	18	3	LEITRIM .. ..	2	0	0	2	0.3
CARNARVON .. ..	49	3	7	53	9	CAVAN .. ..	1	0	1	2	0.3
ANGLESEY .. ..	12	1	1	12	4	FERMANAGH..	2	0	1	3	0.4
ISLE OF MAN ..	9	2	1	8	3	MONAGHAN ..	1	0	0	1	0.2
CHANNEL ISLANDS	24	3	9	30	40	ARMAGH .. ..	5	0	0	5	1.0
						DOWN .. ..	13	0	2	15	1.6
						ANTRIM .. ..	10	0	0	16	1.3
						LONDONDERRY ..	8	1	1	8	1.0
						TYRONE .. ..	4	1	2	5	0.4
						DONEGAL .. ..	8	1	0	7	0.4

been stolen. We are hopeful that many of these records which have stopped will be re-established, and that the useful work which is being done by Mr. E. W. M. Murphy, of the Irish Rainfall Association, will eventually lead to a great improvement in respect of Irish rainfall observing generally.

For assistance in the collection of the rainfall returns for the year we are especially indebted to Miss Cordelia Marshall, who prints and circulates statistics for the English Lake District, as well as to the officials of various local organizations, among whom may be mentioned :—Mr. F. Campbell-Bayard, of the Croydon Natural History and Scientific Society ; Mr. C. P. Sinclair, of the Hertfordshire Natural History Society and Field Club ; Major C. A. Markham, of the Northamptonshire Rainfall Association ; Mr. A. W. Preston, of the Norfolk Rainfall Organization ; the Rev. H. A. Boys, of the Mid-Wessex Rainfall Association ; and Mr. A. P. Jenkin, of the Cornwall Rainfall Association. The services of Mr. E. W. M. Murphy, of the Irish Rainfall Association, have been mentioned already.

During the year ending March 31st, 1923, 225 rainfall stations were inspected by the staff of the British Rainfall Organization, in addition to 62 sites for new gauges. The most important improvements in the exposure and distribution of gauges were effected as the result of inspections in the following localities :—The Berwyn Mountains (Denbighshire) ; Dartmoor ; the Southern Pennines ; the Peak District and Derwent Valley ; the West Highlands. On Ben More, Isle of Mull, West Highlands, a gauge had been set up in 1921 at 2,900 feet above sea level. It was found that the exposure of this gauge was not entirely satisfactory, and it was moved to a more suitable position at 2,800 feet. This is the highest gauge in the British Isles, the next, at Crib Goch, on Snowdon, being 2,340 feet. In the work of inspection, assistance was rendered by the Metropolitan Water Board, the Derwent Valley Water Board, the Corporations of Barnsley, Bradford (Yorks), Morley, Oldham, Plymouth, Rochdale, Rotherham, Sheffield, Wakefield, and Warrington, and by Mr. J. W. Melles, of Gruline, Mull.

### PROFESSIONAL WORK.

The transfer of the Organization to Government control has rendered necessary a reconsideration of the arrangements for conducting professional work. While the Organization was a private enterprise its Director was free to give expert advice on rainfall questions and to charge professional fees for his services. In cases of disputes and litigation he could be retained by either side to give evidence on its behalf, and in a few cases important water undertakings held a kind of lien on his services to prevent the resources of the Organization from

being used against them. Such a position is clearly one which a Government servant cannot take up. The Air Council, therefore, acting on the advice of the Meteorological Committee, appointed a small committee to which the chief interests concerned were invited to appoint representatives to advise on the question.

The Committee consisted of :—

Dr. G. C. Simpson, F.R.S. (Chairman), Director of the Meteorological Office.

Mr. W. J. E. Binnie, B.A., M.Inst.C.E., F.G.S., Representative of the Institution of Water Engineers.

Mr. Ernest P. Hill, M.Inst.C.E., Representative of the Institution of Civil Engineers.

Mr. Walter Sedgwick, M.A., F.R.Met.Soc., Representative of the Society of Parliamentary Agents.

Mr. S. T. Blackwell, Representative of the Finance Division of the Air Ministry.

The terms of reference were :—

- (1) To draft a scheme to govern the conditions under which the services of the Superintendent or other officials of the British Rainfall Organization may be made available for the public, and to define the duties which they may be called upon to perform in this way.
- (2) To draw up a scale of fees payable to the Ministry for the services rendered, and to define the method of payment and the allocation of fees in cases when more than one party is advised on the same matter.
- (3) To draft a form of agreement which shall be entered into in each specific inquiry.

The Committee met on two occasions during 1922 and have drafted a scheme and a form of agreement. These have been accepted by the Air Council and approved by the Lords Commissioners of H.M. Treasury. They are printed as an Appendix to the Annual Report of the Meteorological Committee for the year ended 31st March, 1923.

Professional advice has been given in the course of the year to the Corporations of Barnsley, Birmingham, Chester, Darlington, Morley, Oldham, Plymouth, Rochdale, Wakefield and Warrington; to the Metropolitan Water Board; to the Chester Water-works Company; and to the promoters of four water-power schemes. Copies of the reports submitted have been sent, when desired, to the Ministry of Health and to the Ministry of Agriculture and Fisheries.

## INQUIRIES.

In addition to these professional reports, 369 inquiries, an increase of 64 on the previous year, were received for information connected with rainfall over the British Isles.

## SPECIAL WORK.

A good deal of the time has been devoted of late to a general investigation of the variations of rainfall in the British Isles during the last fifty years. A paper by Mr. Glasspoole on the mean and extreme range of annual rainfall was published in *British Rainfall, 1921*, a preliminary paper on the fluctuations in amount and distribution of annual rainfall from 1868 to 1921 was contributed to the Royal Meteorological Society, and two papers on cognate subjects are included in Part IV. of the present volume. An investigation on similar lines into the variations of the 35 years' average of annual rainfall has been commenced as a preliminary to the extension of the rainfall survey map of the British Isles on the scale two miles to the inch, about one-half of which is now drawn. The survey map has been extended or revised in parts of the counties of Ross and Cromarty, Perthshire, Westmorland, Durham, Yorkshire, Lancashire, Denbighshire, and Devonshire.

The standard rainfall normals for the period 1881-1915 have been revised and extended. A complete series has been prepared for publication in due course by the Meteorological Office as a Section of the Book of Normals.

As much of the time of the staff as could be spared for the purpose has been devoted to re-arranging the rainfall records in the possession of the Organization, which date back to 1677, with a view to making the order uniform throughout. The records so far dealt with are those for Ireland back to the year 1880, and those for Scotland since 1900. Opportunity is being taken to improve the map index showing the positions of the stations.

## OBITUARY.

MR. MORTYN DE CARLE SOWERBY SALTER.—The following obituary notice was written by Dr. H. R. Mill for the *Meteorological Magazine*\*:—

Readers of this Magazine will learn with a sense of personal loss that Mr. Carle Salter died after a very short illness on May 21st. For nearly a quarter of a century no issue of the *Meteorological Magazine* appeared without his collaboration in its production, and latterly it was upon him that the difficult task devolved of adapting the old traditions which had been growing up for sixty years to the new conditions of the post-war world.

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\* Reprinted from *The Meteorological Magazine*, Vol. LVIII, June, 1923, No. 689.

Mr. Salter was the son of Mr. M. J. Salter, who was well known as a scientific chemist in London, and his ancestors included several whose names remain familiar in the scientific world, notable amongst them the famous botanist, Dr. Sowerby. After an education at Bancroft's School, Mr. Saiter joined the staff of the British Rainfall Organization, at 62, Camden Square, in 1897, and thus had for three years the advantage of working under Mr. G. J. Symons, F.R.S., the founder of the voluntary system of rainfall observing in this country. When I joined Mr. Sowerby Wallis as joint director of the British Rainfall Organization, on the first day of the present century, I found Mr. Salter very competent in the handling of statistics, and later, when I had the sole responsibility, his eagerness to co-operate in the new style of discussion and calculation based on cartometry was extremely helpful to me in gradually introducing more rigidly scientific methods. He was in many ways an ideal assistant, quick in his intelligent grasp of new ideas, unflagging in his patient mastery of depressing routine, and always a student of the scientific principles underlying the operations he was carrying out. He soon became my principal assistant, and year by year I delegated to him more and more of the statistical work required for the annual volumes of *British Rainfall*. From 1912 he became personally responsible for the great General Table of Rainfall, and he took a substantial share in the various discussions.

An important part of the work at Camden Square was the preparation of reports on the rainfall of gathering grounds for projected water-works, which had to be prepared often from scanty data and supported by evidence before Parliamentary Committees. In the inspection of the ground and rain-gauges and the testing of the value of particular rainfall records and computing average values, he developed his natural aptitude by diligent and unremitting study. Latterly, we adopted the system of working out the probable rainfall of an area, separately, from the same data, one trying to establish the highest, the other the lowest, possible value consistent with the data, and then arguing the matter out until by mutual criticism we arrived at the most probable figure. By this means, when it came to giving evidence, one was prepared for the cross-examination of the most pertinacious counsel.

Thus also I acquired that confidence in his judgment and skill which enabled me, when the time arrived, to hand over to him the work I was not destined to carry on with perfect confidence in his powers, and hence to me his death was a double sorrow.

On the breakdown of my health, in 1913, Mr. Salter became joint director of the British Rainfall Organization, and in effect joint director of this Magazine also. When the trained assistants left to take part in the war, Mr. Salter remained at his post, only because the state

of his health was such that no medical board would pass him for active service. Thus it was that the work of the Rainfall Organization was kept together and the publications kept going by the temporary assistants whom he trained. This involved a very heavy strain on Mr. Salter, which he could never have stood but for the constant care with which his wife—a daughter of the late Dr. E. F. Willoughby—watched over his health. The close of the War, unfortunately, brought no relief, as the period of transition immediately preceding and following my retirement, in 1919, involved an even heavier tax on his strength; but he lived to see the great body of 5,000 voluntary observers of rainfall transferred in full working order, without loss or discontinuity, from the informal conditions of a private institution to the less flexible, if more dignified, control of a Government Department.

Considering the close and continuous application to routine work which his position entailed, it would have been no discredit to Mr. Salter if he had failed to find time for independent work; but he was able to contribute many important papers\* to the Royal Meteorological Society, on the Council of which he served for many years, and to the Institution of Water Engineers. In these he materially advanced our knowledge of the relation of rainfall to the configuration of the land, and also of the fluctuations of general rainfall from year to year. In *The Rainfall of the British Isles*, he gave a clear and interesting summary of up-to-date material which should be studied by every rainfall observer. This book shows how thoroughly Mr. Salter had mastered the facts of rainfall distribution, and gave promise of works of wider usefulness in a future which, alas, he was never to see.

Mr. Salter's personal qualities won for him many friends, and he was always a cheerful and entertaining companion and a most loyal colleague. The sympathy of a large number will turn to the widow and only son, who formed with him a family circle of rare devotion and affection.

MR. WALTER WILLIAM BRYANT, whose death occurred after a very short illness on January 31st, 1923, had been in charge of the Meteorological and Magnetic Department of the Royal Observatory, Greenwich, since 1904. From that date the supervision of the meteorological observations made at the Observatory and their preparation for publication was his care. Though primarily an astronomer, Bryant entered on his meteorological work with great keenness, and frequently astonished his meteorological friends by his intimate acquaintance with the Greenwich records. He seemed to carry the whole mass of figures in his head, and could quote from memory the remarkable temperatures, heavy rainfall, or other particulars appropriate to

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\* *Vide Bibliography*, page xxi.

almost any meteorological discussion. Bryant took an active part in the work of the Royal Meteorological Society. Though he was not so much in the public eye as his predecessors, Glaisher and Ellis, he was equally assiduous in maintaining the high standard of the meteorological work of the Royal Observatory.

MR. ROBERT T. CROSS, of Worstead, Norwich, who died in June, 1923, took a keen interest in rainfall observations. His record covered 35 years. In 1913 he installed a hyetograph, and thereafter he regularly contributed the results of the records for inclusion in the section of *British Rainfall* dealing with the duration of rainfall.

REV. JOHN DENE, Rector of Horwood and Newton Tracey, Devon, had the distinction, of which he was pardonably proud, of having maintained an unbroken series of rainfall observations in one place for half a century. He commenced observing at Horwood in 1872, and continued the record to within a month of his death in September, 1922. We know of only one living observer, Sir John Moore, who has such a long record of observation at one place. It may be recalled, however, that Mr. J. J. Dalglish, who died in 1921, had kept a rainfall record at West Grange, Culross, for the remarkable period of 57 years.

THE REV. THE HON. WILLIAM CHARLES ELLIS, who died on June 20th, 1923, was Rector of Bothal, Northumberland, for 62 years. He commenced rainfall observations there in 1877, and maintained an unbroken record up to his death. He was a regular subscriber to *British Rainfall* and the *Meteorological Magazine* for nearly half a century, and contributed valuable notes on meteorological phenomena from time to time.

MR. HENRY JOHN ELWES, F.R.S., a former President of the Royal English Arboricultural Society and of the Royal Entomological Society, who died on November 26th, aged 76, had maintained rainfall observations for several years at his house, Colesborne Park, Gloucester.

MR. CHARLES E. J. ESDAILE, who was killed in a hunting accident on October 21st, 1922, commenced a rainfall record at his residence, Cothelstone House, Taunton, in 1875, and sent copies of his records with unfailing regularity to successive directors of the British Rainfall Organization for publication in the annual volumes of *British Rainfall*.

MR. VICTOR HERBERT GATTY, whose death from heart failure, whilst shooting on the moors, occurred on August 12th, 1922, was an enthusiastic amateur meteorologist. He had been for many years a rainfall observer, and had occasionally contributed to the *Meteorological Magazine*. Mr. Gatty was keenly interested in British snowbeds and moraines. The Rev. R. P. Dansey, with whom he had made several expeditions to mountain districts, writes (*Met. Mag.*, Oct., 1922, p. 255): "He once expressed a wish to die on a glacier when

his time should come ; but, failing this, he could hardly have wished anything better than to pass away amid the peaceful heather-covered solitudes of a Scottish grouse moor."

MR. JOHN GUNDRY had kept up an unbroken rainfall record at Staines for 37 years, and not infrequently contributed interesting notes on meteorological phenomena. Before his death he made arrangements for his daughter, who had assisted him for several years, to continue the rainfall record.

MR. WILLIAM BULLER HEBERDEN, C.B., could claim that five generations of his family had been interested in meteorological observations. The tradition had been established by his great grandfather, a doctor well known in the eighteenth century, and continued by his grandfather and his father ; moreover, a niece, Miss Evelyn Heberden, is also a rainfall observer. Mr. W. B. Heberden commenced making rainfall observations in London in 1890. He moved to Exeter in 1898, where he maintained a continuous record until his death at the age of 84, on November 30th, 1922.

MR. CLEMENT LINDLEY WRAGGE.—One of the most romantic chapters in a history of meteorology in the British Isles would be devoted to the Ben Nevis Observatory. Clement Wragge was the pioneer of the group of enthusiastic observers who shared the work on the mountain top. During the summers of 1881 and 1882 he ascended the mountain daily and took regular observations. Wragge was Government Meteorologist for Queensland from 1887 to 1902, and he established the Weather Bureau at Brisbane, as well as high-level meteorological stations on Mount Wellington and Mount Kosciusko (7,336 ft.). His unconventional methods are typified by his practice\* of giving cyclones and anti-cyclones Christian names in his official reports.

*Observers deceased to June 30th, 1923.*

Small Capitals denote Observers with Records of Thirty Years and upwards.

Bailey, Henry James (78) .....	Rowden Abbey, Bromyard.
Baird, Alexander, J.P. ....	The Willows, Wickham Breaux.
Byles, Walter John Barnard (54) .....	Harefield, Middlesex.
Beauford, William Frederick (81) .....	Horeham Grange, Sussex.
Blyth, John .....	Victoria Place, Dunfermline.
Bray, The Hon. Sir Reginald More (80) ...	Manor House, Shere, Guildford.
Breadalbane, The Most Hon. the Marquess	Taymouth Castle, Aberfeldy.
Bromhead, Col. Charles James, C.B. (82) ..	Plas Draw, Ruthin.
Brooke, Rev. William Ingham .....	Barford Rectory, Warwick.
† Bryant, Walter William (57) .....	Royal Observatory, Greenwich.
Burney-Young, E. ....	Gaywood, West Chilton.
Busby, J. ....	Rotherfield Park Gardens, Hants.
Campbell, Rev. James A. ....	Manse of Fetlar, Shetland.
Coghill, C. P. ....	Frankville, Athboy, Co. Meath.

\* *Nature*, Jan. 6th, 1923, p. 24.

† See Biographical Note *ante*.

*Observers deceased to June 30th, 1923.—(con.).*

Coombs, Dr. Carey P. ....	Castle Carey, Bath.
†CROSS, ROBERT T. ....	Lyngate Cottage, Worstead, Norwich.
Davis, Mrs. ....	Castle Connell Rectory, Co. Limerick.
†DENE, REV. JOHN (76) .....	Horwood House, Bideford.
DE L'ISLE AND DUDLEY, LORD (70) .....	Ingleby Manor, Middlesbrough.
Dyson, S. R. ....	Lawns Wood Cemetery, Adel, Leeds.
Edmonds, C. W. ....	Draycott, Fairford, Glos.
†ELLIS, REV. THE HON. WM. CHAS. (88) ...	Bothalhaugh, Morpeth.
†Elwes, Henry John, F.R.S. (76) .....	Colesborne Park, Gloucester.
Elmslie, Leslie Cruickshank (70) .....	Eltermere, Elterwater, Ambleside.
†ESDAILE, CHARLES E. J. ....	Cothelstone House, Taunton.
Forde, Major W. G., D.L. (64) .....	Seaforde, Co. Down.
Fordyce, Alexander Dingwall, M.P. ....	Brucklay Castle, Aberdeenshire.
Foster, Lewis Charles, D.L., J.P. (79) ....	Trevillis, Liskeard.
†Gatty, Victor Herbert .....	Whiteholme, nr. Preston, Lancs.
Glennie, Col. Farquhar .....	Clammer Hill, Haslemere.
Glyn, Col. A. St. Leger .....	Holbrook Hall, Suffolk.
Goddard, Henry H. ....	St. Vincent, Andover, Hants.
Gordon-Duff, Thomas Duff (75) .....	Drummuir Castle, Keith.
Green, J. Singleton, C.E. ....	Hythe, Kent.
Grimsey, John Robert, M.B.E. (63) .....	Leiston, Suffolk.
†GUNDRY, JOHN .....	St. Ann's Cottage, Staines.
Hartley, R. J., C.E. ....	Gibbet Hill, Halifax.
HARVEY, PREBENDARY F. CLYDE (78) ....	Hailsham Vicarage, Sussex.
†HEBERDEN, WILLIAM BULLER, C.B. (84) ..	Elmfield House, Exeter.
Henderson, H. M. ....	Lynhales, Kington.
HONEYBALL, Col. JAMES FREDERICK, V.D., (74).	Newgardens, Teynham, Kent.
Hood, William Walker (65) .....	Tredean, Chepstow, Monmouth.
Hooper, John Kinnersley (72) .....	Little Tangle, Womersh.
Hosegood, T. ....	Warden Road, Minehead.
Johnston, J., C.E. ....	Waterworks Office, Brighton.
KENNEDY, JAMES (78) .....	Doonholm, Ayr.
Knight, William Duncan (77) .....	Rapkyms, Horsham.
Lowes, John Burkill .....	Allan's Green, Bardon Mill.
Lucas, Herbert (80) .....	Bosworth House, Huntingdon.
Macdonald, J. R. Moreton .....	Largie Castle, Argyll.
Mackenzie, Alexander (66) .....	Fasnakyle, Kingussie.
Mulock, Henry Pilkington (77) .....	Moorock Lodge, Ballycumber.
Nicholas, Michael L. ....	Merok, Jennings Road, St. Albans.
PALAIRET, HENRY HAMILTON (79) .....	Cattistock Lodge, Dorchester.
Percival, John Andrew (76) .....	Ashfield, Peterborough.
Power, Rev. Canon Manley (65) .....	Elmfield, Worcester.
Rogers, Reginald Nankivell (69) .....	Carwinion, Falmouth.
†Salter, Mortyn de Carle Sowerby (42) ....	Mill Hill, Middlesex.
Simpson, Stephen (36) .....	Low Abbey, nr. Lancaster.
Soames, Captain Robert (86) .....	Scaldwell, Northampton.
Speed, Col. H. S. Andrews .....	Enmore, Bridgwater.
Spencer, Rev. Canon Arthur John .....	Drayton Rectory, Norwich.
Stanton, Henry (71) .....	Snelston Hall, Ashbourne, Derby.
Steen, Dr. William C. ....	Broadway, Letchworth.

† See Biographical Note *ante*.

*Observers deceased to June 30th, 1923.—(con.).*

Stonham, Harry .....	Old Soar, Plaxtol, Sevenoaks.
Stubington, Col. Frank, V.D., D.L., J.P. (70)	Oaklands, Rowlands Castle, Hants.
Swann, Robert .....	Rhyber Lodge, Lanark.
TAYLOR, HENRY MORSE, J.P. (77) .....	The Rookery, Dilham, Norfolk.
Thomson, J. R. ....	Cliff House, Millport, Bute.
Tomasson, William Hugh (64) .....	Woodthorpe, Nottingham.
Townsend, R. J. ....	Critchells, Lockerley, Romsey.
Walpole, Sir Horatio George, K.C.B. (79).	Eridge Green, Sussex.
Walter, Major Godfrey .....	Malshanger, Basingstoke.
Watson, T. W. M. ....	Cambus Wallace, Biggar.
Williams, Mrs. Morgan B. ....	Killay House, Sketty, Glam.
Willson, Arthur Bruce (65) .....	Rauceby Hall, Sleaford.
WOOD, MILES ASTMAN, F.R.C.S. ....	Orchardleigh, Ledbury, Hereford.
† Wragge, Clement Lindley, F.R.G.S. ....	Ben Nevis Observatory.
Wright, Major W., R.G.A. ....	Hidcote, Campden, Glos.
Yorke, Thomas Edward, D.L. (91) .....	Bewerley Hall, Pateley Bridge.

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† See Biographical Note *ante*.

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BRITISH RAINFALL, 1922

PART II

RAINFALL AND METEOROLOGY

OF

1922

## EVAPORATION AND PERCOLATION IN 1922.

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The short list of stations from which records of the percolation of rainfall through the soil are received is unchanged from that in *British Rainfall*, 1921. One new evaporation record, at Burrator on the south-western slopes of Dartmoor, is added, bringing the total number of evaporation records to 14. These stations are far from representative of the country as a whole, and do not provide a basis for discussion from the point of view of geographical distribution.

It is, indeed, doubtful whether even a much more extended network of stations would enable the subject to be approached from the geographical side, except in a very broad and general manner. In studying the percolation records for example, it must be remembered that it is probable that the principal factor in determining the proportion of the rainfall which penetrates the gauge is the nature of the soil with which it is filled. This should, of course, as far as possible, be similar to the natural soil of the district, and the data will therefore correspond with geological, rather than geographical or climatological, factors.

Even in this limited sphere the percolation gauge does not represent the true conditions of nature. For the purpose of measurement the complete isolation of the soil in the gauge is essential, since communication between this soil and the surrounding earth, allowing of the exchange of water through its fissures, would make such measurement impossible. Unfortunately, the absence of such communication introduces a departure from natural conditions.

Another limitation arises from the fact that in nature rainfall in excess of the capacity of the soil for percolation, and of the atmosphere for re-evaporation, finds its way into streams by surface drainage. The more rainy the district the greater the proportion of the total rainfall which flows off the ground in this manner. In districts of small rainfall, or of highly porous soil, the amount is very small; when both these conditions prevail it is probably only after exceptionally intense rains that any surface flow occurs. In districts of heavy rainfall a large proportion of the precipitation, often far more than 50 per cent. does not penetrate to the subsoil at all.

In a percolation gauge any water which would naturally fall into the category of surface-flow must either accumulate on the top of the gauge and eventually soak through, thus adding unduly to the amount of percolated water, or overflow and be lost, thus adding a fictitious amount to the computed evaporation which is obtained by deducting the percolated water from the total rainfall.

On the other hand, as is pointed out by Mr. Kenneth M. Langdale, of Compton, who has devoted much attention to the study of the subsoil waters of the Chalk Downs, although the percolation records agree well with fluctuations in the underground water level, after a dry period the gauge absorbs the first rainfall more readily than does the natural soil. This, he concludes, is due to the gauge becoming drier than the soil.

These considerations confine the use of percolation gauges to comparatively dry districts where excessive rainfall is not likely to introduce large errors into the records.

In spite of the drawbacks to which attention has been drawn, the percolation records which have been published for many years past in *British Rainfall* have served a useful purpose in supplementing those of direct evaporation from a free water surface.

The latter records also give rise to numerous difficulties: whilst they probably represent the facts of nature more closely than do the percolation records, it is agreed on all sides that they do not do so with a very high degree of accuracy. The difficulty in this case lies principally in the temperature of the water. Numerous experiments\* with small evaporimeters have shown that any small body of water exposed to solar radiation is heated more readily than a larger body of water, with the result that evaporation is stimulated. The evaporation which occurs naturally from water-surfaces must therefore depend to some extent upon their size. A puddle formed by a rain-shower will lose a given depth of water more rapidly than will a lake. The problem is still more complicated when one attempts to estimate the amount of evaporation from the leaves and stems of plants, many of which have organs designed for the encouragement of evaporation.

How far an iron tank, exposing 36 sq. ft. of relatively still water, represents the varied conditions, it is impossible to say. On examination of the observations published in this section it is encouraging to observe that the values of calculated evaporation from the percolation gauges and the readings of total evaporation from the evaporation tanks are nearly alike.

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\* *British Rainfall*, 1889, p. 18 ; 1890, p. 17.

**Evaporation in 1922.**

			From Percolation Records. in.	From Evaporation Tanks. in.
Mean for all Stations	..	..	16·87	16·97
Highest total observed	..	..	21·81	21·65
Lowest total observed	..	..	12·19	13·18

The errors which must exist in either set of observations arise from totally different causes, and the assumption is justified that the fairly accordant results indicate that the records are of the right order of magnitude.

Turning from the general consideration of the subject to the records for 1922, it is interesting to observe the rapid recovery from the unusual conditions of 1921. The rainfall of the early months of 1922 was heavy, and a large proportion found its way into the subsoil. The recovery was delayed at the Timsbury and Twyford stations till February, less than 1 in. out of 5 in. of rainfall penetrating the gauges in January, but thereafter the amount of percolation was large until May, when summer conditions set in. The comparatively small effect of the heavy rainfall in July and August was a marked feature. Indeed, at Compton and Timsbury no percolation appears to have resulted. The resumption of active percolation in the winter of 1922-23 was retarded by the dry autumn, but December gave normal winter values.

The tank evaporation results were, as a rule, close to the normal values, the only outstanding departure being at Talla, the station of the Edinburgh Waterworks in Peeblesshire, where the total evaporation was 3·72 in. below the average of 15 years.

The evaporation in the late summer was everywhere unusually small, a result doubtless of the persistently rainy and gloomy weather. On this point the evaporation records are not well borne out by the percolation records which, as mentioned above, indicated that little of the rainfall reached the subsoil.

Special reference should be made to the record for Valencia Observatory. The tank at this station was established in 1921 and has been found to be affected by insplashing of rain on occasions of high wind. The amount of the error is uncertain; it is hoped that it will be obviated in the near future. The record has a special interest as the first of the kind published for an Irish station.

**Rainfall, Percolation and Calculated Evaporation in 1922.**

(Unless otherwise stated the size of the gauges is 3ft. × 3ft. × 3ft.).

1922.	Compton, Sussex.		Tisbury, Hants.		Twyford, Hants.		Grayshott, Hants.	
	Rainfall.	Percolation.	Rainfall.	Percolation.	Rainfall.	Percolation.	Rainfall.	Percolation.
	in.	in.	in.	in.	in.	in.	in.	in.
January .....	5·89	3·80	5·00	·75	5·06	·98	5·44	4·87
February .....	4·10	3·75	3·12	2·12	3·44	3·21	3·45	2·94
March .....	2·60	2·54	2·28	1·50	2·71	2·44	3·34	3·13
April .....	4·59	2·92	4·21	2·18	4·05	3·11	4·46	3·57
May .....	1·58	·16	·74	·12	·93	·15	·98	·29
June .....	1·74	·00	1·14	·00	1·33	·00	2·02	·00
July .....	4·31	·00	3·95	·00	4·79	·01	4·84	·80
August .....	3·09	·00	2·73	·00	3·05	·25	3·28	·76
September .....	2·27	·00	1·62	·00	1·98	·11	1·77	1·01
October .....	1·21	·00	1·36	·00	1·17	·52	1·14	·52
November .....	2·57	1·64	2·12	·87	2·34	2·16	2·17	2·37
December .....	4·83	4·13	4·10	3·02	4·68	4·31	5·39	4·60
Year .....	38·78	18·94	32·37	10·56	35·53	17·25	38·28	24·86
Calculated Evaporation }	..	19·84	..	21·81	..	18·28	..	13·42

1922.	Rothamsted, Herts.				Harrogate, Yorks.		Craibstone, Aberdeen.			
	Rainfall.	Percolation.			Rainfall.	Percolation.	Rainfall.	Percolation. §		
		20 in. Soil.	40 in. Soil.	60 in. Soil.				1* 40 in. Soil.	2† 40 in. Soil.	3‡ 40 in. Soil.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January .....	2·88	2·81	2·86	2·64	3·02	2·71	5·61	5·69	5·61	5·21
February .....	2·34	1·73	1·72	1·61	2·82	2·22	2·95	3·02	2·88	2·85
March .....	2·10	1·35	1·48	1·41	1·81	1·00	2·45	1·33	1·32	1·37
April .....	3·22	1·46	1·54	1·39	3·10	1·78	3·59	2·40	2·39	2·50
May .....	1·50	·14	·22	·24	1·08	·00	1·04	·49	·43	·36
June .....	·95	·00	·02	·02	1·41	·00	2·62	·03	·02	·01
July .....	4·20	1·66	1·75	1·60	5·06	·74	5·13	1·49	·94	·17
August .....	2·68	·68	·70	·65	6·84	1·31	2·27	·01	·01	·00
September .....	2·63	1·08	1·11	1·01	3·29	1·22	3·65	·21	·05	·03
October .....	·62	·17	·19	·16	·70	·36	1·92	·87	·59	·03
November .....	1·30	·81	·85	·75	1·16	·72	1·80	1·42	1·49	1·30
December .....	2·95	2·72	2·74	2·57	3·45	1·92	2·32	1·84	1·70	1·85
Year .....	27·37	14·61	15·18	14·05	33·74	13·98	35·35	18·80	17·43	15·68
Calculated Evaporation }	..	12·76	12·19	13·32	..	19·76	..	16·55	17·92	19·67

\* Unmanured. † Manured. ‡ Manured and limed. § The gauges were cropped with oats with grass and clover.

## Evaporation in 1922.

List of Stations.	County.	Observer.	Particulars of Tank.			
			Height above		Dia- meter.	Capa- city.
			Ground.	Sea Level.		
			ft. in.	ft.	ft. in.	Gals.
Camden Square	London . . . . .	Roy. Met. Soc. . .	0 3	111	6 0	450
Otterbourne . .	Hampshire . . . .	E. C. Rodda, Esq.	0 3	112	6 0	450
Ormesby St. M.	Norfolk . . . . .	Gt. Yarmouth W.W.	0 3	21	6 0	450
Worstead . . . .	Norfolk . . . . .	R. T. Cross, Esq.	0 4	55	2 6	..
Burrator . . . .	South Devon . . .	F. Howarth, Esq.	0 3	755	6 0	450
Kennick . . . . .	" " . . . . .	S. C. Chapman, Esq.	0 3	835	6 0	450
Revesby . . . . .	Lincoln " . . . .	J. Shaw, Esq. . . .	0 2	130	6 0	450
Southport . . . .	Cent. Lancashire .	J. Baxendell, Esq.	0 3	37	3 0	112
Ardsley No. 1.	Yorkshire, W.R. .	C. C. Smith, Esq.	0 3	395	6 0	450
" No. 2.	" " . . . . .	" " . . . . .	0 3	326	6 0	450
Lower Laithe . .	" " . . . . .	M. R. Barnett, Esq.	0 6	772	6 0	450
Harrogate . . . .	" " . . . . .	A. S. West, Esq.	Flush	589	6 0	450
Talla Water . . .	Peebles . . . . .	Mess. Leslie & Reid	0 3	904	6 0	450
Edinburgh . . . .	Midlothian . . . .	Pro. T. Hudson Beare	0 3	227	6 0	200
Valencia Obsy.	Kerry . . . . .	Air Ministry . . . .	0 3	30	6 0	450

1922.	Camden Square.	Otter- bourne.	Ormesby St. Michael.	Wor- stead.	Burrator.	Kennick.	Revesby.	South- port.
	in.	in.	in.	in.	in.	in.	in.	in.
January . . . . .	.16	.03	.91	.11	.40	.08	c .02	.08
February . . . . .	.31	.24	.60	.27	1.28	c .09	.13	.21
March . . . . .	.96	1.11	1.32	.81	1.33	.99	.72	.55
April . . . . .	1.20	1.84	1.89	1.50	1.29	2.40	1.38	1.45
May . . . . .	2.93	3.52	3.47	2.76	2.97	4.05	3.31	2.51
June . . . . .	3.36	4.08	3.60	2.58	3.71	4.48	3.19	3.05
July . . . . .	2.09	2.98	2.73	2.14	2.87	2.84	2.19	2.66
August . . . . .	1.74	2.06	2.38	1.86	1.55	1.99	2.20	2.01
September . . . .	1.11	1.54	1.97	1.43	.60	1.65	1.62	1.18
October . . . . .	.66	1.04	1.62	.81	2.84	.83	.66	.68
November . . . . .	.27	.24	.66	.41	.91	.21	.24	.19
December . . . . .	.14	.19	.50	.22	1.04	.26	.20	.23
Year . . . . .	14.93	18.87	21.65	14.90	20.79	19.69	15.82	14.80
Average, 1908-1922	15.37	19.62	...	...	...	18.61	14.77	...
Difference . . . . .	- .44	- .75	...	...	...	+1.08	+1.05	...

1922.	Ardsley. No. 1.	Ardsley. No. 2.	Lower Laithe.	Harro- gate.	Talla Water.	Edin- burgh.	Valencia.	Mean of 14 * Records.
	in.	in.	in.	in.	in.	in.	in.	in.
January . . . . .	.03	c .01	.16	.26	.25	...	.29	.19
February . . . . .	.37	.27	.13	.25	.42	...	.30	.34
March . . . . .	.73	.55	.58	.89	1.05	.44	1.67	.95
April . . . . .	1.41	1.28	1.05	1.56	1.21	1.10	1.99	1.53
May . . . . .	3.37	2.86	2.93	3.32	1.98	2.08	2.71	3.05
June . . . . .	3.74	3.03	3.51	3.65	2.73	2.53	3.43	3.44
July . . . . .	2.37	2.18	2.39	3.05	1.80	2.26	3.15	2.53
August . . . . .	2.04	1.86	1.67	2.08	1.47	1.85	1.98	1.92
September . . . .	1.13	1.13	1.40	1.47	1.08	.89	1.23	1.32
October . . . . .	.84	.72	.66	1.02	.81	.83	1.49	1.05
November . . . . .	.23	.17	.19	.63	.26	.16	.58	.37
December . . . . .	.31	.19	.06	.42	.12	.11	.06	.28
Year . . . . .	16.57	14.23	14.73	18.60	13.18	...	18.88?	16.97
Average, 1908-1922	17.48	...	...	18.59	16.90	...	...	...
Difference . . . . .	- .91	...	...	+ .01	-3.72	...	...	...

NOTE.—In the Table c indicates condensation. \*Omitting incomplete record at Edinburgh.

*Evaporation at Camden Square, 1885-1922.*

	Jan. in.	Feb. in.	Mar. in.	April. in.	May. in.	June. in.	July. in.	Aug. in.	Sept. in.	Oct. in.	Nov. in.	Dec. in.	Total in.
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 ..	c·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	c·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 ..	c·03	·01	·92	2·33	3·06	3·62	3·12	2·85	1·48	·70	·11	·01	18·18
1894 ..	c·04	·28	·83	1·17	2·10	2·48	2·49	1·91	·97	·37	·20	·11	12·87
1895 ..	·14	·64	·36	1·26	3·06	3·31	3·07	2·12	1·27	·54	·19	·07	16·03
1896 ..	·16	·24	·64	1·57	3·06	3·21	3·63	1·96	·68	·47	·18	·00	15·80
1897 ..	·23	·21	·76	1·23	2·99	2·48	3·60	2·49	·99	·63	·26	c·14	15·73
1898 ..	·19	·37	·51	1 28	1·56	2·10	2·96	2·53	1·73	·45	·11	·16	13·95
1899 ..	·04	·28	·52	1·24	2·34	3·67	4·03	3·78	2·01	·45	·41	·11	18·88
1900 ..	·03	·16	·80	1·46	2·35	2·85	4·25	2·61	1·61	·89	·24	·15	17·40
1901 ..	·13	·24	·60	1·98	3·25	3·85	3·37	3·19	1·42	·64	·31	c·05	18·93
1902 ..	·16	·15	·71	1·75	1·78	2·33	3·30	1·71	1·47	·69	·28	·27	14·60
1903 ..	·26	·39	·97	1·57	2·24	2·79	3·35	2·53	1·51	·86	·29	·12	16·88
1904 ..	c·09	·26	·54	1·68	1·81	3·32	4·06	2·86	1·20	·50	·26	·02	16·42
1905 ..	·17	·35	·65	1·14	3·19	2·49	3·65	2·23	1·24	·78	·09	·16	16·14
1906 ..	·06	·21	·73	1·90	1·90	3·53	3·65	3·46	2·38	·78	·27	·16	19·03
1907 ..	·21	·38	1·02	1·27	1·93	2·47	2·65	2·24	1·72	·49	·27	·19	14·84
1908 ..	·05	·27	·56	1·32	2·23	3·77	2·75	2·47	1·25	·48	·29	·14	15·58
1909 ..	·14	·30	·30	1·85	2·93	1·70	2·60	2·23	·84	·76	·17	·16	13·98
1910 ..	·22	·17	·80	1·43	2·52	2·57	2·00	2·12	1·42	·76	·19	·10	14·30
1911 ..	·15	·32	·59	1·77	2·58	3·34	4·60	3·19	1·96	·64	·37	·02	19·53
1912 ..	·24	·16	·79	2·34	2·44	2·49	2·55	1·69	1·41	·39	·33	·12	14·95
1913 ..	·10	·32	·77	1·25	2·49	3·13	2·15	2·09	1·07	·61	·36	·32	14·66
1914 ..	·09	·24	·52	1·84	2·56	2·93	2·72	1·99	1·68	·70	·28	·05	15·60
1915 ..	·11	·13	·66	1·65	2·90	3·15	2·50	1·76	1·61	·56	·25	c·03	15·25
1916 ..	·19	·34	·30	1·61	2·32	2·20	2·23	2·34	1·20	·76	·34	c·04	13·79
1917 ..	·11	·17	·53	1·18	3·06	3·01	2·81	1·95	1·16	·75	·34	·12	15·19
1918 ..	·14	·27	·85	·89	2·38	3·01	2·59	2·04	1·69	·40	·24	·16	14·66
1919 ..	c·12	·13	·66	1·06	2·94	3·39	1·90	2·78	1·53	·61	·08	·06	15·02
1920 ..	·20	·24	·78	·85	2·71	2·85	2·09	2·00	1·04	·66	·04	·00	13·46
1921 ..	·20	·28	·96	1·91	3·04	3·66	4·17	2·56	1·72	·72	·19	·28	19·69
1922 ..	·16	·31	·96	1·20	2·93	3·36	2·09	1·74	1·11	·66	·27	·14	14·93
Average 1885-1919	·10	·25	·66	1·51	2·43	2·91	2·97	2·33	1·38	·62	·25	·09	15·50
Diff. 1922-	·06	·06	·30	-·31	·50	·45	-·88	-·59	-·27	·04	·02	·05	-·57

NOTE.—c indicates condensation.

## THE DISTRIBUTION OF RAINFALL IN TIME.

Of the 5,000 rainfall records submitted for publication in each annual volume of *British Rainfall*, full details of the daily readings are sent in for approximately 4,000. The material available for studying the incidence of daily rainfall is therefore very full. In all cases where they are available, the data of the frequency of days with certain specified amounts of rain are printed in the General Tables in Part III, but it is manifestly impracticable to undertake a complete analysis of the daily falls at every station. For the purpose of discussing the monthly and annual frequency of rain and the incidence of exceptional spells of rainy or rainless weather 100 records are therefore selected from the whole, representing as far as possible all parts of the country.

During the past year, further consideration has been given to the question of the revision of the existing definition of a "Rain Day" and of the definitions of "Droughts" and "Rain Spells" dependent thereon. The suggested alteration was, in brief, the abandonment of the unit  $\cdot 01$  in. (or 0.2 mm.) as the lower limit, and the substitution of  $\cdot 04$  in. (or 1.0 mm.). The introduction of the revised definitions has met with general approval, and it has been decided to continue using them. At the same time it is felt that the fact that rainfall statistics have been tabulated by means of the older definitions for more than half a century has led to the latter becoming so firmly engrafted in British rainfall literature that they cannot be immediately abandoned. Until, therefore, the comparison of the results derived from the two systems has been fully established it is proposed to continue the practice introduced in 1919 of publishing both sets of data. In making this decision the Meteorological Office is, as a matter of fact, simply adhering to the decision of the International Meteorological Committee, which body, at its meeting at Zürich in 1888 passed the following resolution :—

"In order to be able to compare the number of days of rain, the Committee recommends the publication of the number of days of rain, snow, etc., when the fall amounts to one millimetre ( $\cdot 04$  inch), or more, in the summaries of results, in addition to the system already in use."

The definitions utilised exclusively until 1918 were as follows :—

A **Rain Day** is a day on which  $\cdot 01$  in. of rain or more is recorded. A fall of rain exceeding  $\cdot 005$  in. but less than  $\cdot 01$  in. is recorded as  $\cdot 01$  in. A fall of rain less than  $\cdot 005$  in. is ignored.

An **Absolute Drought** is a period of more than fourteen (i.e., fifteen or more) consecutive days, no one of which is a rain day.

A **Partial Drought** is a period of more than twenty-eight (i.e., twenty-nine or more) consecutive days, the mean rainfall of which does not exceed  $\cdot 01$  in. per day.

A **Rain Spell** is a period of more than fourteen (i.e., fifteen or more) consecutive days, every one of which is a rain day.

The supplementary definitions introduced in 1919 were :—

A **Wet Day** is a day ending at 9h. G.M.T. on which 1·0 mm. or ·04 in. of rain, or more, is recorded.

A **Dry Spell** is a period of fifteen or more consecutive days, no one of which is a "Wet Day."

A **Wet Spell** is a period of fifteen or more consecutive days, every one of which is a Wet Day.

In order further to compare the two methods the data for the 100 selected stations have now been extracted for the years 1917 and 1918, giving up to 1922 a series of six consecutive years ; summaries are given on pp. 20 and 32.

A special examination has also been made of two long daily records respectively at Camden Square, London, representing the district of least rainfall frequency in the British Isles, and at Enniscroe, Crossmolina, Co. Mayo, representing the district of greatest frequency. The average and extreme values for the 35 years 1881 to 1915 are given below :—

*Average Number of Rain Days (Days with ·01 in. or more) 1881–1915.*

Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
St. Pancras (Camden Sq.)	15	13	14	13	13	11	12	14	11	15	15	16	162
Crossmolina (Enniscroe)	23	20	22	19	18	16	21	22	19	22	24	26	252

*Average Number of Wet Days (Days with ·04 in. or more) 1881–1915.*

Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
St. Pancras (Camden Sq.)	10	9	10	8	9	9	9	10	8	11	10	12	115
Crossmolina (Enniscroe)	20	17	19	17	16	13	17	18	15	18	20	23	213

*Absolute Droughts, 1881–1915.*

Station.	No. of Droughts.	Duration		No. of Years with			
		Mean.	Greatest.	None.	1 or 2	3 or 4	5 or more.
St. Pancras (Camden Sq.)	43	days. 19	days. 29	5	27	3	0
Crossmolina (Enniscroe)	4	15	16	31	4	0	0

*Partial Droughts, 1881–1915.*

Station.	No. of Droughts.	Duration.		No. of Years with			
		Mean.	Greatest.	None.	1 or 2	3 or 4	5 or more.
St. Pancras (Camden Sq.)	35	days. 38	days. 78	9	25	1	0
Crossmolina (Enniscroe)	3	30	• 31	32	3	0	0

*Dry Spells, 1881-1915.*

Station.	No. of Dry Spells.	Duration.		No. of Years with			
		Mean.	Greatest	None.	1 or 2	3 or 4	5 or more.
St. Pancras (Camden Sq.)	101	days. 19	days. 34	0	17	14	4
Crossmolina (Enniscoe)	16	17	23	22	13	0	0

*Rain Spells, 1881-1915.*

Station.	No. of Rain Spells.	Mean Duration.		Longest Spell.		No. of Years with			
		Days.	Mean rain per day.	Days.	Mean rain per day.	None.	1 or 2	3 or 4	5 or more.
St. Pancras (Camden Sq.)	4	15·5	ins. ·16	16	ins. ·22	31	4	0	0
Crossmolina (Enniscoe)	153	24	·25	62	·27	0	4	13	18

*Wet Spells, 1881-1915.*

Station.	No. of Wet Spells.	Mean Duration.		Longest Spell.		No. of Years with			
		Days.	Mean rain per day.	Days.	Mean rain per day.	None.	1 or 2	3 or 4	5 or more.
St. Pancras (Camden Sq.)	0	—	ins. —	—	ins. —	35	0	0	0
Crossmolina (Enniscoe).	81	21	·29	59	·35	4	17	10	4

## DAYS WITH RAIN IN 1922.

The two definitions necessary to give precision to the data discussed under this heading are set out on pp. 8 and 9 under the headings "Rain Day" and "Wet Day."

In Tables I and II, respectively, are given the monthly totals of each of these frequencies at 100 stations, together with mean values for the countries.

Judging by the average values for the period 1892 to 1911, the frequency of rain days in 1922 was in excess of the average over the British Isles as a whole by 10 days, or 5 per cent. The excess was most marked in Scotland where the general number of rain days for the year was 234, being 18 days or 8 per cent. above the average and the largest number recorded since 1903 when there was an excess of 28 days. In Ireland the number of rain days was not in any way abnormal.

Table III.—*General Number of Days with .01 in. or more, 1903–1922, compared with Average, 1892–1911.*

Year.	England and Wales. Average 187.			Scotland. Average 216.			Ireland. Average 223.			British Isles. Average 204.		
	Rain Days.	Diff. from Aver.	Per cent. of Aver.	Rain Days.	Diff. from Aver.	Per cent. of Aver.	Rain Days.	Diff. from Aver.	Per cent. of Aver.	Rain Days.	Diff. from Aver.	Per cent. of Aver.
1903	211	+ 24	113	244	+ 28	113	252	+ 29	113	229	+ 25	112
1904	188	+ 1	101	219	+ 3	101	231	+ 8	104	206	+ 2	101
1905	186	— 1	99	222	+ 6	103	221	— 2	99	203	— 1	100
1906	192	+ 5	103	226	+ 10	105	231	+ 8	104	210	+ 6	103
1907	203	+ 16	109	232	+ 16	107	240	+ 17	108	218	+ 14	107
1908	189	+ 2	101	221	+ 5	102	228	+ 5	102	206	+ 2	101
1909	195	+ 8	104	216	0	100	209	— 14	94	204	0	100
1910	209	+ 22	112	221	+ 5	102	233	+ 10	104	218	+ 14	107
1911	175	— 12	94	209	— 7	97	202	— 21	91	191	— 13	94
1912	212	+ 25	113	228	+ 12	106	235	+ 12	105	222	+ 18	109
1913	190	+ 3	102	212	— 4	98	220	— 3	99	203	— 1	100
1914	192	+ 5	103	214	— 2	99	222	— 1	100	205	+ 1	100
1915	182	— 5	97	206	— 10	95	217	— 6	97	197	— 7	97
1916	205	+ 18	110	232	+ 16	107	239	+ 16	107	220	+ 16	108
1917	185	— 2	99	217	+ 1	100	224	+ 1	100	203	— 1	100
1918	200	+ 13	107	226	+ 10	105	227	+ 4	102	214	+ 10	105
1919	191	+ 4	102	214	— 2	99	213	— 10	96	203	— 1	100
1920	203	+ 16	109	232	+ 16	107	243	+ 20	109	220	+ 16	108
1921	158	— 29	85	224	+ 8	104	217	— 6	97	190	— 14	93
1922	196	+ 9	105	234	+ 18	108	226	+ 3	101	214	+ 10	105

In all parts of the British Isles the most conspicuous feature of the year was the high frequency of rain in the late summer, rain falling on 40 days during July and August. At no season of the year was the

frequency conspicuously below normal. October, with a general value of only 12 days, was the most notable month in this respect ; in this month parts of South Wales had rain on only 5 days. The dry period which marked the early summer was too short to be reflected in the general frequency numbers, and May with 13 days was probably nearly up to its average in this respect.

The distribution of wet days is shown in detail by the map, page 13. In England and Wales the total number of wet days reached 200 only extremely locally in the Welsh mountains and the Lake District, and fell below 150 everywhere except in the Western uplands, the North Yorkshire Wolds, and a part of Norfolk. There were less than 125 wet days over a large part of the East Midlands and along a narrow coastal strip on the south-east. Towards the north and west of the British Isles the number of wet days showed a marked increase. Only parts of the east of Scotland and Ireland had less than 150 wet days, and the number exceeded 175 everywhere beyond a line running from Bantry Bay to Caithness-shire as well as in the Southern Highlands. A coastal strip in the west of Ireland and practically the whole of the western Highlands had more than 200 days but the number does not appear to have been anywhere higher than 250.

The following short tables give for the six years 1917 to 1922  
(a) general numbers of wet days for the British Isles in each month, and  
(b) the general values for the year in each of the countries.

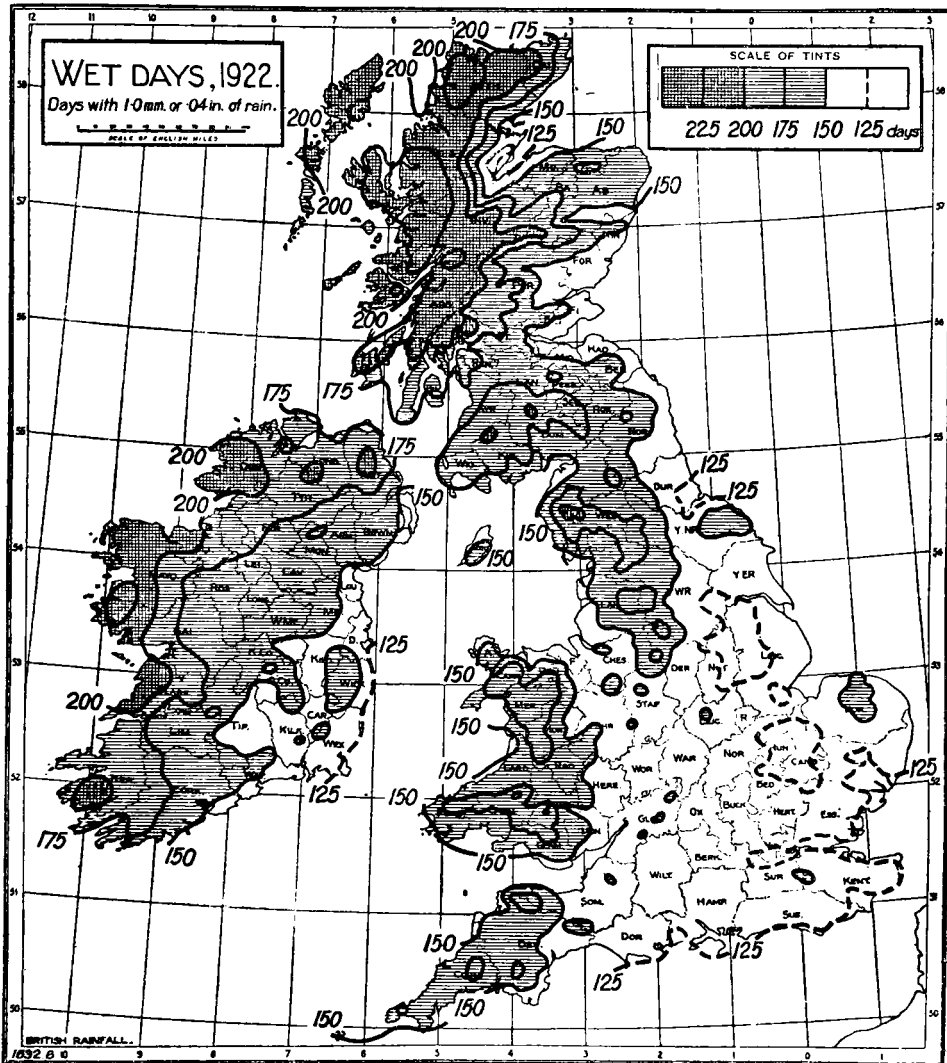
*Number of Wet Days (Days with .04 in. or more) in 1917 to 1922,  
British Isles.*

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1917 ..	11	8	14	13	10	10	9	20	12	21	15	12	155
1918 ..	15	17	9	9	10	9	15	12	22	16	13	21	168
1919 ..	19	9	15	14	8	12	8	12	13	11	15	22	158
1920 ..	20	13	17	19	15	10	19	9	13	9	12	15	171
1921 ..	20	5	17	8	13	5	10	15	7	12	12	18	142
1922 ..	20	16	13	14	9	11	16	15	13	8	11	17	163

*General Number of Wet Days (Days with .04 in. or more) in 1917 to 1922.*

	England and Wales.	Scotland.	Ireland.	British Isles.
1917.. ..	134	174	176	155
1918.. ..	150	182	188	168
1919.. ..	143	172	171	158
1920.. ..	151	185	197	171
1921.. ..	110	177	166	142
1922.. ..	146	181	178	163

So far as it is possible to judge from the short series available, p. 12, the frequency in 1922 was not so conspicuously high as was shown to be the case for rain days, suggesting that the large number of rain days observed was due to an abnormal frequency of days with very small falls. This is further borne out by the fact that the mean amount of rain



per rain day over the country as a whole during the year was  $\cdot 01$  in. below the average, and in Scotland  $\cdot 03$  in. below the average, the latter being the lowest value observed since statistics first became available in 1903. The mean amount of rain per rain day for each of the years 1903 to 1921 for the countries and for the British Isles as a whole, is set out in *British Rainfall*, 1921, p. 18.

Table I.—*Number of Rain Days (Days with .2 mm. or .01 in. of Rain or more) in 1922.*

Station.	County.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year.	Total Rain-fall.	Amount per Rain Day.	
ENGLAND & WALES.																	
St. Pancras, Camden Square	London	20	15	17	17	7	9	22	17	14	12	9	18	177	25.60	.14	
Tenterden, View Tower	Kent	19	14	19	20	7	12	16	19	15	16	11	17	185	27.23	.15	
Patcham	Sussex	25	16	16	18	8	12	19	19	17	12	9	17	188	30.83	.16	
Lymington, The Saltens	Hampshire	22	18	16	18	8	12	15	16	13	6	11	16	171	30.98	.18	
Petersfield, Ditcham Park	"	24	20	17	19	10	13	14	19	17	11	11	15	190	38.09	.20	
Upton	Berkshire	5	22	15	16	7	10	19	15	12	11	12	17	175	28.53	.16	
Newport Pagnell, The Croft	Buckinghamshire	5	20	15	14	10	10	20	16	14	13	9	17	177	26.48	.15	
Eye, Northolm	Northamptonshire	4	18	14	17	18	13	11	19	17	12	8	17	177	21.47	.12	
Fulbourn, Pumping Station	Cambridgeshire	2	21	15	16	18	12	20	19	10	13	14	17	185	22.16	.12	
Danbury Rectory	Essex	19	13	15	18	8	10	18	16	17	17	12	19	182	22.63	.12	
Haughley, Haughley House	Suffolk	20	14	15	16	11	11	19	18	15	11	9	13	172	21.73	.13	
Yarmouth, Burgh Hall	"	23	11	17	17	7	12	20	15	16	16	13	20	187	25.91	.14	
Swaffham	Norfolk	4	20	13	18	15	9	11	19	17	12	10	12	172	26.92	.16	
Salisbury Plain, Shrewton	Wiltshire	3	23	17	20	10	11	20	20	16	9	15	18	199	30.71	.15	
Dorchester, Wollaston House	Dorsetshire	3	25	19	16	20	5	14	20	18	8	13	19	190	41.50	.22	
Holne, Church Park Cottage	South Devon	4	27	20	18	20	8	13	20	19	15	8	21	201	73.89	.37	
Martinhoe Rectory	North Devon	23	18	17	13	8	15	20	17	16	10	13	22	192	40.19	.21	
Morwenstow Vicarage	Cornwall	1	26	19	16	17	13	14	21	23	16	9	13	26	213	35.50	.17
St. Austell, Trevana	"	2	26	21	17	21	9	12	24	18	15	8	14	25	210	47.02	.22
Angersleigh, Leigh Court	Somersetshire	3	24	17	17	6	9	19	18	16	8	14	15	180	36.37	.20	
Mickleton, Bank House	Gloucestershire	4	22	17	17	18	6	10	21	17	12	11	17	181	32.16	.18	
Frampton Cotterell, Park House	"	5	22	17	16	18	10	9	19	18	16	7	14	193	23.75	.12	
Hereford, Holmer Hall	Herefordshire	1	27	19	17	18	10	9	23	18	15	11	14	194	28.62	.15	
Shifnal, Hatton Grange	Shropshire	4	23	18	16	14	9	8	23	18	15	11	25	194	28.62	.15	
Ashbourne, Mayfield House	Staffordshire	5	24	18	15	16	11	13	19	16	17	12	21	189	35.26	.19	
Leicester, Stoughton Drive	Leicestershire	4	21	17	18	19	8	10	19	18	14	9	18	185	26.26	.14	
Horncastle	Lincolnshire	3	20	16	19	17	10	10	20	15	21	13	18	194	27.38	.14	
Workop, Hodsock Priory	Nottinghamshire	5	21	17	21	20	8	9	17	15	13	14	10	184	28.85	.16	
Northwich, Hunts Lock	Cheshire	2	24	18	15	19	10	14	24	23	15	7	14	206	30.47	.15	
St. Michael's-on-Wyre Vicarage	North Lancashire	5	23	19	10	14	12	15	21	19	7	18	24	199	40.11	.20	
Meltham, Harewood Lodge	Yorkshire, W.R.	8	25	19	17	19	11	14	21	18	20	14	24	220	49.02	.22	
Hull, Pearson Park	" E.R.	3	23	18	22	18	11	11	21	13	17	24	14	213	27.53	.13	
Felixkirk, Mount St. John	" N.R.	2	21	17	22	15	9	12	18	13	16	9	21	191	28.52	.15	
Reeth, Arkengarthdale	"	2	17	17	16	20	7	15	23	14	16	21	23	201	42.65	.21	
Whitby, Park Hall, Aislaby	"	5	23	15	24	16	11	12	16	13	19	13	21	204	32.78	.16	
Sunderland, West Hendon House	Durham	2	20	15	20	17	8	12	20	21	20	14	21	200	28.11	.14	
Glanton, Pyke Gardens	Northumberland	6	22	17	22	16	12	11	17	17	19	11	17	199	30.27	.15	

Table I.—Number of Rain Days (Days with .2 mm. or .01 in. of Rain or more) in 1922—(con.).

Station.	County.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year.	Total Rain-fall.	Amount per Rain Day.
<b>ENGLAND &amp; WALES—(con.).</b>																
Geltsdale .....	1	21	22	20	18	14	18	22	25	21	19	18	24	242	in.	.15
Grasmere, The Wray .....	2	24	23	18	20	20	16	22	25	18	14	22	24	246	35.15	.35
Treherbert, Tyn-y-waun .....	6	27	19	18	21	14	17	21	18	15	5	15	25	215	90.37	.42
Carmarthen, The Friary .....	2	29	20	19	20	11	15	23	19	19	5	18	25	223	47.59	.21
Fishguard, Langton, Dwrbach .....	4	25	20	19	21	10	12	19	17	16	6	18	24	207	51.88	.25
Devil's Bridge .....	2	26	19	18	20	11	16	22	19	18	6	20	28	223	54.61	.24
Newtown, Penarth Weir .....	4	22	16	16	17	10	13	16	20	14	5	12	17	178	32.73	.18
Denbigh, Garn .....	2	25	20	17	17	7	15	19	19	18	8	21	24	210	36.41	.17
Dolgelly, Brynithron .....	4	25	19	18	20	12	16	17	20	14	6	17	21	205	56.69	.28
Llanerchymedd, Llwydiarth Esgob.	4	28	20	15	20	12	15	21	17	17	8	17	28	218	35.72	.16
<b>England &amp; Wales</b> .....		<b>23</b>	<b>17</b>	<b>17</b>	<b>18</b>	<b>10</b>	<b>12</b>	<b>20</b>	<b>18</b>	<b>16</b>	<b>12</b>	<b>13</b>	<b>20</b>	<b>196</b>	<b>36.54</b>	<b>.19</b>
<b>(Mean of 47 Stations)</b> .....																
<b>ISLE OF MAN.</b>																
Douglas .....		25	20	15	15	14	14	19	20	18	8	16	25	209	41.27	.20
<b>CHANNEL ISLANDS.</b>																
St. Martin's, Les Blanchés .....		27	17	21	20	5	9	16	17	8	14	10	22	186	32.33	.17
<b>SCOTLAND.</b>																
Stoneykirk, Ardwell House .....	3	27	20	15	11	14	17	18	22	21	11	22	24	222	37.34	.17
Dumfries, Jardington .....	5	25	22	18	14	18	14	22	21	20	10	15	23	222	36.69	.17
Canonbie, Irvine House .....	5	19	20	15	15	13	16	21	21	18	10	11	23	202	44.00	.22
Swinton House .....	3	20	20	20	14	9	11	20	17	17	23	12	18	201	24.85	.12
Linlithgow Academy .....	2	21	23	17	17	16	15	17	17	20	12	12	23	210	27.62	.13
Strathaven, East Overton House ..	8	16	20	15	13	13	14	21	22	16	7	17	19	193	35.86	.19
Girvan, Pinmore .....	5	24	23	14	19	15	21	24	23	22	10	24	23	242	44.00	.18
Stirling, Touch Reservoir, No. 1 ..	1	23	23	13	12	16	15	21	18	17	8	13	20	199	44.69	.22
Dougarie Lodge .....	3	26	22	13	14	19	17	21	21	19	9	22	23	241	76.44	.32
Dalmally, Manse of Glenorchy .....	6	28	24	13	15	22	22	25	19	22	10	27	26	251	51.77	.21
Islay, Ealibab .....	14	28	25	16	16	15	21	24	21	22	10	28	26	261	62.55	.24
Mull, Ulva .....	14	27	24	16	17	22	24	23	23	21	15	10	18	182	25.42	.14
St. Andrews, Water Works .....	3	19	19	15	14	10	11	22	16	15	15	10	18	216	34.00	.16
Aberfeldy, Dail Avon .....	11	29	24	15	15	17	15	22	17	16	12	14	20	216	34.00	.16
Stonehaven, Mains of Cowie .....	2	27	20	24	24	14	18	21	22	18	19	22	20	249	28.55	.11
Balmoral, Castle Gardens .....	1	28	20	23	16	18	23	20	20	16	18	16	17	235	26.87	.11
Peterhead, Forehill Works .....	4	25	12	17	21	13	12	14	20	16	21	23	20	214	32.14	.15
Dufftown, Fife Street .....	3	24	17	19	24	12	18	21	18	16	18	19	14	220	35.51	.16
Cluny Castle .....	3	27	22	22	16	21	17	25	22	15	13	25	24	249	37.34	.15

Table I.—Number of Rain Days (Days with  $\cdot 2$  mm. or  $\cdot 01$  in. of Rain or more) in 1922—(con.).

Station.	County.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year.	Total Rain-fall.	Amount per Rain Day	
SCOTLAND—(con.).																	
Loch Nevis, Inverie.....	Inverness-shire.....	12	23	24	16	20	21	28	23	21	19	12	28	29	264	81.21	.31
Fort William, Atholl Bank.....	".....	17	25	24	16	20	24	22	25	22	22	12	26	26	258	73.29	.28
Skye, Portree.....	".....	18	24	24	19	22	24	27	23	24	20	14	28	25	274	70.67	.26
Barra, Castle Bay.....	".....	19	27	24	18	21	20	21	23	23	19	17	25	27	265	31.76	.12
Fortrose.....	Ross & Cromarty.....	3	16	17	20	17	16	11	16	16	18	12	17	20	196	18.64	.10
Achnasheen, Ledgowan.....	".....	4	21	22	21	21	24	25	22	22	19	9	27	21	254	66.76	.26
Stornoway.....	".....	10	26	23	22	25	24	23	21	22	19	24	28	28	279	47.08	.17
Loch More, Achfary.....	Sutherlandshire.....	5	23	23	22	30	27	24	24	21	19	29	26	290	76.59	.26	
Thurso, Buckies.....	Caithness-shire.....	3	22	14	20	23	18	22	25	19	19	20	21	25	248	33.83	.14
Scotland.....	(Mean of 28 Stations).....	24	21	17	18	18	19	22	20	19	13	21	22	234	44.65	.19	
IRELAND.																	
Castletownshend, Seafeld.....	Co. Cork.....	6	26	21	17	24	15	10	21	19	18	8	13	25	217	46.31	.21
Glannire, Lota Lodge.....	".....	7	23	22	16	18	14	12	21	18	15	10	15	23	207	40.02	.19
Killarney, District Asylum.....	Co. Kerry.....	3	29	25	16	22	17	21	25	26	20	10	20	25	256	50.64	.20
Darrynane Abbey.....	".....	4	30	25	15	21	17	17	24	24	20	10	15	27	245	54.61	.22
Waterford, Brook Lodge.....	Co. Waterford.....	3	22	18	15	11	12	19	19	16	8	11	17	183	30.63	.17	
Nenagh, Castle Lough.....	Co. Tipperary.....	1	26	23	16	21	15	17	24	25	21	6	15	26	235	37.70	.16
Cashel, Ballinamona.....	".....	3	26	20	17	18	14	16	21	22	18	10	17	22	221	30.23	.14
Foynes, Coolinanes.....	Co. Limerick.....	2	27	23	15	17	20	21	28	21	7	15	25	234	36.52	.16	
Inagh, Mount Callan.....	Co. Clare.....	2	27	24	14	18	19	22	23	24	23	8	18	25	245	69.69	.28
Gorey, Courtown House.....	Co. Wexford.....	4	23	19	17	16	7	8	15	19	11	10	12	19	176	31.18	.18
Abbey Leix, Blandsfort.....	Queen's County.....	2	23	20	13	19	11	16	20	21	17	10	11	22	203	32.02	.16
Sallins, Palmerstown.....	Co. Kildare.....	2	22	19	15	17	12	12	20	24	19	11	12	22	205	24.25	.12
Kells, Headfort.....	Co. Meath.....	4	19	20	12	16	12	15	20	25	18	13	15	21	206	33.50	.16
Moate, Coolatore.....	Co. Westmeath.....	1	24	21	15	17	15	17	21	22	19	11	15	25	222	30.67	.14
Ballyhinch Castle.....	Co. Galway.....	3	29	26	15	23	20	22	28	27	25	11	22	28	276	70.92	.26
Mallary.....	Co. Mayo.....	4	26	25	17	17	18	19	20	22	17	10	17	21	229	69.75	.30
Collooney, Markree Observatory.....	Co. Sligo.....	2	27	23	17	22	18	21	20	24	23	9	20	23	247	45.18	.18
Belturbet, Cloverhill.....	Co. Cavan.....	1	24	22	14	18	15	18	24	22	19	9	15	21	221	30.27	.14
Seaford.....	Co. Down.....	2	24	21	11	15	11	13	24	19	16	9	11	18	192	36.80	.19
Ballymena, Harryville.....	Co. Antrim.....	5	29	23	18	18	13	19	24	22	22	11	23	24	246	39.21	.16
Omagh, Edenfel.....	Co. Tyrone.....	3	24	22	16	16	16	20	21	21	20	11	24	24	235	46.02	.20
Milford, The Manse.....	Co. Donegal.....	3	24	24	18	20	15	20	26	22	20	11	21	26	247	39.90	.16
Killybegs, Rockmount.....	".....	5	25	23	17	20	16	19	23	19	20	10	24	25	241	58.64	.24
Ireland.....	(Mean of 23 Stations).....	25	22	15	19	15	17	22	22	19	10	17	23	226	42.78	.19	
British Isles.....	(Mean of 100 Stations).....	24	20	17	18	13	15	21	19	17	12	16	22	214	40.25	.19	

Table II.—*Number of Wet Days (Days with 1 mm. or .04 in. of Rain or more) in 1922.*

Station.	County.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.	Total Rain Days.	Wet Days as % of Rain Days.
ENGLAND AND WALES.																
St. Pancras, Camden Square .....	London .....	14	13	11	13	5	8	15	15	9	6	5	14	128	177	72
Tenterden, View Tower .....	Kent .....	14	13	12	13	3	9	11	11	10	9	7	12	124	185	67
Patcham .....	Sussex .....	19	14	15	14	5	10	15	13	12	6	6	13	142	188	76
Lymington, The Salterns .....	Hampshire .....	20	16	10	14	5	5	12	11	10	4	10	13	130	171	76
Petersfield, Ditcham Park .....	" .....	20	15	12	16	8	9	11	14	12	5	9	13	144	190	76
Upton .....	Berkshire .....	18	14	13	15	6	8	14	12	10	6	6	11	133	175	76
Newport Pagnell, The Croft .....	Buckinghamshire .....	15	13	10	18	6	6	16	13	8	5	6	12	128	179	72
Eye, Northolt .....	Northamptonshire .....	13	9	13	13	7	7	14	11	10	7	6	9	119	177	67
Fulbourn, Pumping Station .....	Cambridgeshire .....	15	11	13	12	9	8	17	13	7	4	6	10	125	185	68
Danbury Rectory .....	Essex .....	12	11	12	14	6	6	16	13	10	10	6	14	130	182	71
Haughley, Haughley House .....	Suffolk .....	15	11	14	12	8	9	14	12	8	4	6	11	121	172	70
Yarmouth, Burgh Hall .....	" .....	18	10	14	12	4	9	14	10	12	12	9	12	136	187	73
Swaffham .....	Norfolk .....	17	11	14	8	6	9	14	13	10	6	6	13	127	172	74
Salisbury Plain, Shrewton .....	Wiltshire .....	16	15	15	15	5	7	16	12	9	4	8	12	138	199	69
Dorchester, Wollaston House .....	Dorsetshire .....	3	16	15	11	13	4	11	15	12	7	5	9	132	190	69
Holne, Church Park Cottage .....	South Devon .....	22	18	15	18	7	8	18	15	12	5	11	18	167	261	83
Martinhoe Rectory .....	North Devon .....	18	16	14	10	8	8	18	12	12	7	10	18	151	192	79
Morwenstow Vicarage .....	Cornwall .....	1	18	16	13	15	10	8	16	13	5	10	17	151	213	71
St. Austell, Trevana .....	" .....	24	19	15	18	9	10	17	15	11	6	9	22	175	210	83
Angersleigh, Leigh Court .....	Somersetshire .....	19	13	15	17	5	7	14	11	11	5	11	15	143	180	79
Mickleton, Bank House .....	Gloucestershire .....	14	14	15	13	5	6	14	13	10	5	7	12	128	174	74
Frampton Cotterell, Park House .....	" .....	14	15	14	14	6	7	17	11	9	5	7	14	133	181	73
Hereford, Holmer Hall .....	Herefordshire .....	17	14	14	15	4	5	14	12	10	2	7	15	129	193	67
Shifnal, Hatton Grange .....	Shropshire .....	22	16	14	14	6	7	19	12	13	5	11	19	158	194	81
Ashbourne, Mayfield House .....	Staffordshire .....	18	14	11	13	6	9	14	13	11	3	7	14	133	189	70
Leicester, Stoughton Drive .....	Leicestershire .....	16	13	14	15	5	5	14	12	9	6	5	11	125	185	68
Horncastle .....	Lincashire .....	15	12	15	11	4	8	16	14	12	12	8	11	138	194	71
Workshop, Hodsock Priory .....	Nottinghamshire .....	16	12	11	15	5	7	15	12	7	6	5	12	123	184	67
Northwich, Hunts Lock .....	Cheshire .....	19	15	9	15	5	10	17	17	11	2	9	20	149	206	72
St. Michael's-on-Wyre Vicarage .....	North Lancashire .....	22	17	10	12	8	9	19	17	14	5	7	20	160	199	80
Meltham, Harewood Lodge .....	Yorkshire, W.R. ....	17	16	13	15	8	11	17	16	14	9	10	20	166	220	75
Hull, Pearson Park .....	" .....	14	12	13	11	4	7	15	11	10	14	8	10	129	213	61
Felixkirk, Mount St. John .....	" .....	15	11	14	12	5	10	16	10	12	12	7	16	140	191	73
Reeth, Arkengarthdale .....	" .....	16	16	13	18	4	11	22	13	16	14	9	20	172	201	86
Whitby, Park Hall, Aislaby .....	" .....	17	12	14	12	6	10	14	9	13	16	10	17	150	204	74
Sunderland, West Hendon House .....	Durham .....	18	10	12	8	5	9	15	11	12	16	7	15	138	200	69
Glanton, Glanton Pyke Gardens .....	Northumberland .....	17	12	19	11	8	8	15	15	15	16	7	11	154	199	77

Table II.—Number of Wet Days (Days with 1 mm. or .04 in. of Rain or more) in 1922—(con.).

Station.	County.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.	Total Rain Days.	Wet Days as % of Rain Days.
<b>ENGLAND AND WALES—(con.).</b>																
Geltsdale.....	Cumberland.....	16	18	12	12	10	14	17	17	15	13	9	19	172	242	71
Grasmere, The Wray.....	Westmorland.....	22	20	12	11	16	14	20	18	16	6	15	21	191	246	78
Treherbert, Tyn-y-waun.....	Glamorganshire.....	24	19	15	19	10	10	20	17	11	5	10	23	183	215	85
Carmarthen, The Friary.....	Carmarthenshire.....	21	19	14	14	8	11	16	14	14	5	9	20	165	223	74
Fishguard, Langton, Dwrbach.....	Pembrokeshire.....	21	17	15	17	9	7	18	14	14	4	10	21	167	207	81
Devil's Bridge.....	Cardiganshire.....	21	18	14	15	8	14	19	14	10	4	10	24	171	223	77
Newtown, Penarth Weir.....	Montgomeryshire.....	4	19	14	14	8	11	13	13	13	5	7	15	146	178	82
Denbigh, Garn.....	Denbighshire.....	2	21	18	12	6	13	15	12	11	4	9	19	153	210	73
Dolgelly, Bryntirion.....	Merionethshire.....	2	25	19	15	11	15	16	15	12	6	16	21	186	205	91
Llanerchymedd, Lliwydarth Esgob.	Anglesey.....	4	24	16	13	15	12	17	12	15	7	9	18	167	218	77
<b>England and Wales.....</b>	<b>(Mean of 47 Stations)...</b>	<b>18</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>7</b>	<b>9</b>	<b>16</b>	<b>13</b>	<b>11</b>	<b>7</b>	<b>8</b>	<b>16</b>	<b>146</b>	<b>196</b>	<b>74</b>
<b>ISLE OF MAN.</b>																
Douglas.....	Isle of Man.....	24	20	11	14	8	10	16	18	15	6	12	15	169	209	81
<b>CHANNEL ISLANDS.</b>																
St. Martins, Les Blanchés.....	Guernsey.....	23	15	17	14	4	8	13	12	7	9	10	18	150	186	81
<b>SCOTLAND.</b>																
Stoneykirk, Ardwell House.....	Wigtownshire.....	3	24	19	12	10	10	14	19	17	9	17	15	176	222	79
Dumfries, Jardington.....	Kirkcudbrightshire.....	5	22	20	11	10	12	18	16	17	7	9	17	169	222	76
Canonbie, Irvine House.....	Dumfriesshire.....	5	15	19	11	12	12	19	17	15	9	10	19	170	201	85
Swinton House.....	Berwickshire.....	3	14	12	15	9	8	15	11	14	17	7	9	137	201	68
Linlithgow Academy.....	Linlithgow.....	2	14	8	12	10	11	15	14	11	10	8	17	144	210	69
Strathaven, East Overton House.....	Lanarkshire.....	5	14	18	10	13	10	17	18	13	5	11	18	157	193	81
Girvan, Pinmore.....	Ayrshire.....	8	21	20	8	9	15	18	17	14	9	17	21	182	242	75
Stirling, Touch Reservoir No. 1.....	Stirlingshire.....	1	22	20	11	9	12	17	13	12	7	10	16	160	199	80
Douganie Lodge.....	Buteshire.....	3	24	20	10	10	13	15	18	15	8	11	16	175	221	79
Dalmally, Manse of Glenorchy.....	Argyllshire.....	6	25	22	11	13	19	21	17	17	9	18	22	214	241	89
Islay, Eallabus.....	".....	14	27	24	14	12	13	19	19	17	10	20	22	216	251	86
Mull, Uiva.....	".....	14	24	23	13	13	17	18	15	18	9	21	22	210	281	80
St. Andrews, Water Works.....	Fife.....	14	16	14	11	8	7	17	15	10	10	7	11	131	182	72
Aberfeldy, Dall Avon.....	Pertshire.....	11	24	16	8	7	10	17	14	11	7	9	16	147	216	68
Stonehaven, Mains of Cowie.....	Kincardineshire.....	2	20	14	12	8	9	13	13	10	11	12	12	149	249	60
Balmoral, Castle Gardens.....	Aberdeenshire.....	1	23	11	13	7	7	15	14	9	9	11	12	145	235	62
Peterhead, Forchill Works.....	".....	4	22	10	10	17	11	13	16	11	17	20	12	166	214	78
Dufftown, Fire Street.....	Banffshire.....	3	20	10	13	22	7	11	13	13	13	12	11	160	220	73
Cluny Castle.....	Inverness-shire.....	3	23	15	14	13	13	21	18	10	10	17	18	187	249	75

Table II.—Number of Wet Days (Days with 1 mm. or .04 in. of Rain or more) in 1922—(con.).

Station.	County.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.	Total Rain Days.	Wet Days as % of Rain Days.
<b>SCOTLAND—(con.).</b>																
Loch Nevis, Inverie .....	Inverness-shire .....	21	23	16	16	19	25	19	20	18	11	26	22	236	264	89
Fort William, Atholl Bank .....	" .....	21	22	12	11	18	21	21	17	17	8	19	20	207	258	80
Skye, Portree .....	" .....	24	23	16	11	20	22	19	20	16	12	23	21	235	274	86
Barra, Castle Bay .....	" .....	23	19	11	16	9	13	16	17	13	12	15	21	185	265	70
Fortrose .....	Ross and Cromarty .....	15	11	11	6	9	5	11	14	10	8	11	10	121	196	62
Achnasheen, Ledgowan .....	" .....	17	21	20	14	21	23	17	19	16	7	24	17	216	254	85
Stornoway .....	" .....	19	21	18	15	20	20	15	17	16	13	19	24	217	279	78
Loch More, Achfary .....	Sutherlandshire .....	19	23	19	20	26	23	15	22	16	14	27	26	250	290	86
Thurso, Buckies .....	Caithness-shire .....	21	11	17	14	15	20	18	13	17	17	16	19	198	248	80
<b>Scotland .....</b>	<b>(Mean of 28 Stations) ..</b>	<b>*21</b>	<b>18</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>17</b>	<b>16</b>	<b>14</b>	<b>10</b>	<b>15</b>	<b>17</b>	<b>181</b>	<b>234</b>	<b>77</b>
<b>IRELAND.</b>																
Castletownshend, Seafeld .....	Co. Cork .....	20	20	13	17	9	4	16	14	14	8	9	18	162	217	75
Glanmire, Lota Lodge .....	" .....	21	19	10	14	10	10	19	15	12	7	9	18	164	207	79
Killarney, District Asylum .....	Co. Kerry .....	26	20	14	16	12	10	21	18	14	7	13	21	192	256	75
Darrynane Abbey .....	" .....	24	23	15	19	14	11	20	20	16	6	12	24	204	245	83
Waterford, Brook Lodge .....	Co. Waterford .....	18	16	12	9	6	8	15	15	12	3	8	16	138	183	75
Nenagh, Castle Lough .....	Co. Tipperary .....	19	19	13	13	13	9	16	22	13	5	6	20	168	235	71
Cashel, Ballinamona .....	" .....	18	15	10	12	8	8	14	17	10	4	8	17	141	221	64
Foynes, Coolnanes .....	Co. Limerick .....	23	18	12	10	12	12	15	18	12	6	10	20	168	234	72
Inagh, Mount Callan .....	Co. Clare .....	24	23	14	16	17	20	22	22	20	7	16	25	226	245	92
Gorey, Courtown House .....	Co. Wexford .....	16	14	14	12	5	4	12	13	11	7	4	13	125	176	71
Abbey Leix, Blandsfort .....	Queen's County .....	19	17	10	17	8	10	17	16	11	6	5	18	154	203	76
Sallins, Palmerstown .....	Co. Kildare .....	2	16	10	16	8	9	16	17	11	7	7	15	150	205	73
Kells, Headfort .....	Co. Meath .....	17	18	9	14	10	14	14	18	13	9	4	18	158	206	77
Moate, Coolatore .....	Co. Westmeath .....	19	16	12	13	11	14	15	15	15	6	5	17	158	222	71
Ballyhinch Castle .....	Co. Galway .....	28	25	14	20	18	20	23	20	22	20	20	25	244	276	88
Mallurany .....	Co. Mayo .....	25	24	16	15	13	19	19	21	16	10	17	21	216	229	94
Collooney, Markree Observatory ..	Co. Sligo .....	27	22	13	18	11	16	16	15	17	6	14	20	195	247	79
Belturbet, Cloverhill .....	Co. Cavan .....	19	19	9	14	12	13	17	16	14	9	9	17	168	221	76
Seaforde .....	Co. Down .....	20	16	10	12	9	13	17	17	14	9	6	18	161	192	84
Ballymena, Harryville .....	Co. Antrim .....	27	23	13	17	12	18	21	20	17	8	13	18	207	246	84
Omagh, Edenfel .....	Co. Tyrone .....	24	20	15	13	10	16	18	18	16	10	14	19	193	235	82
Milford, The Manse .....	Co. Donegal .....	21	18	12	18	11	16	18	18	16	9	16	20	193	247	78
Killybegs, Rockmount .....	" .....	24	23	15	17	15	17	19	17	16	9	14	21	207	241	86
<b>Ireland .....</b>	<b>(Mean of 23 Stations) ..</b>	<b>22</b>	<b>19</b>	<b>12</b>	<b>15</b>	<b>11</b>	<b>13</b>	<b>17</b>	<b>18</b>	<b>15</b>	<b>7</b>	<b>10</b>	<b>19</b>	<b>178</b>	<b>226</b>	<b>79</b>
<b>British Isles .....</b>	<b>(Mean of 100 Stations).</b>	<b>20</b>	<b>16</b>	<b>13</b>	<b>14</b>	<b>9</b>	<b>11</b>	<b>16</b>	<b>15</b>	<b>13</b>	<b>8</b>	<b>11</b>	<b>17</b>	<b>163</b>	<b>214</b>	<b>76</b>

## DROUGHTS AND DRY SPELLS IN 1922.

All periods conforming to any of the three definitions of absolute drought, partial drought, and dry spell, respectively, (see pp. 8, 9 *ante.*) at any one of the 100 selected stations, are set out in full on pp. 24–30. In order to economise space the names of stations at which no instance occurred during the year are omitted. The full list of stations can be referred to in the Tables of rain days on pp. 14–16.

The number of instances of absolute drought recorded during the year was normal, but the area affected was slightly above the average, 54 out of the 100 stations experiencing absolute droughts compared with an average of 48. Partial droughts were on the other hand both fewer and less widespread than is normally the case, the area affected being represented by 34 stations compared with an average of 41. No instances of exceptionally protracted droughts call for notice. A comparative statement of droughts for the years 1887 to 1922 is given on p. 21.

The statistics available for a similar comparison of dry spells cover only six years.

*Dry Spells, 1917–1922 (i.e., 15 days without a “wet day.”\*)*

Year.	Number at 100 Stations.	Mean Duration.	Longest Spell.	Number of Stations with			
				None.	1 or 2	3 or 4	5 or more.
		Days.	Days.				
1917	193	20	31	5	70	25	0
1918	118	17	26	36	47	17	0
1919	98	19	38	35	62	3	0
1920	56	18	31	55	44	1	0
1921	201	21	58	21	43	29	7
1922	162	18	30	13	65	22	0

\* A day with .04 in. or more.

The areas over which partial droughts were observed during the year were almost exclusively confined to the south, only two stations north of the Humber, viz. Swinton (Berwickshire) and St. Andrews, recording one. The maximum occurred in a well marked strip of country extending from Devonshire to the Midlands, in the centre of which 120 days of partial drought were recorded at Mickleton in the north of Gloucestershire.

The distribution of absolute droughts was very unusual. The areas over which they occurred during the year lay in three strips extending from the mouth of the Shannon to Inverness-shire, from Land's End to Co. Down, and from the coast of Sussex to Banffshire.

Dry spells were more widespread than either absolute or partial droughts, the only areas which did not experience at least one during

the year being parts of the north and west of Scotland and of the north of Ireland. Practically everywhere in the south of the British Isles two or more dry spells occurred.

*Comparative Summary of Droughts, 1887-1922.*

ABSOLUTE DROUGHTS.*					PARTIAL DROUGHTS.†			
	No. of Droughts at 100 Stations.	Mean Duration.	Longest.	Stations without one.	No. of Droughts at 100 Stations.	Mean Duration.	Longest.	Stations without one.
		Days.	Days.			Days.	Days.	
1887	160	21	34	4	116	40	74	18
1888	34	17	20	70	8	42	50	92
1889	84	21	30	26	76	34	45	30
1890	26	18	20	78	6	30	31	94
1891	52	18	34	56	76	36	49	28
1892	72	16	20	50	34	35	64	66
1893	78	20	44	46	106	51	114	20
1894	104	18	31	20	88	37	62	26
1895	104	19	29	32	94	39	64	38
1896	54	18	26	50	98	40	75	32
1897	40	18	20	62	14	40	61	88
1898	62	17	28	54	62	38	77	52
1899	120	21	31	20	82	35	48	40
1900	28	17	21	76	18	32	35	82
1901	112	17	20	20	18	37	56	84
1902	10	17	18	90	4	37	41	96
1903	22	19	25	79	33	34	41	71
1904	12	16	18	88	18	34	41	82
1905	26	17	20	74	59	36	48	60
1906	73	17	25	47	40	36	55	62
1907	56	19	25	51	30	32	41	71
1908	74	18	32	48	52	35	54	68
1909	47	17	23	66	18	37	51	84
1910	32	16	24	70	23	33	42	78
1911	137	19	32	20	137	36	75	19
1912	105	19	32	26	68	37	69	42
1913	67	17	26	33	52	37	62	54
1914	49	20	25	65	54	33	50	57
1915	68	18	33	38	56	36	50	57
1916	52	20	29	51	44	33	43	57
1917	109	19	28	23	64	33	61	46
1918	20	16	18	83	14	34	47	87
1919	33	18	31	68	44	38	50	63
1920	18	17	22	84	22	37	54	79
1921	86	19	38	47	109	42	89	30
1922	63	17	23	46	44	36	51	66
Average	64	18	27	52	52	36	56	59
1922 diff. from Average.	-1	-1	-4	-6	-8	-0	-5	+7

NOTE.—The values previous to 1910 have been increased to the equivalent of 100 Stations for ready comparison. In the columns headed "Longest," the figures refer to the selected Stations only.

\* 15 days without a "rain-day." † 29 days averaging not more than .01 inch.

There were short and very local dry spells in one or two places during March and April, but, with minor exceptions, the dry periods of 1922 were confined to the early summer and the autumn. The dry weather of early summer was nearly synchronous in all parts of the

#### MAY-JUNE, 1922.



British Isles; in the autumn, however, failure of rain was at no time so widespread, and there were, in fact, three periods during which different parts of the country were affected.

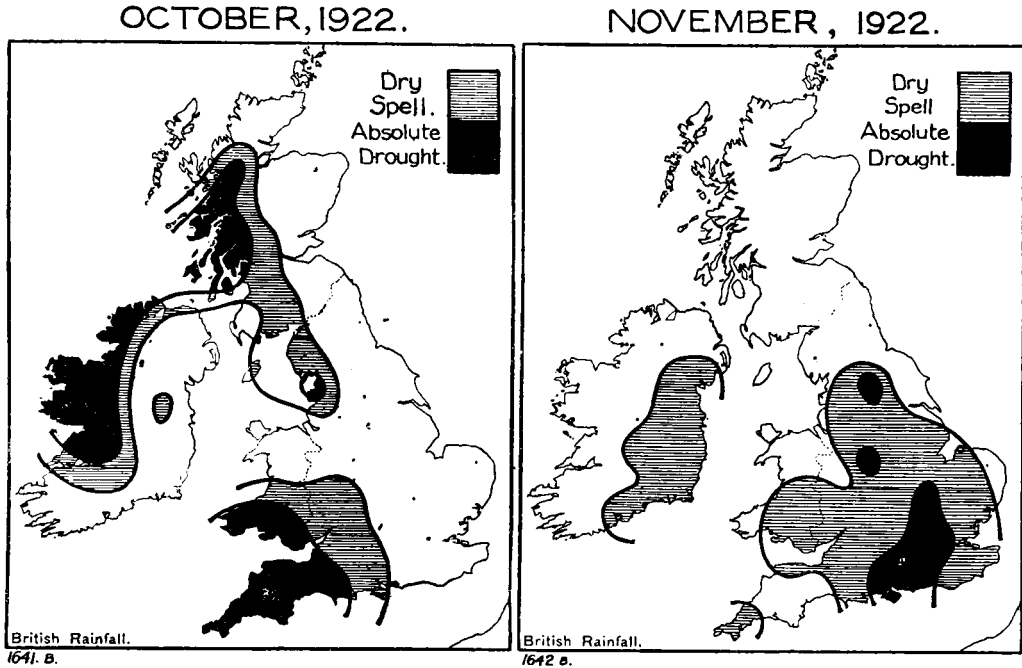
The districts affected in the former case included the east coast of Scotland from Banffshire southward, the whole of England, except Hampshire and part of Cornwall, as well as south and east of Wales and of Ireland. Only in the eastern part of these extensive areas was the shortage of rain sufficient to satisfy the more rigorous definition of an "absolute drought," whilst in still more limited areas in the south-east of England and the strip

extending from Devonshire to Leicestershire and in North Wales a few stations experienced "partial droughts" extending from various days early in May till about the middle of June. In general, the "dry spell" covered the last week of May and the first week of June. It commenced slightly earlier in the west Midlands of England. The areas affected by "dry spells" and "absolute droughts" are shown in the accompanying sketch map.

Except in the west Midlands the dry period of May and June was a normal short summer spell of rainless weather, and in no way justified the outcry of many of the newspapers that the droughty conditions of 1921 were being resumed.

The dry periods of the autumn were of a more serious nature. During about three weeks in October, commencing generally between the 6th and 12th, a dry spell with a very unusual distribution affected the western districts of the British Isles. Still farther west absolute drought occurred in the same period over a strip of the coasts of Ireland and Scotland from Co. Clare to western Inverness-shire, and over the south-west of England and Wales from Pembrokeshire to Dorset. One or two stations in the west Midlands of England experienced partial drought throughout October, but this was by no means widespread. A map showing the distribution of dry spells and absolute droughts in October is given on p. 23.

After a short interval during which rain spells occurred locally in Scotland, another dry period of about three weeks' duration occurred, affecting the Midlands and south of England, South Wales and the east of Ireland. This area coincided with that of the October dry spell



only in Wessex, South Wales and part of the west of England, in which districts the shortage of rain of this season was of a serious nature.

At a few stations in the centre and south of England still another dry spell occurred in the first half of December. Although no further absolute drought was experienced, the November–December dry period gave a partial drought of from 30 to 40 days' duration everywhere in the south-east of England from Yarmouth to Plymouth, as well as over more restricted areas in the south-east of Ireland and round the Firth of Forth.

The autumn dry periods taken as a whole constituted one of the most conspicuous features of the year's weather, and at one time became a real menace to the water-supply which, in places, in spite of the rainy summer, had not fully recovered from the shortage of 1921. The resumption of widespread rainfall in the latter half of December, however, brought general relief.

*Droughts in 1922.*

Station and County.	ABSOLUTE DROUGHTS.*			PARTIAL DROUGHTS.†			
	Began.	Ended.	Last- ed.	Began.	Ended.	Last- ed.	Rain.
ENGLAND & WALES.			Days			Days.	In.
St. Pancras (Camden Sq.)..	May 25	June 12	19	Nov. 11	Dec. 16	36	·33
London—2.	Nov. 11	Nov. 25	15				
Tenterden (View Tower) ..	May 20	June 7	19	May 2	June 13	43	·42
Kent—1.				Nov. 9	Dec. 15	37	·30
Patcham .....	May 20	June 7	19	Nov. 11	Dec. 15	35	·24
Sussex—3.	Nov. 11	Nov. 25	15				
Lymington (The Salterns) ..	Nov. 11	Nov. 25	15	Nov. 9	Dec. 15	37	·33
Hampshire—4.							
Petersfield (Ditcham Park)	Nov. 11	Nov. 25	15	Nov. 11	Dec. 15	35	·15
Hampshire—5.							
Upton .....	None.			Nov. 6	Dec. 16	41	·41
Berkshire—5.							
Newport Pagnell (The Croft)	May 26	June 12	18	Nov. 7	Dec. 16	40	·40
Buckinghamshire—5.	Nov. 11	Nov. 25	15				
Eye (Northolm).....	May 25	June 12	19	Nov. 7	Dec. 16	40	·32
Northamptonshire—4.	Nov. 11	Nov. 25	15				
Fulbourn (Pumping Statn.)	May 26	June 12	18	Nov. 11	Dec. 15	35	·33
Cambridgeshire—2.							
Danbury Rectory .....	May 26	June 12	18	Nov. 7	Dec. 16	40	·39
Essex—4.							
Haughley (Haughley Ho.)..	None.			May 6	June 21	47	·44
Suffolk—2.							
Yarmouth (Burgh Hall)....	None.			May 4	June 12	40	·39
Suffolk—4.							
Swaffham .....	May 26	June 12	18	None.			
Norfolk—4.							
Salisbury Plain (Shrewton)	None.			Nov. 11	Dec. 16	36	·25
Wiltshire—3.							
Dorchester (Wollaston Ho.)	Oct. 10	Oct. 28	19	Nov. 11	Dec. 15	35	·27
Dorsetshire—3.							
Holne (Church Pk. Cottage)	Oct. 6	Oct. 28	23	May 18	June 23	37	·34
South Devon—4.				Nov. 11	Dec. 10	30	·28
Morwenstow Vicarage ....	Oct. 12	Oct. 28	17	None.			
Cornwall—1.							
St. Austell (Trevarna) ....	Oct. 6	Oct. 28	23	None.			
Cornwall—2.							
Angersleigh (Leigh Court) ..	May 18	June 6	20	May 12	June 21	41	·37
Somersetshire—3.	Oct. 6	Oct. 21	16	Nov. 11	Dec. 15	35	·23
Mickleton (Bank House) ..	May 25	June 11	18	May 4	June 23	51	·45
Gloucestershire—4.				Oct. 1	Oct. 30	30	·30
				Nov. 7	Dec. 15	39	·34
Frampton Cotterell (Pk Ho)	None.			May 5	June 11	38	·37
Gloucestershire—5.				Nov. 11	Dec. 16	36	·35
Hereford (Holmer Hall)....	May 24	June 8	16	May 5	June 12	39	·38
Herefordshire—1.				Oct. 1	Oct. 30	30	·16
				Nov. 7	Dec. 13	37	·36
Shifnal (Hatton Grange) ..	May 24	June 12	20	May 23	June 23	32	·26
Shropshire—4.							
Ashbourne (Mayfield Ho.) ..	May 24	June 8	16	May 23	June 21	30	·22
Staffordshire—5.	Nov. 11	Nov. 25	15	Oct. 1	Oct. 30	30	·28

\* 15 days without a "rain-day."

† 29 days averaging not more than .01 inch.

*Droughts in 1922—(con.).*

Station and County.	ABSOLUTE DROUGHTS.*			PARTIAL DROUGHTS.†			
	Began.	Ended.	Last- ed.	Began.	Ended.	Last- ed.	Rain.
ENGLAND & WALES			Days.			Days	In.
—(con.).							
Leicester (Stroughton Drive)	May 25	June 12	19	May 5	June 12	39	·26
Leicestershire—4.				Nov. 7	Dec. 14	38	·37
Horncastle .....	None.			Nov. 10	Dec. 16	37	·36
Lincolnshire—3.							
Worksop (Hodsock Priory)	May 23	June 8	17	Nov. 7	Dec. 16	40	·33
Nottinghamshire—5.							
Northwich (Hunts Lock) ..	May 23	June 8	17	Oct. 1	Oct. 31	31	·30
Cheshire—2.							
S. Michael's-on-Wyre Vic.	Oct. 13	Oct. 30	18	None.			
North Lancashire—5.							
Meltham (Harewood Lodge)	May 23	June 8	17	None.			
Yorkshire, W. R.—8.							
Hull (Pearson Park) .....	May 24	June 7	15	None.			
Yorkshire, E. R.—3.							
Felixkirk (Mount St. John)	May 24	June 7	15	None.			
Yorkshire, N. R.—2.	Nov. 11	Nov. 25	15				
Reeth (Arkengarthdale) ...	May 23	June 8	17	None.			
Yorkshire N. R.—2.							
Whitby (Park Hall, Aislaby)	May 23	June 8	17	None.			
Yorkshire, N. R.—5.							
Sunderland (W. Hendon Ho.)	May 25	June 8	15	None.			
Durham—2.							
Treherbert (Tyn-y-waun)	Oct. 12	Oct. 30	19	None.			
Glamorganshire—6.							
Carmarthen (The Friary) ..	Oct. 12	Oct 30	19	None.			
Carmarthenshire—2.							
Fishguard (Langton,	May 23	June 6	15	None.			
Dwrbach)	Oct. 12	Oct. 29	18				
Pembrokeshire—4.							
Denbigh (Garn) .....	None.			May 5	June 9	36	·35
Denbighshire—2.							
ISLE OF MAN.							
Douglas (Clypse Reservoir)	Oct. 13	Oct. 29	17	None.			
Isle of Man.							
CHANNEL ISLANDS.							
St. Martins (Les Blanchés) ..	May 17	May 31	15	May 4	June 5	33	·25
Guernsey.	Nov. 11	Nov. 26	16				
SCOTLAND.							
Canonbie (Irvine House) ..	May 24	June 8	16	None.			
Dumfriesshire—5.							
Swinton House .....	May 25	June 11	18	Nov. 11	Dec. 15	35	·35
Berwickshire—3.							
Dougarie Lodge .....	Oct. 13	Oct. 29	17	None.			
Buteshire—3.							
Dalmally (Manse of Glen- orchy) .....	Oct. 13	Oct. 29	17	None.			
Argyllshire—6.							

\* 15 days without a "rain-day."

† 29 days averaging not more than '01 inch.

*Droughts in 1922—(con.).*

Station and County.	ABSOLUTE DROUGHTS.*			PARTIAL DROUGHTS.†			
	Began.	Ended.	Last- ed.	Began.	Ended.	Last- ed.	Rain.
SCOTLAND.—(con.).							
Islay (Eallabus) .....	Oct. 14	Oct. 29	16	None.		Days.	In.
Argyllshire—14.							
Mull (Ulva) .....	Oct. 14	Oct. 29	16	None.			
Argyllshire—14.							
St. Andrews Water Works... Fifeshire—3.	None.			Nov. 11	Dec. 15	35	·30
Peterhead (Forehill Works) Aberdeenshire—4.	May 22	June 9	19	None.			
Dufftown (Fife Street) .... Banffshire—3.	May 22	June 8	18	None.			
Loch Nevis (Inverie) .... Inverness-shire—12.	Oct. 15	Oct. 29	15	None.			
Achnasheen (Ledgowan)... Ross & Cromarty—4.	Oct. 14	Oct. 30	17	None.			
IRELAND.							
Castletownshend (Seafeld) Co. Cork—6.	None.			May 25	June 24	31	·27
Glanmire (Lota Lodge) .... Co. Cork—7.	None.			Nov. 10	Dec. 10	31	·25
Waterford (Brook Lodge) .. Co. Waterford—3.	May 25	June 8	15	Nov. 10	Dec. 11	32	·31
Nenagh (Castle Lough) .. Tipperary—1.	Oct. 13	Oct. 30	18	None.			
Inagh (Mount Callan) .... Clare—2.	Oct. 13	Oct. 29	17	None.			
Gorey (Courtown House) .. Co. Wexford—4.	May 25	June 8	15	Nov. 10	Dec. 13	34	·26
Sallins (Palmerstown) .... Co. Kildare—2.	None.			Nov. 10	Dec. 12	33	·33
Ballynahinch Castle ..... Co. Galway—3.	Oct. 14	Oct. 29	16	None.			
Mallarany .....	Oct. 14	Oct. 29	16	None.			
Co. Mayo—4.							
Collooney (Markree Obser.) Co. Sligo—2.	Oct. 14	Oct. 30	17	None.			
Seaforde .....	May 22	June 8	18	None.			
Co. Down—2.							
Milford (The Manse) ..... Co. Donegal—3.	Oct. 14	Oct. 29	16	None.			
Killybegs (Rockmount) .. Co. Donegal—5.	Oct. 13	Oct. 29	17	None.			

\* 15 days without a "rain-day."

† 29 days averaging not more than .01 inch.

*Dry Spells in 1922 (i.e., 15 days without a "wet-day." \*)*

Station and County.	Began.	Ended.	Lasted.	Rain-fall.
ENGLAND & WALES.				
			Days.	In.
St. Pancras (Camden Square) .....	Mar. 9	Mar. 23	15	·06
London—2.	May 25	June 12	19	·00
	Nov. 11	Nov. 30	20	·05
Tenterden (View Tower) .....	May 18	June 7	21	·02
Kent—1.	Nov. 11	Nov. 29	19	·04
	Dec. 1	Dec. 15	15	·06
Patcham .....	May 20	June 7	19	·00
Sussex—3.	Nov. 11	Nov. 29	19	·01
Lymington (The Salterns).....	Mar. 8	Mar. 23	16	·07
Hampshire—4.	Oct. 6	Oct. 28	23	·01
	Nov. 11	Nov. 29	19	·02
	Dec. 1	Dec. 15	15	·05
Petersfield (Ditcham Park) .....	Mar. 9	Mar. 23	15	·03
Hampshire—5.	Nov. 11	Nov. 29	19	·01
	Dec. 1	Dec. 15	15	·01
Upton .....	May 25	June 9	16	·02
Berkshire—5.	Nov. 11	Nov. 25	15	·03
	Dec. 1	Dec. 16	16	·07
Newport Pagnell (The Croft) .....	May 25	June 12	19	·01
Buckinghamshire—5.	Nov. 11	Nov. 25	15	·00
Eye (Northolm).....	May 25	June 12	19	·00
Northamptonshire—4.	Nov. 11	Nov. 25	15	·00
	Nov. 27	Dec. 15	19	·09
Fulbourn (Pumping Station) .....	May 26	June 12	18	·00
Cambridgeshire—2.	Nov. 11	Nov. 25	15	·03
Danbury Rectory .....	May 26	June 12	18	·00
Essex—4.	Nov. 11	Nov. 25	15	·02
Haughley (Haughley House) .....	May 26	June 12	18	·01
Suffolk—2.	Nov. 11	Nov. 25	15	·02
Yarmouth (Burgh Hall) .....	May 6	May 24	19	·08
Suffolk—4.				
Swaffham .....	May 25	June 12	19	·02
Norfolk—4.	Nov. 11	Nov. 25	15	·03
Salisbury Plain (Shrewton) .....	Mar. 9	Mar. 23	15	·07
Wiltshire—3.	Oct. 6	Oct. 28	23	·03
	Nov. 11	Nov. 29	19	·07
	Dec. 1	Dec. 15	15	·07
Dorchester (Wollaston House) .....	May 19	June 6	19	·04
Dorsetshire—3.	Oct. 6	Oct. 28	23	·01
	Nov. 11	Nov. 29	19	·04
Holne (Church Park Cottage) .....	May 23	June 21	30	·07
South Devon—4.	Oct. 6	Oct. 28	23	·00
Martinhoe Rectory .....	May 24	June 8	16	·03
North Devon—1.	Oct. 12	Oct. 28	17	·01
	Nov. 11	Nov. 26	16	·02
Morwenstow Vicarage.....	May 24	June 11	19	·04
Cornwall—1.	Oct. 6	Oct. 28	23	·04
St. Austell, Trevarna .....	Oct. 6	Oct. 28	23	·00
Cornwall—2.	Nov. 11	Nov. 29	19	·06
Angersleigh (Leigh Court) .....	May 18	June 7	21	·02
Somersetshire—3.	Oct. 6	Oct. 28	23	·01

\* A day with '04 in. or more.

*Dry Spells in 1922 (i.e., 15 days without a "wet day."\*)—(con.).*

Station and County.	Began.	Ended.	Lasted.	Rain-fall.
ENGLAND & WALES—(con.).			Days.	In.
Mickleton (Bank House) . . . . .	May 17	June 11	26	·05
Gloucestershire—4.	Nov. 11	Nov. 25	15	·01
	Nov. 27	Dec. 14	18	·04
Frampton Cotterell (Park House) . . . . .	May 18	June 11	25	·02
Gloucestershire—5.	Oct. 6	Oct. 28	23	·06
	Nov. 11	Nov. 25	15	·02
Hereford (Holmer Hall) . . . . .	May 23	June 11	20	·05
Herefordshire—1.	Oct. 6	Oct. 30	25	·04
	Nov. 11	Nov. 29	19	·09
Shifnal (Hatton Grange) . . . . .	May 23	June 12	21	·02
Shropshire—4.				
Ashbourne (Mayfield House) . . . . .	May 23	June 8	17	·02
Staffordshire—5.	Oct. 1	Oct. 17	17	·07
	Nov. 10	Nov. 25	16	·04
Leicester (Stroughton Drive) . . . . .	May 17	June 12	27	·07
Leicestershire—4.	Nov. 11	Nov. 25	15	·02
	Nov. 27	Dec. 13	17	·07
Horncastle . . . . .	May 23	June 12	21	·02
Lincolnshire—3.	Nov. 11	Nov. 25	15	·05
	Nov. 28	Dec. 15	18	·08
Worksop (Hodsock Priory) . . . . .	May 23	June 11	20	·02
Nottinghamshire—5.	Nov. 7	Nov. 25	19	·05
	Nov. 27	Dec. 13	17	·07
Northwich (Hunts Lock) . . . . .	May 23	June 8	17	·00
Cheshire—2.	Nov. 11	Nov. 25	15	·01
S. Michael's-on-Wyre Vicarage . . . . .	May 23	June 11	20	·07
North Lancashire—5.	Oct. 6	Oct. 30	25	·05
	Nov. 9	Nov. 29	21	·18
Meltham (Harewood Lodge) . . . . .	May 23	June 8	17	·00
Yorkshire, W. R.—8.	Nov. 11	Nov. 25	15	·04
Hull (Pearson Park) . . . . .	Apr. 27	May 15	19	·10
Yorkshire, E. R.—3.	May 23	June 7	16	·01
Felixkirk (Mount St. John) . . . . .	Apr. 29	May 15	17	·04
Yorkshire, N. R.—2.	May 23	June 7	16	·01
	Nov. 11	Nov. 25	15	·00
Reeth (Arkengarthdale) . . . . .	May 23	June 8	17	·00
Yorkshire, N. R.—2.	Nov. 7	Nov. 21	15	·03
Whitby (Park Hall, Aislaby) . . . . .	May 23	June 8	17	·00
Yorkshire, N. R.—5.				
Sunderland (West Hendon House) . . . . .	Apr. 27	May 15	19	·10
Durham—2.	May 25	June 8	15	·00
Glanton (Glanton Pyke Gardens) . . . . .	May 24	June 11	19	·05
Northumberland—6.				
Geltsdale . . . . .	Mar. 28	Apr. 11	15	·11
Cumberland—1.				
Grasmere (The Wray) . . . . .	May 27	June 11	16	·03
Westmorland—2.	Oct. 13	Oct. 30	18	·08
Treherbert (Tyn-y-waun) . . . . .	May 24	June 12	20	·08
Glamorganshire—6.	Oct. 12	Oct. 30	19	·00
	Nov. 11	Nov. 25	15	·03

\* A day with ·04 in. or more.

*Dry Spells in 1922 (i.e., 15 days without a "wet day."\*)—(con.).*

Station and County.	Began.	Ended.	Lasted.	Rain-fall.
ENGLAND & WALES—(con.).				
Carmarthen (The Friary) .....	May 23	June 8	17	·03
<i>Carmarthenshire—2.</i>	Oct. 12	Oct. 30	19	·00
	Nov. 11	Nov. 29	19	·12
Fishguard (Langton, Dwrbach) .....	May 23	June 8	17	·03
<i>Pembrokeshire—4.</i>	Oct. 12	Oct. 30	19	·01
Devil's Bridge .....	May 23	June 8	17	·01
<i>Cardiganshire—2.</i>	Oct. 6	Oct. 30	25	·02
	Nov. 11	Nov. 25	15	·09
	Nov. 11	Nov. 25	15	·05
Newtown (Penarth Weir) .....				
<i>Montgomeryshire—4.</i>				
Denbigh (Garn) .....	May 23	June 9	18	·01
<i>Denbighshire—2.</i>				
ISLE OF MAN & CHANNEL ISLANDS.				
Douglas (Clypse Reservoir) .....	Oct. 13	Oct. 30	18	·01
<i>Isle of Man.</i>				
St. Martins (Les Blanchés) .....	May 17	June 5	20	·01
<i>Guernsey.</i>	Nov. 11	Nov. 26	16	·00
SCOTLAND.				
Stoneykirk (Ardwell House) .....	May 27	June 11	16	·09
<i>Wigtownshire—3.</i>				
Dumfries (Jardington) .....	Oct. 13	Oct. 30	18	·04
<i>Kirkcudbrightshire—5.</i>				
Canonbie (Irvine House) .....	May 24	June 8	16	·00
<i>Dumfries-shire—5.</i>				
Swinton House .....	Apr. 28	May 13	16	·06
<i>Berwickshire—3.</i>	May 25	June 11	18	·00
Strathaven (East Overton House) .....	Oct. 13	Oct. 30	18	·02
<i>Lanarkshire—5.</i>				
Girvan (Pinmore) .....	Mar. 9	Mar. 23	15	·07
<i>Ayrshire—8.</i>				
Stirling (Touch Reservoir No. 1) .....	Oct. 13	Oct. 30	18	·02
<i>Stirlingshire—1.</i>				
Dougarie Lodge .....	Oct. 13	Oct. 29	17	·00
<i>Buteshire—3.</i>				
Dalmally (Manse of Glenorchy) .....	Mar. 8	Mar. 22	15	·02
<i>Argyllshire—6.</i>	Oct. 13	Oct. 29	17	·00
Islay (Eallabus) .....	Oct. 14	Oct. 29	16	·00
<i>Argyllshire—14.</i>				
Mull (Ulva) .....	Oct. 14	Oct. 29	16	·00
<i>Argyllshire—14.</i>				
St. Andrews Water Works .....	May 23	June 8	17	·02
<i>Fifeshire—3.</i>				
Stonehaven (Mains of Cowie) .....	May 25	June 9	16	·07
<i>Kincardineshire—2.</i>				
Balmoral Castle Gardens .....	May 22	June 11	21	·13
<i>Aberdeenshire—1.</i>				
Peterhead (Forehill Works) .....	May 22	June 9	19	·00
<i>Aberdeenshire—4.</i>				
Dufftown (Fife Street) .....	May 22	June 9	19	·02
<i>Banffshire—3.</i>				

\* A day with ·04 in. or more.

*Dry Spells in 1922 (i.e., 15 days without a "wet day."\*)—(con.).*

Station and County.	Began.	Ended.	Lasted.	Rain-fall.
SCOTLAND—(con.).				
Loch Nevis (Inverie) .....	Oct. 14	Oct. 29	16	·01
<i>Inverness-shire—12.</i>				
Fort William (Atholl Bank) .....	Oct. 13	Oct. 30	18	·06
<i>Inverness-shire—17.</i>				
Achnasheen (Ledgowan) .....	Oct. 14	Oct. 30	17	·00
<i>Ross &amp; Cromarty—4.</i>				
IRELAND.				
Castletownshend (Seafield) .....	May 25	June 8	15	·03
<i>Co. Cork—6.</i>				
Glanmire (Lota Lodge) .....	Nov. 11	Nov. 29	19	·10
<i>Co. Cork—7.</i>				
Killarney (District Asylum) .....	May 24	June 7	15	·03
<i>Co. Kerry—3.</i>				
Darrynane Abbey .....	May 26	June 11	17	·04
<i>Co. Kerry—4.</i>				
Waterford (Brook Lodge) .....	May 21	June 8	19	·03
<i>Co. Waterford—3.</i>	Nov. 10	Nov. 28	19	·06
Nenagh (Castle Lough) .....	Oct. 13	Oct. 30	18	·00
<i>Co. Tipperary—1.</i>	Nov. 10	Nov. 29	20	·11
Cashel (Ballinamona) .....	May 21	June 8	19	·07
<i>Co. Tipperary—1.</i>	Oct. 13	Oct. 30	18	·04
Foynes (Coolnanas) .....	Mar. 27	Apr. 10	15	·06
<i>Co. Limerick—2.</i>	Oct. 12	Oct. 30	19	·02
Inagh (Mount Callan) .....	Oct. 13	Oct. 29	17	·00
<i>Co. Clare—2.</i>				
Gorey (Courtown House) .....	May 21	June 8	19	·02
<i>Co. Wexford—4.</i>	Nov. 10	Dec. 8	29	·12
Abbey Leix (Blandsfort) .....	May 22	June 7	17	·03
<i>Queen's County—2.</i>	Nov. 10	Nov. 29	20	·10
Sallins (Palmerstown) .....	May 21	June 9	20	·05
<i>Co. Kildare—2.</i>	Oct. 12	Oct. 26	15	·05
	Nov. 10	Nov. 29	20	·07
Kells (Headfort) .....	May 22	June 8	17	·02
<i>Co. Meath—4.</i>	Nov. 10	Nov. 29	20	·15
Moate (Coolatore) .....	May 22	June 9	19	·04
<i>Co. Westmeath—1.</i>				
Ballynahinch Castle .....	Oct. 14	Oct. 30	17	·02
<i>Co. Galway—3.</i>				
Mallarany .....	Oct. 14	Oct. 29	16	·00
<i>Co. Mayo—4.</i>				
Collooney (Markree Observatory) .....	May 22	June 8	18	·11
<i>Co. Sligo—2.</i>	Oct. 13	Oct. 30	18	·01
Belturbet (Cloverhill) .....	May 22	June 8	18	·09
<i>Co. Cavan—1.</i>				
Seaforde .....	May 22	June 8	18	·00
<i>Co. Down—2.</i>	Nov. 11	Nov. 25	15	·10
Milford (The Manse) .....	Oct. 14	Oct. 29	16	·00
<i>Co. Donegal—3.</i>				
Killybegs (Rockmount) .....	Oct. 13	Oct. 29	17	·00
<i>Co. Donegal—5.</i>				

\* A day with ·04 in. or more.

## RAIN SPELLS AND WET SPELLS IN 1922.

The dates of all rain spells and wet spells occurring during 1922 at any of the 100 selected stations are given in the lists on pp. 33-41 in the same manner as those of droughts and dry spells. The definitions upon which the data are based will be found on pp. 8 and 9.

Statistics of rain spells are now available for a period of 20 years. These show that during 1922 the total number of rain spells observed at the 100 stations, a fair index of the frequency of rainy periods over the country as a whole, was 170 compared with an average of 169. The area affected can best be judged by the number of stations at which such spells occurred. This was 70 out of 100, again very close to the average value.

*Comparative Table of Rain Spells\* at 100 Stations, 1903-1922.*

Year.	No. of Rain Spells.	DURATION OF SPELLS.				STATIONS WITH			
		Mean.		Greatest.					
		Days.	Mean rain per day.	Days.	Mean rain per day.	None.	1 or 2.	3 or 4.	5 or more.
1903	282	22	in. .28	52	in. .51	11	41	26	22
1904	152	19	.22	34	.27	31	51	11	7
1905	121	19	.24	44	.38	45	39	12	4
1906	125	21	.25	50	.40	38	47	11	4
1907	177	21	.25	45	.17	38	30	18	14
1908	159	19	.24	49	.43	21	59	12	8
1909	110	19	.26	45	.12	36	52	12	0
1910	235	21	.25	64	.30	24	34	25	17
1911	185	22	.29	39	.15	19	50	23	8
1912	198	22	.27	58	.19	29	32	30	9
1913	128	21	.29	64	.19	44	34	19	3
1914	150	22	.29	70	.28	30	44	25	1
1915	132	20	.27	38	.25	34	47	16	3
1916	231	20	.29	62	.28	19	41	28	12
1917	152	22	.28	52	.19	30	48	17	5
1918	186	23	.30	56	.21	21	51	19	9
1919	143	20	.26	46	.31	29	53	14	4
1920	165	20	.25	45	.24	32	45	12	11
1921	184	22	.29	45	.25	31	36	25	8
1922	170	21	.26	49	.35	30	42	23	5
Average	169	21	.27	50	.27	29	44	19	8

NOTE.—The values previous to 1910 have been increased to the equivalent of 100 Stations for comparison. In the columns headed "Greatest" the figures refer to the selected Stations only.

\* At least .01 in. each day; 15 days or more.

The distribution of rain spells during the year was very irregular. A strip of the east coast of Great Britain, and most of the east and south of England, escaped. The mountain areas of England and Wales and a

well-marked coastal strip in the west of Scotland and Ireland showed a frequency exceeding 60 days' duration, whilst at one or two stations in exceptionally rainy districts in the extreme west the number of days involved rose above 100.

Statistics on similar lines for wet spells extend back only to 1917. The number observed at 100 stations in 1922 was slightly higher than in any of the previous five years, but the area involved, viz., 36 per cent. of the British Isles, was apparently normal.

*Wet Spells (at least .04 in. each day; 15 days or more), 1917-1922.*

Year.	Number of Wet Spells.	Mean Duration.		Longest Spell.		STATIONS WITH			
		Days.	Mean rain per day.	Days.	Mean rain per day.	None.	1 or 2.	3 or 4.	5 or more
1917 ....	55	19	in. .35	31	in. .46	67	28	3	2
1918 ....	49	21	.40	36	.44	70	26	4	0
1919 ....	49	17	.29	33	.34	66	29	5	0
1920 ....	47	18	.37	31	.61	75	17	8	0
1921 ...	59	20	.41	29	.32	69	22	9	0
1922 ....	65	20	.36	42	.28	64	29	7	0

The area over which wet spells occurred was well defined, being limited to Dartmoor, Exmoor, Central and South Wales, the Pennines and English Lake District and a westerly strip extending from Co. Cork to the Orkneys. Very locally as many as 60 days were involved during the year in wet spells, the maximum rising to 97 days at Loch More, Sutherlandshire, and to 92 days at Ballynahinch, in Co. Galway.

The wet periods of 1922 were in no case very protracted nor very widespread. They were less well defined than the dry periods, but for the most part fell into four groups respectively in January, in February to March, in June to July, and in December.

The rain spell of December, 1921, and January, 1922, completing the period commencing in December, 1921, discussed on p. 39 of *British Rainfall, 1921*, which was of a normal winter character, continued in the west generally till about January 11th, and at a few stations in the north-west of Ireland and the Hebrides till nearly the end of the month. The area affected was a broad belt on the west of Scotland and Ireland and a narrow strip of the west of England and Wales. Over most of the western portion of this district the conditions reached the intensity of a wet spell. The longest period observed was at Eallabus, in Islay, where the rain spell continued unbroken from December 4th to January 21st, 49 days, with a total fall of 14.60 in. Four days later another rain spell commenced in this district lasting till February 8th,

and then, after an interval of 4 days a further rain spell which lasted till March 11th, linking the January wet period to that of February and March.

The wet period of February and March like that of January was of normal winter character and its distribution, both as a rain spell and a wet spell, was nearly the same. The duration of the wet period was not very uniform, the commencement being in most places about the middle of February, and the end about March 8th. A few stations, chiefly in the west of Ireland experienced a short rain spell in the second half of April, coincident with local dry spells in the north-east of England, but no further widespread wet period occurred till the middle of June.

As a wet spell the rainy period of June and July affected only limited areas in the West Highlands, the north of Ireland and the extreme west of England and Wales. A rain spell was experienced over a large area extending from Co. Cork to Caithness and over a considerable part of the west of England and Wales. In most districts the duration of this rain spell did not exceed 20 days, but in Inverness-shire and Ross-shire the duration reached 25 days and at Loch More, in western Sutherlandshire, 31 days, from June 8th to July 8th, an unusually protracted period for a summer rain spell even in that region.

There were again short local rain spells in the west of Scotland during August and November, but with these unimportant exceptions the only definite rainy period occurred in the last three weeks of the year. This rain spell left Scotland practically untouched. The areas affected were two well defined strips of country extending respectively from Bantry Bay to Stornoway and from Land's End to the Solway Firth. A wet spell occurred over a considerable part of the west coasts in both these strips. In Ireland the spell was unfinished at the close of the year. The rainfall intensity was highest on Dartmoor, where at Holne, near Ashburton, the 16 days, December 15th to 30th, gave a total fall of 12·10 inches.

*Rain Spells (at least ·01 in. each day; 15 days or more), 1922.*

Station and County.	Began.	Ended.	Lasted.	Total Rain.	Rain per Day.		
					Max.	Min.	Mean.
ENGLAND & WALES.			Days.	In.	In.	In.	In.
Patcham . . . . .	June 22	July 9	18	2·91	·90	·01	·16
<i>Sussex—3.</i>							
Petersfield (Ditcham Park) .	Feb. 15	Mar. 8	22	4·33	·66	·01	·20
<i>Hampshire—5.</i>	June 22	July 6	15	3·92	1·90	·01	·26
Yarmouth (Burgh Hall) . . .	June 22	July 9	18	2·15	·49	·01	·12
<i>Suffolk—4.</i>							

*Rain Spells (at least .01 in. each day; 15 days or more), 1922—(con.).*

Station and County.	Began	Ended.	Lasted.	Total Rain.	Rain per Day.		
					Max.	Min.	Mean.
ENGLAND & WALES—(con.)			Days.	In.	In.	In.	In.
Dorchester (Wollaston House)	Jan. 18	Feb. 4	18	4.94	.82	.01	.27
<i>Dorsetshire—3.</i>	Feb. 14	Mar. 9	24	5.80	.62	.01	.24
	June 22	July 8	17	5.27	2.11	.01	.31
	Dec. 16	Dec. 30	15	6.00	1.14	.02	.40
Holne (Church Park Cottage)	Feb. 14	Mar. 9	24	12.55	1.30	.02	.52
<i>South Devon—4.</i>	June 22	July 10	19	7.74	2.10	.01	.41
	Dec. 15	Dec. 30	16	12.10	2.46	.03	.76
Martinhoe Rectory .....	Dec. 12	Dec. 30	19	6.31	1.30	.01	.33
<i>North Devon—1.</i>							
Morwenstow Vicarage .....	<i>Dec. 14</i>	<i>Jan. 10</i>	<i>28</i>	<i>3.20</i>	<i>.40</i>	<i>.01</i>	<i>.11</i>
<i>Cornwall—1.</i>	<i>(1921)</i>						
	June 22	July 8	17	3.11	.88	.02	.18
	Dec. 10	Dec. 31	22	5.31	1.31	.01	.24
St. Austell (Trevarna) .....	<i>Dec. 14</i>	<i>Jan. 11</i>	<i>29</i>	<i>4.02</i>	<i>.56</i>	<i>.02</i>	<i>.14</i>
<i>Cornwall—2.</i>	<i>(1921)</i>						
	Dec. 14	Dec. 31	18	7.70	1.61	.01	.43
Mickleton (Bank House) ..	June 22	July 9	18	2.44	1.03	.01	.14
<i>Gloucestershire—4.</i>							
Hereford (Holmer Hall) ..	Feb. 14	Mar. 1	16	2.43	.53	.01	.15
<i>Herefordshire—1.</i>							
Shifnal (Hatton Grange) ..	Dec. 14	Dec. 31	18	3.92	1.41	.02	.22
<i>Shropshire—4.</i>							
Ashbourne (Mayfield House)	June 24	July 9	16	4.07	1.48	.02	.25
<i>Staffordshire—5.</i>	Dec. 14	Dec. 29	16	4.53	1.47	.01	.28
Northwich (Hunts Lock) ..	June 22	July 9	18	4.19	1.20	.01	.23
<i>Cheshire—2.</i>	Dec. 14	Dec. 30	17	4.16	1.25	.02	.24
St. Michael's-on-Wyre Vic. ...	Feb. 13	Feb. 27	15	2.46	.47	.01	.16
<i>North Lancashire—5.</i>	Dec. 13	Dec. 30	18	5.29	1.03	.04	.29
Meltham (Harewood Lodge)	June 22	July 9	18	5.55	1.90	.01	.31
<i>Yorkshire W.R.—8.</i>	Dec. 14	Dec. 31	18	5.84	1.82	.01	.32
Hull (Pearson Park) .....	Feb. 21	Mar. 10	18	2.19	.35	.01	.12
<i>Yorkshire, E. R.—3.</i>	June 24	July 10	17	3.73	1.51	.01	.22
	Oct. 16	Nov. 1	17	1.10	.18	.01	.06
	Dec. 14	Dec. 29	16	2.16	.58	.01	.13
Felixkirk (Mount St. John) ..	Jan. 18	Feb. 4	18	3.86	.78	.01	.21
<i>Yorkshire, N. R.—2.</i>	Dec. 14	Dec. 31	18	3.43	1.67	.01	.19
Reeth (Arkengarthdale) ...	Dec. 11	Dec. 30	20	5.51	.74	.01	.28
<i>Yorkshire, N. R.—2.</i>							
Geltsdale .....	Feb. 13	Mar. 10	26	4.00	.38	.01	.15
<i>Cumberland—1.</i>	Dec. 11	Dec. 30	20	4.62	.82	.02	.23
Grasmere (The Wray) .....	<i>Dec 4</i>	<i>Jan. 2</i>	<i>30</i>	<i>20.87</i>	<i>3.46</i>	<i>.02</i>	<i>.70</i>
<i>Westmorland—2.</i>	<i>(1921)</i>						
	Feb. 13	Mar. 10	26	12.20	1.29	.01	.47
	June 24	July 9	16	7.43	2.24	.07	.46
	Dec. 11	Dec. 30	20	12.90	1.70	.10	.65
Treherbert (Tyn-y-waun) ....	<i>Dec. 14</i>	<i>Jan. 9</i>	<i>27</i>	<i>11.24</i>	<i>1.97</i>	<i>.01</i>	<i>.42</i>
<i>Glamorganshire—6.</i>	<i>(1921)</i>						
	Feb. 14	Mar. 9	24	18.56	2.14	.09	.77
	June 22	July 9	18	10.73	2.94	.01	.60
	Dec. 11	Dec. 30	20	13.12	2.45	.07	.66

*Rain Spells (at least .01 in. each day ; 15 days or more), 1922—(con.).*

Station and County.	Began.	Ended.	Lasted.	Total Rain.	Rain per Day.		
					Max.	Min.	Mean.
ENGLAND & WALES.--(con.)							
Carmarthen (The Friary) . . . .	Dec. 4	Jan. 11	Days. 39	In. 5.07	In. .68	In. .01	In. .13
Carmarthenshire—2.	(1921)						
	Feb. 14	Mar. 10	25	6.98	.76	.01	.28
Fishguard (Langton, Dwrbach)	Feb. 15	Mar. 10	24	7.20	.90	.01	.30
Pembrokeshire—4.	Dec. 11	Dec. 29	19	6.24	1.07	.06	.33
Devil's Bridge . . . . .	Dec. 14	Jan. 9	27	8.30	.80	.01	.31
Cardiganshire—2.	(1921)						
	Feb. 14	Mar. 9	24	8.22	.87	.03	.34
	June 18	July 9	22	5.54	.78	.01	.25
	Dec. 11	Dec. 31	21	5.78	.73	.01	.28
Denbigh (Garn) . . . . .	Feb. 14	Mar. 9	24	4.10	.64	.02	.17
Denbighshire—2.	June 22	July 9	18	4.42	1.54	.01	.25
	Dec. 14	Dec. 31	18	5.61	1.30	.02	.31
Dolgelly (Bryntirion) . . . . .	Dec. 14	Jan. 9	27	8.70	1.18	.01	.32
Merionethshire—4.	(1921)						
	Feb. 14	Mar. 10	25	7.07	.62	.02	.28
	Dec. 12	Dec. 30	19	6.41	1.35	.05	.34
Llanerchymedd (Llwydiarth Esgob).	Dec. 21	Jan. 11	22	4.19	.67	.01	.19
Anglesey.	(1921)						
	Feb. 14	Feb. 28	15	2.95	.69	.02	.20
	Dec. 11	Dec. 31	21	4.65	.87	.02	.22
ISLE OF MAN.							
Douglas (Clype Reservoir) . .	Dec. 18	Jan. 3	17	3.52	.45	.01	.21
Isle of Man.	(1921)						
CHANNEL ISLANDS.							
St. Martin's (Les Blanchés) . .	Dec. 16	Dec. 31	16	4.37	1.01	.04	.27
Guernsey.							
SCOTLAND.							
Dumfries (Jardington) . . . .	Jan. 25	Feb. 8	15	2.01	.53	.01	.13
Kirkcudbrightshire—5.	Dec. 10	Dec. 30	21	4.18	.76	.01	.20
Canonbie (Irvine House) . . . .	Apr. 22	May 6	15	2.32	.58	.02	.15
Dumfriesshire—5.	Dec. 11	Dec. 30	20	4.55	.52	.02	.23
Swinton House . . . . .	Oct. 17	Nov. 3	18	2.24	.51	.02	.12
Berwickshire—3.							
Linlithgow Academy . . . . .	Jan. 25	Feb. 9	16	1.74	.45	.01	.11
Linlithgowshire—2.							
Girvan (Pinmore) . . . . .	Feb. 13	Feb. 27	15	2.91	.60	.01	.19
Ayrshire—8.	June 17	July 8	22	3.83	1.02	.01	.17
	Oct. 31	Nov. 14	15	3.66	.99	.01	.24
Stirling (Touch Res. No. 1) . .	Feb. 14	Mar. 7	22	7.02	1.22	.03	.32
Stirlingshire—1.							
Dougarie Lodge . . . . .	Dec. 12	Jan. 3	23	6.45	.69	.01	.28
Buteshire—3.	(1921)						
Dalmally (Manse of Glenorchy).	Dec. 4	Jan. 11	39	24.58	2.84	.02	.63
Argyllshire—6.	(1921)						
	Feb. 12	Mar. 8	25	9.98	2.00	.02	.40

*Rain Spells (at least .01 in. each day; 15 days or more), 1922—(con.).*

Station and County.	Began.	Ended.	Lasted.	Total Rain.	Rain per Day.		
					Max.	Min.	Mean.
SCOTLAND—(con.).			Days.	In.	In.	In.	In.
Islay (Eallabus) . . . . .	Dec. 4	Jan. 21	49	14.60	1.17	.02	.30
Argyllshire—14.	(1921)						
	Jan. 25	Feb. 8	15	2.97	.42	.05	.20
	Feb. 12	Mar. 11	28	6.95	.75	.02	.25
	June 17	July 4	18	3.25	.45	.02	.18
	Oct. 30	Nov. 17	19	3.92	1.14	.01	.21
Mull (Ulva) . . . . .	Dec. 4	Jan. 21	49	17.00	1.57	.01	.35
Argyllshire—14.	(1921)						
	Feb. 12	Mar. 8	25	7.27	.99	.02	.29
	June 14	July 4	21	3.90	.76	.01	.19
	Aug. 11	Aug. 27	17	3.21	.87	.01	.19
	Nov. 24	Dec. 8	15	2.66	.95	.01	.18
Aberfeldy (Dall Avon) ....	Dec. 12	Jan. 11	31	6.07	.67	.01	.20
Perthshire—11.	(1921)						
	Jan. 13	Jan. 30	18	5.41	1.08	.01	.30
	Feb. 14	Mar. 9	24	3.79	.47	.01	.16
Stonehaven (Mains of Cowie)	Mar. 24	Apr. 7	15	1.62	.49	.01	.11
Kincardineshire—2.	June 22	July 10	19	3.69	.93	.01	.19
	Aug. 21	Sept. 5	16	1.28	.27	.01	.08
Balmoral Castle Gardens ...	Dec. 15	Jan. 11	28	4.03	.57	.01	.14
Aberdeenshire—1.	(1921)						
Peterhead (Forehill Works) .	Dec. 28	Jan. 11	15	1.63	.21	.03	.11
Aberdeenshire—4.	(1921)						
Dufftown (Fife Street) . . . .	Dec. 26	Jan. 11	17	3.32	.53	.01	.20
Banffshire—3.	(1921)						
Cluny Castle . . . . .	Dec. 12	Jan. 11	31	10.08	.91	.02	.33
Inverness-shire—3.	(1921)						
	Feb. 23	Mar. 9	15	4.37	.72	.01	.29
	June 18	July 8	21	3.27	.77	.01	.16
	July 20	Aug. 3	15	1.48	.44	.01	.10
Loch Nevis (Inverie) . . . . .	Dec. 4	Jan. 11	39	21.57	2.34	.05	.55
Inverness-shire—12.	(1921)						
	Feb. 12	Mar. 8	25	10.36	1.09	.05	.41
	June 9	July 4	26	6.01	.81	.02	.23
	Aug. 11	Aug. 27	17	4.68	1.06	.02	.28
	Nov. 12	Dec. 8	27	7.16	.96	.02	.27
Fort William (Atholl Bank) .	Dec. 12	Jan. 11	31	13.95	1.22	.02	.45
Inverness-shire—17.	(1921)						
	Feb. 12	Mar. 8	25	13.81	2.75	.03	.55
	June 14	July 8	25	4.52	.72	.01	.18
	Aug. 11	Aug. 27	17	4.14	.96	.01	.24
Skye (Portree) . . . . .	Dec. 4	Jan. 11	39	12.95	1.00	.03	.33
Inverness-shire—18.	(1921)						
	Feb. 12	Mar. 11	28	8.33	.90	.01	.30
	June 9	July 4	26	4.48	.65	.01	.17
	Aug. 11	Aug. 31	21	5.19	.87	.01	.25
	Nov. 15	Dec. 8	24	4.31	.84	.02	.18

*Rain Spells (at least .01 in. each day; 15 days or more), 1922—(con.).*

Station and County.	Began.	Ended.	Lasted.	Total Rain.	Rain per Day.		
					Max.	Min.	Mean.
SCOTLAND—(con.).							
Barra (Castle Bay) . . . . .	Dec. 4	Jan. 21	49	7.00	.68	.01	.14
Inverness-shire—19.	(1921)						
	Feb. 12	Mar. 5	22	3.17	.77	.01	.14
	June 17	July 4	18	2.04	.28	.01	.11
	Oct. 23	Nov. 10	19	2.32	.39	.02	.12
	Dec. 14	Dec. 31	18	2.08	.30	.01	.12
Fortrose . . . . .	Dec. 14	Jan. 3	21	4.38	.52	.01	.21
Ross & Cromarty—3.	(1921)						
Achnasheen (Ledgowan) ..	Dec. 4	Jan. 11	39	18.72	2.08	.04	.48
Ross & Cromarty—4.	(1921)						
	Feb. 17	Mar. 8	20	8.28	.88	.08	.41
	Apr. 21	May 8	18	6.24	1.15	.03	.35
	June 12	July 8	27	5.03	.78	.02	.19
	Aug. 10	Aug. 28	19	3.83	1.11	.01	.20
	Nov. 16	Dec. 7	22	7.54	1.14	.01	.34
Stornoway . . . . .	Dec. 4	Jan. 11	39	11.39	.69	.02	.29
Ross & Cromarty—10.	(1921)						
	Feb. 17	Mar. 11	23	5.51	.72	.04	.24
	Aug. 11	Aug. 27	17	3.83	.74	.01	.23
	Dec. 17	Dec. 31	15	3.09	.65	.02	.21
Loch More (Achfary) . . . . .	Dec. 4	Jan. 11	39	20.89	2.25	.03	.54
Sutherlandshire—5.	(1921)						
	Feb. 12	Mar. 8	25	7.72	.77	.05	.31
	Apr. 23	May 23	31	10.46	.99	.03	.34
	June 8	July 8	31	7.19	.91	.02	.23
	Aug. 11	Aug. 28	18	3.99	1.21	.02	.22
	Oct. 26	Nov. 10	16	4.21	.77	.02	.26
	Nov. 12	Dec. 8	27	11.33	1.36	.02	.42
Thurso (Buckies) . . . . .	Dec. 26	Jan. 12	18	4.97	.91	.05	.28
Caithness-shire—3.	(1921)						
	June 19	July 6	18	1.91	.25	.01	.11
	Dec. 14	Dec. 28	15	1.63	.31	.01	.11
IRELAND.							
Castletownshend (Seafield) ..	Apr. 19	May 4	16	1.77	.43	.01	.11
Co. Cork—6.							
Glanmire (Lota Lodge) ...	Dec. 11	Dec. 31	21	4.47	.57	.01	.21
Co. Cork—7.							
Killarney (District Asylum) .	Dec. 18	Jan. 10	24	3.70	.63	.01	.15
Co. Kerry—3.	(1921)						
	Feb. 14	Mar. 10	25	7.99	1.40	.01	.32
	June 16	July 9	24	3.82	.88	.01	.16
	Dec. 15	Dec. 31	17	6.31	.97	.05	.37
Darrynane Abbey . . . . .	Jan. 12	Feb. 4	24	7.62	.97	.01	.32
Co. Kerry—4.	Feb. 11	Mar. 9	27	6.57	.95	.03	.24
	Apr. 19	May 4	16	2.96	.50	.02	.19
	June 21	July 8	18	4.12	1.90	.01	.23
	Dec. 15	Dec. 31	17	4.61	.59	.04	.27

*Rain Spells (at least .01 in. each day; 15 days or more), 1922—(con.).*

Station and County.	Began.	Ended.	Lasted.	Total Rain.	Rain per day.		
					Max.	Min.	Mean.
IRELAND—(con.)			Days.	In.	In.	In.	In.
Nenagh (Castle Lough) .... Co. Tipperary—1.	Dec. 12 (1921)	Jan. 3	23	4.43	1.00	.01	.19
	Apr. 19	May 4	16	1.38	.26	.01	.09
	Dec. 11	Dec. 31	21	5.30	.77	.01	.25
Foynes (Coolnanes) .....	June 17	July 3	17	2.24	.28	.02	.13
Co. Limerick—2.	Dec. 12	Dec. 31	20	5.99	.55	.01	.30
Inagh (Mount Callan) ..	Dec. 12 (1921)	Jan. 10	30	8.16	1.40	.02	.27
Co. Clare—2.	Feb. 12	Mar. 9	26	8.00	.70	.03	.31
	June 17	July 3	17	4.39	.70	.03	.26
	Sept. 10	Sept. 26	17	6.14	2.30	.03	.36
	Dec. 15	Dec. 31	17	7.83	1.47	.09	.46
Abbey Leix (Blandsfort) .... Queen's County—2.	June 20	July 5	16	1.94	.35	.01	.12
Kells (Headfort) .....	June 21	July 5	15	1.73	.29	.03	.12
Co. Meath—4.							
Moate (Coolatore) .....	Dec. 24 (1921)	Jan. 9	17	2.84	.60	.01	.17
Co. Westmeath—1.	Dec. 15	Dec. 31	17	2.95	.53	.01	.17
Ballynahinch Castle .....	Dec. 4 (1921)	Jan. 14	42	11.69	1.47	.06	.28
Co. Galway—3.	Jan. 25	Feb. 8	15	3.97	.56	.01	.26
	Feb. 11	Mar. 10	28	8.62	.98	.02	.31
	Apr. 19	May 7	19	3.35	.48	.02	.18
	June 17	July 8	22	7.15	2.26	.02	.33
	Aug. 14	Aug. 30	17	4.87	.79	.01	.29
	Sept. 10	Oct. 6	27	8.60	1.84	.01	.32
	Dec. 11	Dec. 31	21	7.27	.66	.02	.35
Mallarany .....	Dec. 4 (1921)	Jan. 10	38	10.57	.80	.03	.28
Co. Mayo—4.	Feb. 11	Mar. 9	27	28.62	.87	.05	.32
	June 17	July 3	17	3.79	.46	.05	.22
Collooney (Markree Obser.)	Dec. 12 (1921)	Jan. 21	41	8.10	.68	.03	.20
Co. Sligo—2.	Feb. 12	Feb. 27	16	4.71	.84	.07	.29
	Apr. 19	May 6	18	1.84	.36	.02	.10
	June 16	July 4	19	3.21	.55	.02	.17
	Dec. 16	Dec. 30	15	4.54	.94	.03	.30
Belturbet (Cloverhill) ....	Dec. 17 (1921)	Jan. 3	18	2.34	.33	.01	.13
Co. Cavan—1.	Feb. 14	Mar. 9	24	3.26	.54	.02	.14
	June 21	July 8	18	2.70	.64	.01	.15
Seaforde .....	June 24	July 8	15	3.18	.49	.04	.21
Co. Down—2.							
Ballymena (Harryville) ....	Dec. 17 (1921)	Jan. 18	33	6.93	.95	.03	.21
Co. Antrim—5.	Feb. 12	Feb. 27	16	2.84	.55	.04	.18
	June 17	July 8	22	3.25	.44	.02	.15

*Rain Spells (at least .01 in. each day; 15 days or more), 1922—(con.).*

Station and County.	Began.	Ended.	Lasted.	Total Rain.	Rain per day.		
					Max.	Min.	Mean.
IRELAND—(con.)			Days.	In.	In.	In.	In.
Omagh (Edenfel) . . . . .	Dec. 4	Jan. 4	32	6.93	.72	.01	.22
Co. Tyrone—3.	(1921)						
	Feb. 14	Mar. 10	25	5.88	.90	.01	.24
	June 17	July 7	21	4.10	.70	.03	.20
Milford (The Manse) . . . . .	Dec. 12	Jan. 18	38	9.15	.56	.03	.24
Co. Donegal—3.	(1921)						
	Feb. 12	Mar. 9	26	5.26	.63	.02	.20
	Apr. 22	May 6	15	2.06	.49	.02	.14
	June 17	July 9	23	4.26	.87	.02	.19
	Dec. 15	Dec. 31	17	4.03	.61	.02	.24
Killybegs (Rockmount) . . .	Dec. 4	Jan. 20	48	15.53	1.19	.02	.32
Co. Donegal—5.	(1921)						
	Feb. 14	Mar. 9	24	7.27	1.00	.04	.30
	Apr. 22	May 6	15	1.87	.27	.02	.12
	June 18	July 4	17	4.46	.59	.05	.26
	Oct. 30	Nov. 14	16	3.99	1.25	.01	.25
	Dec. 16	Dec. 30	15	6.31	1.46	.01	.42

*Wet Spells (at least .04 in. each day; 15 days or more), 1922.*

Station and County.	Began.	Ended.	Lasted.	Total Rain.	Mean Rain, per day.
ENGLAND & WALES.			Days.	In.	In.
Holne (Church Park Cottage)	June 24	July 9	16	7.63	.48
South Devon—4.	Dec. 16	Dec. 30	15	12.07	.80
Martinhoe Rectory . . . . .	Dec. 14	Dec. 30	17	6.27	.37
North Devon—1.					
St. Austell (Trevarna) . . . . .	Dec. 16	Dec. 31	16	7.63	.48
Cornwall—2.					
St. Michael's-on-Wyre Vic. . . . .	Dec. 13	Dec. 30	18	5.29	.29
North Lancashire—5.					
Meltham (Harewood Lodge) .	Dec. 14	Dec. 30	17	5.83	.34
Yorkshire, W. R.—8.					
Reeth (Arkengarthdale) . . . . .	Dec. 12	Dec. 30	19	5.50	.29
Yorkshire, N. R.—2.					
Grasmere (The Wray) . . . . .	Dec. 18	Jan. 1	15	16.51	1.10
Westmorland—2.	(1921)				
	Feb. 13	Feb. 27	15	7.67	.51
	June 24	July 9	16	7.43	.46
	Dec. 11	Dec. 30	20	12.90	.65
Treherbert (Tyn-y-waun) . . . .	Dec. 18	Jan. 3	17	8.71	.51
Glamorganshire—6.	(1921)				
	Feb. 14	Mar. 9	24	18.56	.77
	June 24	July 9	16	10.55	.66
	Dec. 11	Dec. 30	20	13.12	.66

*Wet Spells (at least .04 in. each day ; 15 days or more), 1922—(con.).*

Station and County.	Began.	Ended.	Last.	Total Rain.	Mean Rain, per day.
ENGLAND & WALES—(con.).			Days.	In.	In.
Carmarthen (The Friary) .... <i>Carmarthenshire—2.</i>	Feb. 14	Mar. 8	23	6.94	.30
Fishguard (Langton, Dwrbach) <i>Pembrokeshire—4.</i>	Dec. 11	Dec. 29	19	6.24	.33
Devil's Bridge ..... <i>Cardiganshire—2.</i>	Dec. 26 (1921)	Jan. 9	15	5.06	.34
	June 24	July 9	16	4.54	.28
	Dec. 12	Dec. 30	19	5.76	.30
Dolgelly (Bryntirion) ..... <i>Merionethshire—4.</i>	Feb. 14	Mar. 9	24	7.05	.29
	Dec. 12	Dec. 30	19	6.41	.34
CHANNEL ISLANDS.					
St. Martins (Les Blanchés) ... <i>Guernsey.</i>	Dec. 16	Dec. 31	16	4.37	.27
SCOTLAND.					
Dougarie Lodge ..... <i>Buteshire—3.</i>	Dec. 12 (1921)	Jan. 2	22	6.44	.29
Dalmally (Manse of Glenorchy) <i>Argyllshire—6.</i>	Dec. 4 (1921)	Jan. 2	30	21.94	.73
	Feb. 12	Mar. 7	24	9.96	.41
Islay (Eallabus) ..... <i>Argyllshire—14.</i>	Dec. 26 (1921)	Jan. 18	24	7.60	.32
	Jan. 25	Feb. 8	15	2.97	.20
	Feb. 17	Mar. 8	20	5.62	.28
	June 17	July 3	17	3.23	.19
Mull (Ulva) ..... <i>Argyllshire—14.</i>	Dec. 24 (1921)	Jan. 11	19	5.28	.28
Cluny Castle ..... <i>Inverness-shire—3.</i>	Dec. 26 (1921)	Jan. 11	17	7.03	.41
Loch Nevis (Inverie) ..... <i>Inverness-shire—12.</i>	Dec. 4 (1921)	Jan. 11	39	21.57	.55
	Feb. 12	Mar. 8	25	10.36	.41
	June 14	July 4	21	4.71	.22
Fort William (Atholl Bank) <i>Inverness-shire—17.</i>	Dec. 24 (1921)	Jan. 10	18	8.79	.49
	June 18	July 2	15	3.64	.24
Skye (Portree) ..... <i>Inverness-shire—18.</i>	Dec. 24 (1921)	Jan. 11	19	6.88	.36
	Feb. 12	Mar. 8	25	8.17	.33
	June 16	July 4	19	3.55	.19
Achnasheen (Ledgowan) ..... <i>Ross &amp; Cromarty—4.</i>	Dec. 4 (1921)	Jan. 11	39	18.72	.48
	Feb. 17	Mar. 8	20	8.28	.41
	June 16	July 2	17	3.52	.21
Stornoway ..... <i>Ross &amp; Cromarty—10.</i>	Dec. 12 (1921)	Jan. 11	31	9.41	.30
	Feb. 17	Mar. 11	23	5.51	.24

*Wet Spells (at least .04 in. each day ; 15 days or more), 1922—(con.).*

Station and County.	Began.	Ended.	Last.	Total Rain.	Mean Rain, per day.
SCOTLAND—(con.).					
Loch More (Achfary) . . . . . Sutherlandshire—5.	Dec. 12 (1921)	Jan. 11	31	14.95	.48
	Feb. 12	Mar. 8	25	7.72	.31
	June 15	July 4	20	5.95	.30
	Aug. 11	Aug. 27	17	3.97	.23
	Nov. 15	Dec. 8	24	10.27	.43
Thurso (Buckies) . . . . . Caithness-shire—3.	Dec. 26 (1921)	Jan. 12	18	4.97	.28
IRELAND.					
Killarney (District Asylum) .. Co. Kerry—3.	Feb. 19 Dec. 15	Mar. 9 Dec. 31	19 17	7.34 6.31	.39 .37
Darrynane Abbey . . . . . Co. Kerry—4.	Dec. 15	Dec. 31	17	4.61	.27
Nenagh (Castle Lough) . . . . . Co. Tipperary—1.	Dec. 15	Dec. 30	16	4.58	.29
Foynes (Coolnanes) . . . . . Co. Limerick—2.	Dec. 15	Dec. 30	16	5.00	.31
Inagh (Mount Calan) . . . . . Co. Clare—2.	Dec. 15	Dec. 31	17	7.83	.46
Ballynahinch Castle . . . . . Co. Galway—3.	Dec. 4 (1921)	Jan. 14	42	11.69	.28
	Feb. 11	Mar. 9	27	8.60	.32
	June 17	July 3	17	3.49	.21
	Sept. 10	Sept. 26	17	7.12	.42
	Dec. 15	Dec. 31	17	6.49	.38
Mallarany . . . . . Co. Mayo—4.	Dec. 4 (1921)	Jan. 8	36	10.40	.29
	Feb. 11	Mar. 9	27	8.62	.32
	June 17	July 3	17	3.79	.22
Collooney (Markree Observatory) Co. Sligo—2.	Jan. 1 Feb. 12	Jan. 21 Feb. 27	21 16	4.24 4.71	.20 .29
Seaforde . . . . . Co. Down—2.	June 24	July 8	15	3.18	.21
Ballymena (Harryville) . . . . . Co. Antrim—5.	Feb. 12	Feb. 27	16	2.84	.18
Omagh (Edenfel) . . . . . Co. Tyrone—3.	Dec. 16 (1921)	Jan. 4	20	5.67	.28
Milford (The Manse) . . . . . Co. Donegal—3.	June 24 Dec. 16	July 8 Dec. 30	15 15	3.58 3.99	.24 .27
Killybegs (Rockmount) . . . . . Co. Donegal—5.	Dec. 12 (1921)	Jan. 12	32	10.41	.33
	Feb. 14	Mar. 9	24	7.27	.30
	June 18.	July 4	17	4.46	.26

### DURATION OF RAINFALL IN 1922.

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The tables of duration of rainfall have this year been re-arranged, and are given in two sections. The first, occupying pp. 44–45, gives the total duration in hours for each month ; the second, on pp. 46–47, the mean rate in inches per hour. The actual totals of amount of rainfall are omitted as they can readily be computed by multiplying the mean fall per hour by the duration.

The method of standardization of the records by fixing the minimum intensity of rainfall to rank for duration at 0·004 in. or 0·1 mm. per hour, which has been discussed at some length in this section of the last two volumes of *British Rainfall*, has now come into more general use. Out of the 60 records printed, 42 are known to be standardized, whilst in one or two others the observers having tested their records and having found no appreciable difference from the standard values, have preferred to make no change from the old method. This shows a distinct advance from 1921, when the number of standardized records was 24 out of 54.

Those stations at which the standardized method has been employed are indicated in the table thus :—§. D indicates that daily values have been received.

The changes in the list of stations from which records are available are on the whole in the direction of improvement. The most serious loss from the point of view of geographical distribution is that of Baldonell in Co. Dublin, leaving only four stations in Ireland. Scotland has suffered no loss, and we are able to add the official record at Leuchars, Fifeshire, and imperfect records at Crathie and Gergask, near Kingussie, bringing the total number of stations up to eight, but the north and west are still very poorly represented. In Wales the new record at Holyhead effects a considerable improvement.

The most unusual features of the year at practically all stations were the high duration values recorded in April and July, in which respect the year had much in common with 1920. January was also a month of high rainfall duration, the totals rising to more than 100 hours in several districts. May was generally the month of least duration, but the west of Scotland was conspicuously exceptional in this respect, for rain fell during 89·2 hours at Renfrew and no less than 157·0 hours at Glenleven, on the borders of Argyllshire and Inverness-shire, compared with only 10 hours at Worstead, in Norfolk, and 10·3 at Lympne, near Dover. In the west of England, October was notable for continued dry weather, the total duration of rain at West Bromwich being only 4·3 hours and at Blundellsands only 8·0 hours.

The following table compares the total duration at Camden Square, London, with similar statistics since 1881, and with the average of the period 1881–1915. The total was 66·5 hours above the average—not far short of twice the value of the previous year. The mean rate of rainfall per hour was rather below the average.

*Comparison of Duration and Intensity of Rainfall, at Camden Square in 1922, with the Average for 35 Years, 1881-1915.*

Year.	DURATION. Average 436·9 hrs.		INTENSITY. Average ·056 in.		Year.	DURATION. Average 436·9 hrs.		INTENSITY. Average ·056 in.	
	Total.	Per cent. of average.	Rate Per Hour.	Per cent. of average.		Total.	Per cent. of average.	Rate Per Hour.	Per cent. of average.
	hrs.		in.			hrs.		in.	
1881	486·3	111	·057	102	1902	357·8	82	·059	105
1882	480·7	110	·056	100	1903	M 688·5	158	·055	98
1883	393·5	90	·062	111	1904	491·8	113	m ·042	75
1884	336·8	77	·060	107	1905	456·4	104	·050	89
1885	470·0	108	·057	102	1906	420·4	96	·058	104
1886	427·2	98	·063	112	1907	418·8	96	·055	98
1887	300·3	69	·064	114	1908	500·7	115	·047	84
1888	435·7	100	·064	114	1909	576·5	132	·046	82
1889	428·5	98	·056	100	1910	491·2	112	·052	93
1890	409·5	94	·052	93	1911	473·0	108	·052	93
1891	490·3	112	·057	102	1912	517·0	118	·054	96
1892	372·5	85	·061	109	1913	453·0	104	·049	87
1893	388·0	89	·051	91	1914	513·6	118	·050	89
1894	477·7	109	·058	104	1915	568·9	130	·057	102
1895	380·0	87	·057	102	1916	627·8	144	·054	96
1896	404·3	93	·058	104	1917	476·3	109	·063	112
1897	371·2	85	·062	111	1918	520·2	119	·057	102
1898	298·5	68	·059	105	1919	610·6	140	·043	77
1899	337·5	77	·067	120	1920	519·9	119	·045	80
1900	366·3	84	·064	114	1921	m 269·2	62	·054	96
1901	310·2	71	M ·071	127	1922	503·4	115	·051	91

Table I.—Duration of Rainfall at 60 Stations in the British Isles during 1922.

County.	Station.	Pattern of Gauge.	ft.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
				hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
D London	Shad Thames Pump. Station	Hyet.	42	88.7	59.3	62.7	81.8	24.0	30.7	75.2	52.7	47.3	37.0	45.5	94.0	698.9
D "	Camden Square	Hyet.	111	70.7	45.4	42.2	75.2	12.9	15.9	59.2	38.4	37.0	21.3	28.2	57.0	503.4
D Surrey	Croydon Aerodrome	Hyet.	245	90.6	51.7	47.4	69.7	16.0	29.1	54.9	34.5	32.5	25.0	37.9	67.8	557.1
D "	Kew Observatory	Beckley	20	65.7	42.0	36.9	67.6	12.2	21.4	56.0	42.3	35.8	20.5	31.6	60.2	492.2
D Kent	Lympne Aerodrome	Hyet.	348	79.0	54.8	60.2	67.8	10.3	30.5	46.8	47.0	71.2	49.0	42.1	59.7	618.4
D "	Isle of Grain	Hyet.	10	73.9	43.1	53.4	64.5	13.2	22.8	55.3	54.3	43.0	37.4	33.3	48.7	542.9
D "	Bexley Heath (Rookwood)	Hyet.	161	..	..	..	..	..	..	..	..	..	17.4	23.1	48.8	..
D Sussex	Eastbourne	Hyet.	59	79.5	54.5	42.5	64.7	15.3	19.8	46.6	44.2	48.2	29.9	26.3	59.8	531.3
D Hampshire	Calshot	Hyet.	9	78.3	47.6	45.9	73.4	22.8	24.5	46.2	37.8	35.6	14.3	39.9	70.7	537.0
D "	Andover	Hyet.	295	..	73.0	63.4	59.7	14.5	23.0	..	63.7	39.1	17.6	52.2	79.3	..
D "	Petersfield (Stoner Hill)	Hyet.	748	100.6	67.2	72.0	74.5	26.3	32.3	60.0	54.3	46.7	28.1	42.2	81.7	685.9
D "	South Farnborough	Hyet.	231	81.5	59.8	52.5	70.3	17.1	18.8	59.3	51.8	38.9	31.4	44.7	94.3	620.4
D Middlesex	Palmer's Grn. (Broomfield Pk.)	Casella	138	66.5	40.8	37.5	74.2	15.4	24.8	46.4	28.3	31.0	12.0	29.0	48.1	454.0
D Herts.	Harpden (Rothamsted)	Hyet.	420	56.5	47.5	43.9	68.9	13.8	19.1	56.2	42.0	42.1	12.6	26.0	47.7	476.3
D "	Hitchin (Chiltern Road)	Hyet.	298	65.3	47.3	42.8	69.7	15.9	16.1	68.2	47.6	40.4	15.8	30.6	55.4	515.1
D Oxon.	Benson Observatory	Dines	186	56.9	42.8	50.7	72.4	20.2	24.0	62.6	55.9	30.8	17.4	19.9	42.6	496.2
D Suffolk	Copdock (Rookwood)	Casella	164	73.5	44.7	28.8	68.3	16.9	25.0	55.0	33.1	44.2	26.3	33.0	45.4	494.2
D "	Felixstowe Aerodrome	Hyet.	15	76.3	32.3	28.8	..	..	..	..	..	..	..	..	..	..
D Norfolk	Worstead (Lyngate Cottage)	Hyet.	55	100.9	74.9	46.2	64.7	10.0	28.3	74.5	38.8	53.4	27.8	58.7	53.2	631.4
D S. Devon	Plymouth (Cattewater)	Hyet.	87	169.1	93.4	65.0	57.1	34.9	33.7	77.7	64.1	59.1	45.2	53.7	99.0	852.0
D "	Plymouth (The Hoe)	Halliwell	117	110.5	95.8	67.0	68.1	30.1	22.1	72.9	70.2	46.5	27.6	41.4	82.8	735.0
D "	Plymouth (Freedom Park)	Hyet.	208	112.9	101.4	77.1	71.0	30.9	22.7	76.9	58.9	49.8	32.6	47.8	88.6	770.6
D Cornwall	Falmouth Observatory	Beckley	167	114.9	83.2	68.4	86.6	26.9	25.8	69.3	68.8	47.4	40.6	30.3	78.0	740.2
D Gloucester	Gloucester (Dollard Ho.)	Hyet.	366	82.7	89.7	95.3	70.5	28.7	29.6	73.9	74.1	53.7	21.4	42.6	82.3	744.5
D Stafford	West Bromwich	Hyet.	543	86.3	46.3	42.0	55.2	19.4	12.3	75.1	58.5	44.6	4.3	22.8	55.4	522.2
D "	Ashbourne (Mayfield House)	Casella	374	123.0	73.8	52.7	67.2	20.7	26.2	70.3	79.7	58.1	9.8	38.3	75.6	695.4
D Lincoln	Cranwell	Hyet.	237	131.6	94.7	60.2	68.7	14.0	17.6	72.6	52.9	47.5	29.7	37.5	60.9	687.9
D Nottingham	Nottingham (Trent Lane)	Fernley	83	68.4	52.1	27.8	69.3	11.2	15.3	65.8	59.0	42.2	11.2	19.0	54.9	496.2
D "	Worksop (Hodsock Priory)	Halliwell	56	92.1	54.9	43.5	81.6	12.6	18.2	59.7	67.9	45.3	16.0	21.4	49.2	562.4
D Cheshire	Birkenhead (Bidston Obsy.)	Osler	189	91.8	87.0	37.5	54.8	26.8	45.7	78.8	60.3	64.3	9.9	42.9	65.7	665.5

Table I.—Duration of Rainfall at 60 Stations in the British Isles during 1922—(con.).

County.	Station.	Pattern of Gauge.	ft.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
				hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
D S. Lancs.....1	Blundellsands (Myra) .....	Hyet.	35	..	..	30.0	..	20.0	28.5	60.7	..	61.8	8.0	32.7	81.5	..
\$ D ".....3	Bolton (Queen's Park) .....	Fernley	342	110.8	75.8	56.7	70.8	40.4	59.9	78.0	74.4	90.1	12.3	59.0	94.4	822.6
D C. Lancs.....2	Leyland (Worden Hall) .....	Fernley	125	89.4	96.5	50.2	61.3	41.3	57.0	86.5	67.1	86.2	16.3	48.6	77.7	798.1
\$ D ".....3	Southport (Hesketh Park) ..	Fernley	39	80.4	76.0	37.9	43.4	33.2	32.0	74.0	70.1	67.5	12.2	41.9	77.1	645.7
D N. Lancs. .4	Lancaster (Greg Observatory)	Beckley	312	74.2	92.5	51.7	41.0	49.1	43.3	84.5	101.1	86.6	19.5	54.4	114.0	811.9
\$ D W.R. Yorks 9	Haworth (Lower Laithe Res.)	Hyet.	772	115.5	104.0	59.5	74.3	36.2	64.5	88.8	91.0	84.5	28.0	59.2	120.8	926.3
D " 9	Earby Sewage Works .....	Hyet.	425	96.8	102.0	50.0	52.2	22.8	40.5	78.5	46.2	87.0	11.5	32.0	79.8	699.3
" 9	Skipton Town Hall .....	Hyet.	367	98.3	114.2	73.0	76.0	21.0	60.8	100.2	96.5	127.0	31.3	55.5	123.0	976.8
D N.R. Yorks. 2	Felixkirk (Mount St. John) ..	Halliwell	542	71.1	53.6	40.8	39.8	10.0	27.4	54.5	42.3	49.9	20.6	20.8	49.3	480.1
\$ D " 2	Felixkirk (Mount St. John) ..	Hyet.(182)	542	70.7	55.8	30.3	36.0	9.8	27.0	57.5	43.2	44.9	18.8	19.6	42.7	456.3
D " 2	Felixkirk (Mount St. John) ..	Hyet.(98)	542	62.9	49.9	29.9	36.4	9.4	26.8	58.7	42.8	49.1	21.0	21.4	45.8	454.1
\$ D " 2	Felixkirk (Mount St. John) ..	Hyet.(98)	542	62.5	52.6	31.5	37.1	10.4	26.7	57.8	42.7	49.2	19.7	20.1	45.7	456.0
D " 2	Felixkirk (Mount St. John) ..	Casella	542	69.3	49.6	43.5	40.9	9.6	35.8	59.6	45.0	50.1	22.4	24.2	48.1	498.1
D Glamorgan 3	Swansea (Victoria Park) ....	Hyet.	28	99.5	82.5	73.8	45.6	32.9	25.0	82.4	66.3	75.8	24.9	52.1	95.6	756.4
D Brecon ....7	Cray Reservoir .....	Halliwell	1044	195.5	184.0	143.0	94.0	54.2	63.7	154.6	90.3	115.7	53.2	78.5	199.3	1426.0
" ....7	Black Mtns. (Aber Clwyd) ..	Hyet.	1880	76.2	69.8	70.1	70.7	15.7	24.8	93.6	83.0	45.9	13.6	24.1	64.8	652.3
\$ D Flint .....1	Shotwick Aerodrome .....	Hyet.	18	110.8	62.8	45.7	55.6	13.0	35.1	80.0	64.9	60.5	11.3	34.3	78.3	652.3
\$ D Anglesey ..	Holyhead (Salt Island) .....	Hyet.	26	..	48.2	35.3	30.8	18.9	19.4	57.2	46.8	39.6	21.9	22.9	55.5	..
\$ D Dumfries....5	Eskdalemuir Observatory ..	Beckley	794	88.0	90.5	51.9	40.3	66.7	47.2	121.5	95.6	105.8	72.0	87.0	147.7	1014.2
\$ D Berwick ....3	Swinton House .....	Hyet.	200	..	..	..	..	14.2	27.3	59.2	26.7	49.1	52.8	19.4	34.1	..
\$ D Renfrew ....2	Renfrew Aerodrome .....	Hyet.	36	121.3	126.8	51.2	48.7	89.2	40.9	70.1	81.5	59.1	55.6	58.5	103.7	906.6
\$ D Argyll .....4	Glenleven (Blackwater Dam)	Hyet.	1072	184.3	194.8	89.2	69.0	157.0	100.3	113.2	95.0	85.6	72.0	135.8	202.4	1498.6
\$ D Fife .....3	Leuchars .....	Hyet.	36	106.1	77.2	69.5	43.0	18.1	31.9	63.9	..	..	..	37.6	51.3	..
\$ D Aberdeen ..2	Aberdeen (King's College) ..	Beckley	48	95.9	70.7	75.3	57.8	26.4	35.2	66.1	38.4	46.8	42.4	52.0	37.5	644.5
\$ D Inverness ..3	Laggan (Crathie) .....	Hyet.	920	155.4	100.3	56.0	..	..	..	..	..	..	..	..	..	..
\$ D " ..3	Laggan (Gergask) .....	Hyet.	870	..	..	..	..	53.3	41.4	52.2	49.2	25.3	42.5	54.1	..	..
\$ D Cork .....7	Cork (University College) ..	Hyet.	66	91.7	76.7	41.6	51.0	26.5	18.6	66.5	84.4	105.7	38.5	56.1	84.0	741.3
\$ D Kerry .....3	Valencia Observatory .....	Beckley	42	108.1	103.1	44.2	65.5	65.0	28.5	66.8	81.4	80.2	45.5	54.5	85.5	828.3
\$ D Armagh ....5	Armagh Observatory .....	Beckley	196	85.1	69.2	27.6	69.2	33.0	43.0	60.2	77.0	73.1	29.6	26.1	56.5	649.6
\$ D Londonderry 5	Glendra Lodge .....	Hyet.	950	115.6	106.1	55.6	93.3	52.6	58.0	86.8	91.7	96.7	40.0	62.9	112.6	971.9

Table II.—Mean Rate of Rainfall per hour during 1922.

County.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
London	Shad Thames Pumping Station	.025	.028	.022	.031	.030	.035	.044	.041	.036	.024	.025	.025	.030
"	St. Pancras (Camden Square)	.040	.048	.036	.040	.064	.070	.065	.066	.058	.048	.051	.055	.051
§ Surrey	Croydon Aerodrome	.033	.046	.039	.045	.071	.045	.058	.069	.061	.041	.046	.059	.049
"	Kew Observatory	.034	.045	.046	.038	.084	.046	.059	.049	.044	.039	.045	.047	.045
§ Kent	Lympne Aerodrome	.046	.035	.034	.039	.057	.046	.048	.057	.063	.041	.037	.053	.046
"	Isle of Grain	.032	.030	.026	.027	.073	.043	.035	.028	.053	.033	.033	.044	.035
"	Bexley Heath (Rookwood)	.032	.030	.026	.027	.073	.043	.035	.028	.053	.033	.033	.044	.035
"	Eastbourne	.051	.049	.040	.051	.035	.093	.046	.076	.055	.038	.070	.048	.053
§ Hampshire	Calshot	.053	.051	.041	.033	.024	.067	.065	.045	.034	.057	.040	.057	.047
"	Andover	.036	.036	.035	.048	.041	.041	.041	.061	.039	.056	.033	.043	.043
"	Petersfield (Stoner Hill)	.067	.067	.050	.066	.046	.069	.105	.070	.053	.049	.068	.075	.067
"	South Farnborough	.041	.040	.039	.039	.049	.055	.079	.053	.048	.029	.039	.043	.046
§ Middlesex	Palmer's Green (Broomfield Pk.)	.045	.053	.038	.039	.039	.062	.061	.061	.070	.075	.053	.055	.052
§ Herts.	Harpden (Rothamsted)	.051	.049	.048	.047	.109	.050	.075	.064	.062	.049	.050	.062	.057
"	Hitchin (Chiltern Road)	.038	.039	.036	.038	.069	.061	.054	.047	.057	.032	.038	.042	.044
§ Oxon.	Benson Observatory	.039	.047	.033	.034	.049	.054	.055	.075	.059	.035	.055	.057	.049
§ Suffolk	Copdock (Rookwood)	.060	.040	.050	.035	.065	.052	.049	.034	.084	.032	.044	.035	.048
"	Felixstowe Aerodrome	.039	.046	.036	.035	.035	.052	.049	.034	.084	.032	.044	.035	.048
§ Norfolk	Worsted (Lyngate Cottage)	.048	.036	.037	.042	.045	.046	.072	.031	.050	.048	.031	.035	.044
§ S. Devon	Plymouth (Cattewater)	.031	.036	.052	.057	.043	.031	.043	.064	.046	.042	.044	.064	.045
"	Plymouth (The Hoe)	.044	.035	.038	.037	.051	.050	.048	.053	.061	.069	.057	.079	.050
"	Plymouth (Freedom Park)	.047	.042	.043	.049	.059	.058	.054	.077	.068	.067	.081	.085	.059
§ Cornwall	Falmouth Observatory	.049	.059	.053	.055	.059	.040	.064	.063	.062	.054	.078	.102	.062
§ Gloucester	Cirencester (Dollarward House)	.043	.045	.031	.041	.038	.040	.073	.068	.045	.052	.045	.050	.048
Stafford	West Bromwich	.043	.059	.040	.048	.046	.053	.073	.078	.073	.077	.047	.066	.059
"	Ashbourne (Mayfield House)	.040	.043	.045	.037	.047	.044	.070	.067	.050	.054	.044	.062	.051
§ Lincoln	Cranwell	.016	.025	.023	.037	.049	.041	.067	.060	.045	.033	.030	.054	.037
§ Nottingham	Nottingham (Trent Lane)	.048	.040	.054	.041	.100	.046	.062	.086	.040	.051	.047	.055	.054
"	Worksop (Hodsock Priory)	.032	.049	.031	.035	.092	.047	.056	.096	.051	.047	.043	.062	.051
§ Cheshire	Birkenhead (Bidston Observatory)	.039	.034	.040	.034	.052	.034	.045	.052	.036	.032	.038	.045	.040

Table II.—*Mean Rate of Rainfall per hour during 1922—(con.)*.

County.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
S. Lancs. .... 1	Blundellsands (Myra) .....	in. .	in. .	in. .043	in. .	in. .066	in. .064	in. .065	in. .	in. .046	in. .036	in. .061	in. .045	in. .
§ " .... 3	Bolton (Queen's Park) .....	.042	.055	.059	.035	.056	.052	.063	.078	.053	.047	.071	.068	.057
C. Lancs. .... 2	Leyland (Worden Hall) .....	.041	.040	.030	.041	.055	.047	.055	.061	.045	.042	.060	.053	.048
§ " .... 3	Southport (Hesketh Park) .....	.047	.046	.036	.035	.050	.068	.067	.086	.043	.048	.059	.054	.054
N. Lancs. .... 4	Lancaster (Greg Observatory) .....	.052	.049	.049	.052	.059	.074	.074	.063	.052	.048	.049	.048	.056
§ W.R. Yorks. .... 9	Haworth (Lower Laithes Res.) .....	.047	.059	.058	.055	.049	.036	.059	.068	.061	.040	.041	.043	.052
" .... 9	Earby Sewage Works .....	.038	.050	.061	.052	.057	.056	.065	.120	.045	.060	.071	.053	.057
" .... 9	Skipton Town Hall .....	.037	.038	.035	.039	.062	.032	.052	.045	.030	.021	.035	.033	.038
N.R. Yorks. .... 2	Felixkirk (Mt. St. John), <i>Halliwel</i> .....	.049	.039	.042	.054	.078	.074	.087	.063	.048	.062	.069	.071	.059
§ " .... 2	Felixkirk (Mt. St. John), <i>Hyet. (182)</i> ..	.049	.037	.057	.059	.079	.075	.082	.061	.053	.068	.073	.082	.062
" .... 2	Felixkirk (Mt. St. John), <i>Hyet. (98)</i> ..	.055	.042	.058	.059	.083	.075	.080	.062	.049	.060	.067	.077	.062
" .... 2	Felixkirk (Mt. St. John), <i>Hyet. (98)</i> ..	.056	.040	.055	.058	.075	.076	.082	.062	.049	.064	.072	.077	.062
" .... 2	Felixkirk (Mt. St. John), <i>Casella</i> .....	.050	.042	.040	.052	.081	.056	.079	.059	.048	.057	.059	.073	.057
Glamorgan .... 3	Swansea (Victoria Park) .....	.047	.062	.046	.064	.071	.054	.068	.071	.065	.063	.053	.062	.060
Brecon .... 7	Cray Reservoir .....	.045	.058	.051	.055	.041	.034	.057	.057	.042	.049	.050	.056	.051
" .... 7	Black Mountains (Aber Clwyd) .....	.077	.090	.086	.060	.081	.081	.070	.056	.075	.072	.088	.095	.076
§ Flint .... 1	Shotwick Aerodrome .....	.032	.033	.041	.037	.028	.034	.043	.047	.039	.038	.031	.044	.038
§ Anglesey ....	Holyhead (Salt Island) .....	.063	.063	.052	.074	.047	.067	.062	.076	.090	.061	.065	.070	.070
§ Dumfries .... 5	Eskdalemuir Observatory .....	.056	.063	.068	.076	.064	.055	.056	.041	.029	.043	.042	.040	.050
§ Berwick .... 3	Swinton House .....	.033	.033	.031	.055	.037	.036	.035	.030	.030	.036	.043	.036	.035
§ Renfrew .... 2	Glendevon (Blackwater Dam) .....	.046	.056	.059	.049	.077	.052	.059	.049	.050	.084	.053	.073	.059
§ Argyll .... 4	Leuchars .....	.031	.027	.025	.038	.045	.047	.056	.056	.056	.056	.036	.032	.056
§ Fife .... 3	Aberdeen (King's College) .....	.039	.027	.029	.051	.038	.072	.063	.062	.059	.055	.040	.061	.047
§ Aberdeen .... 2	Laggan (Crathie) .....	.043	.049	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050	.050
§ Inverness .... 3	Laggan (Gergask) .....	.070	.057	.053	.058	.062	.043	.048	.046	.032	.050	.032	.050	.050
§ " .... 3	Cork (University College) .....	.070	.065	.069	.050	.054	.059	.082	.064	.052	.054	.070	.074	.064
§ Kerry .... 7	Valencia Observatory .....	.039	.039	.049	.045	.054	.050	.057	.050	.036	.043	.046	.053	.046
§ Armagh .... 5	Armagh Observatory .....	.051	.056	.052	.061	.054	.054	.053	.051	.039	.045	.051	.050	.052
§ Londonderry .... 5	Glenedra Lodge .....	.051	.056	.052	.061	.054	.054	.053	.051	.039	.045	.051	.050	.052

## HEAVY FALLS IN SHORT PERIODS IN 1922.

For fifty-five successive years, a section of *British Rainfall* has been devoted to a discussion of exceptionally heavy falls of rain during comparatively short periods of time, based on traces from self-recording instruments or specially timed readings of ordinary rain-gauges. Since 1908 these intense falls have been classified into "worthy of notice," "remarkable" and "very rare" according as the duration and amount of rainfall came within the limits indicated in the following table :—

Table I.—*Limits of Exceptional Falls.*

Minutes.	WORTHY OF NOTICE.		REMARKABLE.		VERY RARE.	
	Amount.	Rate per Hour.	Amount.	Rate per Hour.	Amount.	Rate per Hour.
	in.	in.	in.	in.	in.	in.
10 ....	.30	1.80	.65	3.90	1.00	6.00
20 ....	.53	1.59	1.06	3.18	1.58	4.74
30 ....	.70	1.40	1.35	2.70	2.00	4.00
40 ....	.82	1.23	1.54	2.31	2.26	3.39
50 ....	.92	1.10	1.67	2.00	2.42	2.90
60 ....	1.00	1.00	1.75	1.75	2.50	2.50
70 ....	1.07	.92	1.81	1.55	2.54	2.18
80 ....	1.12	.84	1.85	1.39	2.57	1.93
90 ....	1.15	.77	1.89	1.26	2.60	1.73
100 ....	1.18	.71	1.92	1.15	2.62	1.57
110 ....	1.21	.66	1.93	1.05	2.64	1.44
120 ....	1.23	.61	1.94	.97	2.65	1.33

Table II gives particulars of the falls recorded in 1922 which reached the intensity "worthy of notice" or "remarkable." No instances occurred of falls reaching the intensity "very rare," and the historical table giving particulars of such falls recorded since 1868 is accordingly omitted. Intense rains are nearly always very local in character, and hence the list cannot claim to include all the heavy falls which have occurred in the British Isles. Nevertheless, a comparison of the lists for successive years reveals marked differences suggestive of a real difference in the frequency of such occurrences. A comparison with the average frequency as determined from the records for the periods 1868 to 1921

is, therefore, not without interest. The year 1922 was like 1921 and 1919, in that the number of intense falls recorded was remarkably small, and unlike 1920 when the number was unusually large.

*Number of Noteworthy Rains of Two Hours' Duration or less.*

		England and Wales.					Scotland.	Ireland.	British Isles.	Per cent. of records received.
		S.E.	S.W.	N.E.	N.W.	Total.				
Average } 1868-1921	...	15.8	7.4	4.4	2.0	29.6	2.1	1.3	33.0	1.0
1922	...	5	0	4	1	10	0	0	10	0.2

No instance of a noteworthy fall is reported from either Scotland or Ireland, an unusual feature which had not occurred for at least the previous 10 years.

The intense falls of 1922 as given in Table II were most frequent in May. At Tunbridge Wells on May 25th a sharp thunderstorm occurred accompanied by hail. The observer reports that practically all the hailstones, which varied from  $\frac{3}{4}$  ins. to 2 ins. in diameter, jumped out of the gauge, the actual fall being measured as 1.08 ins. but estimated at 1.37 ins. during 15 minutes. In the same way the falls reported from Hodsock Priory on May 21st and those from Grimsby, Otham and Hampson-in-Ellel were accompanied by severe hail, and the amounts given must be considered as minima. (See *The Meteorological Magazine*, June, 1922, pp. 129-130.)

The fall at Hodsock Priory on August 7th was the intense portion of a continuous fall of nearly 28 hours during which 5.06 inches were recorded. (See autographic record reproduced on p. 64.)

Table II.—*Heavy Rains in Short Periods in 1922.*

Date.	Div.	Station.	Amount.		Duration.		Rate er Hour.
			ins.	mm.	hrs.	min.	
Sept. 8	VI.	Clun, Trinity Hospital ..	.15	4	0	3½	2.57
May 21	VII.	Worksop, Hodsock Priory ..	.25	6	0	4½	3.30
" 25	II.	Tunbridge Wells ..	.43	11	0	5	5.16*
" 25	III.	Harpenden, Rothamsted ..	.22	6	0	7	1.89
" 25	II.	Otham, Synyards ..	.87	22	0	10	5.22*
" 25	II.	Tunbridge Wells ..	1.08	27	0	15	4.32*
" 22	VII.	Grimsby, Abbey Road ..	.77	20	0	15?	3.08
" 17	VII.	Grimsby, Abbey Road ..	.54	14	0	15	2.16
" 21	VIII.	Hampson-in-Ellel ..	1.13	29	0	20	3.39*
" 21	X.	Stockton, Ropner Park ..	1.03	26	0	30	2.06
July 23	III.	Oving House ..	1.00	25	1	0	1.00
Aug. 7	VII.	Worksop, Hodsock Priory ..	1.97	50	2	15	.88*

\* " Remarkable " fall.

## HEAVY FALLS ON RAINFALL DAYS IN 1922.

**January.**—January was generally unsettled; strong winds from the west prevailed so that there was much orographical rain. All the heavy falls which we quote fell in that general category, but it is noteworthy that the 3·58 in. at Fofanny Reservoir (on the Mourne Mountains, 938 ft. above sea level) on the 14th came with a S.E. wind. There were other heavy falls at this place during the month, 2·20 in. being reported on the 17th and 1·58 in. on the 20th.

### January 1st.

<i>Westmorland.</i>	in. or %	<i>Argyll</i>	in. or %
Staveley (Potter Fell) ...	3·10 3·9	Dalmally (Glenorchy) ...	2·84 3·7
<i>Lanark.</i>		<i>Inverness.</i>	
Leadhills .....	3·27 4·2	Loch Quoich (Kinlochquoich)	3·00 3·1

### January 14th.

*Co. Down*, Mourne Mts. (Fofanny Res.), 3·58 in. or 6·3 per cent.

### January 22nd.

*Carnarvon*, Snowdon (Llyn Llydaw Copper Mine), 2·73 in. or 1·8 per cent.

**February.**—The heaviest rainfall in February occurred on the 24th in the West of Scotland under the influence of strong southwest winds.

### February 22nd.

*Carnarvon*, Snowdon (Cwm Dyli), 2·84 in. or 2·1 per cent.

### February 24th.

<i>Argyll.</i>	in. or %	<i>Inverness.</i>	in. or %
Loch Linnhe (Ardgour House) .....	2·59 2·8	Invergarry Gardens .....	2·80 4·4
		Loch Arkaig (Achnacarry)	2·80 3·3
		Fort William (Atholl Bank)	2·75 3·8

### February 25th.

*Argyll*, Glenleven (Kinlochleven), 2·52 in. or 2·9 per cent.

### February 28th.

*Inverness*, Loch Arkaig (Achnacarry), 2·65 in. or 3·2 per cent.

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Falls which are not the maximum fall for the year are printed in italics.

**March and April.**—In March, falls in excess of 2·50 in. in a “rainfall day” were rare. The two which have to be placed on record are credited to March 4th. They occurred in the front of a depression which showed a well-defined warm-front.

At 7h. on the morning of March 5th the “warm-front” lay across the British Isles from the North Channel to the Mouth of the Thames, temperatures to the S.W. of the line being 48 deg. F. or above, to the N.E., 43 deg. F. and below.

At some of the wettest stations it appears to have been impracticable to measure the rainfall for the 4th and 5th separately. The total at Llyn-y-fan Fach (Afon Sychlwch) in Carmarthenshire was 3·47 in. for these two days. At Snowdon (Cwm Dyli) the total for the 3rd, 4th and 5th was 4·48 in.

#### March 4th.

<i>Cumberland.</i>	<i>in. or %</i>	<i>Carnarvon.</i>	<i>in. or %</i>
Buttermere (Hassness) . . .	2·53 2·6	Penygroes (Nebo School)	2·58 2·9

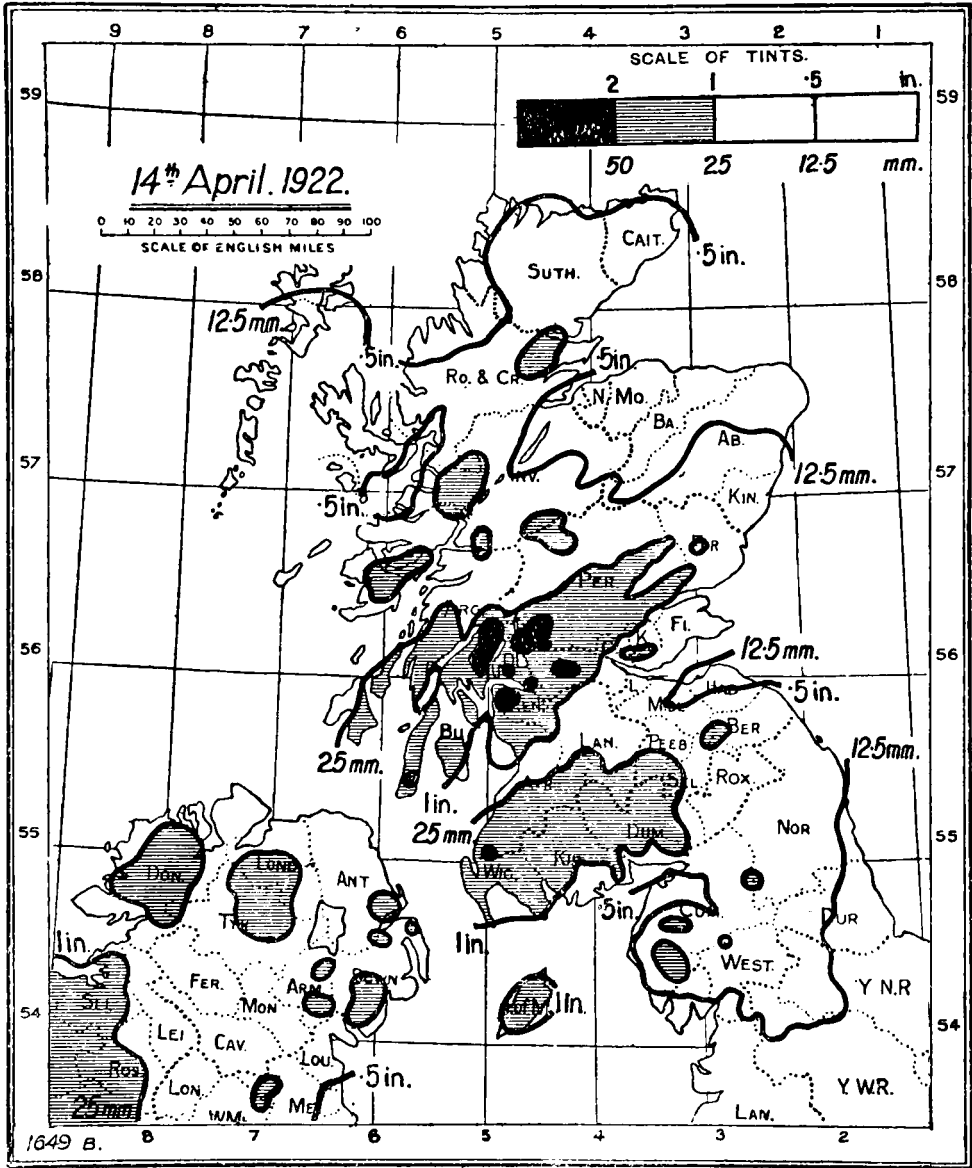
On March 31st a small depression crossed Ireland and moved to the Mouth of the English Channel. There was a severe blizzard in Dublin and much snow in Wales, the water equivalent exceeding an inch in several places. In the same district there was also a good deal of snow, associated with another depression, which followed nearly the same track two days later. The heaviest rainfall of April occurred on the 14th. As will be seen from the synoptic chart on page 53, a deep depression was centred off the south of Ireland on this day. Over most of England there was a current of air from the south with temperature above 50 deg. F. Over Scotland the wind was from the east, and 10 deg. F. colder. At 18h., the time of the chart, the “warm-front” ran from the North Channel to Flamborough Head. The presence of a good deal of cumulus cloud in the warm current, as also the occurrence of showers in places, may be noted.

The map of the distribution of the rainfall, page 52, shows that in Great Britain, at any rate, the heavy rain was all to the north of the “warm-front.” There is no direct evidence to show whether the warm current over-ran the cold one and provided the moisture for the rainfall. The heaviest rain was in the Trössachs and near the mouth of the Clyde. The “shadow” with less than  $\frac{3}{4}$  in. north of the hills of S.W. Scotland is conspicuous. There was rain in all parts of Ireland but not so much as in Scotland, though the centre of the depression was in the South. Moreover, although the centre of the depression crossed the Irish Sea on the 15th, the rainfall for that day in Scotland was considerably less.

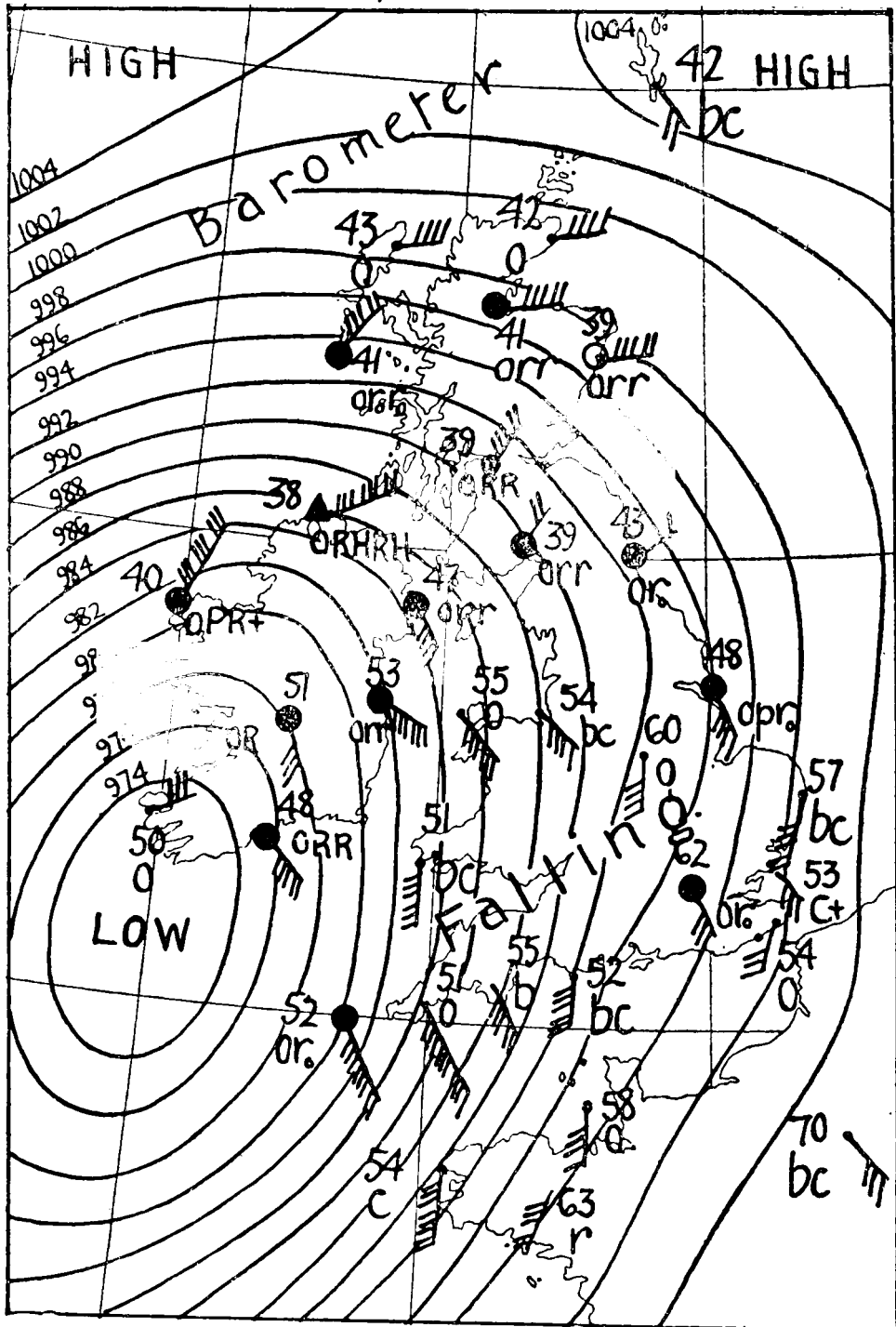
In the following list all recorded falls of  $2\frac{1}{2}$  in. for the one day are entered together with the totals for the two days, April 14th and 15th, at the same stations.

County.	Station.	April 14th.		April 14th-15th.	
		in.	%	in.	%
Stirling ..	Duchray Valley (Glen Dhu)	2.70	3.4	4.20	5.4
" ..	Duchray Valley (Comer)	2.60	3.1	4.10	4.9
Argyll ..	Loch Eck (Benmore) ..	2.62	3.2	3.08	3.7
Perth ..	Aberfoyle (The Inn) ..	2.80	5.2	3.95	7.4
" ..	Loch Dhu ..	2.80	3.7	4.75	6.3
" ..	Achnahard ..	2.50	4.1	3.80	6.3
Co. Mayo ..	Aasleagh House ..	2.61	2.7	3.65	3.8

RAINFALL, APRIL 14th, 1922.



Friday, 14<sup>th</sup> April, 1922. 18h., G.M.T.



**May.**—The circumstances of the heavy rain which occurred in Scotland on May 15th were interesting.

On the morning of that day a depression which had moved rather quickly from beyond Iceland lay off the coast of Norway. Another depression, long and shallow, extended W.S.W. from Scotland. Striking variations in wind direction are shown on the maps for 7h. and for 18h. Presumably the warm current from S.W. was overrunning the cold air, then moving from the east, brought south in the rear of the former depression. The orographical rain appropriate to the South-west current would be added to the cyclonic rain. In the English Lake District and in North Wales the orographical rain continued on the 16th. For the stations at which there was 2·50 in. on one day the rainfall for the 14th, 15th and 16th is shown below.

County.	Station.	May 14th.	May 15th.		May 16th.	
		in.	in. or %		in. or %	
Cumberland	Egremont (The Grange) ..	*	·43	0·8	3·19	5·9
"	Silecroft (Old Chappels) ..	*	·08	0·1	2·63	4·9
Westmorland	Dungeon Ghyll ..	*	*	*	3·24	3·3
Carnarvon ..	Snowdon (Llydaw Intake) 10.	*	*	*	2·50	1·7
" ..	Snowdon (L. Llydaw Copper M.)	*	*	*	2·80	1·8
Ayrshire ..	Glengarnock (Chemical Works).	·33	2·88	5·5	·38	0·7
" ..	Skelmorlie (West Park) ..	·22	2·55	5·2	·35	0·7
" ..	Dalry (Caaf Reservoir) ..	·24	2·58	5·3	·39	0·8
Renfrew ..	Lochwinnoch (Garthland) ..	·40	3·08	5·0	·37	0·6
" ..	Shaws W. W. (Compens. Res.).	·42	2·73	4·5	·45	0·7
" ..	Shaws W. W. (Loch Thom) ..	·45	2·75	4·5	·42	0·7
" ..	Shaws W. W. (Hole Glen) ..	·73	2·56	4·2	·28	0·5
Dumbarton	Glen Finlas Reservoir No. 7. ..	·79	3·01	3·5	·44	0·5
Stirling ..	Kilsyth (Innsbridge) ..	·30	2·72	6·4	·20	0·5
Bute ..	Millport (Marine Biog. Stat.).	·25	2·68	6·9	·19	0·5
Argyll ..	Morvern (Kingairloch) ..	1·21	2·61	2·5	·21	0·2
" ..	Ardgour House ..	1·30	5·14	5·6	·56	0·6
" ..	Duror (Achara) ..	·59	2·50	3·6	·45	0·7
" ..	Glenleven (Blackwater Dam S.)	1·37	2·58	2·9	·51	0·6
" ..	Glenleven (Kinlochleven) ..	1·29	2·90	3·3	·38	0·4
" ..	Corran Lighthouse ..	*	3·30	4·2	*	*
" ..	Glen Etive ..	1·60	3·02	3·9	1·10	1·4
" ..	Loch Awe (Dalavich) ..	1·29	3·48	4·4	·50	0·6
" ..	Dalmally (Manse of Glenorchy)	·95	4·04	5·3	·37	0·5
" ..	Loch Fyne (Castle Lachlan) ..	·40	3·12	4·1	·26	0·3
" ..	Craræ (Kennels) ..	*	3·31	4·5	*	*
" ..	Strachur Park ..	·93	2·65	4·0	·40	0·6
" ..	Loch Fyne (Brenchoillie) ..	1·00	2·56	3·5	·62	0·9
" ..	Inveraray Castle Gardens ..	1·08	2·51	3·1	·64	0·8
" ..	Toward (Knockdow Gardens) ..	·25	2·65	4·6	·30	0·5
" ..	Innellan (Lilybank) ..	·33	2·87	5·1	·33	0·6
" ..	Eriska ..	·85	2·78	4·9	·37	0·6
" ..	Mull (Glencannel) ..	2·20	4·24	3·7	·58	0·5

\* Indicates that the rainfall for these days is not available.

County.	Station.	May 14th.	May 15th.		May 16th.	
		in.	in. or %		in. or %	
Inverness ..	Loch Quoich (Kinlochquoich)	1.29	3.00	3.1	.83	0.8
" ..	Loch Nevis (Inverie Gardens) ..	1.50	2.73	3.4	.35	0.4
" ..	Moidart (Kinlochmoidart) ..	.85	2.60	3.6	.15	0.2
" ..	Loch Arkaig (Glen Dessary) ..	*	2.55	2.4	*	*
" ..	N. Ballachulish (Alltshellach)	1.03	2.62	3.5	.28	0.4
" ..	Glenleven (Blackwater Dam N.)	1.47	2.55	3.0	.43	0.5
" ..	Fort William (Atholl Bank) ..	1.64	2.63	3.6	.27	0.4
" ..	Skye (Duisdale House) ..	.86	3.17	4.1	.80	1.0
Ross & C. ..	Loch Carron (Dunhulladale)...	1.20	2.59	3.6	.54	0.8

Towards the end of May England suffered from a "heat-wave," temperatures of 88 deg. F. being recorded on the 22nd. Such a heat-wave signifies that the air drifting over the country has come from the far South, probably from the Sahara. The hot current has on its western side cooler air from the Atlantic, and the juxtaposition and overlapping of such currents promotes instability. The advent of this particular heat-wave was marked by thunderstorms in many parts of the country. A very heavy one occurred in Yorkshire on the 21st. Hail "large as walnuts" did much damage.

#### May 21st.

<i>Yorkshire.</i>	<i>in. or %</i>	<i>Yorkshire—con.</i>	<i>in. or %</i>
West Witton (Ivy House)	2.66 6.7	East Harlsey (Harlsey	
Leyburn (Bolton Hall)	2.55 6.3	Hall) .....	2.11 7.7

Details of other storms are given in "The Meteorological Magazine" for June 1922, p. 129. From the "Gardeners' Chronicle," June 3rd, 1922, we learn that on May 25th 200 panes of glass were broken by hail at Coombe House Gardens, Croydon, and no less than 400 at Hall Place, Tonbridge.

**June.**—No heavy falls have to be chronicled in June.

**July.**—On July 1st heavy falls over a large area were associated with a depression centred to the west of Ireland and moving north-east. The largest measurements connote orographic rain; they occurred in South Wales.

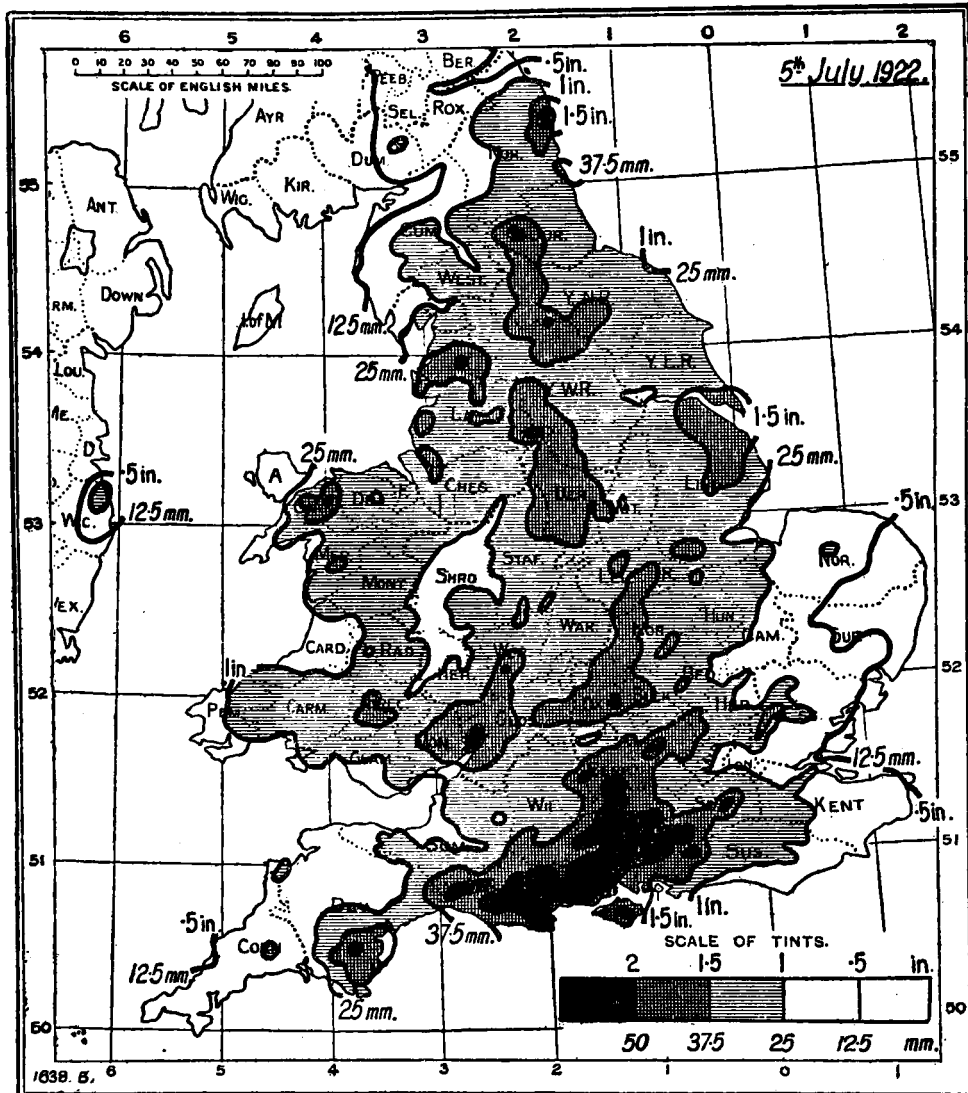
#### July 1st.

<i>Glamorgan.</i>	<i>in. or %</i>	<i>Glamorgan—con.</i>	<i>in. or %</i>
Treherbert (Tyn-y-waun)	2.94 3.3	Rhondda W.W. (Llyn	
Rhondda (PontLluestWen R.)	2.50 2.9	Fawr Res.) .....	2.99 3.4

\* Indicates that the rainfall for these days is not available.

On July 5th a depression developed off the mouth of the English Channel and moved rapidly north-east. Over a large area in the south of England the fall exceeded 2 in. as shown on this map. As will be

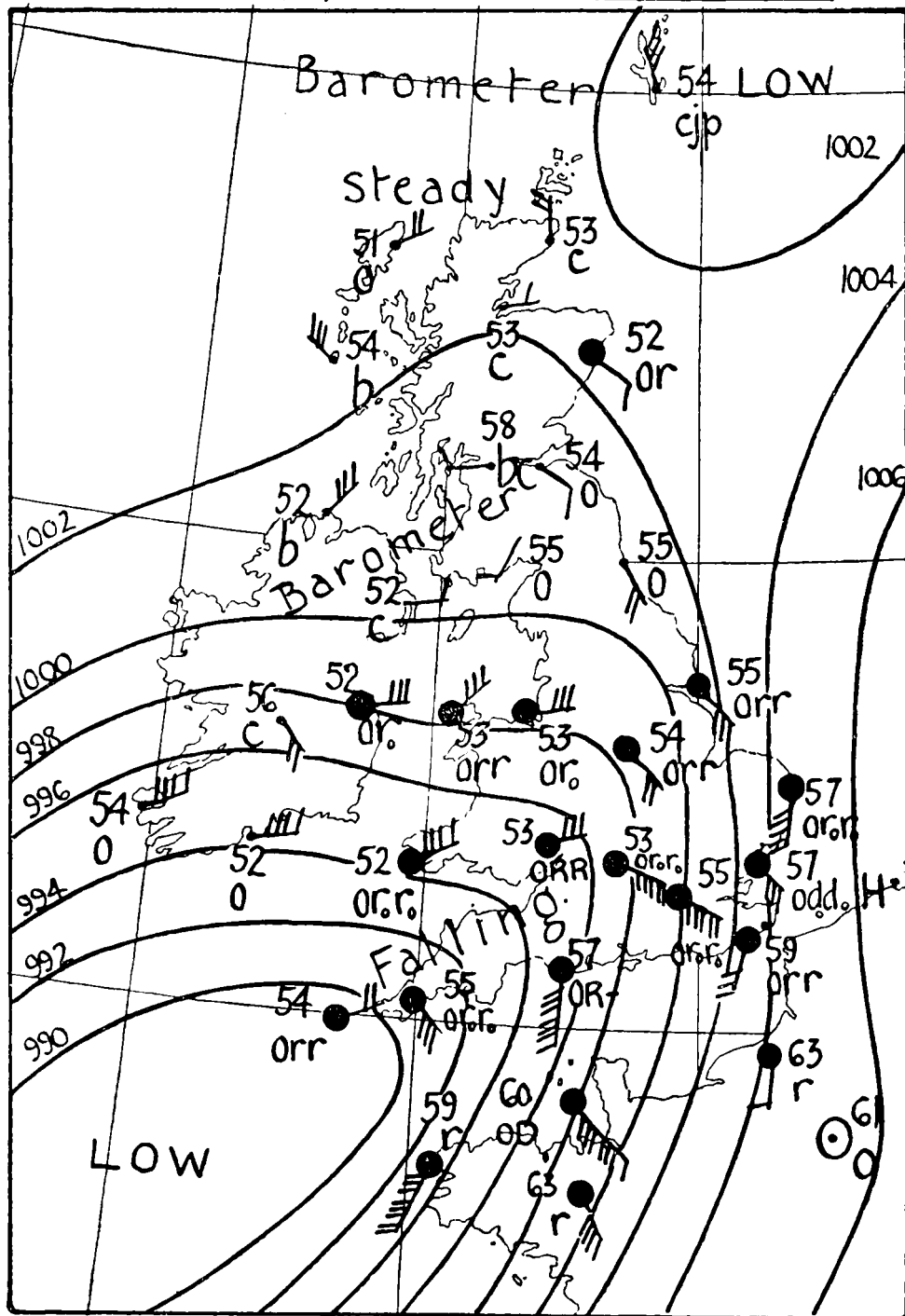
RAINFALL, JULY 5th, 1922.



seen from the chart on the next page there were no striking differences of temperature\* in front of the depression. The sharp turn in the wind, however, which was from south over the English Channel and from east over the Bristol Channel should be noticed. In south-west England the greater part of the rainfall of the 24 hours came before the epoch of the 18 h. chart. More heavy rain came with the squalls in the rear of the depression. The autographic record at Stoner Hill

\* See p. 67.

Wednesday, 5<sup>th</sup> July, 1922. 18h., G.M.T.



near Petersfield (well to the right of the track of the depression), where the total fall was 2.69 in. shows that gentle rain began about 12.30 h.

From 16 h. to 2.30 next morning rain fell steadily, it was heaviest between midnight and 2 h., about 0·4 in. per hour. The rain ceased abruptly at 2.30 h.; there were slight showers afterwards at about 6 and 7 h.

### July 5th.

<i>Sussex.</i>	<i>in. or %</i>	<i>Hants—con.</i>	<i>in. or %</i>
Petworth Park Gardens ..	2·63 7·0	Aldershot (Sewage Works)	3·02 9·7
<i>Hants.</i>		Highclere Castle Gardens	3·49 7·8
Lyndhurst (Deerhurst) ..	2·52 6·5	Highclere (Boxhall Cottage)	2·50 7·7
Cadnam (Copythorne Ho.)	2·72 7·1	<i>Berkshire.</i>	
Ashmansworth (Manor Ho.)	2·68 *	Newbury (Andover Rd.) .	2·44 7·5
Westbury House Gardens	2·57 6·3	<i>Dorsetshire.</i>	
Ovington Rectory .....	2·70 6·5	Kinson (Eglinton) .....	2·52 7·0
Petersfield (Stoner Hill) ..	2·69 5·8	Wimborne (Westfield)....	2·50 *
Colmer Rectory .....	2·55 6·5	<i>Gloucestershire.</i>	
Rotherfield Park .....	2·63 6·0	Chepstow (Pen Moel) ....	2·77 6·8
Selbourne (The Wakes) ..	2·85 7·0		

During the passage of the following depression there was a good deal of rainfall; 2 in. was exceeded in the west of Ireland on the 8th and in north-east Scotland on the 9th.

The heavy falls of the "rainfall day," July 14th, were associated with the development of a secondary depression over the South Midlands and its passage to the North Sea.

South of the Thames there was light rain or drizzle when the depression was nearest, but it was some hours later that thunderstorms developed. At South Farnborough (on the borders of Hampshire and Surrey) there were two downpours, between 21 h. and 22 h. and again between 1 h. and 2 h. The heaviest rain was concentrated in a small area in North Sussex.

### July 14th.

<i>Surrey.</i>	<i>in. or %</i>	<i>Norfolk—con.</i>	<i>in. or %</i>
Wonersh (Little Tangley) .	2·34 7·5	Norwich (Ipswich Rd.) ..	2·50 8·0
<i>Sussex.</i>		Thorpe St Andrew.....	2·49 7·6
Lower Beeding (Warren)	3·84 10·4	Sprowston (Oak Lodge) ..	2·36 7·7
Balcombe (Highley Manor)	2·51 5·4	Sprowston (Council Sch.) .	2·57 7·6
<i>Norfolk.</i>		Coltishall .....	2·64 8·6
Stratton St. Mary Rectory	2·23 7·7	Wroxham (Hoveton Hall)	2·35 7·7
Keswick Old Hall .....	2·68 7·9	Wroxham House .....	2·89 8·8
Norwich (Eaton) .....	2·70 8·3	Worstead (Frankfort M.) .	2·82 9·4
Norwich (Carrow House) .	2·65 8·3	North Walsham (Empson)	2·18 7·8

The rainfall in Norfolk on that night may be attributed more

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\* Figures not available.

directly to the depression. Mr. H. Satchell gives the following details of the fall at Stratton St. Mary Rectory near Norwich :—

July 14th	9	to	15.30	G.M.T.	..	.08 in.
	15.30	"	19.30	"	..	.28 "
July 14th-15th	19.30	"	6.30	"	..	1.45 "
" 15th	6.30	"	9	"		.42 "
						<hr/> 2.23 "

The rain did not stop during the 20 hours from 15.30 on the 14th to 11.30 on the 15th. The depression persisted over the North Sea, rain falling in Norfolk for four days in succession. At Worstead (midway between Norwich and Cromer) the autographic rain-gauge showed the following remarkable records of the duration :—

July 14th	..	..	..	..	16.0 hours.
" 15th	..	..	..	..	7.9 "
" 16th	..	..	..	..	22.5 "
" 17th	..	..	..	..	2.1 "

On July 22nd and 23rd the distribution of pressure over the south Midlands was irregular and in isolated districts there was considerable rainfall.

#### July 22nd.

<i>Cambridge.</i>	<i>in. or %</i>	<i>Cambridge—con.</i>	<i>in. or %</i>
Cambridge (Sydney St.)	2.15 9.6	Cambridge (Pumping Stn.)	1.94 8.8

#### July 23rd.

<i>Huntingdon.</i>	<i>in. or %</i>	<i>Warwick.</i>	<i>in. or %</i>
Catworth .....	2.04 7.8	Coventry (City Hospital)	2.29 7.7
		Coventry (Keresley Grange)	2.65 8.6

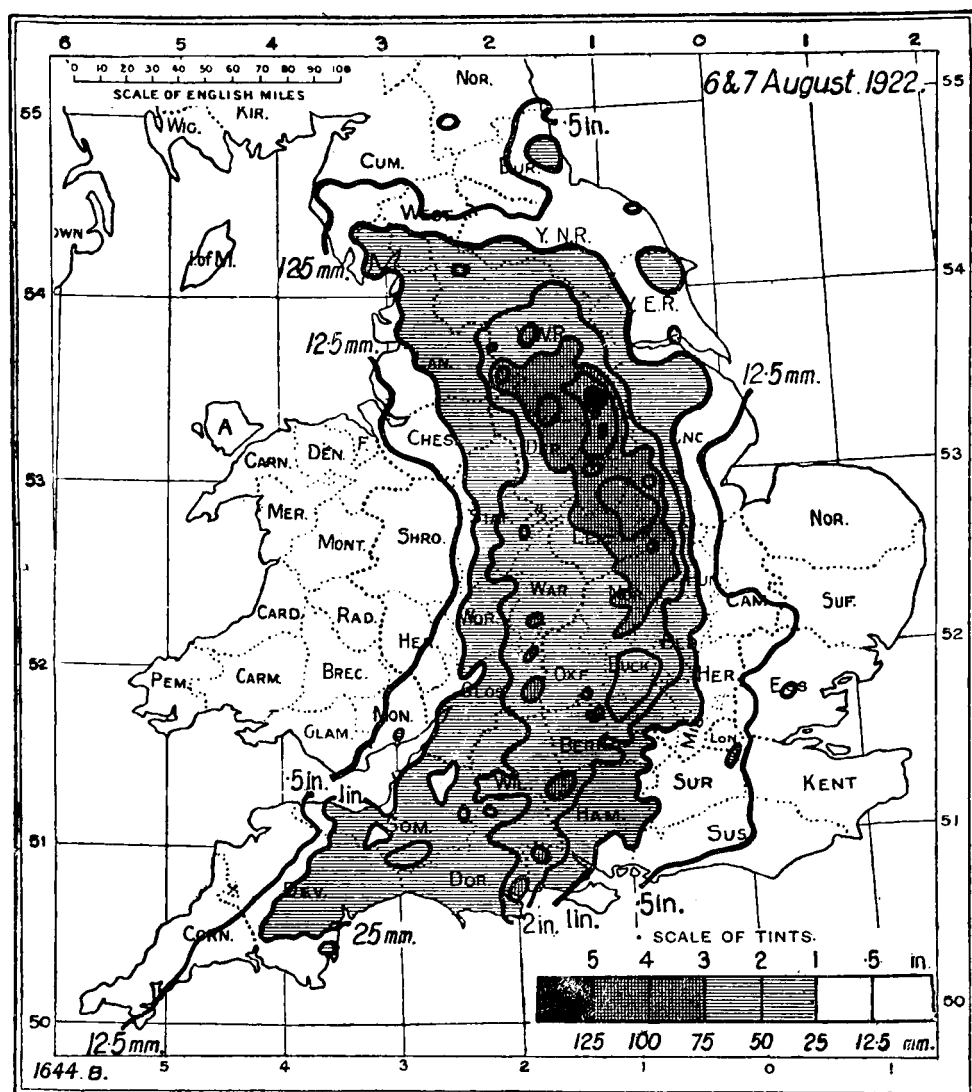
At Coventry the total from 2 h. to 21 h. on July 23rd was 2.93 in.

**August.**—The most widespread rainfall of the year occurred on Sunday, August 6th and Monday (Bank Holiday), August 7th. This rain was associated with the passage across England of a depression of moderate depth. To quote from the Monthly Weather Report :

" A depression which had been heralded by the fall of the barometer in the west of Ireland on the evening of the 2nd lay off the mouth of the English Channel on the 3rd and 4th, causing generally unsettled conditions over the British Isles. By the morning of the 5th, this depression had almost completely filled up, but *on the 6th a new depression appeared over the mouth of the English Channel and moved north-eastward across England.* This was followed by the appearance of a second disturbance off the south-west coasts, which also moved north-eastward and joined up with the first centre over the North Sea."

The reference to the depression which brought so much rain is printed in italics.

## RAINFALL, AUGUST 6th-7th, 1922.

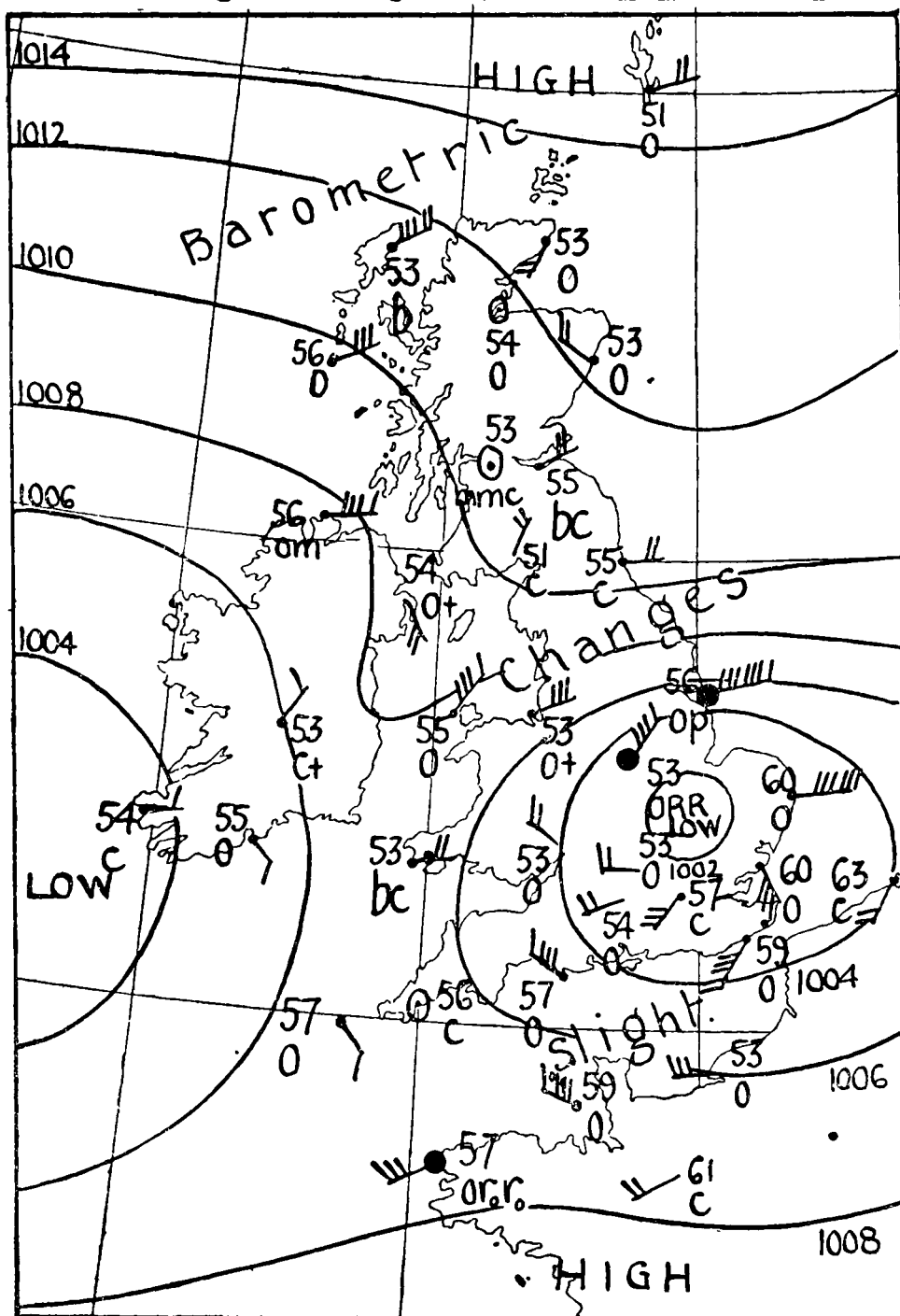


The chart on the next page shows the state of affairs at 7 h. on August 7th, one depression being centred in Bedfordshire and the following one to the south-west of Ireland.

It is remarkable that the only telegraphic reporting stations in the British Isles at which rain was actually occurring at the time of the chart were Nottingham and Spurn Head. We may associate this fact with the crowding of the isobars to the north of the depression, or again we may concentrate our attention on the contrast of temperature 60 deg. F. at Yarmouth, 53 deg. at Nottingham, and speculate as to whether the warm current was over-running the cooler one.

Whatever the explanation may be, the autographic record at Nottingham shows that rain persisted there without a break from 21 h.

Monday, 7<sup>th</sup> August, 1922. 7h. G.M.T.



on Sunday evening to the same hour on Monday evening,\* the total fall for this period being over 3·4 in.

The circumstances at Hodsock Priory, Worksop, 28 miles north of Nottingham, were very similar. By the courtesy of Lt. Col. H. Mellish we are able to reproduce (page 63) the autographic record of the rainfall at Hodsock. It will be seen that over 5 in. were measured in a continuous fall of nearly 28 hours. Of the total, 2 inches occurred in the three hours from 9 h. to 12 h. on the 7th.

The rainfall credited to the 6th exceeded 1 in. over a wide strip of country reaching from the English Channel, between Teignmouth and the Solent, up to Sheffield and Doncaster; the fall exceeded 2 in. over half of this area. For the next rainfall day the area with over an inch lay to the north of Nottingham and Grantham, and south of a line from Coniston and Northallerton.

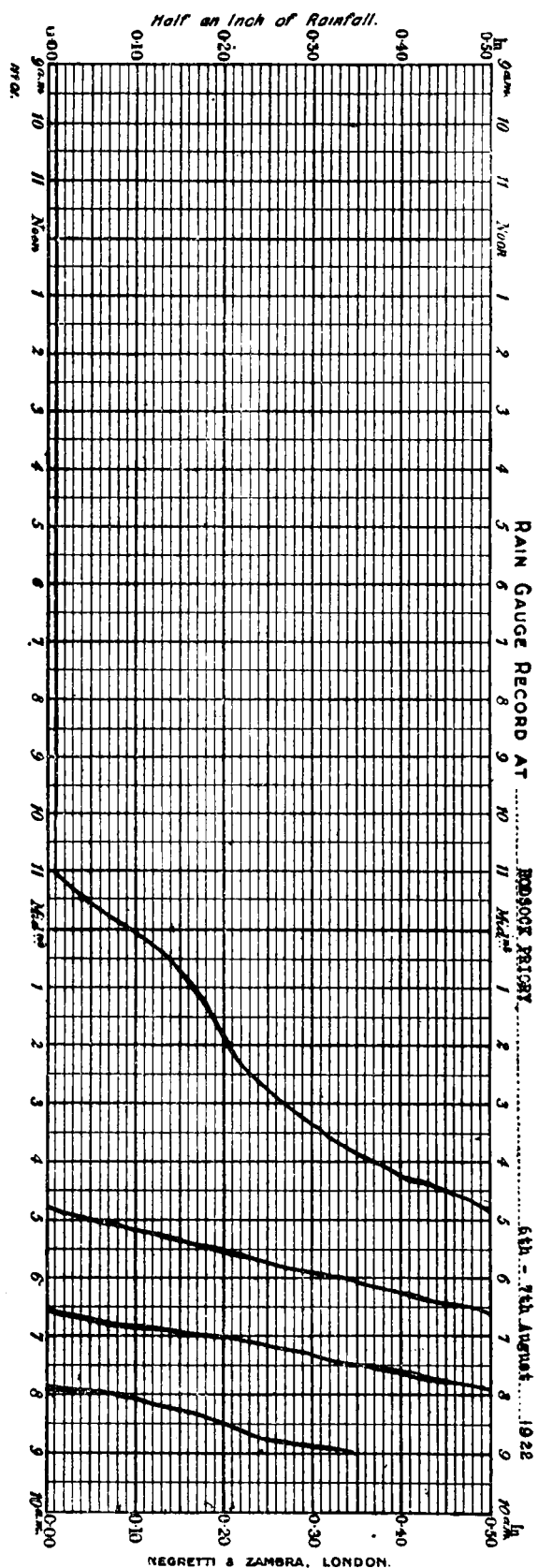
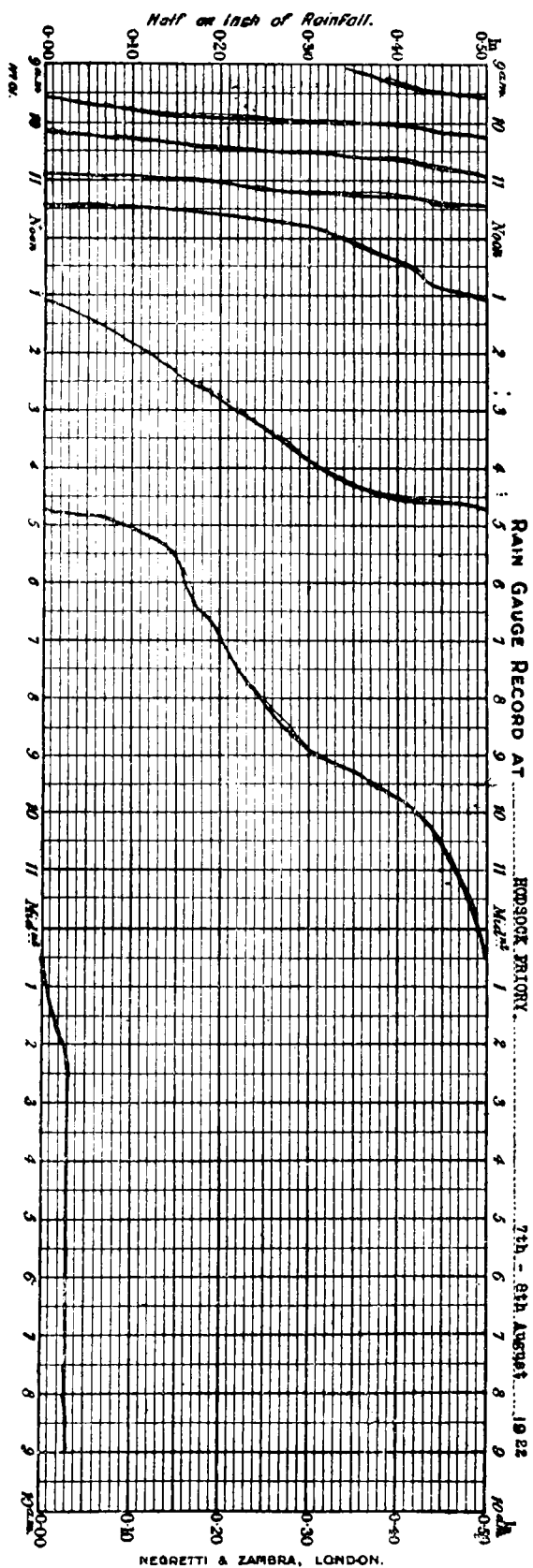
It is better in some ways to neglect the arbitrary division between the two rain days. The map on page 60 shows the total fall for the 6th and 7th. Perhaps the most striking feature of this map is the very steep gradient of rainfall to the east of the wet area. Compare Grantham, 4·7 in., with Sleaford, some 10 miles away, 1·5 in.; also Stamford, 3·8 in., with Eye, some 11 miles away, ·5 in. From the English Channel to the Wash the track of the centre of the depression almost coincided with the 1 in. isoyhet, and as is usual in such cases the heavy rain was to the left of the track.

In the following table only falls reaching 3·5 in. in one rainfall day, or 4·5 in. in the two days together, are quoted:—

County.	Station.	Aug. 6th.		Aug. 7th.	
		in.	or %.	in.	or %.
Northampton	Gretton (Gretton House) .. ..	3·81	12·3	·33	1·1
"	Collyweston (Cuckoo Lodge) .. ..	3·71	13·4	·54	2·0
Dorset ..	Parkstone (Combe) .. ..	3·72	10·2	†	†
Leicester ..	Knossington Rectory .. ..	3·82	11·7	·42	1·3
" ..	Ashfordby (Ironworks) .. ..	(4·00)	13·7	·68	2·3
" ..	Melton Mowbray (White Lodge) ..	3·95	13·0	·75	2·5
" ..	Melton Mowbray .. ..	3·95	13·1	·75	2·5
" ..	Croxton Kerrial School .. ..	4·18	12·9	·32	1·0
" ..	Belvoir Castle Gardens .. ..	3·63	11·7	·43	1·4
Lincoln ..	Holywell Hall .. ..	4·28	13·8	†	†
" ..	Stainby Rectory .. ..	3·90	11·8	·43	1·3
" ..	Grantham (Saltersford) .. ..	2·75	9·0	1·83	0·6
" ..	Grantham (Guildhall) .. ..	2·38	8·1	2·30	7·8
Nottingham ..	Burton Joyce Water Works ..	3·00	9·7	1·50	4·9
" ..	Sutton-in-Ashfield (Rushley P.S.)	2·43	7·1	2·19	6·4

\* Published in "The Meteorology of Nottingham in 1922."

† Information not available.



County.	Station.	Aug. 6th.		Aug. 7th.	
		in.	%.	in.	%.
Nottingham..	Mansfield (Rainworth W.W.) ..	2.52	7.2	2.18	6.2
" ..	Mansfield (High Oakham) ..	2.90	7.5	1.65	4.2
" ..	Mansfield (Debdale Hall) ..	4.18	11.9	†	†
" ..	Slipstone Waterworks ..	2.06	6.6	2.61	8.4
" ..	Ollerton (Boughton W.W.) ..	2.00	6.8	3.13	10.6
" ..	Ollerton (Thoresby Gardens.) ..	1.92	5.3	3.84	10.6
" ..	Clumber Gardens ..	†	†	3.22	9.8
" ..	Worksop (Osberton Gardens) ..	1.65	5.8	3.40	11.9
" ..	Retford (Grammer School) ..	1.91	6.6	3.16	11.0
" ..	Retford (Morton Hall) ..	1.78	6.2	3.11	10.9
" ..	Retford (Sewage Disposal Works) ..	.50	1.6	4.39	14.4
" ..	Worksop (Wigthorpe Hill) ..	1.97	7.1	3.08	11.0
" ..	Worksop (Hodsock Priory) ..	1.83	6.3	3.23	11.2
" ..	Scrooby ..	1.25	4.5	4.26	15.3
" ..	Bawtry Hall (The Gardens) ..	1.12	3.9	4.26	14.7
Derby ..	Totley Hall..	1.70	4.1	2.93	7.1
Yorkshire W.R.	Standedge (Cas Shaw Cudworth) ..	†	†	3.38	10.1
" ..	Lindrick Common (Woodside) ..	†	†	3.41	10.8
" ..	Woodsetts Grange (Old Vicarage) ..	1.75	5.7	2.99	9.8
" ..	Doncaster (Carr House Hospital) ..	.08	0.3	4.70	16.5
" ..	Sheffield (Stumperlow Hall) ..	1.59	3.9	3.19	7.9
" ..	Sheffield W.W. (Redmires Res.) ..	1.70	3.9	3.03	7.0
" ..	Rotherham (Thrybergh) ..	.60	2.2	3.64	13.3
" ..	Conisborough (Frisby Res.) ..	.67	2.4	4.16	15.0
" ..	Doncaster (Avenue Road) ..	1.03	3.4	3.69	12.2

The depression to the west of Ireland (page 61) passed across England from the Bristol Channel to the Humber on the 8th. The rainfall which marked its passage was by no means abnormal except in parts of Lancashire and Yorkshire. The rain, which occurred mostly during the night 8th-9th, was again on the left of the track of the storm.

#### August 8th.

<i>Lancashire.</i>		<i>in. or %</i>	<i>Yorkshire.</i>		<i>in. or %</i>
Burnley (Huntroyde) . . . .	2.65	5.9	Harrogate (Harlow Hill Res.)	2.83	8.4
Worthdale (Watersheddles)	2.50	5.3	Harrogate (Irongate Bridge)	2.64	7.1

On August 16th, under the influence of a large cyclone with its centre to the north-west of Ireland, strong south winds prevailed in South Wales, and heavy orographic rainfall occurred.

#### August 16th.

<i>Glamorgan.</i>		<i>in. or %</i>	<i>Carmarthen.</i>		
Ystalyfera (Wern House) .	2.61	4.0	Llyn-y-fan Fach (Waen		
Glyncorwg Colliery . . . .	2.66	3.1	Sychlwch) . . . . .	3.38	4.0
Treherbert (Tyn-y-waun) .	2.61	2.9	<i>Merioneth.</i>		
Rhondda (Pont Lluest Wen R.)	2.80	3.2	Bl. Festiniog (Oakley Q.)	3.60	4.5
Rhondda (Llyn Fawr R.)	2.51	2.9	Bl. Festiniog (Llechwedd Q.)	3.68	3.6

† Information not available.

The last heavy "splashes" of the month were associated with a depression which developed to the south of Ireland on the 29th and moved up the Irish Sea on the 30th. The rainfall was heavy on and near the Wicklow mountains.

**August 30th.**

<i>Co. Wexford.</i>	<i>in. or %</i>	<i>Co. Dublin—con.</i>	<i>in. or %</i>
Gorey (Courtown House)	2.98 9.6	Foxrock (Kilteragh) . . . .	3.07 13.0
<i>Co. Kilkenny.</i>		Kingstown (People's Park)	2.90 *
Arklow Rectory . . . . .	2.43 9.3	Kingstown (Harbour Yard)	2.86 13.2
Rathdrum (Avondale) . . .	2.80 7.9	Harold's Cross (Westfield)	1.46 7.7
Roundwood (Vartry Lodge)	3.04 8.4	Harold's Cross (Pretoria T.)	1.54 8.1
Roundwood . . . . .	3.26 7.9	Donnybrook (Belmont Av.)	2.27 10.5
Roundwood (Knockatemple)	3.00 7.9	Donnybrook (Anglesey R.)	2.05 11.1
Newcastle (Killadreenan) .	2.46 7.9	Dublin (Fitz-William Sq.)	1.84 9.0
Greystones (Rathdown) ..	2.33 8.1	Dublin (Trinity College) .	1.68 8.8
<i>Co. Dublin.</i>		Dublin (Ringsend P. Stn.)	2.04 10.6
Carrickmines (Claremont) .	2.23 9.9	Clontarf (Pumping Stn.)	2.25 11.0
Ballybrack (Marino) . . . .	2.34 12.7	Sutton (Tower Cottage) ..	1.55 8.8
		Malahide (Seamount) . . . .	1.77 7.4

The depression reached central Scotland on the 31st, being very shallow, and then started to move southwards. The heavy rain on the Lancashire coast during the night August 31st-September 1st appears to have been connected with this movement.

**August 31st.**

<i>Central Lancs.</i>	<i>in. or %</i>	<i>North Lancs.—con.</i>	<i>in. or %</i>
Southport (Hesketh Park)	2.56 7.4	St. Anne's-on-Sea (Lawrence	
<i>North Lancs.</i>		Ho.) . . . . .	3.75 10.6
St. Anne's-on-Sea . . . . .	3.71 10.8	Blackpool Observatory ..	3.06 8.0

**September.**—The rainfall of September 12th occurred during the passage of a depression moving rapidly from Iceland to England. In Cornwall and Wales the rain was heavy in the daytime, further north it fell mostly at night. The Isle of Man lay close to the track of the centre of the depression and the rainfall there nearly reached 3 in.

**September 12th.**

<i>Isle of Man.</i>	<i>in. or %</i>	<i>Isle of Man.—con.</i>	<i>in. or %</i>
Ramsey (Town Hall) . . . .	2.87 6.6	Ramsey (North Promenade)	2.95 6.7

On September 13th there was generally but little rain, though the same depression crossed England (by 18 h. it was symmetrically placed with the whole of England inside the 984 mb. isobar). The heaviest falls are given below :—

**September 13th.**

<i>Staffordshire.</i>	<i>in. or %</i>	<i>Co. Mayo.</i>	<i>in. or %</i>
Bloxwich (Sneyd Res.) . . .	2.58 8.3	Delphi Lodge . . . . .	2.73 2.6
<i>Co. Kerry.</i>			
Killorglin (Callinafercy) ..	2.90 5.2		

The Engineer to the Birmingham Canal Navigation reports that the whole of the fall of 2·58 in. at Sneyd Reservoir "fell between 5.30 and 8.30 p.m., the occasion being a very excessive thunderstorm. As far as I can ascertain this is the only place in the district where rain fell to such an extent on the day in question."

#### September 16th.

*Merioneth*, Blaenau Festiniog (Llechwedd Quarries), 2·86 in. or 2·8 per cent.

On September 18th and 19th there were strong west winds over the whole of the British Isles, and orographic rainfall was therefore to be expected.

#### September 18th.

<i>Merioneth.</i>	<i>in. or %</i>	<i>Merioneth—con.</i>	<i>in. or %</i>
Tan-y-bwlch (Dol-y-Moch)	3·65 5·7	Pennal (Talgarth Hall)...	2·55 4·3
Festiniog (Hafod Fawr) ..	2·86 3·9	<i>Carnarvon.</i>	
Blaenau Festiniog (Oakley Quarries) .....	2·75 3·5	Portmadoc (Wern) .....	3·11 5·8
Blaenau Festiniog (Llech-wedd Quarries).....	3·38 3·3	Snowdon (Cwm Dyli) No. 11	4·45 3·3
Dolgelly (Bryntirion) ....	3·02 5·3	<i>Co. Mayo.</i>	
		Mallarany .....	3·28 4·7
		Delphi Lodge .....	2·81 2·7

#### September 19th.

*Carnarvon*, Beddgelert (Council School), 3·80 in. or 4·1 per cent.

**October.**—October was a remarkably dry month and no heavy falls calling for mention here occurred until the last day. October 31st was wet in the northern districts, which came under the influence of a large depression centred to the north-west of Scotland and of a secondary which formed during the day over Ireland.

#### October 31st.

<i>Cumberland.</i>	<i>in. or %</i>	<i>Argyll.</i>	<i>in. or %</i>
Buttermere (Hassness) ...	2·90 3·0	Duror (The Rectory).....	2·62 3·6
<i>Carnarvon.</i>		<i>Inverness.</i>	
Snowdon (Llydaw Intake)	2·63 1·8	N. Ballachullish (Alltshellach)	3·00 4·1
Snowdon (L. Llydaw Cop-per Mines) No. 9 .....	2·80 1·8	<i>Ross and Cromarty.</i>	
		Ullapool .....	3·16 *

**November.**—Rainfall of a similar character was associated with another depression which approached Scotland on November 5th. One entry in our table refers to November 9th, and this also is to be attributed to strong west winds.

#### November 5th.

<i>Carnarvon.</i>	<i>in. or %</i>	<i>Argyll—con.</i>	<i>in. or %</i>
Beddgelert (Council School)	2·50 2·7	Dunoon (Reservoir).....	3·00 4·1
<i>Argyll.</i>		Dunoon (Redhurst) .....	2·57 3·4
Loch Fyne (Castle Lachlan)	3·21 4·2		

#### November 9th.

*Argyll*, Morven (Kingairloch), 2·54 in. or 2·5 per cent.

**December.**—The latter half of December was stormy. The greater part of the rainfall of the month occurred with strong west winds. All the heavy falls to be placed on record refer to stations in the west. The entries for December 19th are accounted for by the depression which passed up the English Channel during the night 19th-20th and then moved northwards.

**December 12th.**

<i>Carnarvon.</i>	<i>in. or %</i>	<i>Inverness.</i>	<i>in. or %</i>
Snowdon (Cwm Dyli) ....	2·73 2·0	Loch Quoich (Glenquoich)	2·85 2·8
<i>Argyll.</i>		Loch Arkaig (Achnacarry)	2·77 3·3
Ardgour House .....	2·84 3·1	Loch Arkaig (Glen Dessary)	3·60 3·4
Glenleven (Blackwater Dam)	2·55 2·29	Skye (Scalpay Island) ...	2·62 3·6
Corran Lighthouse .....	2·65 3·4		

**December 13th.**

*Cumberland*, Buttermere (Hassness), 3·70 in. or 3·8 per cent.

**December 19th.**

<i>S. Devon.</i>	<i>in. or %</i>	<i>Breconshire.</i>	<i>in. or %</i>
Princetown (Huccaby House)	2·56 4·2	Crickhowell (Gwernvale) ..	2·90 6·8
<i>Hereford.</i>			
Credenhill .....	1·90 7·5		

**December 23rd.**

<i>Carnarvon.</i>	<i>in. or %</i>	<i>Carnarvon—con.</i>	<i>in. or %</i>
Lake Eigiau (Dam Site) .	3·18 3·6	Snowdon (Cwm Dyli) No. 11	3·00 2·2

**December 24th.**

*Cumberland*, Buttermere (Hassness), 3·18 in. or 3·3 per cent.

**December 25th.**

*Argyllshire*, Glen Etive, 2·55 in. or 3·3 per cent.

**December 29th.**

*Midlothian*, Liberton (The Inch), 1·54 in. or 8·1 per cent.

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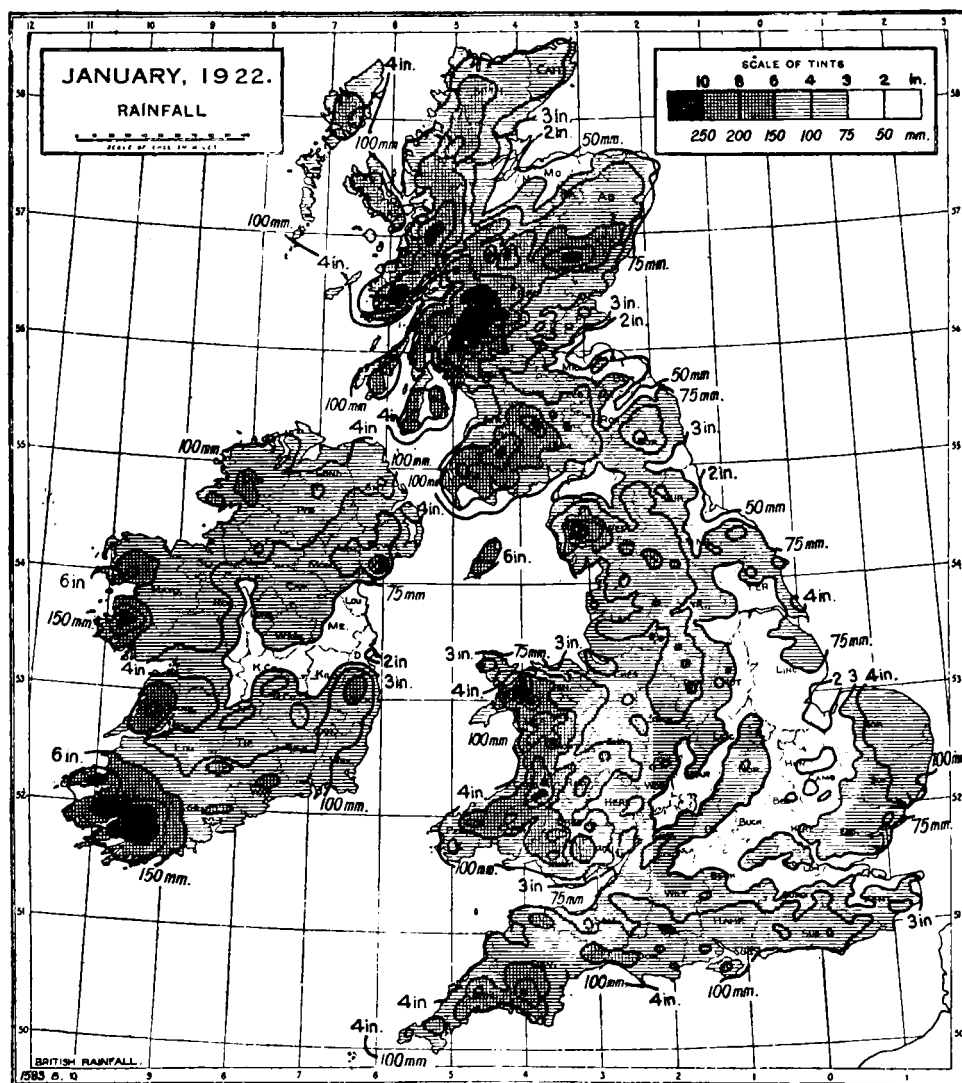
**Additional Note on the Rainfall of July 5th, 1922.**

A "warm sector" can be detected on the map on p. 57. The map for 7 h. on July 6th shows such a sector clearly, the wind at Gorleston being from S. and the temperature 61° F., whilst the corresponding data for Tynemouth were N.E. and 51° F.

The occasion is remarkable in that most of the rain seems to have fallen through the warm air, not through the cold easterly current.

## MONTHLY RAINFALL IN 1922.

**January.**—The weather of January was very changeable, the fluctuations of temperature being exceptionally large. Precipita-



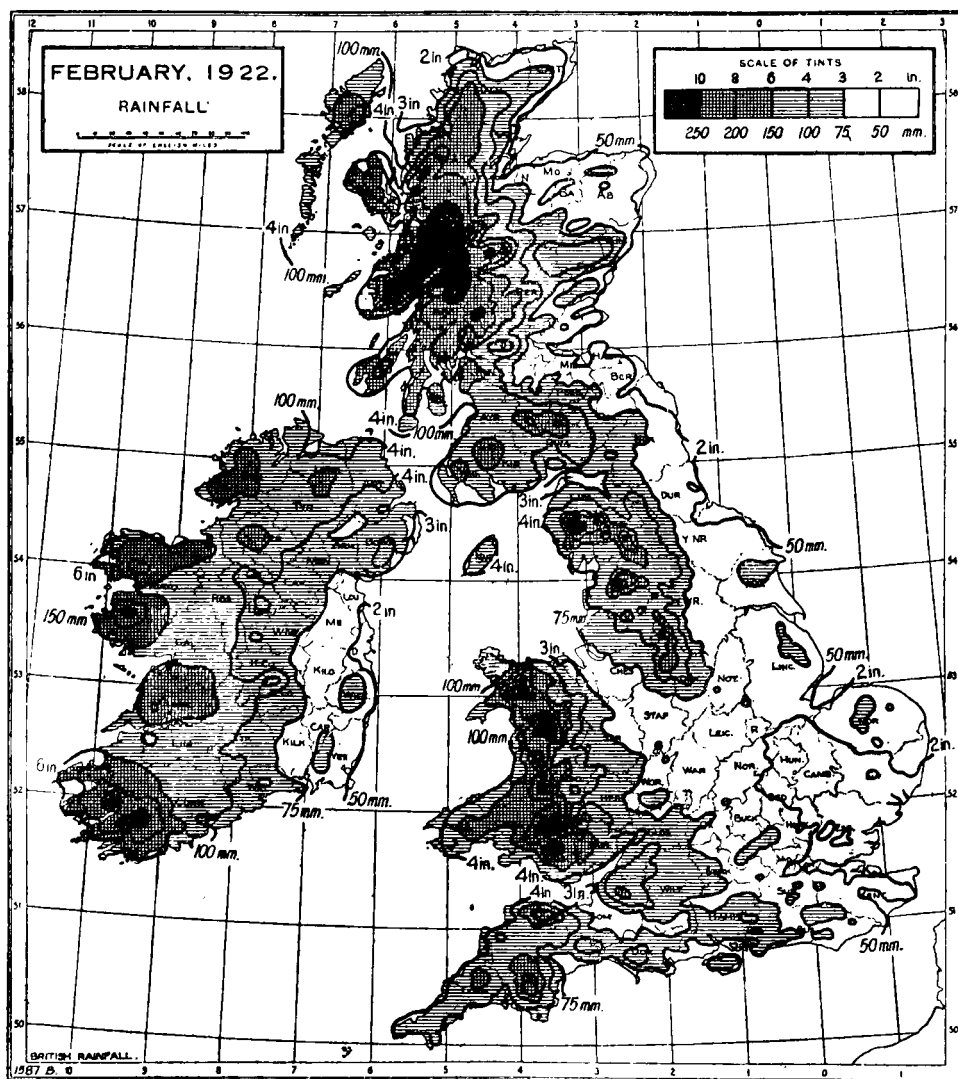
tion was above the normal, the excess being greatest, in proportion, in the parts of the country which are usually the driest and where the drought of the preceding months had been felt most severely. The amount of snow was distinctly more than normal, especially along the Scottish Border, where road traffic was seriously affected. The heaviest

snowfall was associated with the north wind in rear of a V-shaped depression which crossed the country from west to east on the 15th of the month. The fall in Norfolk and in Aberdeenshire was more than twice the normal. At Norwich it was as high as 265 per cent., and was the largest amount recorded in any January since



records began in 1865, and at other places in East Anglia, *e.g.*, at Ipswich, with shorter records, the previous maxima were surpassed. In Aberdeenshire it was the wettest January since 1903; the fall at Logie Coldstone being 233 per cent. of the normal. The wetness of this part of Scotland appears to have been associated with the

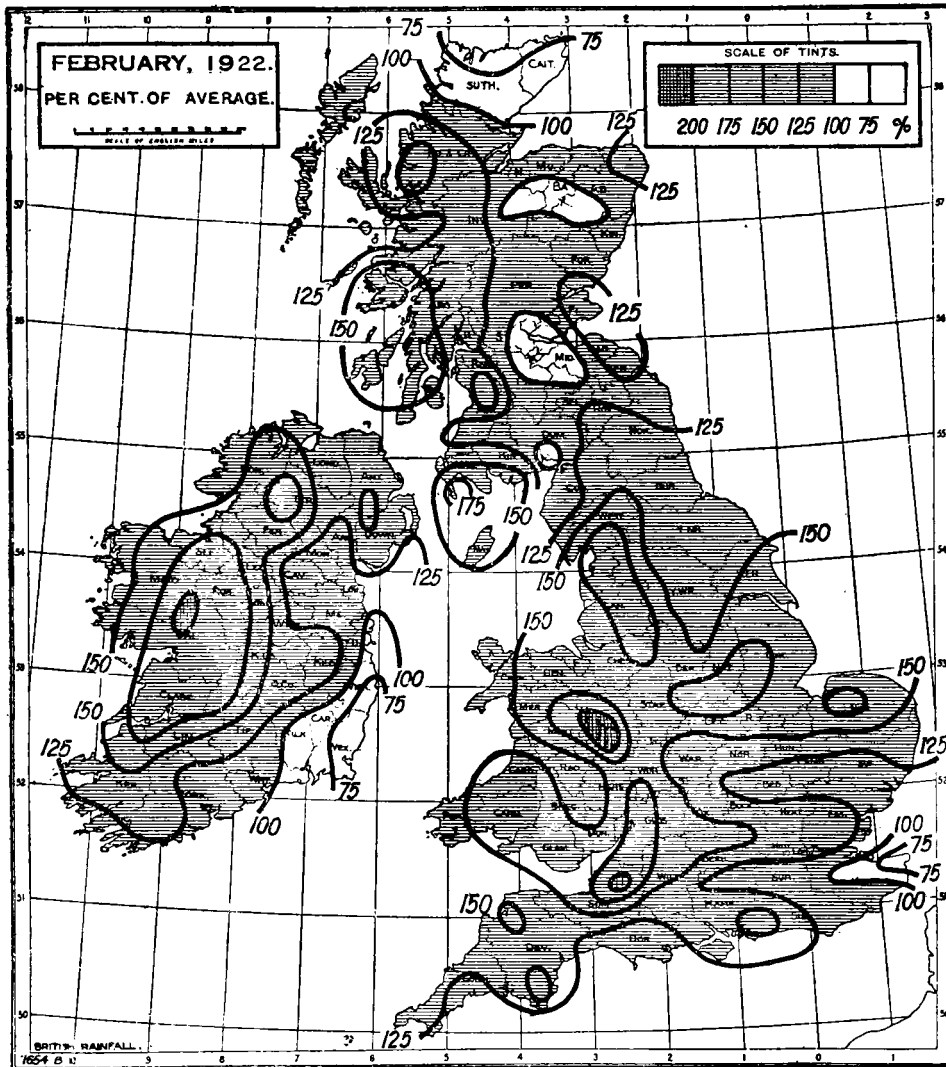
prevalence of winds from south-east. The number of wet days was also excessive. At Braemar there was measurable precipitation on 29 days out of the 31, and on 28 of these the fall amounted to a millimetre ( $\cdot 04$  in.) or more. Corresponding figures for Markree Castle (Sligo) were 27 and 27. On the other hand, in Kent there were comparatively



few wet days, 1 mm. or more being measured only nine times at Canterbury, ten times at Margate and at Ramsgate.

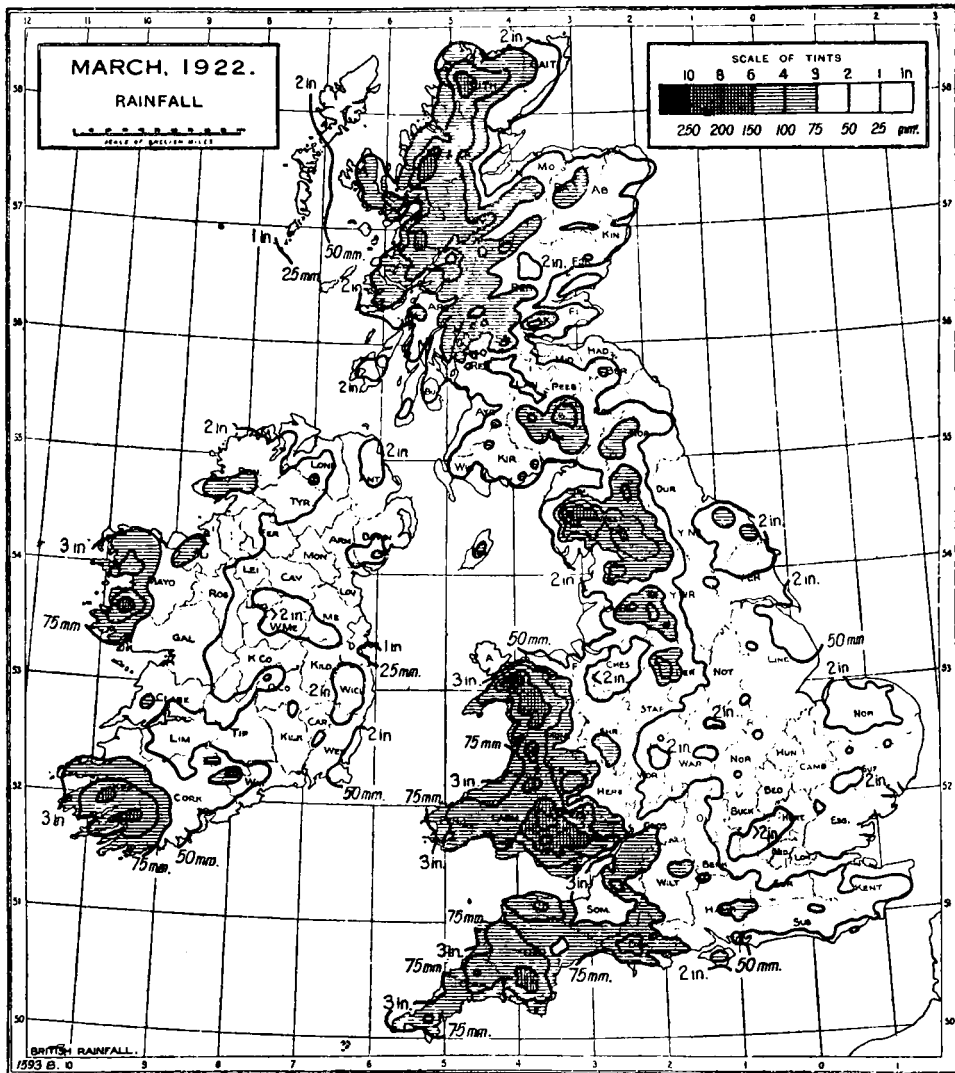
**February.**—The weather of February was generally of the mild unsettled westerly type. Rainfall was well above normal, much of it

being associated with the passage of secondary depressions across the country. On the shores of the Atlantic, thunderstorms of the winter type, produced when a cold current from the Arctic regions is warmed from below in its passage over the comparatively warm ocean, were frequent. For the month as a whole, precipitation was above normal



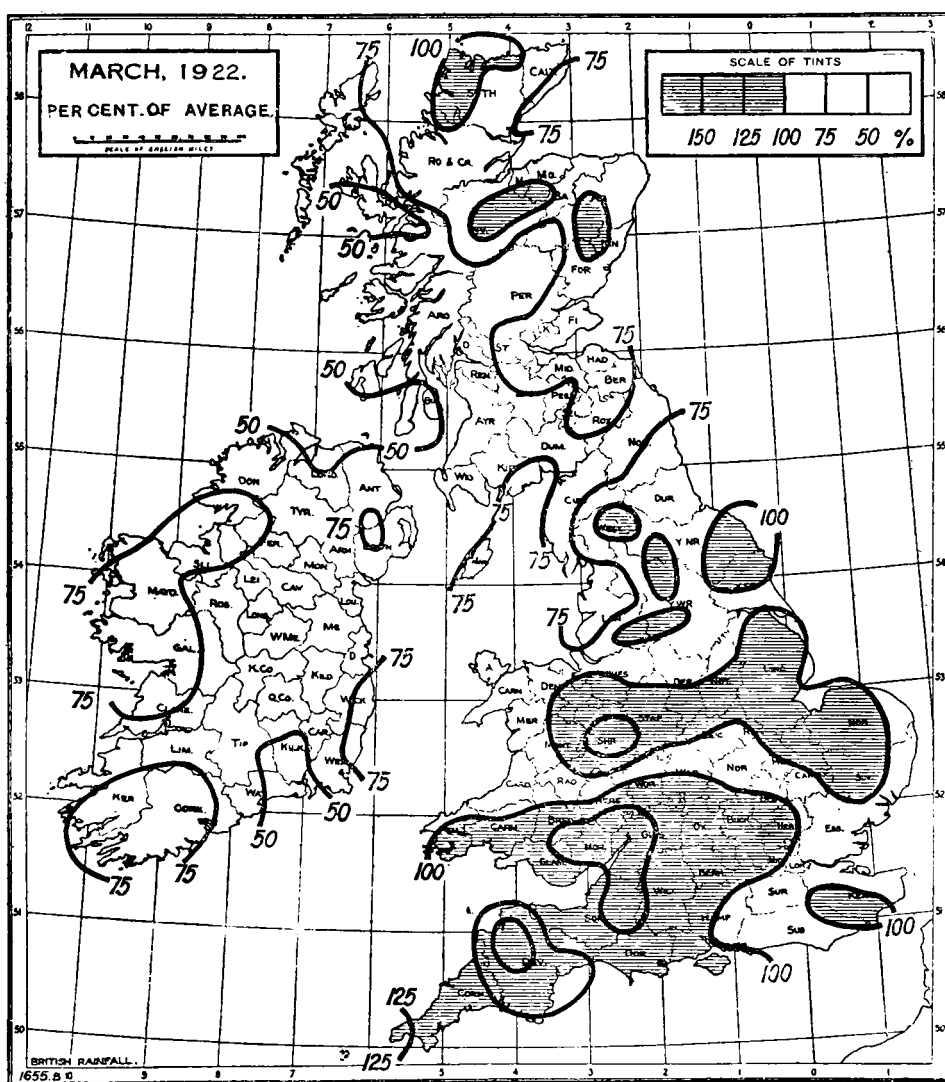
over nearly the whole of the British Isles, but there was a deficiency in the extreme north of Scotland (where February is normally a wet month), in the south-east of Ireland and also in Kent. An excess of 50 per cent. occurred over a very large area including nearly the whole of Wales, central England, half of Ireland and the extreme west

of Scotland. At stations in Shropshire, Somerset and Galway, more than twice the normal fall was recorded. The area with less than 2 in. of rain was small, consisting mostly of Essex and parts of neighbouring counties; it will be noticed, however, that the 2 in. line follows the coast line very closely from Cape Wrath to Flamborough Head.



The total precipitation in the mountainous districts exceeded 10 in., and as much as 20 in. were recorded on Snowdon. In the east of Scotland, especially in the valleys of the Tay and Dee, considerable damage was caused by flooding. This was due to the heavy rainfall at the end of the month and the melting of the snow on the surrounding hills.

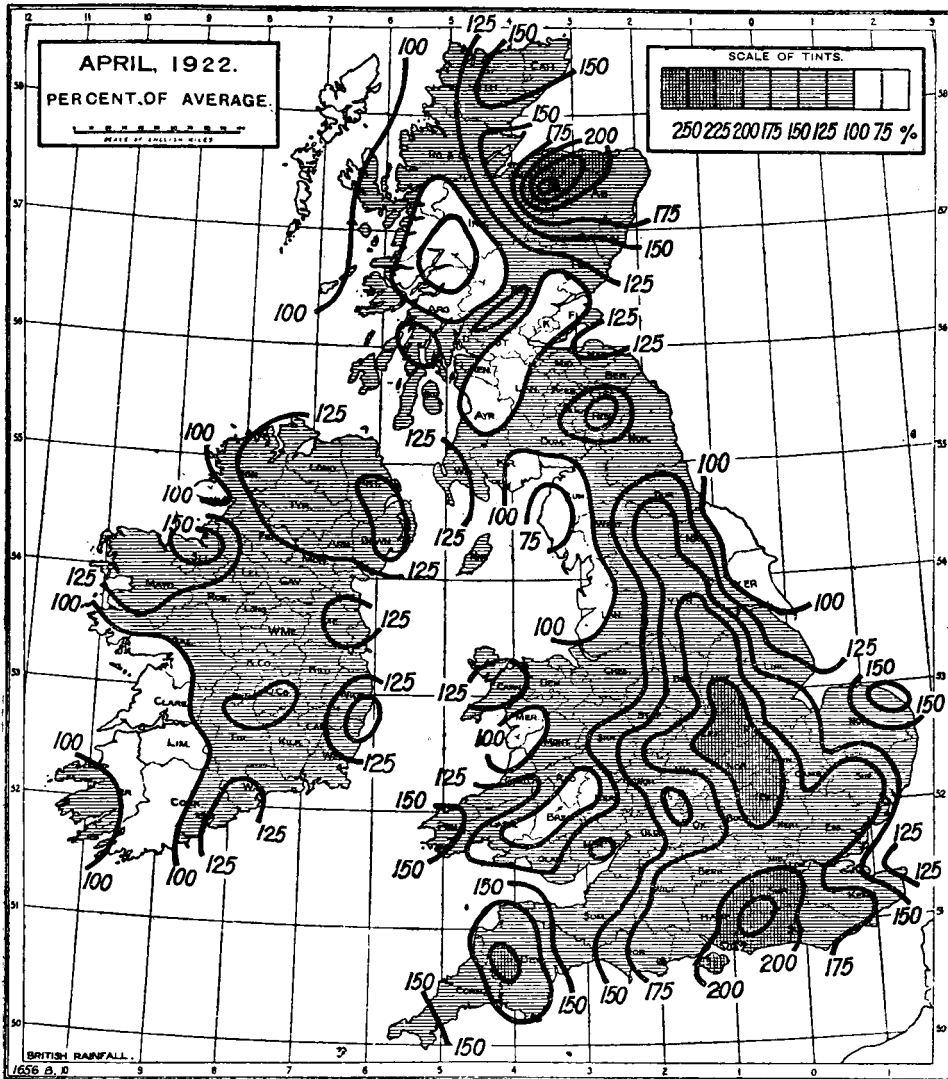
**March.**—The month opened with a south-westerly type of pressure distribution, the weather being mild and unsettled. Strong winds were frequent and culminated in an unusually severe gale over southern England on the morning of the 8th. For the next two weeks easterly and northerly winds predominated, and there was little or no



precipitation. Towards the end of the month a depression travelled slowly from Iceland to the Irish Sea and on to the Straits of Dover, bringing a good deal of rain, hail and sleet, and on the 31st there was severe weather round the Irish Sea, much snow falling in South Wales. The rainfall of the month was generally below the normal, notably so



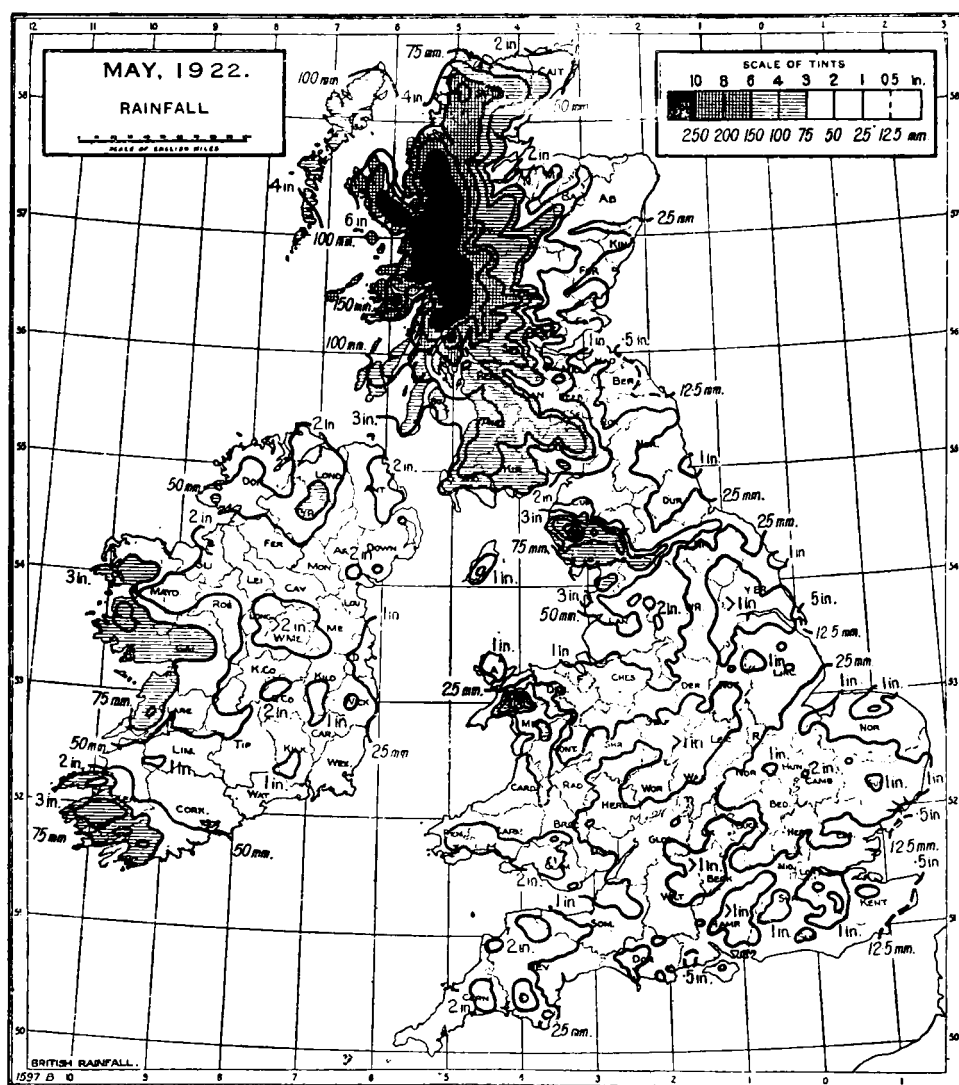
**April.**—The month was cold and unsettled. Numerous depressions travelled across the south of Ireland and England and hung about the North Sea and the Baltic. Winds from northerly quarters, therefore, predominated. The characteristics of the distribution of rainfall in the month may be attributed in part to the absence of orographic rain



and in part to the cyclonic rain which predominated in the southern counties of England and in the east of Scotland.

Precipitation was above the normal over the greater part of the British Isles, but there were areas with a deficiency, mostly those where orographical rainfall is the concomitant of westerly winds, the

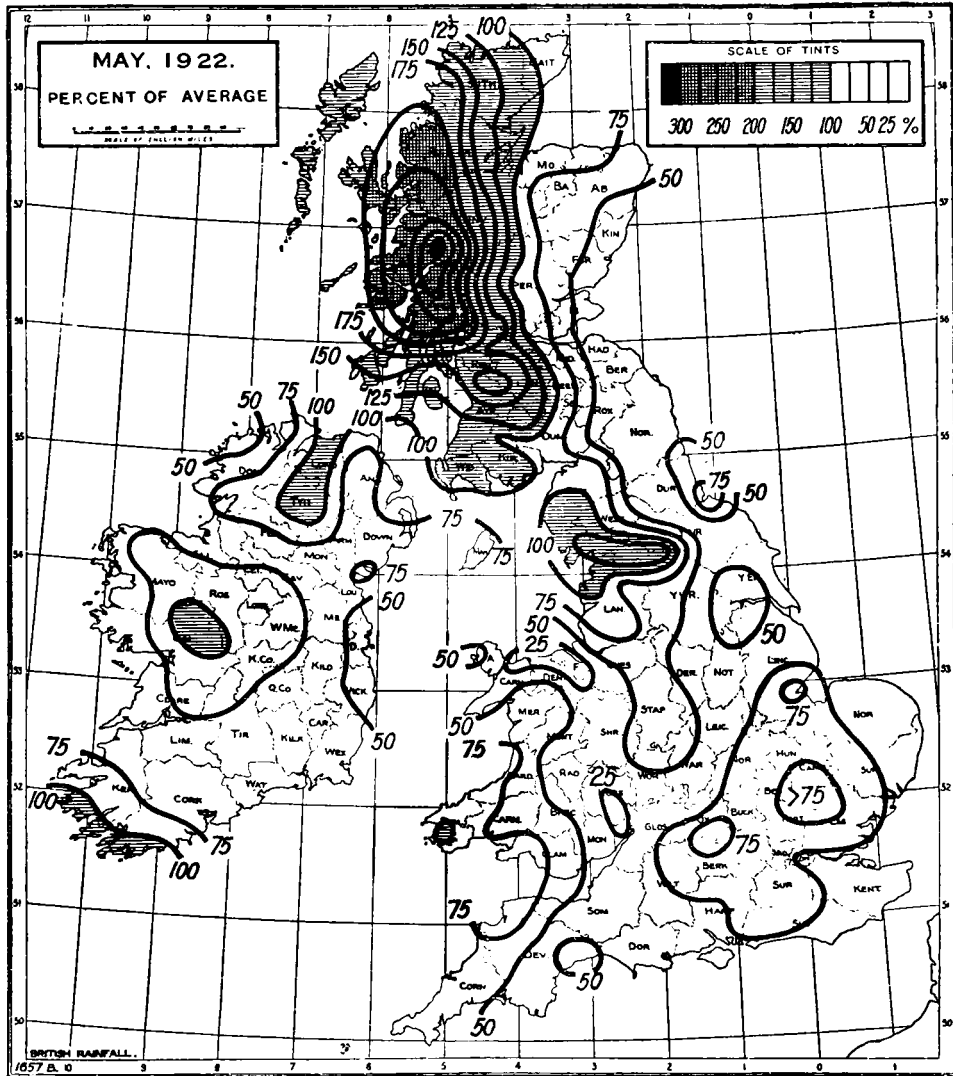
Western Highlands, the English Lake District and south-west Ireland. Round Dartmoor, in Morayshire, and also in a large area extending from the south-west of England to Nottingham there was approximately twice the normal fall. At Grantown-on-Spey it was the wettest April on record and the rainfall, 5 in., was twice that measured at Fort



William, a complete reversal of the normal relation between these two places.

Snow was reported in various districts in Scotland on several days, and at the end of the month Highland roads were completely blocked. In Ireland also there was much snow, the Wicklow mountains being covered to a considerable depth on many occasions.

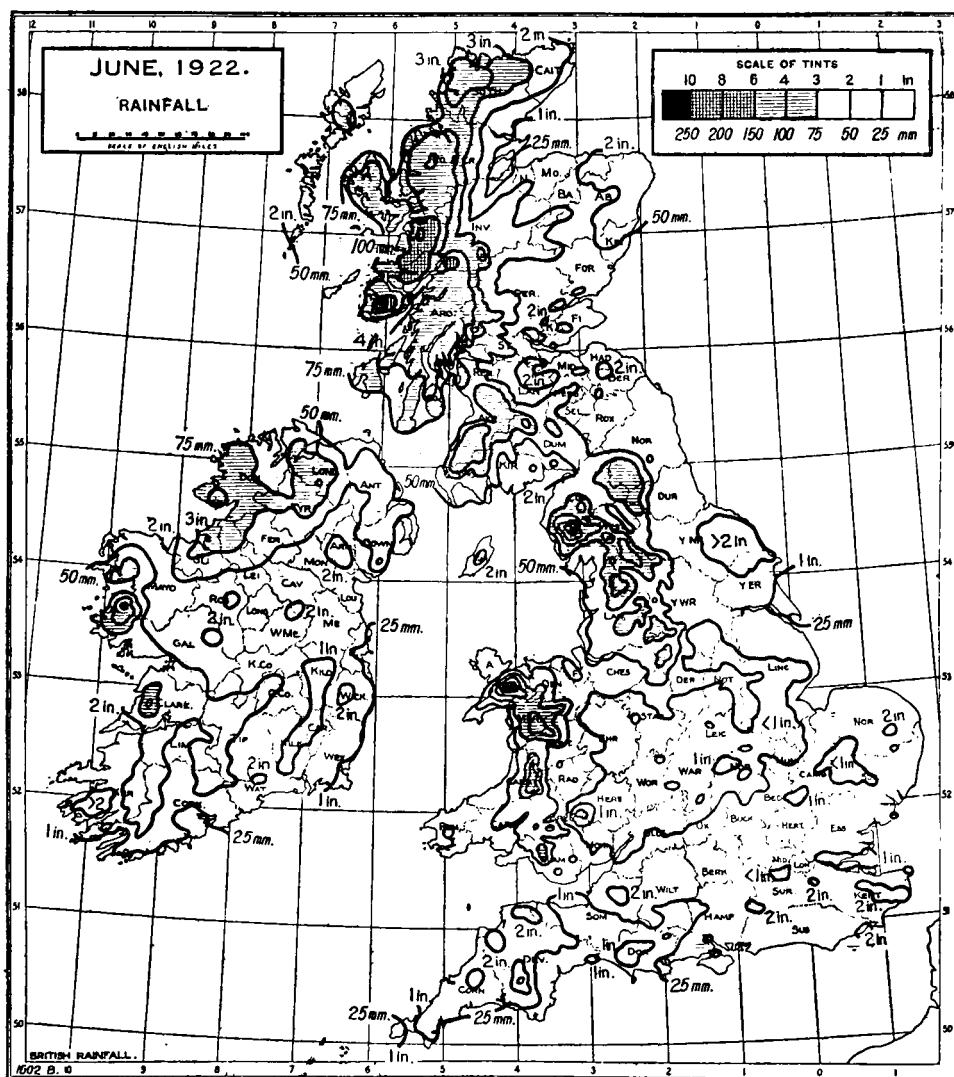
**May.**—The dull cold April was followed by a fine May, the most notable feature of which was the hot spell which began about the 20th in the south-east and eastern parts of England. During the first week a series of depressions passed to the south of Iceland, and the weather over the British Isles was variable and unsettled. Frequent



showers of rain and hail occurred, and line squalls were reported at one or two places. On the 14th and 15th there was heavy precipitation in western Scotland associated with the passage of a large depression and its secondaries. (See p. 54-55).

The hot spell, which was associated with the extension of a

continental anti-cyclone over England, brought thunderstorms to most parts of the country. A thunderstorm accompanied by exceptionally heavy hail, "large as walnuts" in the words of one observer, occurred in Wensleydale in North Yorkshire on the 21st. At West Witton

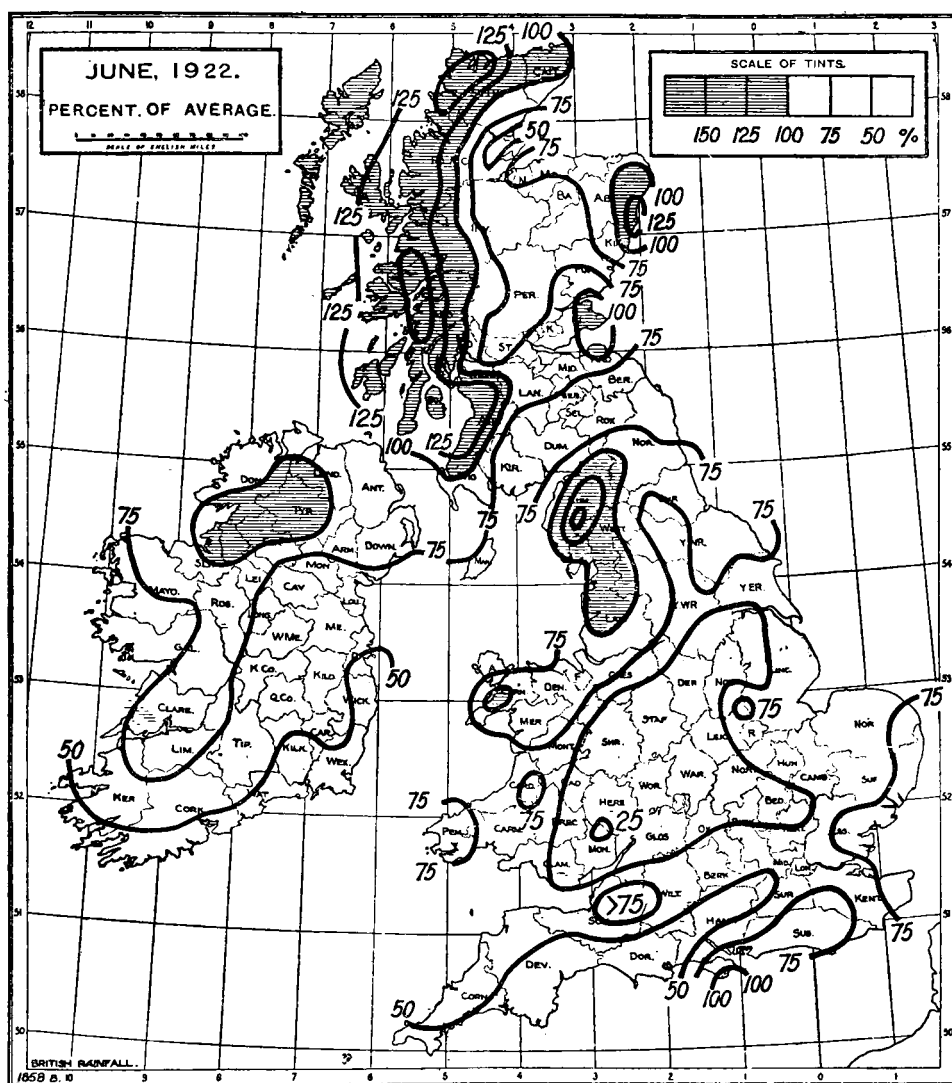


the rainfall measured 2.66 in. There were also severe thunderstorms in the south-east of England on the 25th.

For the British Isles as a whole the rainfall for the month was well below the average. Rainfall above normal occurred, however, in the western half of Scotland, where a considerable area received more than twice the average, and in isolated areas in Ireland. The driest part of

the country was round Herefordshire. At Ross-on-Wye (County Obsy.) the total for the month was only 0·44 in., 21 per cent. of the average.

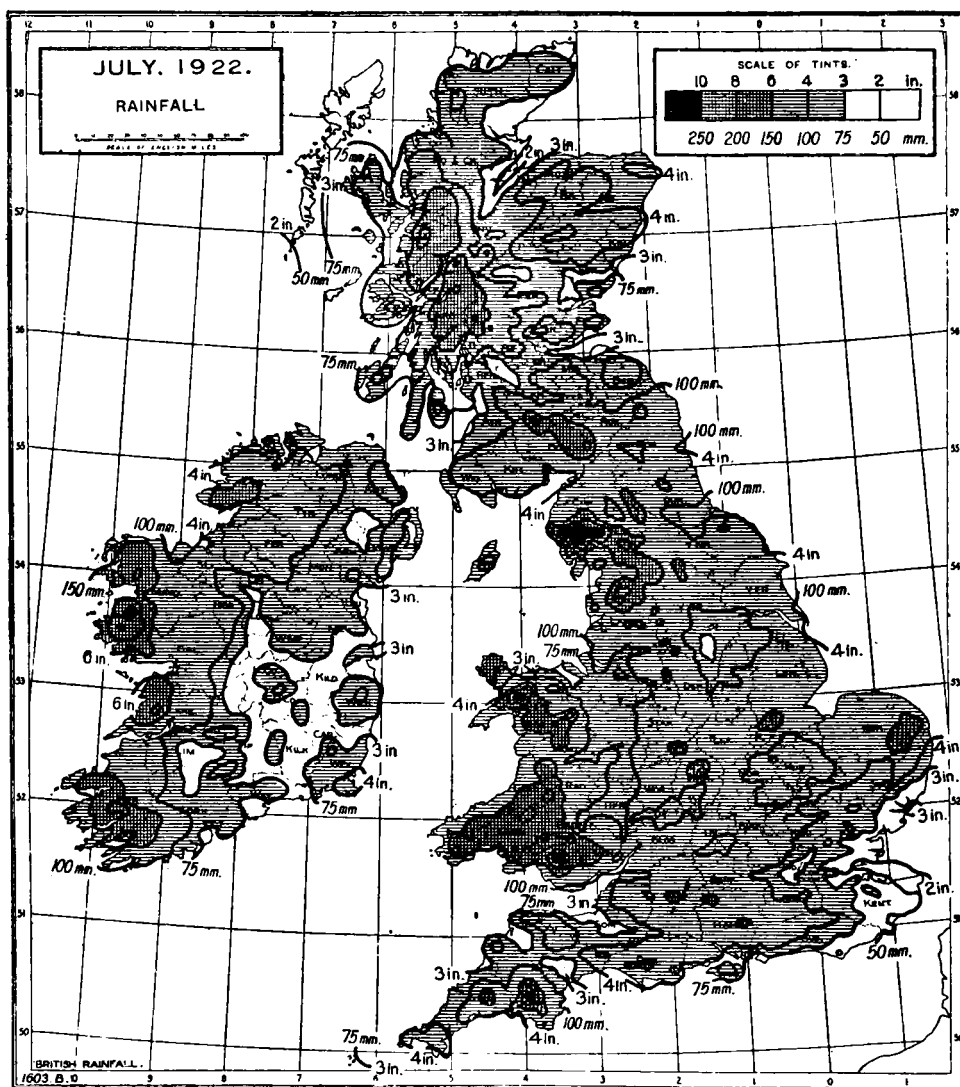
**June.**—The warm sunny weather which had characterized the latter end of May persisted until about the end of the month, when cool and



unsettled weather, associated with a series of depressions approaching the British Isles from the Atlantic, set in.

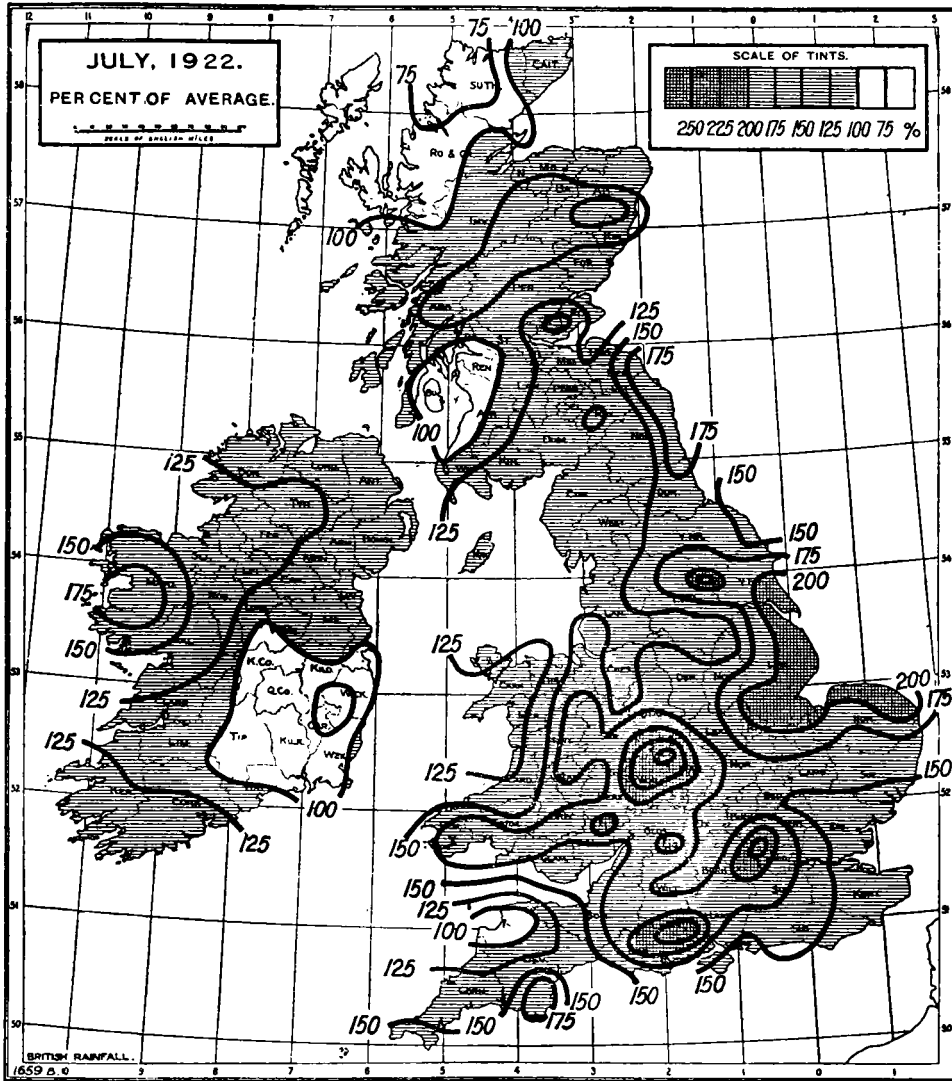
The prevailing winds were westerly and precipitation responded by being above normal in the Western Highlands, the Lake District, Snowdonia and the North of Ireland. On the other hand, in the

districts which depend for summer rainfall on showery conditions there was a marked deficiency. The relatively driest part of the country was again round Herefordshire, Ross-on-Wye having 0·58 in. or 27 per cent. of the average, Abergavenny ·58 in. or 24 per cent., Cheltenham ·71 in. or 32 per cent. At Roden near Shrewsbury the



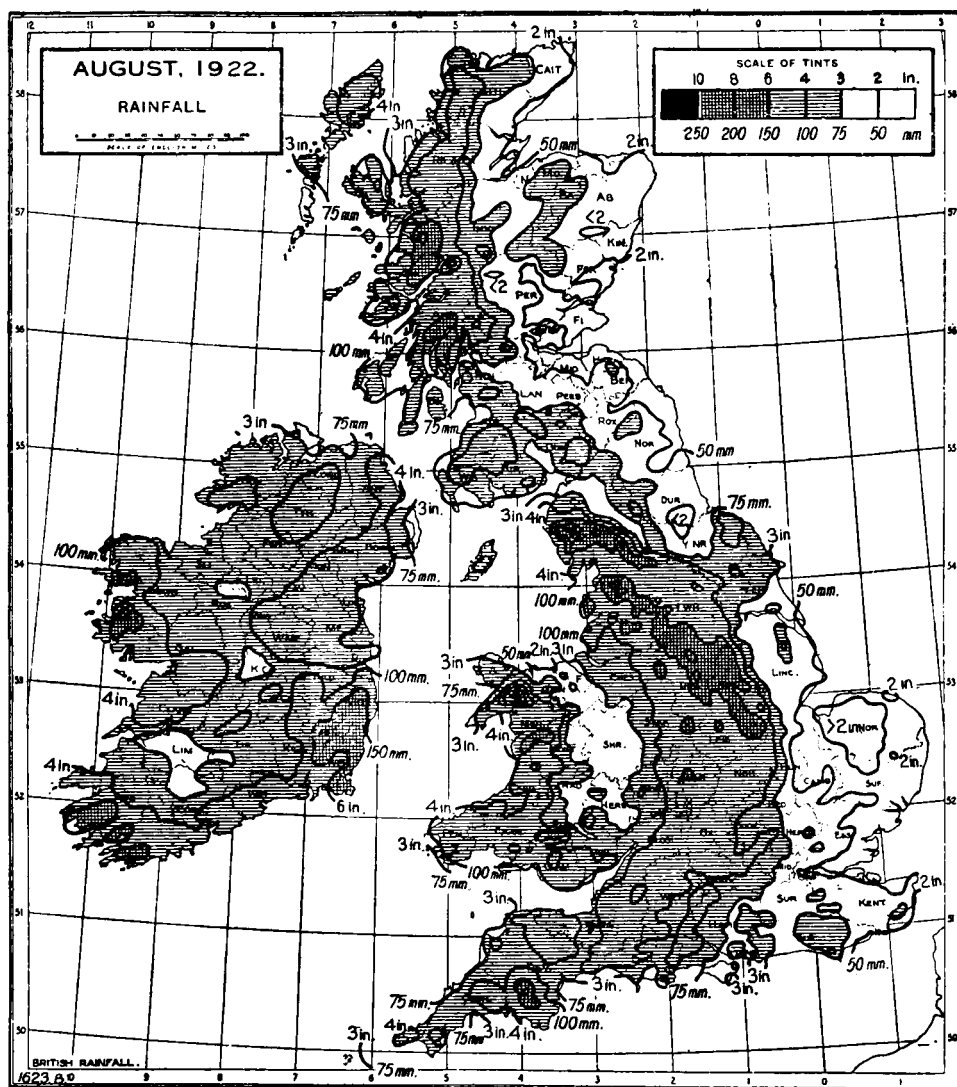
total was only ·50 in. Less than 1 in. for the month was recorded over a band from Sidmouth to Hull including the greater part of the Midlands. In the English Lake District and in Inverness-shire falls of about 10 in. were recorded locally. In Ireland the fall was generally between 1 and 2 in. in the east and south, between 2 and 3 in. in the north and west.

**July.**—The weather was cool and unsettled throughout the month. There was a considerable excess of precipitation, and temperature was much below the normal. The number of barometric depressions which affected these islands was large, and the tracks of several lay directly across the country.



The rainfall associated with the first of these was heavy and widespread. On July 5th (as will be seen from the map on page 56) there was more than an inch of rain over practically the whole of England and Wales. Like stormy conditions occurred with the following depression which crossed England on the 9th, but precipitation was not so heavy.

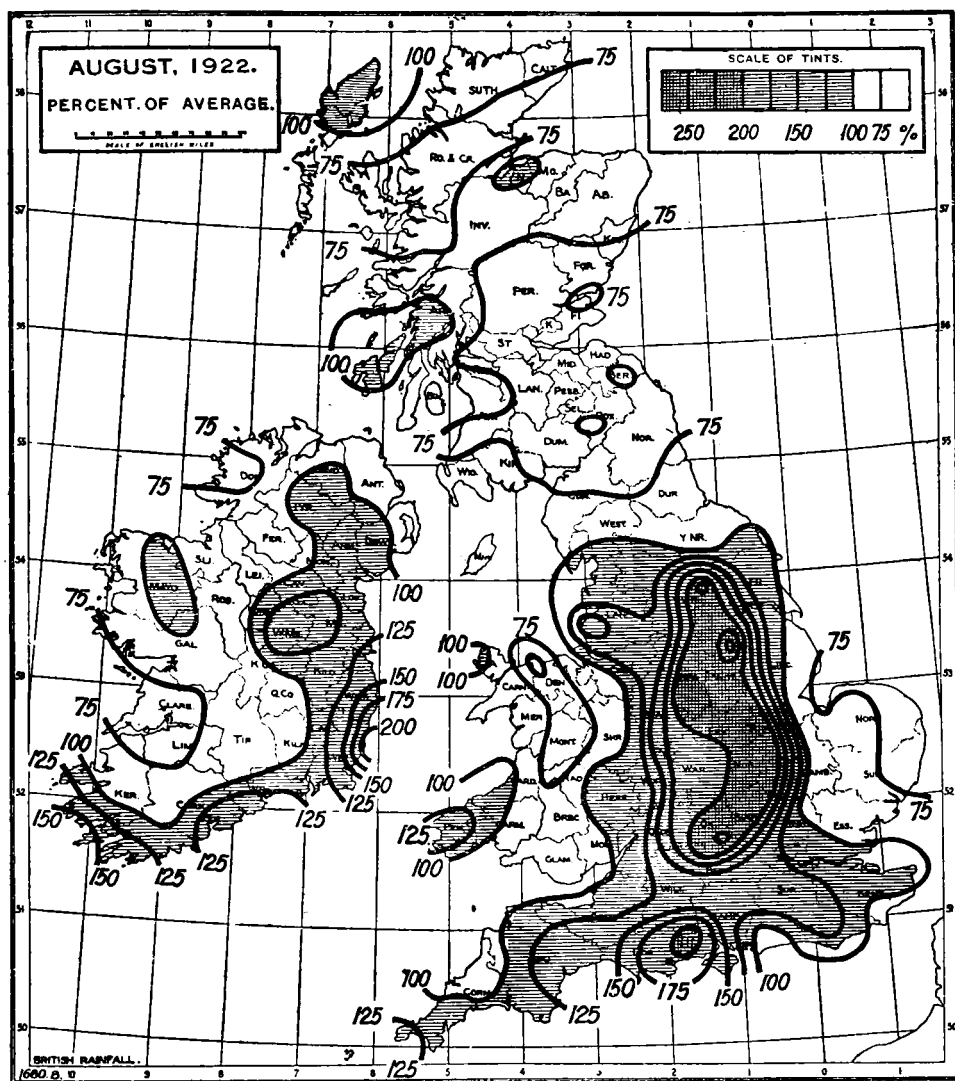
For the month as a whole the rainfall over England and Wales was unusually heavy, and everywhere there was an excess. In Scotland and Ireland the general rainfall was much nearer the normal, less than the usual amount falling in the south-east of Ireland and in the north-west and south-west of Scotland. As much as twice the



normal occurred over considerable areas in Hampshire, Lincolnshire, Norfolk and the Black Country. At Norwich the total for the month, 7·33 in., was 283 per cent. of the average; of this total 2·70 was measured on the morning of the 15th. The number of rain days in the month was very high. At Oban there were no less than 23 days with

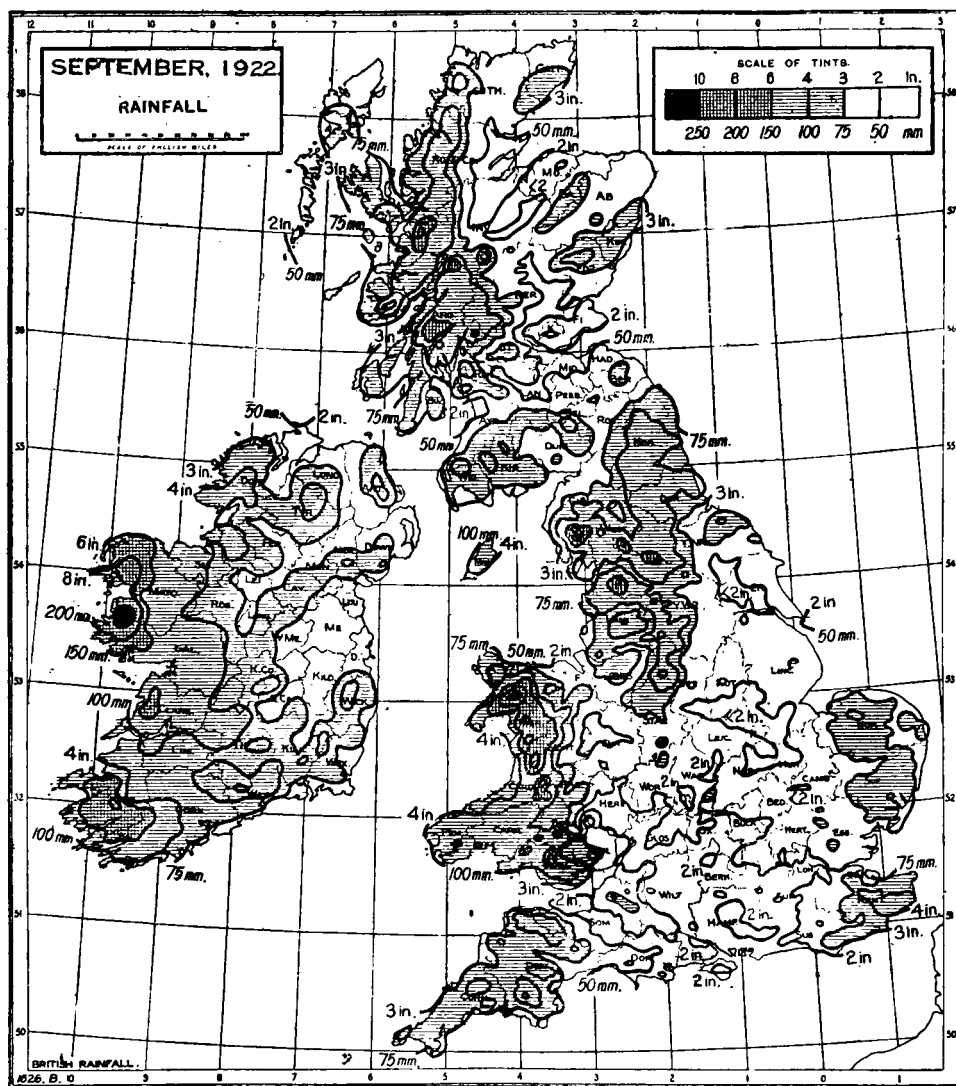
.04 in. or more. On the other hand, there was a coastal strip from Dungeness to Salcombe where the corresponding number was only 8. Thunderstorms were rare.

**August.**—The cool and unsettled conditions were maintained



throughout the greater part of August. Temperature was much below normal. Rainfall was excessive over most of England and Wales, but was below normal in Scotland. The greater part of the rain was associated with the passage of depressions, notably with those which travelled from the mouth of the Channel to the North Sea on the

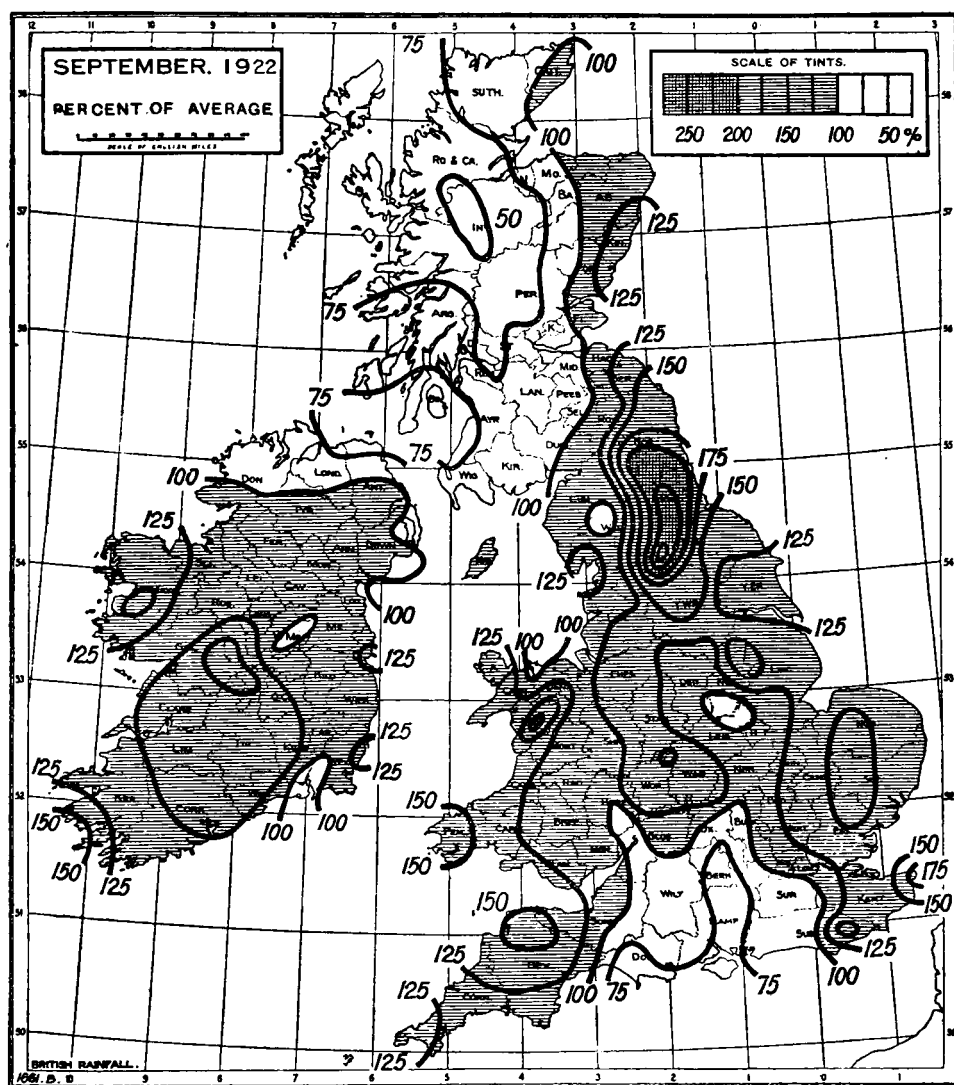
7th and 8th. Comparison of the map on page 60 with the maps for the whole month shows how largely the rainfall of those two days contributed to the total fall. At Hodsock Priory, Worksop, the amount for the month was 6·50 in., 276 per cent. of the average, and there was a large area in the Midlands with more than 200 per cent. Other



high percentages occurred in Hampshire and in Wexford. In the latter county, as in Cork and Waterford, the wettest day was the 3rd, when a depression was situated off the south of Ireland. Thunderstorms were again infrequent. The best holiday weather was experienced on the east coast. At Walton-on-the-Naze there were

only six days with  $\cdot 04$  in. or more, and the total for the month was less than an inch.

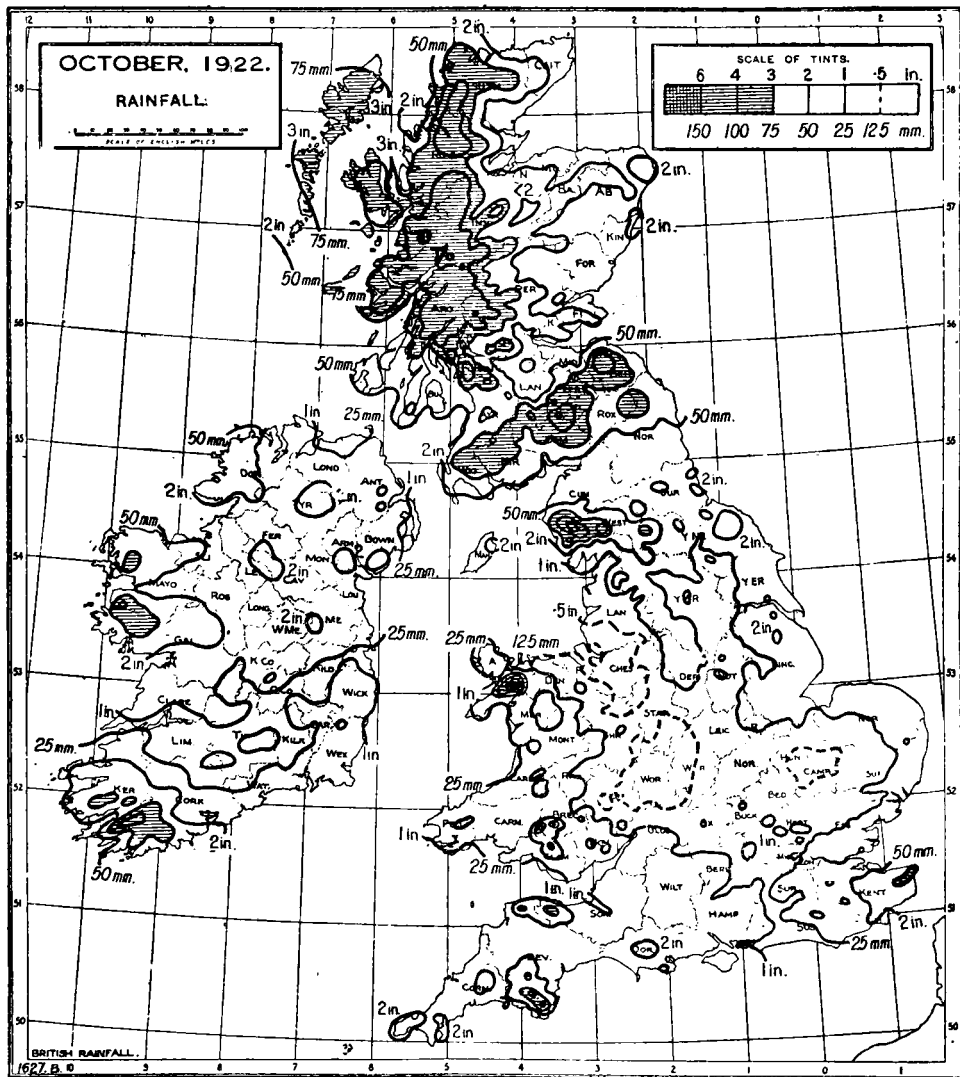
**September.**—Throughout the greater part of the month the weather was cool and unsettled. Rainfall was deficient over Scotland and in



some of the southern counties of England. In the Western Highlands of Scotland little more than half the normal was recorded. On the other hand, in northern and eastern England the total was generally from 50 to 100 per cent. above the normal, and in the area including Newcastle, Hexham and the Yorkshire dales there was an excess of

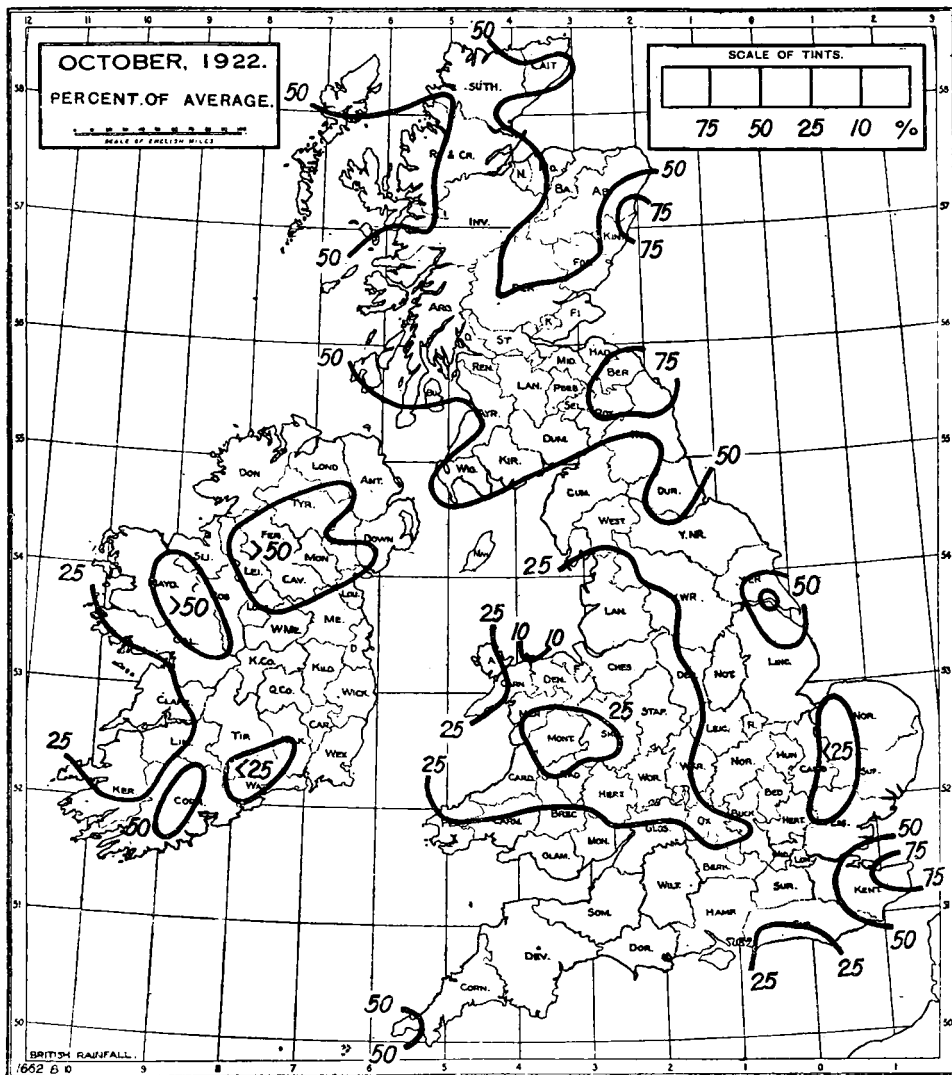
more than 100 per cent. At Leyburn the total was 5·15 in., 256 per cent. of the average. In eastern Kent falls of more than 4 in. were widespread and formed a notable feature of the month's rainfall.

Snow fell on the Cairngorm Mountains on the 15th. On the 18th it lay on Ben Nevis down to 2,000 ft. above sea level.



**October.**—In striking contrast to the wet summer, October, usually a wet month, was abnormally dry, and the rainfall totals show in most cases a considerable deficiency. In no part of the British Isles was the normal reached, and the areas with as much as 75 per cent. were very small. The deficiency was most marked in the

centre of England and Wales, where less than a quarter of the normal was recorded over a very large area. Less than a quarter of the normal also fell in places on the west coast of Ireland, and as little as 10 per cent. was recorded in North Wales and in parts of Cheshire. At Hoylake, near Liverpool, the total for the month was only  $\cdot 15$  in.,

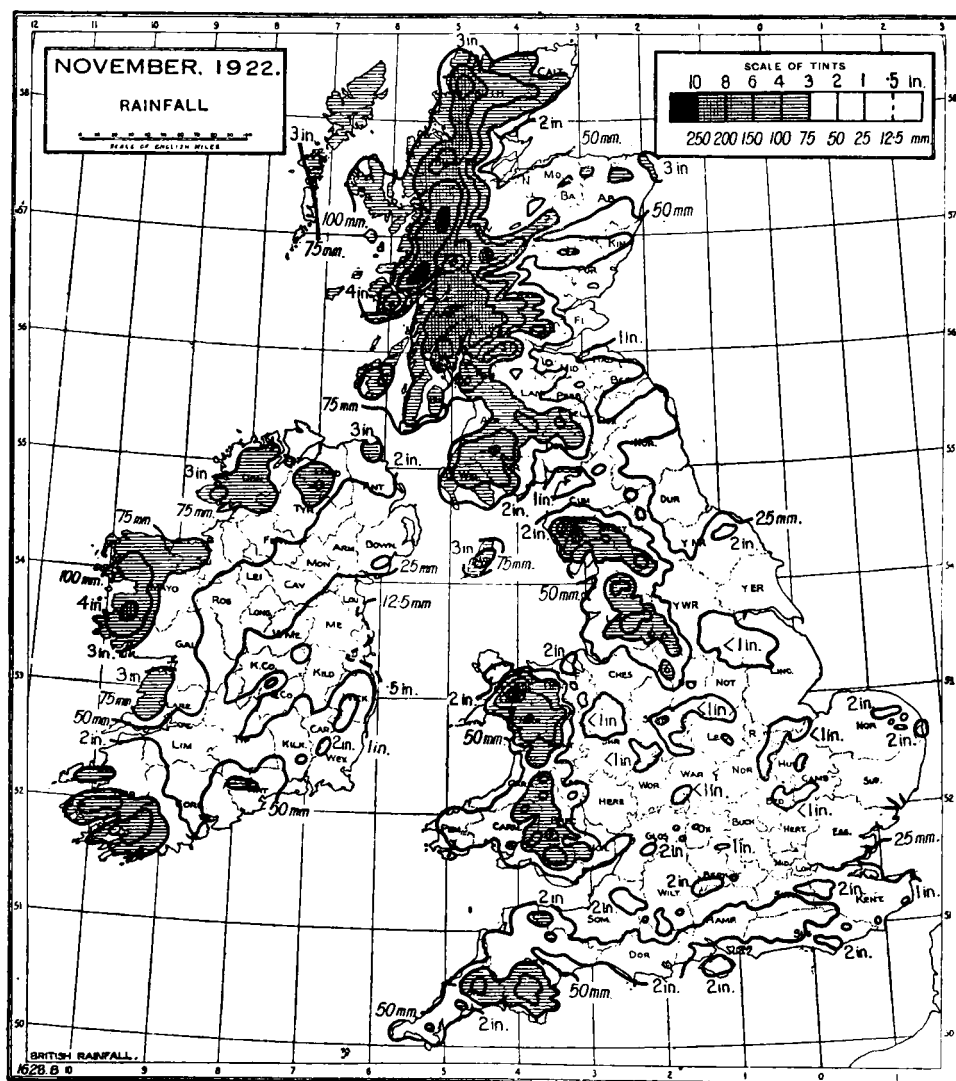


5 per cent. of the normal. On parts of the east coast as much as 75 per cent. was recorded, the prevailing north-easterly winds causing frequent, though only moderately heavy, precipitation.

Snow fell at several stations in the British Isles towards the close of the month. It was reported at Falmouth and Jersey on the 29th,

a very unusual occurrence during October. In Scotland it lay to a depth of several inches in some upland areas.

**November.**—The deficiency of rainfall which occurred generally over the British Isles in October continued in November. The month



opened with ten days of generally unsettled weather, but subsequently an anti-cyclonic type of pressure distribution dominated the situation; there was much fog and low cloud but little rain. The general rainfall was the smallest recorded in November since 1909. The distribution differed from that of the preceding month in showing no special

concentration on the east coast. The total approximated most closely to the normal in the north-west where a considerable area had more than 75 per cent. of the normal. This rain fell mostly during the first ten days of the month, over 3 in. being credited to the 5th at Castle Lachlan, Loch Fyne. Less than a third of the normal was recorded



over a considerable area near the Scottish borders. Indeed, at Kelso, the total was only 0·29 in., 12 per cent. of the normal. Even more noteworthy was the deficiency in Dublin and the neighbouring counties. At Trinity College, Dublin, there were only two days with as much as ·04 in., and the month's total was ·26 in., 10 per cent. of the normal.



Snow, hail and sleet were frequent in Scotland during the second half of the month. There was, however, no general snowstorm, and a Perthshire observer described the month as singularly free from snow for December.



The general rainfall for the British Isles and the several countries for each month of the year as a percentage of the normal fall is set out at the end of Table III, page 109. A summary showing the values for the years 1903 to 1921 is given in *British Rainfall*, 1921, page 92.



TABLE II.—(con.). ENGLAND—(con.).

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
III.	Cambridgeshire ..	3 Wisbech (Bank House) .....	2.25	2.34	1.83	2.12	1.16	1.20	4.76	1.81	2.74	.71	1.18	2.24	24.34
IV.	Essex.....	2 Leigh (Herschell Road) .....	2.59	1.62	1.63	2.55	.63	1.22	2.00	1.57	2.64	1.79	.92	2.10	21.26
"	"	2 Ongar (Marden Ash) .....	3.03	1.54	1.47	2.20	1.15	1.47	2.86	1.82	2.97	.93	1.17	2.22	22.83
"	"	3 Bradwell-on-Sea (Bradwell Hall)	3.80	1.60	1.29	2.42	.63	1.34	2.51	1.39	2.55	1.69	1.49	2.08	22.79
"	"	4 Shalford (Littles) .....	3.11	1.75	1.73	2.60	.81	1.76	3.08	1.97	2.34	.78	1.08	1.77	22.78
"	Suffolk .....	1 Chapel St. Mary School .....	3.39	1.62	1.54	2.28	1.10	1.38	2.62	1.16	3.84	1.02	1.52	2.16	24.03
"	"	1 Hawkedon Rectory .....	3.39	1.68	2.21	2.84	1.12	1.14	3.75	2.06	3.12	.64	1.47	1.67	25.09
"	"	3 Orford (The Gables) .....	4.41	2.00	1.58	2.46	1.59	1.16	2.04	1.43	2.83	1.31	1.62	1.65	24.08
"	"	3 Halesworth Rectory .....	4.43	2.25	1.83	2.55	.90	1.81	3.47	1.55	3.55	1.36	1.74	1.83	27.27
"	"	4 Yarmouth (Burgh Hall) .....	4.37	2.17	1.56	2.46	.49	1.84	4.30	1.18	2.97	1.09	1.74	1.74	25.91
"	"	5 Drinkstone .....	3.41	2.07	2.04	2.70	.95	.99	3.24	1.83	3.49	.64	1.62	1.91	24.89
"	Norfolk .....	1 Diss (The Cedars) .....	4.63	1.99	1.78	2.26	1.08	.96	3.59	1.71	2.94	.61	1.11	1.62	24.28
"	"	1 Wymondham .....	5.70	2.87	2.00	2.98	.74	1.99	6.11	1.80	3.11	1.16	1.96	3.11	33.53
"	"	2 Aylsham (Rippon Hall) .....	5.17	2.90	1.98	3.53	.88	1.65	5.12	1.58	3.30	1.51	2.30	2.69	32.61
"	"	3 Sandringham House Gardens..	3.54	2.80	2.46	2.60	.93	1.85	4.57	2.23	3.72	1.54	1.80	2.72	30.76
"	"	3 Blakeney .....	4.69	2.44	2.47	2.18	1.37	1.50	5.19	1.91	2.63	1.23	1.85	3.71	31.17
"	"	4 Thetford (Waterworks) .....	2.96	2.27	1.82	2.10	1.65	1.28	4.15	2.42	3.16	.79	1.43	1.94	25.97
"	"	4 Swaffham .....	3.42	3.10	2.04	1.98	.77	1.18	4.37	2.24	3.30	.70	1.44	2.38	26.92
V.	Wiltshire .....	1 Bradford (Manvers House) .....	3.22	3.88	2.61	3.15	.55	1.27	3.83	4.62	1.92	1.58	1.43	3.75	31.81
"	"	2 Mere (Charnage) .....	4.78	3.03	3.11	3.62	.86	1.01	4.13	3.43	2.14	1.49	1.91	3.54	33.05
"	"	3 Salisbury Plain (Shrewton) .....	3.64	2.88	2.58	3.53	.84	.85	4.18	3.57	1.66	1.56	1.71	3.71	30.71
"	"	5 Marlborough (Mildenhall) .....	3.30	3.22	3.13	3.50	1.73	1.37	4.23	3.61	1.57	1.06	1.57	3.69	31.98
"	Dorsetshire .....	3 Weymouth (Springfield) .....	4.05	2.56	2.54	2.88	1.11	.82	4.09	3.22	1.56	1.71	2.22	4.51	31.27
"	"	3 Beaminster (Hamilton Lodge)	6.24	3.81	3.95	3.99	1.21	1.05	5.71	4.53	2.71	1.91	2.56	5.13	42.80
"	"	4 Winterbourne Whitchurch Vic.	5.13	3.60	3.81	5.26	.60	.82	5.53	3.31	1.95	2.11	1.97	5.46	39.55
"	"	4 Wimborne (Codford House) ..	5.31	3.13	3.19	3.70	.65	.88	5.24	4.28	2.01	1.50	2.14	5.11	37.14
"	South Devonshire .....	3 South Brent (Great Aish) .....	8.04	8.25	6.56	6.71	2.76	2.06	7.87	6.99	5.17	3.12	4.63	10.78	72.94
"	"	4 Two Bridges (Moor Lodge) .....	9.83	11.32	7.58	7.08	2.78	3.16	10.09	7.46	5.23	3.67	5.62	12.89	86.71
"	"	5 Teignmouth (Den Gardens) .....	4.61	3.14	3.04	3.93	.49	.43	3.46	2.85	2.32	1.31	2.28	6.22	34.08
"	"	6 Crediton (Okefield) .....	4.36	2.97	3.29	3.71	.86	.96	2.31	4.27	2.74	1.15	1.91	5.61	34.14
"	"	7 Ottery St. Mary (West Hill) ..	5.19	3.23	3.59	2.81	.61	.95	3.31	3.28	3.17	1.27	2.18	5.75	35.34
"	North .....	1 Morthoe (Twitche House) .....	3.62	3.96	3.84	3.43	1.79	1.81	3.34	3.49	3.06	1.75	1.87	6.41	38.37
"	"	2 Chumleigh (Leigh House) .....	3.95	4.98	3.69	4.45	1.65	1.34	3.11	4.04	3.08	1.27	2.10	6.31	39.97

TABLE II.—(con.). ENGLAND—(con.).

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
V.	North Devon ...	Dolton (Hilliers) .....	4.57	5.49	4.28	3.56	1.67	1.40	2.87	3.28	3.40	1.28	1.98	6.59	40.37
"	Cornwall ...	Redruth (Trewirgie) .....	6.44	4.64	3.08	3.70	1.42	1.37	4.45	3.47	3.47	1.92	2.48	7.52	43.97
"	"	Newquay (Tresillian House) ..	5.10	3.67	2.92	3.89	1.41	1.75	3.56	2.96	3.51	1.26	1.92	6.23	38.18
"	"	Morwenstow Vicarage .....	3.86	4.12	3.08	3.34	2.15	1.41	3.09	2.99	2.67	1.62	1.72	5.45	35.50
"	"	Penzance (Morrab Garden) ...	5.66	4.70	4.00	3.45	1.49	1.09	4.23	4.00	3.97	2.38	2.01	7.42	44.40
"	"	St. Austell (Trevarna) .....	6.83	4.49	3.67	4.57	1.65	1.37	4.70	3.89	3.39	1.52	2.97	7.97	47.02
"	"	Liskeard (Trevillis) .....	6.41	4.51	4.38	4.80	2.34	1.56	5.43	4.25	4.15	1.79	3.74	7.90	51.26
"	"	Altarnon Vicarage .....	6.82	6.78	5.38	5.52	2.16	2.32	4.97	4.11	4.59	2.29	4.00	9.86	58.80
"	"	Tresco Abbey .....	3.44	3.25	2.89	3.83	1.55	1.16	2.93	2.52	3.66	2.23	1.62	6.06	35.14
"	"	Street (Hind Hayes) .....	3.52	2.61	2.55	1.98	.63	.87	2.90	4.28	1.85	1.12	1.43	3.75	27.49
"	Somersetshire...	Burnham (Chalbury) .....	3.20	2.59	2.31	2.78	.97	1.12	2.86	4.14	2.03	.97	1.58	4.51	29.06
"	"	Taunton (The Park) .....	3.59	2.53	2.79	3.48	.63	.70	3.09	3.24	1.97	1.50	1.43	5.25	30.20
"	"	Winsford School .....	6.15	8.34	5.87	5.11	1.66	1.45	5.73	4.87	4.68	3.03	3.19	8.81	58.89
VI.	Gloucestershire..	Avening House.....	3.86	3.75	3.27	2.63	.62	.90	4.06	4.58	1.89	1.12	1.72	4.49	32.89
"	"	Cheltenham (Old Bath Road) ..	3.11	3.33	2.32	3.10	.75	.78	4.03	4.60	1.98	.71	1.57	4.20	30.48
"	"	Mickleton (Bank House) .....	2.42	2.24	1.84	2.45	.61	.70	3.57	4.60	1.83	.36	.89	3.62	25.13
"	"	Clifton (Harley Place) .....	3.46	4.87	3.29	2.77	.96	1.69	4.31	4.80	2.64	1.50	1.74	5.16	37.19
"	"	Lechdale (Claydon House).....	2.27	3.05	2.31	3.10	1.07	1.39	4.71	4.16	1.59	.93	1.56	2.71	28.85
"	Herefordshire ..	Ross (Birchlea) .....	3.76	3.32	3.17	2.75	.45	.64	4.46	2.76	1.71	.78	1.26	4.36	29.42
"	"	Weobley School .....	3.99	3.25	2.37	2.33	.88	.86	3.11	3.25	1.68	.84	1.29	4.45	28.30
"	"	Ashford House .....	3.80	4.12	3.57	2.35	.94	1.02	3.60	2.42	2.20	.87	1.47	4.50	30.86
"	Shropshire .....	Clun Forest (Cwm Ffrydd) ..	5.32	5.71	3.92	4.22	1.28	1.71	4.81	3.35	2.42	1.52	1.85	4.50	40.61
"	"	Much Wenlock (Willey Park) ..	4.83	2.73	2.59	2.37	1.07	.75	4.18	2.45	2.39	.62	1.13	4.26	29.37
"	Staffordshire ...	Market Drayton (Old Springs)	3.49	2.51	2.35	1.95	.96	.80	3.90	3.25	2.83	.38	1.07	4.09	27.62
"	"	Lichfield (St. John Street) ....	3.25	2.31	2.21	2.52	1.37	.90	4.61	5.88	2.27	.31	.91	3.78	30.32
"	"	Stafford (Rising Brook) .....	3.74	2.73	2.25	1.90	1.11	.57	4.35	3.79	2.50	.35	.94	4.18	28.41
"	"	Ashbourne (Mayfield House) ..	4.89	3.19	2.39	2.52	.97	1.15	4.95	5.37	2.91	.53	1.68	4.71	35.26
"	Worcestershire..	Kempsey (The Lodge) .....	2.82	3.02	1.67	2.19	.80	.67	3.97	3.18	2.11	.43	1.17	3.16	25.19
"	"	Bewdley School .....	3.97	3.12	2.21	2.65	1.02	.83	4.76	3.27	2.49	.44	.92	2.97	28.65
"	"	Dudley (Borough Cemetery) ..	3.26	2.91	2.02	2.98	1.24	.68	5.02	4.51	2.65	.16	.94	3.13	29.50
"	"	Alvechurch (High Croft) .....	3.74	2.82	2.20	3.24	1.15	.94	5.04	4.37	2.93	.38	1.52	4.00	32.33
"	Warwickshire ..	Coventry (Keresley Grange) ..	3.15	2.43	1.98	2.62	1.08	.89	7.06	4.78	2.24	.48	1.27	2.96	30.94
"	"	Farnborough .....	3.49	2.83	2.23	3.16	.91	.92	5.00	5.09	3.07	1.06	1.74	3.89	33.39

TABLE II.—(con.). ENGLAND—(con.).

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
VII.	Leicestershire ..	4	Loughboro' (Nan Pantan Res.)	3.65	2.66	1.77	3.42	1.45	5.02	6.36	2.30	.73	1.16	4.16	33.63
"	"	4	Belvoir Castle Gardens .....	2.44	2.98	1.92	3.17	.98	5.00	5.71	1.72	1.11	1.44	3.11	31.04
"	Rutlandshire ...	1	Uppingham (Ridlington) .....	3.22	2.49	1.85	3.33	1.13	4.87	5.29	2.04	.90	1.20	3.35	30.60
"	Lincolnshire ...	2	Market Deeping (Wilsthorpe) ..	1.94	2.15	1.22	2.75	.81	4.95	3.30	1.45	.97	.55	2.13	22.82
"	"	3	Boston (Black Sluice, Skirbeck)	2.21	2.46	1.61	2.28	1.36	4.49	1.81	2.32	1.15	1.11	2.72	24.68
"	"	3	Sleaford (Kesteven Co. Asylum)	2.64	2.34	1.23	2.66	.77	6.1	4.50	2.65	1.08	1.19	3.48	25.41
"	"	3	Willingham-by-Stow .....	2.64	2.91	2.02	2.04	1.44	1.06	4.10	3.19	1.02	.89	2.89	26.65
"	"	4	Skegness (Estate Offices) .....	2.68	2.09	1.62	1.68	.88	1.23	4.24	2.26	1.61	1.20	3.17	25.11
"	"	4	Louth (Westgate) .....	3.50	3.00	2.38	1.96	.61	1.32	5.06	2.84	1.77	1.58	2.94	29.71
"	"	5	Brigg .....	3.15	2.79	1.83	1.55	.93	1.25	3.88	2.14	1.40	1.04	2.16	24.20
"	Nottingham .....	5	Mansfield (West Bank) .....	4.18	2.89	2.00	3.38	.93	1.37	4.41	6.30	1.06	1.28	3.85	34.27
"	Derbyshire .....	5	Littleover (The Knoll) .....	3.82	2.91	1.71	2.68	1.05	.87	3.76	5.23	.53	.79	3.51	28.59
"	"	6	Matlock Bath (Lower Tower) ..	4.75	4.22	2.61	3.29	.67	1.29	5.06	5.35	2.87	1.67	4.27	37.21
"	"	6	Buxton (Devonshire Hospital)	5.16	6.58	3.07	3.52	.98	2.36	5.57	5.86	1.03	3.54	5.24	46.95
VIII.	Cheshire .....	1	Northenden (Wythenshawe Hall)	3.06	3.40	1.85	2.28	1.31	2.56	3.74	4.36	.25	2.16	3.89	31.52
"	"	2	Middlewich (Bostock Hall) ...	3.61	3.04	1.93	2.44	.78	1.20	4.31	3.66	.48	1.28	4.52	30.16
"	"	4	Eccleston .....	3.85	1.91	1.86	2.28	.51	1.46	3.70	3.87	.28	1.06	3.86	27.42
"	South Lancashire	3	Bolton (Bloomfield, Heaton) ..	4.42	4.54	3.09	2.61	1.99	2.91	4.63	5.84	.57	3.69	5.45	44.77
"	Central	1	Burnley (Swinden) .....	4.82	4.95	3.56	4.32	2.12	3.12	5.24	6.49	1.62	3.20	5.65	49.46
"	"	3	Southport (Hesketh Park) ...	3.79	3.49	1.36	1.54	1.66	2.16	4.93	6.04	.58	2.49	4.17	35.11
"	North	4	Lancaster (Greg Obsv.) .....	3.86	4.55	2.53	2.15	2.91	3.21	6.23	6.39	.94	2.64	5.47	45.37
"	"	5	Barton (Newsham House) ..	3.79	4.83	1.91	2.39	1.93	2.69	5.32	5.10	.63	2.77	5.59	41.31
IX.	Yorkshire, W.R.	2	Settle (Gas Works) .....	5.39	5.25	3.40	2.72	2.27	2.59	6.18	4.59	1.36	2.67	5.39	45.83
"	"	7	Sheffield (Stumperlow Hall) ..	5.26	3.71	2.28	4.07	.89	1.40	4.07	8.12	1.12	2.14	4.56	40.62
"	"	7	Doncaster (Avenue Road) ....	3.08	2.92	1.54	2.93	1.01	.95	3.60	6.48	1.01	.90	3.47	30.25
"	"	8	Meltham (Harewood Lodge) ..	4.92	5.36	3.93	4.08	1.60	2.67	4.86	6.78	1.29	3.05	6.16	49.02
"	"	9	Garforth (Manor Farm) .....	2.66	2.60	1.72	2.21	.92	1.59	4.24	4.54	.96	1.13	3.59	28.65
"	"	10	Ilkley (Spence's Garden) .....	4.36	4.28	2.80	3.27	.94	1.84	4.53	4.23	.88	1.97	3.85	37.30
"	"	10	York (Cherry Hill) .....	2.77	2.22	2.02	1.74	1.14	1.35	4.86	4.52	.96	1.29	2.75	27.48
"	"	10	Buckden .....	6.60	5.33	4.39	3.48	3.35	2.90	6.25	5.69	2.05	2.43	6.84	53.59
"	"	11	Knaresborough (Gram. School)	2.50	2.62	1.68	2.97	.83	1.84	4.48	5.88	1.26	1.44	4.96	33.47
"	E.R.	2	Birdsall Gardens .....	4.05	3.06	2.65	2.03	.81	2.27	4.95	4.01	.98	1.60	3.50	32.09
"	"	3	Pattingham .....	3.06	2.47	1.79	1.15	.39	.75	4.56	1.92	1.31	1.26	2.22	23.26

TABLE II.—(con.). ENGLAND—(con.).

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
IX.	Yorkshire, E.R.	Holme-on-Spalding Moor ....	2.76	2.78	1.74	1.61	1.50	1.20	4.87	3.14	1.73	.98	1.29	2.35	25.95
"	"	Beverley (East Riding Asylum)	2.46	2.67	1.64	1.83	.86	1.08	5.02	2.95	1.92	1.13	1.60	2.21	25.37
"	"	Bridlington.....	4.15	3.09	2.25	1.05	1.00	1.74	5.01	3.31	2.75	1.40	1.87	2.68	30.30
"	"	Masham Moor (Roundhill Res.)	5.09	4.28	3.42	4.04	1.71	2.08	6.18	4.81	5.23	1.39	1.73	5.22	45.18
"	"	Felixkirk (Mount St. John) ...	3.56	2.09	1.80	2.16	.79	2.02	4.75	2.69	2.39	1.26	1.44	3.57	28.52
"	"	Reeth (Arkengarthdale) .....	4.70	4.49	3.65	3.08	.88	1.74	5.46	3.89	5.07	2.74	1.28	5.67	42.65
"	"	Bilsdale Priory.....	3.69	2.31	2.77	2.53	.97	2.42	5.30	3.20	3.64	2.34	2.36	4.89	36.42
"	"	Whitby (Mulgrave Castle) ....	3.05	1.99	2.64	1.50	1.04	2.38	4.25	4.25	3.54	1.81	.90	3.75	31.10
"	"	Middlesbrough (Albert Park) ..	1.77	1.54	1.44	1.33	1.55	1.65	3.90	2.28	2.63	1.42	.72	3.48	23.71
X.	Durham .....	Weardale W.W. (Waskerley) ..	2.57	2.30	2.32	2.66	.66	1.21	5.86	2.98	4.44	1.95	1.17	5.57	33.69
"	"	Sunderland (W. Hendon Ho.) ..	2.73	1.96	1.64	1.60	.87	1.50	4.60	2.27	4.42	1.75	.92	3.85	28.11
"	Northumberland	Corbridge (Howden Dene) ...	2.74	2.36	1.60	2.31	.79	1.51	4.95	1.85	4.31	1.03	.57	3.26	27.28
"	"	Bellingham (High Green Manor)	4.27	3.58	2.45	2.06	1.39	1.59	3.90	2.53	4.55	1.56	.78	4.23	32.89
"	"	Morpeth (Bothalhaugh Lawn)	2.76	2.38	1.85	1.52	.61	1.43	4.08	2.10	4.04	1.77	1.02	3.20	26.76
"	"	Font. Res. (Tynemouth W.W.)	4.98	2.57	2.29	2.34	.86	1.01	4.54	2.14	4.91	1.84	.95	4.30	32.73
"	"	Glanton (Glanton Pyke Gardens)	4.12	1.97	2.24	2.26	1.18	1.47	4.97	2.03	3.50	2.25	1.04	3.24	30.27
"	"	Ilderton (Lilburn Tower Gdns.)	4.04	2.32	1.92	2.10	.82	1.43	4.68	1.76	3.70	2.88	1.57	3.20	30.42
"	Cumberland	Penrith (Briar Cottage) .....	2.95	3.18	2.12	2.58	1.26	2.15	3.99	2.50	4.03	.80	1.13	5.53	32.22
"	"	Geltsdale .....	2.73	3.25	2.01	2.69	1.85	3.41	5.63	3.43	2.75	1.15	1.33	4.92	35.15
"	"	Carlisle (Scaleby Hall) .....	2.50	3.41	1.66	1.85	1.47	2.92	3.98	2.81	2.34	1.10	.98	3.88	28.90
"	"	Whitehaven (Irish Street) ....	3.91	4.43	2.05	2.71	3.65	2.56	6.55	5.04	2.41	2.71	2.45	5.22	43.69
"	"	Silecroft (Old Chappels) .....	6.35	7.42	3.17	1.99	4.23	3.25	6.24	5.51	3.50	2.47	4.22	5.40	53.75
"	Westmorland	Kirkby Stephen (Redman Ho.)	3.62	4.22	3.60	2.95	1.43	1.83	5.06	2.83	3.74	1.89	2.13	7.49	40.79
"	"	Mickleden.....	15.71	14.70	7.72	6.24	10.60	7.50	13.20	9.40	12.40	4.57	9.27	20.75	132.06
"	"	Kendal (Crosthwaite Vic.) ....	6.19	6.16	3.61	2.40	3.47	2.72	5.80	5.37	4.14	1.81	3.45	8.02	53.14
England. General Mean, 155 Stations .....			3.99	3.27	2.51	2.96	1.25	1.51	4.39	3.62	2.92	1.30	1.76	4.21	33.69

**TABLE II.—(con.). MONMOUTH AND WALES, AND THE ISLANDS.**

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
XI.	Monmouth	Newport W.W. (Newchurch)	4.74	5.84	5.09	3.70	1.20	1.11	6.37	4.55	2.85	2.29	2.27	7.21	47.22
"	"	Abergavenny (The Chain)	5.54	4.83	4.26	3.33	.60	.55	4.33	2.94	2.18	1.15	1.65	6.56	37.92
"	Glamorgan	Swansea (Victoria Park)	4.66	5.10	3.43	2.94	2.34	1.35	5.59	4.73	4.90	1.57	2.74	5.96	45.31
"	"	Bridgend (Highmead)	4.21	5.01	4.98	3.32	2.19	1.90	5.94	5.13	4.24	1.05	2.13	7.56	47.66
"	"	Treherbert (Tyn-y-waun)	9.12	13.89	9.06	5.75	2.33	2.58	11.92	6.84	7.07	3.06	5.28	13.47	90.37
"	"	Cardiff (Roath Park)	4.79	4.95	4.35	3.21	1.44	1.37	4.62	4.27	3.75	.87	2.91	7.22	43.75
"	Carmarthen	Carmarthen (The Friary)	6.05	5.75	4.10	3.00	1.96	1.96	6.37	4.64	4.54	1.65	2.18	5.39	47.59
"	"	Llandovery (Nantyrhogfaen)	5.02	7.21	4.34	3.47	1.61	1.93	6.13	3.99	4.14	1.22	2.43	6.71	48.20
"	Pembroke	St. David's	3.75	3.15	3.17	2.15	1.69	1.75	4.62	4.45	4.28	1.27	1.54	3.97	35.79
"	"	Tenby	4.62	4.67	4.04	3.25	1.85	1.42	5.18	3.79	5.02	1.06	1.75	5.21	41.86
"	"	Haverfordwest (Grammar Schl.)	6.25	5.07	3.68	4.42	2.50	2.30	6.29	5.36	6.03	1.41	2.24	5.67	51.22
"	"	Fishguard (Langton, Dwrbach)	5.96	5.78	4.72	3.74	2.49	2.52	5.65	5.12	4.99	1.85	2.65	6.41	51.88
"	Cardigan	Cardigan (County School)	5.16	4.12	4.00	3.61	1.46	1.71	5.10	4.20	3.57	1.31	1.80	5.05	41.09
"	"	Lampeter (Falcondale)	6.35	6.73	3.49	4.19	1.67	1.87	6.51	3.58	4.30	1.33	2.18	6.16	48.36
"	Brecon	Swansea W.W. (Cray Res.) No.1	8.76	10.69	7.30	5.20	2.23	2.17	8.88	5.14	4.85	2.61	3.92	11.25	73.00
"	"	Birmingham W.W.(Cois-yr-hwch)	10.25	12.65	7.65	6.31	2.50	5.36	9.70	7.30	7.55	2.88	4.50	11.80	88.45
"	Radnor	Llandrindod Wells (Kimberley)	4.63	5.20	3.65	3.19	.97	1.65	4.55	2.80	2.73	1.15	1.97	4.92	37.41
"	Montgomery	Newtown (Penarth Weir)	4.00	3.91	2.82	3.30	1.10	1.46	3.85	2.80	2.23	1.53	1.49	4.24	32.73
"	"	Carno (Council School)	6.39	7.15	3.86	3.90	.88	1.68	4.28	3.27	3.31	1.35	2.83	6.00	44.90
"	"	Landysilio Rectory	3.71	3.48	2.08	2.29	1.28	.60	3.54	2.30	1.38	.50	.79	3.56	25.51
"	"	Lake Vyrnwy (Bk Cynon Isaf)	7.24	8.37	4.83	3.38	1.84	2.52	6.40	3.76	4.09	1.95	3.04	8.20	55.62
"	Flint	Rhyl Sewage Works	2.36	3.44	1.41	1.84	.55	1.51	2.60	1.83	2.30	.65	1.79	4.02	24.30
"	Denbigh	Wrexham (Packsaddle Res.)	4.16	4.03	2.47	2.90	.56	1.07	3.38	2.04	3.17	.81	1.78	5.01	31.38
"	"	Gyffylliog (Fachlwyd Hall)	4.73	5.13	3.39	3.08	.99	1.61	3.93	2.86	2.92	.67	2.51	6.57	38.39
"	"	Pentre Foelas (Voelas Hall)	7.17	7.07	5.61	4.71	1.51	2.32	5.06	3.11	3.81	1.65	3.26	10.18	55.46
"	Merioneth	Dolgelly (Bryntirion)	6.63	7.14	3.95	3.33	1.84	2.88	5.50	5.25	7.56	1.69	4.12	6.80	56.69
"	"	Trawsfynydd Camp	6.50	8.49	6.13	3.81	2.33	3.26	6.64	5.50	7.64	1.39	5.36	9.09	66.14
"	Carnarvon	Llandudno	3.39	3.19	1.82	2.24	.28	1.45	2.69	1.45	2.06	.32	1.19	4.33	24.41
"	"	Bethesda (Pentrhyn Quarries)	7.36	8.62	4.18	4.95	.92	3.61	5.28	3.98	5.08	2.17	3.93	11.06	61.14
"	"	Abersoch	4.88	4.79	3.43	2.73	1.48	1.72	4.30	3.72	5.45	1.25	3.41	5.16	42.32

TABLE II.—(con.). MONMOUTH AND WALES—(con.).

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
XI.	Carnarvon .....	Snowdon (Cwm Dyli) .....	13.41	20.17	10.59	8.21	6.20	7.21	12.27	9.90	12.26	4.78	8.55	20.94	134.49
"	Anglesey .....	Holyhead (Salt Island) .....	4.38	3.39	2.15	2.58	1.09	1.14	3.85	3.79	3.93	1.56	1.56	4.25	33.67
"	" .....	Llanerchymedd (Llwydrth Esgb)	3.73	4.12	2.63	3.49	1.59	1.53	3.68	3.20	3.86	1.12	1.70	5.07	35.72
<b>Wales. General Mean, 33 Stations .....</b>			<b>5.75</b>	<b>6.46</b>	<b>4.32</b>	<b>3.68</b>	<b>1.68</b>	<b>2.09</b>	<b>5.61</b>	<b>4.17</b>	<b>4.49</b>	<b>1.55</b>	<b>2.77</b>	<b>7.12</b>	<b>49.69</b>
<b>England and Wales. General Mean, 188 Stations .....</b>			<b>4.30</b>	<b>3.83</b>	<b>2.83</b>	<b>3.09</b>	<b>1.32</b>	<b>1.61</b>	<b>4.60</b>	<b>3.72</b>	<b>3.19</b>	<b>1.35</b>	<b>1.94</b>	<b>4.72</b>	<b>36.50</b>

ISLANDS.

XI.	Isle of Man .....	Douglas (Borough Cemetery) ..	6.18	5.30	2.59	2.79	1.35	1.81	4.19	3.03	4.13	1.84	3.06	5.00	41.27
"	" .....	Ramsey (North Promenade) ..	7.84	4.14	2.83	3.20	.53	1.78	3.03	2.18	5.05	2.15	4.64	6.97	44.34
"	Jersey .....	Millbrook (St. Helier W.V.) ..	4.44	2.03	3.88	3.23	1.19	1.71	3.48	2.37	2.47	1.77	2.81	4.37	33.75
"	Guernsey .....	St. Martin's (Les Blanchés) ..	4.55	1.93	3.33	3.41	.87	1.54	2.69	2.16	2.50	2.66	2.12	4.57	32.33
"	Sark .....	Pointe Robert .....	4.07	1.86	3.12	3.34	.97	1.35	3.08	2.38	2.42	1.27	2.12	4.86	30.84
"	Alderney .....	St. Anne's Rectory .....	4.79	2.65	3.53	3.50	.81	1.37	2.98	1.90	1.55	3.70	2.48	5.52	34.78

SCOTLAND.

XII.	Wigtownshire .. 3	Stoneykirk (Ardwell House) ..	6.11	4.72	1.44	2.81	2.52	2.14	3.71	3.26	3.24	2.20	2.21	2.98	37.34
"	" .. 4	Whithorn (Glasserton) .....	4.37	5.28	1.45	2.51	2.47	2.14	3.91	3.11	2.78	2.38	3.13	3.53	37.06
"	" .. 4	Kirkcowan (Craighlaw) .....	6.82	5.94	2.10	2.99	3.72	2.73	4.42	3.50	3.88	3.45	4.84	3.81	48.20
"	Kirkcudbrightshire 3	Dalry (Glendarroch) .....	7.80	5.55	2.29	3.27	3.08	1.66	4.41	3.67	3.34	3.28	3.13	5.39	46.87
"	" .. 4	Dalbeattie (Kirkennan) .....	4.77	4.56	3.07	3.30	3.20	1.60	4.32	4.44	3.49	2.45	2.07	5.62	42.89
"	Dumfriesshire .. 4	Dalton (Kirkwood) .....	4.73	4.72	2.52	2.84	3.28	3.12	7.82	4.22	3.54	2.84	1.72	5.06	46.41
"	" .. 4	Moffat (Craigiellands) .....	6.20	4.98	3.63	2.34	4.46	2.75	5.19	3.94	2.66	3.57	3.29	5.41	48.42
"	" .. 5	Langholm (Ewes) .....	5.38	5.31	3.22	3.38	3.89	2.34	8.08	4.16	3.40	3.11	1.87	5.81	49.95
"	Roxburghshire . 3	Jedburgh (Jedneuk) .....	1.31	2.09	1.60	2.38	.58	1.37	3.91	1.85	2.11	2.38	.52	2.16	22.26
XIII.	Selkirkshire ... 2	Ettrick Manse .....	4.79	5.95	4.33	4.24	3.17	1.80	5.58	3.75	2.72	3.96	2.72	6.79	49.80
"	" ... 4	Galashiels (The Peel Clovenfords)	3.70	3.72	3.03	2.60	1.07	1.00	4.12	3.18	2.10	2.31	1.64	3.38	31.85
"	Peeblesshire ... 2	Stobo Castle .....	4.55	3.31	2.52	2.21	1.64	2.45	3.54	2.41	2.50	3.12	1.79	4.01	34.05
"	Berwickshire ... 2	Earnsclough Burn (Blythe Rig)	3.64	2.88	3.10	3.45	.84	2.12	5.69	2.76	2.79	4.47	1.72	3.60	37.06
"	" ... 4	Marchmont House .....	2.93	2.96	2.19	2.32	.67	1.57	5.40	2.73	3.41	3.44	.92	2.74	31.28
"	Haddingtonshire 5	North Berwick Reservoir ....	1.83	2.12	1.58	1.93	.70	1.88	2.74	1.44	2.18	1.95	1.06	1.63	21.04

TABLE II.—(con.). SCOTLAND—(con.).

Div.	County.	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
XIII.	Midlothianshire .	5 Balerno (Cockburn Hill) .....	2.91	2.69	2.25	2.25	2.03	2.08	4.31	2.12	1.71	2.11	1.98	3.82	30.26
"	"	5 Edinburgh (Royal Observatory)	1.41	1.86	1.59	1.52	.67	1.70	3.74	1.47	1.73	1.68	1.20	2.68	21.25
XIV.	Lanarkshire ...	4 Airdrie (Hillend Reservoir) ...	3.40	2.54	2.71	1.82	3.93	2.33	3.88	2.79	2.61	2.17	2.05	3.67	33.90
"	"	5 Leadhills .....	13.92	8.48	4.06	4.68	4.87	5.13	9.17	5.57	3.84	4.11	5.63	8.02	77.48
"	"	5 Strathaven (East Overton Ho.) ..	4.05	3.17	2.37	1.71	3.98	2.05	3.36	3.38	2.12	2.04	2.78	4.85	35.86
"	Ayrshire .....	3 Dalry (Munnoch Reservoir) ..	3.98	6.30	2.56	3.41	4.91	2.77	3.35	3.43	4.05	3.16	4.53	4.06	46.51
"	"	6 Maybole (Culzean Castle Gdns.)	4.15	4.55	1.47	2.02	3.58	3.17	2.48	2.72	1.78	1.94	2.36	2.85	33.07
"	"	8 Colmonell (Knockdolian) .....	7.15	4.50	1.61	3.83	2.83	3.50	2.92	3.23	2.83	2.13	3.39	3.63	41.55
"	"	13 New Cumnock (Ayr Sanator'm)	6.10	5.42	2.57	3.29	4.24	3.20	3.51	3.68	3.14	2.57	3.59	3.61	44.92
"	Renfrewshire ..	2 Houston Manse .....	5.46	5.50	2.83	2.97	4.16	1.66	2.77	2.93	2.68	2.71	3.50	5.10	42.27
XV.	Dumbartonshire	2 Cardross (Kilmahew) .....	5.49	4.91	1.87	3.21	4.14	1.98	2.84	2.16	2.50	1.95	2.93	4.39	38.37
"	Stirlingshire ...	1 Falkirk (Westbank Garden) ..	4.19	2.77	2.07	2.04	2.81	1.41	3.61	1.73	1.97	1.67	1.96	3.86	30.09
"	Buteshire .....	1 Rothesay (Ardencraig) .....	6.56	6.59	2.56	3.49	5.23	4.05	3.93	3.80	3.21	2.85	5.53	5.33	53.13
"	"	3 Arran (Dougarie Lodge) .....	5.72	5.07	2.03	3.90	3.09	4.05	3.55	3.43	3.04	2.81	4.65	3.27	44.61
"	Argyllshire .....	3 Morvern (Kingairloch) .....	8.63	14.48	5.24	4.93	12.00	6.65	8.22	8.26	5.35	5.90	11.00	12.83	103.49
"	"	5 Connel Ferry (Ach-na-cloich) .	4.38	7.58	2.50	3.08	7.75	6.09	5.91	4.27	3.77	3.85	5.53	6.73	61.44
"	"	5 Glen Etive .....	5.78	9.17	3.76	2.08	13.19	4.61	7.64	4.49	5.17	5.20	4.64	11.59	77.32
"	"	6 Loch Awe (Ford) .....	7.15	7.74	2.60	4.70	8.03	5.47	5.83	5.99	6.01	3.93	6.01	6.61	70.07
"	"	6 Dalnally (Manse of Glenorchy)	8.78	8.99	2.71	4.21	10.73	4.61	6.66	5.26	5.33	4.21	5.79	9.16	76.44
"	"	9 Muasdale (Killeen Manse) ...	5.65	5.15	1.74	2.89	3.50	3.35	2.56	3.62	3.23	2.46	4.15	2.85	41.15
"	"	10 Skipness Castle .....	4.84	6.47	1.92	3.71	3.86	3.37	2.78	3.72	2.83	2.72	4.41	3.98	44.61
"	"	11 Ardrishaig (Canal Office) ....	6.27	7.53	2.15	3.91	5.85	4.50	4.94	4.90	3.70	3.25	6.59	6.32	59.91
"	"	11 Ardinglas .....	10.26	8.28	3.10	5.05	7.39	4.37	6.14	3.79	3.91	4.16	6.79	9.58	72.82
"	"	12 Loch Eck (Benmore) .....	11.09	11.64	3.67	6.01	7.87	4.97	5.97	5.57	5.43	3.76	7.09	10.04	83.11
"	"	14 Islay (Ardbeg) .....	6.58	6.24	1.51	3.06	3.59	2.83	2.65	4.55	2.50	2.09	4.59	2.84	43.03
"	"	14 Jura (Ardfin) .....	7.77	9.00	2.24	3.62	4.21	3.94	4.03	4.84	2.82	2.39	5.40	4.94	55.20
"	"	14 Mull (Iona Manse) .....	6.28	6.89	1.89	3.52	5.03	3.28	3.14	3.42	3.52	3.44	3.46	5.20	48.97
"	"	14 Mull (Glencannell) .....	12.24	13.75	5.44	5.76	13.86	6.93	9.61	7.42	8.37	7.20	10.74	13.15	114.47
"	"	14 Mull (Quinish) .....	6.43	8.11	3.02	3.41	6.59	3.87	4.51	4.18	3.38	3.77	5.48	7.12	59.87
XVI.	Fifeshire .....	2 Kirkcaldy (Munro Street) ....	2.57	2.13	1.85	1.37	1.69	1.75	3.25	1.71	2.40	2.21	1.66	1.99	24.57
"	"	3 Cupar (Rankellour) .....	3.80	1.78	2.08	1.55	.82	1.69	3.63	1.47	2.24	2.21	1.18	2.17	24.62
"	Perthshire .....	2 Aberfoyle (The Inn) .....	6.05	6.80	3.20	4.70	5.75	2.30	4.10	3.10	2.90	3.50	5.20	6.10	53.70
"	"	3 Glengyle .....	9.90	10.60	3.85	4.50	8.70	3.60	7.50	6.30	4.50	5.15	6.20	10.50	81.30

TABLE II.—(con.). SCOTLAND—(con.).

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
XVI.	Perthshire	Glendevon (Tormaukin) .....	5.46	3.67	4.34	3.14	4.56	1.50	7.05	3.69	2.51	3.40	4.14	5.69	49.15
"	"	Lochearnhead (Edenchip) .....	9.89	7.61	3.47	4.54	5.22	2.75	4.65	3.12	3.17	3.22	4.89	7.80	60.33
"	"	Crieff (Strathearn Hydro.) .....	4.84	3.75	2.00	3.10	2.05	1.66	3.19	1.81	1.74	2.15	3.07	3.70	33.06
"	"	Aberfeldy (Dall Avon) .....	7.06	3.39	1.91	2.36	2.25	1.58	3.03	1.52	1.69	1.47	1.90	5.84	34.00
"	"	Loch Rannoch (Dall) .....	6.84	5.25	2.00	2.09	3.44	2.04	2.37	1.60	2.24	2.02	2.48	6.40	38.77
"	"	Blair Atholl (Bruar Lodge) No. 2	6.06	3.87	2.12	4.43	3.82	2.77	4.98	3.37	2.31	2.10	2.79	5.65	44.27
"	"	Coupar Angus (Public School)	4.39	2.62	1.73	1.48	1.38	1.58	2.62	2.07	1.78	1.39	1.58	2.22	24.84
"	"	Kirkmichael (Balintuim Ho.)	7.99	4.77	2.13	2.76	1.74	1.29	3.36	3.36	2.94	1.60	1.74	4.22	37.90
"	Forfarshire	Arbroath (W. Cemetery) .....	3.41	1.83	2.11	1.49	.63	1.47	3.45	1.63	2.32	1.77	1.49	1.73	23.33
"	"	Glen Prosen (Lednathie) .....	8.07	6.46	2.32	3.28	1.66	1.59	4.15	2.62	4.41	1.73	2.20	4.15	42.64
XVII.	Kincardineshire	Marykirk (Balmakewan) .....	5.45	2.20	2.03	2.02	.58	1.85	2.73	1.74	3.31	1.31	1.65	1.88	26.75
"	"	Crathes (Pinewood) .....	6.34	3.63	1.92	2.65	.70	1.92	4.39	1.97	3.27	1.70	1.49	2.59	32.57
"	Aberdeenshire	Glen Tanner (Aitnach) .....	5.75	3.46	2.82	3.72	1.28	1.60	5.00	1.58	3.49	1.45	1.80	5.60	37.55
"	"	Braemar (Derry Lodge) .....	5.85	3.41	2.23	4.17	2.55	1.97	3.71	3.03	1.62	1.93	1.86	2.90	35.23
"	"	Aberdeen (Cranford House) ..	4.80	2.41	2.47	3.70	1.00	2.39	4.40	2.51	3.47	2.84	2.20	2.50	34.69
"	"	Strathdon (Estate Office) .....	5.72	2.63	2.37	4.27	1.37	2.02	3.61	2.15	2.98	1.53	2.09	1.68	32.42
"	"	Haddo House .....	4.48	2.44	2.10	3.50	1.28	2.03	3.93	1.83	2.63	2.18	2.58	2.24	31.22
"	"	Peterhead (Forehill Works) ..	2.75	1.80	2.33	3.55	1.30	2.55	4.08	3.12	2.66	2.49	3.45	2.06	32.14
"	"	Huntley (Cruchie) .....	4.23	2.70	2.51	4.40	1.54	2.58	4.46	2.34	2.92	2.28	2.52	1.58	34.06
"	Banffshire	Banff (Duff House) .....	3.62	2.31	1.99	3.48	1.49	2.28	3.30	1.79	2.19	1.56	2.61	1.55	28.17
"	Morayshire	Gordon Castle .....	2.78	2.32	2.00	4.07	1.96	1.60	3.77	2.78	2.60	1.34	2.48	1.44	29.14
"	"	Grantown-on-Spey .....	2.72	1.92	3.06	5.04	1.54	1.42	3.95	3.02	1.84	2.06	2.13	1.86	30.56
"	"	Knockando (Schoolhouse) .....	2.07	1.49	2.24	5.22	1.41	1.02	4.45	3.01	2.50	1.88	1.99	1.19	28.47
"	Nairnshire	Nairn (Achareidh) .....	1.87	1.93	1.56	2.60	2.14	1.46	3.30	2.57	1.70	1.62	1.53	1.37	23.65
XVIII.	Invernessshire	Cluny Castle .....	5.57	4.06	2.31	2.61	3.05	2.51	2.97	2.93	1.33	2.33	2.69	4.98	37.34
"	"	Alvie Gardens .....	3.46	2.29	2.55	4.25	2.44	1.57	3.13	1.88	1.09	1.62	2.45	3.34	30.07
"	"	Loch Ness (Foyers) .....	2.77	6.27	2.92	2.81	4.11	1.40	2.67	2.23	.95	3.26	3.26	5.64	38.29
"	"	Loch Quoich (Glenquoich) ..	11.85	10.78	4.75	4.87	13.73	6.09	6.29	5.66	5.86	4.04	10.74	16.58	101.24
"	"	Invergarry Gardens .....	4.80	11.29	4.94	2.76	7.82	2.92	4.26	3.34	2.51	3.40	4.13	10.87	63.04
"	"	Arisaig House .....	4.95	5.68	2.81	3.96	8.14	4.90	5.19	4.20	3.85	3.52	5.24	7.85	60.29
"	"	Glenleven (Corrour Station) ..	6.46	9.14	3.17	1.71	9.42	3.35	4.62	3.91	3.13	5.08	5.28	12.05	67.32
"	"	Fort William (Atholl Bank) ..	5.46	10.81	4.40	2.54	11.86	4.00	5.18	4.63	3.54	4.92	6.27	9.68	73.29
"	"	Hyskier .....	4.64	4.78	2.10	2.26	4.77	2.93	3.11	4.46	2.46	2.66	3.00	6.46	43.63

**TABLE II.—(con.). SCOTLAND—(con.).**

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
XVIII	Inverness-shire	18 Skye (Kyleakin, Dunringell)	5.04	9.36	4.24	3.30	9.17	4.05	4.44	3.34	3.37	3.25	5.02	9.52	64.10
"	"	18 Skye (Portree)	6.12	8.25	3.59	6.31	9.48	4.25	4.33	6.06	3.40	4.70	5.27	8.91	70.67
"	"	18 Skye (Dunvegan)	6.33	7.82	2.91	4.24	7.32	4.04	4.06	5.40	3.34	3.74	4.28	7.47	60.95
"	"	19 Barra (Castle Bay)	4.15	4.22	1.31	3.65	2.63	2.18	2.01	2.30	2.18	2.36	2.17	2.60	31.76
"	Ross & Cromarty	4 Achnasheen (Ledgowan)	5.56	6.21	5.13	4.84	9.26	4.40	3.26	4.49	3.26	3.41	7.63	9.41	66.76
"	"	4 Strathpeffer	3.61	3.63	1.46	1.48	2.85	1.61	2.21	2.55	1.27	1.84	1.94	2.78	27.23
"	"	4 Alness (Ardross Castle)	4.16	4.00	2.89	4.01	3.30	1.04	3.30	2.16	1.98	2.72	2.38	3.75	35.69
"	"	6 Inverpolly Lodge	4.13	3.66	2.89	2.38	5.51	2.69	1.90	3.40	1.76	1.71	4.39	6.09	40.51
"	"	7 Braemore (Loch a' Bhraoin)	8.59	7.71	3.71	4.91	7.59	4.30	3.16	5.34	3.97	2.71	8.52	8.87	69.38
"	"	8 Loch Torridon (Bendamph)	7.49	11.95	6.54	5.74	10.25	5.55	4.37	4.51	3.84	3.35	7.51	10.74	81.84
"	"	8 Poolewe (Inverewe Gardens)	4.44	4.76	3.11	3.72	8.15	3.95	3.98	2.99	2.71	1.93	4.18	6.22	50.14
"	"	9 Glen Shiel (Shiel House)	5.62	9.65	1.55	3.38	12.38	3.88	6.45	3.54	4.53	2.40	7.20	9.15	69.73
"	"	10 Stornoway	5.82	5.36	3.13	2.56	4.86	2.73	2.56	4.61	2.76	3.07	3.74	5.88	47.08
XIX.	Sutherlandshire	2 Dunrobin Castle	4.13	2.04	1.95	2.81	2.72	1.34	2.27	1.51	2.38	1.09	2.05	1.71	26.00
"	"	4 Tongue Manse	3.78	1.65	2.86	4.41	2.92	3.50	2.20	2.75	2.35	2.39	3.03	3.33	35.17
"	"	4 Melvich Schoolhouse	4.06	2.20	3.07	3.77	2.16	2.30	3.17	3.03	2.62	1.33	3.14	3.01	33.83
"	"	5 Loch More (Achfary)	6.12	6.05	7.05	6.08	7.97	5.69	3.77	5.58	4.81	3.98	9.93	9.56	76.59
"	Caithness-shire	2 Wick	3.27	1.80	1.68	3.41	1.83	1.81	3.16	2.05	2.82	1.53	2.67	2.38	28.41
"	"	3 Thurso (Buckies)	4.53	2.33	2.39	3.98	2.20	2.43	3.23	2.35	2.77	1.79	2.82	3.01	33.83
"	Orkney	Pomona (Deerness)	2.96	1.99	2.25	3.26	2.51	1.32	3.10	2.48	2.76	1.98	2.90	4.96	32.47
"	Shetland	Fetlar (The Manse)	2.32	2.65	2.10	4.41	2.99	1.36	3.11	3.13	2.54	1.60	3.32	3.03	32.56
<b>Scotland. General Mean, 102 Stations</b>			<b>5.42</b>	<b>5.21</b>	<b>2.71</b>	<b>3.40</b>	<b>4.38</b>	<b>2.81</b>	<b>4.18</b>	<b>3.36</b>	<b>3.01</b>	<b>2.75</b>	<b>3.71</b>	<b>5.22</b>	<b>46.16</b>

**IRELAND.**

XX.	Co. Cork	4 Bantry House	9.34	6.11	4.01	2.90	2.79	.47	5.49	5.28	4.66	2.01	4.28	6.16	53.50
"	"	6 Castletownshend (Seafeld)	6.66	6.31	3.40	3.42	2.79	.92	3.68	5.89	3.27	2.49	2.37	5.11	46.31
"	"	6 Clonakilty (Shannon Vale Ho.)	6.07	5.69	2.62	2.80	2.48	.89	3.74	4.92	3.34	2.51	2.57	4.23	41.86
"	"	6 Dunmanway (The Rectory)	9.81	8.10	4.03	3.74	3.26	1.54	5.53	5.03	4.59	3.07	3.42	7.50	59.62
"	"	7 Ballinageary (Inchibeg)	12.21	12.13	6.31	4.58	3.14	2.33	6.96	5.64	6.01	4.77	4.70	13.44	82.22
"	"	7 Midleton (Ballinacurra)	4.74	3.40	1.70	2.64	1.58	1.03	3.07	4.53	2.77	1.49	2.12	3.36	32.43
"	"	7 Dripsey (Woollen Mills)	5.74	4.95	2.57	3.02	1.35	.90	4.42	3.93	3.51	1.49	1.64	4.17	37.69

TABLE II.—(con.). IRELAND—(con.).

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
XX.	Co. Cork	Kanturk (Castlecor)	4.73	4.67	2.62	2.86	1.74	1.89	3.10	3.23	3.47	1.15	1.79	4.67	35.92
"	"	Mitchelstown Castle	3.79	4.33	1.85	3.33	1.75	2.70	2.72	3.11	4.00	.90	2.09	3.69	34.26
"	"	Cahirveen Water Works	8.46	7.77	3.27	3.39	4.57	2.49	5.69	6.52	5.67	2.73	3.91	7.57	62.04
"	"	Killarney (District Asylum)	7.35	7.44	4.54	3.31	2.38	2.09	4.15	3.90	3.74	1.04	2.49	7.61	50.04
"	"	Killorglin (Callinacree)	8.32	7.96	3.96	3.40	3.08	1.29	6.62	4.20	7.71	.65	2.00	6.81	56.00
"	"	Darrynane Abbey	7.94	5.59	3.72	4.04	3.22	1.41	5.50	6.62	5.39	1.99	3.50	5.69	54.61
"	"	Kenmare (Dromore Castle)	8.79	8.71	4.14	4.93	4.57	1.96	6.76	6.49	6.70	2.36	3.15	8.09	66.65
"	"	Waterford (Brook Lodge)	4.49	3.00	1.31	2.71	1.44	1.17	2.94	4.76	2.53	1.20	1.47	3.61	30.63
"	"	Carrick-on-Suir (Seskin)	5.03	2.89	1.92	2.95	.85	1.35	2.72	4.66	4.25	1.00	2.21	4.92	34.75
"	"	Nenagh (Traverston)	4.22	5.14	2.23	2.30	2.20	3.44	3.48	2.80	4.93	1.38	1.50	5.41	39.03
"	"	Nenagh (Castle Lough)	4.79	6.12	2.07	3.14	2.00	1.89	3.37	3.06	3.42	1.07	1.27	5.50	37.70
"	"	Clogheen	4.55	4.21	4.20	2.59	1.90	1.37	2.35	3.15	4.40	.70	2.62	5.57	37.61
"	"	Cashel (Ballinamona)	3.68	3.75	1.39	2.41	1.31	1.44	2.37	3.39	3.49	1.26	1.42	4.32	30.23
"	"	Roscrea (Timoney Park)	3.09	3.44	1.94	2.82	1.69	2.55	2.64	3.28	2.68	.82	.87	4.91	30.73
"	"	Knocklong (Kilfrush)	3.68	4.08	2.16	2.81	1.84	2.48	2.92	3.03	3.61	.49	1.33	4.51	32.94
"	"	Foynes (National School)	4.02	5.70	1.84	2.44	1.52	2.41	3.48	2.73	4.54	.66	1.72	6.11	37.17
"	"	Limerick (O'Connell Street)	3.65	4.54	1.66	2.83	2.27	1.96	4.00	3.31	4.58	.94	1.59	5.59	36.92
"	"	Inagh (Mount Callan)	8.46	7.77	3.28	4.40	3.95	4.56	8.13	5.30	6.81	1.88	4.93	10.22	69.69
"	"	Kilkee (Liscrona)	5.87	4.95	2.58	2.74	2.66	1.71	5.14	3.54	3.12	.96	1.95	5.04	40.26
"	"	Newmarket-on-F. (Dromoland Cas.)	4.62	5.27	1.69	2.27	1.91	1.33	4.64	3.08	2.99	.66	1.90	5.48	35.84
XXI.	"	Foulkesmill (Longraigue)	4.34	3.04	1.82	3.10	1.62	1.65	3.82	5.34	3.03	1.08	1.51	3.51	33.86
"	"	Johnstown Castle	3.08	2.35	2.23	3.11	1.86	.95	4.64	6.87	3.02	1.33	1.24	3.77	34.45
"	"	Enniscorthy (Woodbrook)	5.62	3.49	1.95	3.70	1.49	1.55	3.97	6.63	3.97	1.46	2.51	4.89	41.23
"	"	Gorey (Courtown House)	3.76	2.01	2.09	3.29	1.24	1.13	3.21	6.71	3.11	.98	1.23	2.42	31.18
"	"	Kilkenny (Lavistown House)	2.70	2.16	.98	2.31	1.09	1.00	2.41	2.53	2.91	.77	1.03	3.58	23.47
"	"	Rathdrum (Avondale)	5.06	3.14	2.32	3.61	1.32	1.15	3.08	6.78	2.66	1.58	1.40	3.32	35.42
"	"	Annacarter Schoolhouse	6.37	2.92	2.70	4.42	1.10	1.08	3.75	6.93	4.14	1.40	1.47	4.27	40.55
"	"	Carlow (Browne's Hill)	3.76	2.60	1.63	3.25	.91	.85	2.81	5.95	2.73	1.13	1.01	4.12	30.75
"	"	Hacketstown Rectory	4.51	2.58	1.96	3.23	1.58	1.77	3.19	6.18	3.71	1.29	1.19	2.96	34.15
"	"	Abbey Leix (Blandsfert)	3.67	3.58	1.49	3.65	1.60	1.77	3.03	3.49	3.42	1.01	.78	4.53	32.02
"	"	Mountmellick	4.42	4.66	2.17	3.58	2.07	1.86	3.07	3.72	3.11	1.58	.84	5.48	36.56
"	"	Birr Castle	2.83	3.95	1.64	2.27	1.84	1.37	2.63	3.17	3.82	1.16	.84	4.01	29.53
"	"	Straffan House	2.68	3.00	1.70	2.72	1.20	1.28	2.96	4.19	2.62	1.35	.71	2.94	27.35

TABLE II.—(con.). IRELAND—(con.).

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
XXI.	Co. Dublin . . . . .	Howth Castle . . . . .	2.11	1.30	1.02	2.57	.74	1.08	2.47	4.00	2.11	.96	.46	2.04	20.86
"	"	Balbriggan (Ardgillan) . . . . .	2.70	1.93	1.48	2.69	.82	1.20	2.93	3.88	2.45	1.28	.50	2.45	24.31
"	Meath . . . . .	Dunboyne (Stirling, Clonee) . . . . .	3.03	2.31	1.99	3.32	1.15	1.37	3.37	5.07	2.98	1.76	.59	3.35	30.29
"	"	Summerhill House . . . . .	2.91	2.77	2.43	3.06	2.23	1.38	2.87	5.20	2.72	1.86	.62	3.20	31.25
"	"	Kells (Headfort) . . . . .	3.47	3.18	1.71	3.13	1.93	1.79	3.31	5.65	2.75	1.60	.85	4.13	33.50
"	Westmeath . . . . .	Moate (Coolatore) . . . . .	3.16	3.46	1.92	2.74	1.94	1.27	3.09	3.70	3.19	1.55	.89	3.76	30.67
"	"	Mullingar (Belvedere) . . . . .	3.31	3.40	1.97	2.85	2.08	1.36	3.28	5.52	2.61	1.21	.78	4.46	32.83
"	"	Castlepollard (Pakenham Hall) . . . . .	3.10	2.79	2.16	2.91	2.67	2.15	3.45	4.75	3.33	1.49	1.19	4.88	34.87
"	Louth . . . . .	Dundalk (Aughneskea Reservoir) . . . . .	4.32	3.67	1.93	3.05	2.21	1.95	4.82	5.73	3.45	2.21	1.06	4.76	39.16
"	"	Greenore . . . . .	3.01	2.97	1.44	2.29	1.75	1.48	3.06	3.95	2.30	1.41	.82	3.79	28.27
"	"	Ballymahon (New Castle) . . . . .	3.22	3.62	1.87	2.59	1.96	1.43	2.82	4.21	3.49	1.45	1.38	4.48	32.52
"	Longford . . . . .	Castle Forbes Gardens . . . . .	4.07	4.74	2.00	2.43	2.44	1.46	3.17	4.50	3.57	1.66	1.64	4.27	35.95
XXII.	Galway . . . . .	Galway (Waterdale) . . . . .	3.65	5.90	2.17	3.38	3.06	2.16	5.05	4.13	4.65	1.71	2.41	5.50	43.77
"	"	Ballynahinch Castle . . . . .	8.11	8.03	4.08	4.82	3.61	3.82	9.05	6.31	8.46	2.35	4.56	7.72	70.92
"	"	Tuam (Gardenfield) . . . . .	3.79	7.44	3.07	2.83	3.31	1.47	5.30	4.53	3.79	2.60	2.46	4.33	44.92
"	"	Killimor (Ramore) . . . . .	3.75	4.25	1.64	2.98	2.08	1.62	3.03	4.35	4.30	1.27	1.17	5.14	35.58
"	"	Ahascragh (Clonbrook) . . . . .	4.23	5.63	2.42	2.71	3.12	2.28	4.79	4.01	4.88	2.19	1.65	6.31	44.22
"	Roscommon . . . . .	Strokestown (Castlenode) . . . . .	3.93	4.82	1.89	2.23	2.00	2.07	3.97	3.24	3.35	1.32	1.27	4.69	34.78
"	Mayo . . . . .	Swinford Rectory . . . . .	4.57	5.64	2.89	3.41	1.63	2.23	4.29	3.19	5.52	1.73	2.19	4.87	42.16
"	"	Crossmolina (Enniscoe) . . . . .	6.06	7.27	3.49	4.47	2.80	2.33	5.54	5.00	5.32	2.59	2.99	7.36	55.22
"	"	Westport House . . . . .	5.35	5.59	3.43	3.56	1.79	2.01	5.98	3.97	5.98	1.83	4.13	7.71	51.33
"	"	Mallarany . . . . .	7.48	7.38	4.53	4.30	3.64	3.84	7.73	6.22	8.43	2.95	4.91	8.34	69.75
"	"	Aasleagh House . . . . .	11.33	11.75	6.45	6.84	4.05	5.45	9.14	7.13	12.14	3.57	6.23	11.78	95.86
"	"	Cong (The Glebe) . . . . .	5.73	6.39	2.95	3.47	3.16	1.51	5.63	4.24	4.68	3.10	2.76	5.67	49.29
"	"	Ballinrobe (Creagh) . . . . .	5.66	7.38	3.04	3.40	2.66	1.31	4.84	4.29	4.15	2.76	2.85	6.45	48.89
"	Sligo . . . . .	Collooney (Markree Obsv.) . . . . .	5.25	6.08	2.93	4.29	1.49	3.03	4.48	3.76	3.97	1.93	2.79	5.18	45.18
"	"	Sligo (Ard-na-veagh) . . . . .	4.76	5.64	2.88	3.86	1.50	3.61	4.32	3.80	3.90	1.74	2.73	4.68	43.42
"	"	Drumshanbo (Lough Allen Sluices) . . . . .	3.31	3.90	1.93	2.45	1.50	2.34	4.04	3.47	2.84	1.74	1.53	4.06	33.11
XXIII.	Cavan . . . . .	Belturbet (Cloverhill) . . . . .	3.16	3.21	1.41	2.31	1.80	1.50	3.94	3.43	2.82	1.83	1.40	3.46	30.27
"	Fermanagh . . . . .	Enniskillen (Portora) . . . . .	4.08	4.93	1.84	2.81	1.67	2.30	4.50	3.71	2.91	1.41	2.08	4.23	36.47
"	"	Belleek (Heronshaw) . . . . .	4.70	5.50	2.32	3.41	1.91	3.51	4.79	3.47	3.02	1.38	2.33	5.13	41.47
"	Monaghan . . . . .	Monaghan (Workhouse) . . . . .	3.79	3.21	1.52	2.23	1.50	1.80	3.67	3.98	2.61	1.60	1.21	4.02	31.14
"	Armagh . . . . .	Lurgan (Belle Vue) . . . . .	3.12	2.86	1.43	2.94	1.68	2.14	2.82	3.59	2.00	1.32	1.23	2.79	27.92

**TABLE II.—(con.) IRELAND—(con.).**

Div.	County.	Station.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
XXIII	Co. Armagh ....	Armagh Observatory .....	3.31	2.72	1.35	3.08	1.77	2.15	3.41	3.84	2.66	1.27	1.20	2.97	29.73
"	" Down .....	Newry (Bridge Street House).	5.29	3.85	2.09	3.04	1.96	1.86	3.19	4.41	3.81	1.89	1.29	3.97	36.65
"	" .....	Seaford .....	3.80	4.02	1.94	4.68	1.77	2.18	3.65	3.85	3.05	1.73	1.54	4.59	36.80
"	" .....	Donaghadee .....	4.58	3.09	1.31	3.27	1.61	2.17	3.50	2.53	2.38	.98	1.24	3.15	29.81
"	" Antrim .....	Belfast (Queen's University) ..	4.55	3.52	1.39	4.05	2.06	2.10	3.51	3.62	2.62	1.45	1.23	2.49	32.59
"	" .....	Larne (Sallagh Springs) .....	6.10	5.17	2.54	4.43	1.57	2.46	4.55	4.35	3.56	1.15	2.79	4.58	43.25
"	" .....	Glenarm Castle .....	5.25	4.75	2.10	5.22	2.08	1.93	3.68	4.58	2.98	1.36	2.43	3.47	39.83
"	" .....	Antrim (Ardnaveigh) .....	3.82	3.29	1.79	3.62	1.89	1.89	3.51	3.00	2.17	1.55	1.60	2.63	30.76
"	" .....	Ballymena (Harryville) .....	5.24	4.78	2.27	4.00	1.86	2.44	3.86	3.80	3.28	1.77	2.33	3.58	39.21
"	" Londonderry	Londonderry (Dunruadh) ....	3.73	4.88	1.91	3.29	2.13	3.19	4.60	3.25	2.32	1.36	2.38	4.21	37.25
"	" .....	Glendora Lodge .....	5.89	6.00	2.92	5.69	2.87	3.12	4.56	4.72	3.77	1.80	3.24	5.57	50.15
"	" .....	Limavady (Drenagh) .....	3.22	3.75	1.38	4.19	2.37	2.45	3.20	3.75	2.25	.97	2.72	3.15	33.40
"	" .....	Tullyhogue (Rockdale House)	5.12	4.54	1.52	3.26	1.85	2.25	4.04	4.08	3.75	2.05	1.57	4.32	38.35
"	" Tyrone .....	Omagh (Edenfel) .....	5.16	5.49	2.37	3.71	3.07	3.27	4.68	4.49	3.80	2.01	2.61	5.36	46.02
"	" .....	Sion Mills (Sion House) .....	4.40	4.72	2.03	3.49	1.72	2.21	4.45	3.77	2.55	1.64	2.73	4.47	38.18
"	" .....	Malin Head .....	3.33	4.75	1.82	2.48	1.94	2.23	3.09	2.50	1.89	1.33	2.17	2.83	30.36
"	" Donegal .....	Letterkenny (District Asylum)	5.37	5.15	2.25	4.24	1.80	2.23	3.96	3.04	2.99	1.29	2.82	5.84	40.98
"	" .....	Milford (The Manse) .....	4.85	5.19	1.87	3.88	1.32	2.63	4.01	3.61	3.03	1.52	3.28	4.71	39.90
"	" .....	Dunfanaghy (St. Helens) ....	3.96	4.20	2.08	3.26	1.24	2.68	3.11	3.54	3.08	2.16	2.71	4.47	36.49
"	" .....	Narin (Kiltoorish) .....	4.83	6.03	2.51	3.13	1.60	3.43	5.01	3.68	3.40	2.79	2.96	7.25	46.62
"	" .....	Killybegs (Rockmount) .....	6.41	7.40	3.92	3.56	2.89	4.43	6.45	4.28	5.31	2.37	4.12	7.50	58.64
<b>Ireland. General Mean, 94 Stations .....</b>			<b>4.89</b>	<b>4.78</b>	<b>2.40</b>	<b>3.32</b>	<b>2.09</b>	<b>2.03</b>	<b>4.12</b>	<b>4.35</b>	<b>3.81</b>	<b>1.63</b>	<b>2.08</b>	<b>4.95</b>	<b>40.45</b>
<b>British Isles. † General Mean, 390 Stations .....</b>			<b>4.75</b>	<b>4.41</b>	<b>2.70</b>	<b>3.23</b>	<b>2.30</b>	<b>2.02</b>	<b>4.36</b>	<b>3.75</b>	<b>3.29</b>	<b>1.80</b>	<b>2.45</b>	<b>4.91</b>	<b>39.97</b>

† Including Isle of Man and Channel Islands.

TABLE III.—*Monthly Rainfall in 1922 ; the Average, 1881–1915, being taken as 100.*

Station.	County.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
St. Pancras, Camden Square.....	London.....	151	132	83	196	47	55	162	115	117	39	61	131
Tenterden, View Tower.....	Kent.....	187	112	109	191	43	63	114	99	137	52	50	90
Margate, Cliftonville.....	".....	134	65	79	111	39	86	79	117	181	85	36	77
Edenbridge, Falconhurst.....	".....	178	103	104	176	51	80	163	127	90	47	53	129
Compton, Compton House.....	Sussex.....	185	155	94	229	71	70	152	100	81	26	67	115
Brighton, Old Steyne.....	".....	157	135	79	197	45	76	168	120	75	21	49	97
Ventnor, Royal National Hospital	Hampshire.....	171	130	121	216	42	102	141	156	71	32	59	110
Fordingbridge, Oaklands.....	".....	173	131	109	180	41	47	234	221	80	32	70	118
Sherborne St. John Rectory.....	".....	139	119	101	198	56	49	193	135	70	29	54	95
Royston, Therfield Rectory.....	Hertfordshire.....	135	123	95	176	92	47	145	91	139	27	54	84
High Wycombe.....	Buckinghamshire.....	149	152	124	195	67	68	231	150	116	38	61	91
Oxford, Magdalen College.....	Oxfordshire.....	133	150	111	169	89	61	157	227	75	20	50	108
Wellingborough, Swanspool.....	Northamptonshire.....	185	132	91	214	62	57	170	223	116	31	48	111
Wisbech, Bank House.....	Cambridgeshire.....	134	168	114	161	71	60	210	75	143	27	57	109
Chelmsford, High Street.....	Essex.....	192	146	81	191	72	82	114	95	144	44	63	104
Hawkedon Rectory.....	Suffolk.....	195	111	116	185	61	55	154	80	162	24	65	69
Beccles, Geldeston.....	Norfolk.....	220	136	78	137	36	99	161	66	143	42	67	62
Worstead, Dilham.....	".....	209	162	89	177	40	74	215	57	141	49	70	79
Swoffham.....	".....	185	198	114	134	44	55	171	86	155	24	59	100
Bishops Cannings.....	Wiltshire.....	147	160	114	185	54	68	159	133	87	36	52	128
Evershot, Melbury House.....	Dorsetshire.....	173	112	120	174	37	45	205	171	74	34	47	91
Ashburton, Druid House.....	Devonshire.....	137	154	140	194	35	38	192	128	123	33	81	131
Cullompton.....	".....	142	134	108	144	45	48	121	145	149	30	62	139
Barnstaple, N. Dev. Athenæum..	".....	113	151	153	185	86	70	87	109	154	35	56	143
Penzance, Morrab Garden.....	Cornwall.....	149	141	125	142	67	49	156	126	135	51	44	131
St. Austell, Trevarna.....	".....	160	117	107	162	68	53	140	107	106	29	60	131
Altarnon Vicarage.....	".....	114	133	113	152	71	74	130	88	118	33	64	122
Litton, Sherborne Res. ....	Somersetshire.....	145	208	132	140	42	95	187	107	120	40	73	124
Cirencester, Dollarward House..	Gloucester.....	138	172	124	149	51	48	203	163	107	33	62	120
Kington, Gravel Hill.....	Hereford.....	120	135	93	88	32	33	163	110	110	16	58	123
Church Stretton, Wolstaston....	Shropshire.....	188	216	134	146	48	46	191	82	105	26	61	136
Market Drayton, Old Springs.....	Stafford.....	159	146	111	115	44	33	145	98	139	12	41	147

TABLE III.—*Monthly Rainfall in 1922; the Average, 1881–1915, being taken as 100—(con.).*

Station.	County.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Malvern, Church Street .....	Worcester.....	185	179	123	141	33	38	222	101	134	12	57	145
Farnborough .....	Warwick .....	162	137	105	161	41	39	195	186	144	34	64	132
Birmingham, Edgbaston .....	" .....	169	149	90	183	64	34	250	180	152	17	53	152
Belvoir Castle Gardens .....	Leicester .....	138	179	106	207	46	76	206	218	92	41	65	126
Boston, Black Sluice, Skirbeck ..	Lincoln .....	136	169	103	169	77	64	204	76	132	42	55	127
Lincoln, Skellingthorpe Hall....	" .....	138	187	107	133	41	34	181	114	152	42	54	146
Mickleover, Clyde House .....	Derby .....	179	183	110	164	51	38	164	208	101	22	40	144
Chelford, Astle Hall .....	Cheshire .....	145	183	86	120	55	69	165	131	128	17	46	139
Bury, Gin Hall No. 1 .....	S. Lancashire.....	120	176	109	120	79	91	139	130	142	18	94	138
Stonyhurst College .....	C. " .....	94	179	65	103	70	107	166	118	120	20	74	110
Southport, Hesketh Park .....	C. " .....	150	163	60	83	79	99	168	171	106	16	81	127
Cartmel, Holker Hall .....	N. " .....	127	179	75	87	127	100	139	110	140	27	58	124
Rotherham, Moorgate Grange....	W. R. Yorks .....	169	141	77	184	27	42	126	216	123	33	34	110
Bradford, Lister Park .....	" .....	158	148	104	173	53	60	154	199	156	25	56	106
York, Museum Gardens .....	" .....	154	134	114	95	63	60	187	166	109	32	63	113
Hull, Pearson Park .....	E. R. " .....	157	171	99	99	61	51	205	110	121	79	73	94
Leyburn, Bolton Hall .....	N. R. " .....	186	133	108	158	142	72	171	110	256	39	32	154
Felixkirk, Mount St John .....	" .....	146	122	92	130	43	93	172	94	125	43	58	144
Scarborough .....	" .....	148	117	121	84	38	83	145	107	132	31	34	85
Middlesbrough, Albert Park ....	" .....	111	118	92	97	81	87	152	83	158	47	34	179
Barnard Castle, County School ..	Durham .....	173	136	83	177	35	58	166	80	241	59	25	158
Newcastle, Town Moor .....	Northumberland ..	144	145	82	123	55	81	184	90	213	59	34	147
Hallington, Fawcett, Newc. WW ..	" .....	135	130	75	116	31	91	141	66	216	39	24	131
Ilderton, Lilburn Tower .....	" .....	196	112	71	113	35	67	189	61	158	79	82	122
Carlisle, Spital Cemetery .....	Cumberland .....	95	133	57	101	82	126	147	65	115	38	30	113
Borrowdale, Seathwaite .....	" .....	79	116	74	62	117	152	136	92	108	49	49	124
Appleby, Castle Bank .....	Westmorland .....	113	162	114	126	56	94	127	78	97	47	83	178
Abergavenny, Larchfield .....	Monmouth .....	147	134	127	131	30	24	202	99	107	26	41	140
Ystalyfera, Wern House .....	Glamorgan .....	109	173	123	99	79	54	184	91	124	35	53	110
Cardiff, Ely Pumping Station....	" .....	120	158	118	137	58	49	167	96	124	36	56	154
Carmarthen, The Friary .....	Carmarthen .....	138	155	108	109	71	68	181	100	131	29	44	94
Haverfordwest, Grammar School	Pembroke .....	136	146	108	169	100	85	197	129	170	26	45	99

TABLE III.—*Monthly Rainfall in 1922; the Average, 1881–1915, being taken as 100—(con.).*

Station.	County.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Strata Florida, Hafod.....	Cardigan .....	134	166	77	134	61	89	131	86	120	23	43	89
Lake Vyrnwy, Bank Cynon Isaf..	Montgomery.....	121	188	105	108	58	79	185	74	113	33	53	116
Northop, Soughton Hall.....	Flint .....	191	154	100	116	20	92	154	87	122	19	57	138
Dolgelly, Bryntirion.....	Merioneth .....	117	160	80	91	56	83	129	93	178	28	66	99
Llandudno .....	Carnarvon .....	131	153	84	124	15	71	113	48	90	9	39	140
Llandwrog, Glynllivon Park.....	" .....	134	133	96	143	38	119	116	85	143	33	52	107
Holyhead, Salt Island.....	Anglesey .....	151	139	82	124	56	53	148	119	147	39	38	102
Douglas, Borough Cemetery.....	Isle of Man.....	182	162	87	113	53	73	137	78	125	40	64	100
Stoneykirk, Ardwell House.....	Wigtownshire .....	207	180	55	134	100	88	128	87	116	61	56	73
Dalry, Glendaroch .....	Kirkcudbrightshire	140	109	51	107	98	60	123	77	91	62	52	76
Auchencairn, Torr House.....	" .....	133	150	82	91	111	62	143	76	83	51	49	107
Durrisdeer, Drumlanrig Gardens.	Dumfriesshire .....	184	114	59	117	129	58	139	54	81	55	67	90
Hawick, Branxholme.....	Roxburghshire ..	101	130	77	152	50	66	154	78	116	73	31	93
Marchmont House .....	Berwickshire .....	130	142	83	115	27	68	177	82	141	90	31	98
North Berwick Reservoir .....	Haddingtonshire ..	106	136	84	138	35	113	106	46	104	66	47	76
Moorfoot Hills, Gladhouse Res...	Midlothianshire ..	116	90	73	118	67	75	141	63	98	71	47	99
Airdrie, Hillend Reservoir .....	Lanarkshire .....	103	93	95	92	158	95	119	71	86	61	55	93
Kilmarnock, North Craig Res. ..	Ayrshire .....	85	173	69	85	182	149	97	99	79	72	84	70
Girvan, Pinmore.....	" .....	151	115	52	117	109	138	94	65	68	40	83	66
Shaws W.W., Loch Thom .....	Renfrewshire .....	114	140	62	110	163	96	90	71	92	71	62	86
Lochgilphed, Potalloch .....	Argyllshire .....	151	167	50	129	236	158	124	109	91	58	95	81
Skipness Castle.....	" .....	102	161	50	121	134	126	83	81	68	61	82	71
Inveraray Castle Gardens.....	" .....	112	132	54	93	255	103	147	105	99	69	79	85
Islay, Eallabus .....	" .....	155	171	59	108	159	134	116	121	89	53	78	77
Mul, Quinish.....	" .....	115	171	68	103	215	130	111	85	71	67	89	100
Loch Leven Sluice.....	Kinross-shire .....	117	103	80	96	73	80	152	60	80	57	64	65
Loch Dhu .....	Perthshire .....	132	128	52	127	151	74	116	79	75	63	71	88
Crieff, Strathearn Hydro.....	" .....	120	107	62	142	82	63	107	43	61	55	71	83
Blair Atholl.....	" .....	160	121	67	108	94	65	135	67	73	39	46	106
Dundee, Eastern Necropolis.....	Forfarshire .....	172	131	83	91	45	102	119	88	112	57	56	70
Montrose, Sunnyside Asylum....	" .....	198	115	92	130	27	73	106	66	145	51	57	63
Braemar, Bank.....	Aberdeenshire .....	214	115	69	177	59	68	135	84	77	42	42	100

TABLE III.—*Monthly Rainfall in 1922; the Average, 1881-1915, being taken as 100—(con.).*

Station.	County.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Logie Coldstone School.....	Aberdeenshire .....	233	89	105	177	57	82	157	79	106	47	52	76
Aberdeen, Cranford House.....	" .....	202	104	96	180	40	133	149	87	148	87	68	72
New Deer Schoolhouse.....	" .....	223	130	87	190	68	107	114	88	106	47	90	62
Gordon Castle.....	Morayshire .....	138	121	86	233	92	78	118	88	104	42	86	54
Grantown-on-Spey .....	" .....	112	91	116	256	66	63	129	94	74	69	71	69
Nairn, Delnies .....	Nairnshire .....	90	119	80	155	108	86	107	116	79	72	70	57
Fort Augustus, St. Benedicts....	Inverness-shire .....	59	148	100	76	198	87	116	81	46	69	68	119
Loch Quoich, Glenquoich .....	" .....	86	104	49	75	251	124	98	69	68	40	88	113
Arisaig House.....	" .....	80	114	60	111	236	150	105	72	64	60	78	108
Fort William, Atholl Bank.....	" .....	57	146	67	57	307	114	107	75	56	70	78	96
Alness, Ardross Castle.....	Ross-shire.....	109	121	89	166	127	46	109	73	68	71	59	91
Loch Torridon, Bendamph.....	" .....	80	151	87	110	225	136	81	68	55	42	81	105
Stornoway .....	" .....	113	120	76	84	190	118	84	116	70	59	64	94
Dunrobin Castle.....	Sutherlandshire .....	150	80	74	132	120	70	79	56	99	38	62	53
Tongue Manse.....	" .....	96	47	85	168	123	171	72	86	74	57	66	67
Melvich Schoolhouse .....	" .....	123	74	108	163	105	119	113	101	94	36	78	70
Loch More, Achfary .....	" .....	84	92	109	125	181	154	70	96	84	51	116	103
Wick.....	Caithness-shire.....	133	79	74	171	88	101	120	75	113	52	85	77
Pomona, Deerness .....	Orkney .....	86	66	80	157	126	72	121	86	95	52	74	118
Dunmanway, The Rectory.....	Co. Cork .....	157	138	82	90	96	44	142	107	112	51	55	93
Glanmire, Lota Lodge, No. 1....	" .....	134	111	75	126	69	49	129	138	136	44	49	82
Mallow, Longueville .....	" .....	127	114	85	81	59	72	106	78	137	54	36	71
Killarney, District Asylum.....	" Kerry .....	124	143	96	100	78	72	125	88	104	19	44	105
Darrynane Abbey.....	" .....	158	121	91	117	108	45	144	152	151	40	69	97
Waterford, Brook Lodge.....	" Waterford .....	122	92	48	107	62	43	91	124	91	31	39	77
Nenagh, Castle Lough.....	" Tipperary .....	121	196	67	125	81	77	107	78	122	32	32	119
Cahir Abbey .....	" .....	95	129	59	124	57	63	89	89	134	22	48	91
Cashel, Ballinamona .....	" .....	97	117	51	96	55	63	82	95	142	35	41	99
Foynes, Coolnanes .....	" Limerick .....	120	177	66	80	70	81	116	71	140	16	43	131
Gorey, Courtown House.....	" Wexford .....	120	72	90	150	56	47	109	201	126	28	35	63
Kilkenny, Lavistown House ....	" Kilkenny .....	101	96	49	110	52	43	86	78	131	25	36	114
Shillelagh, Coollattin Gardens...	" Wicklow .....	130	74	72	154	60	53	68	144	108	32	49	106

TABLE III.—*Monthly Rainfall in 1922; the Average, 1881–1915, being taken as 100—(con.).*

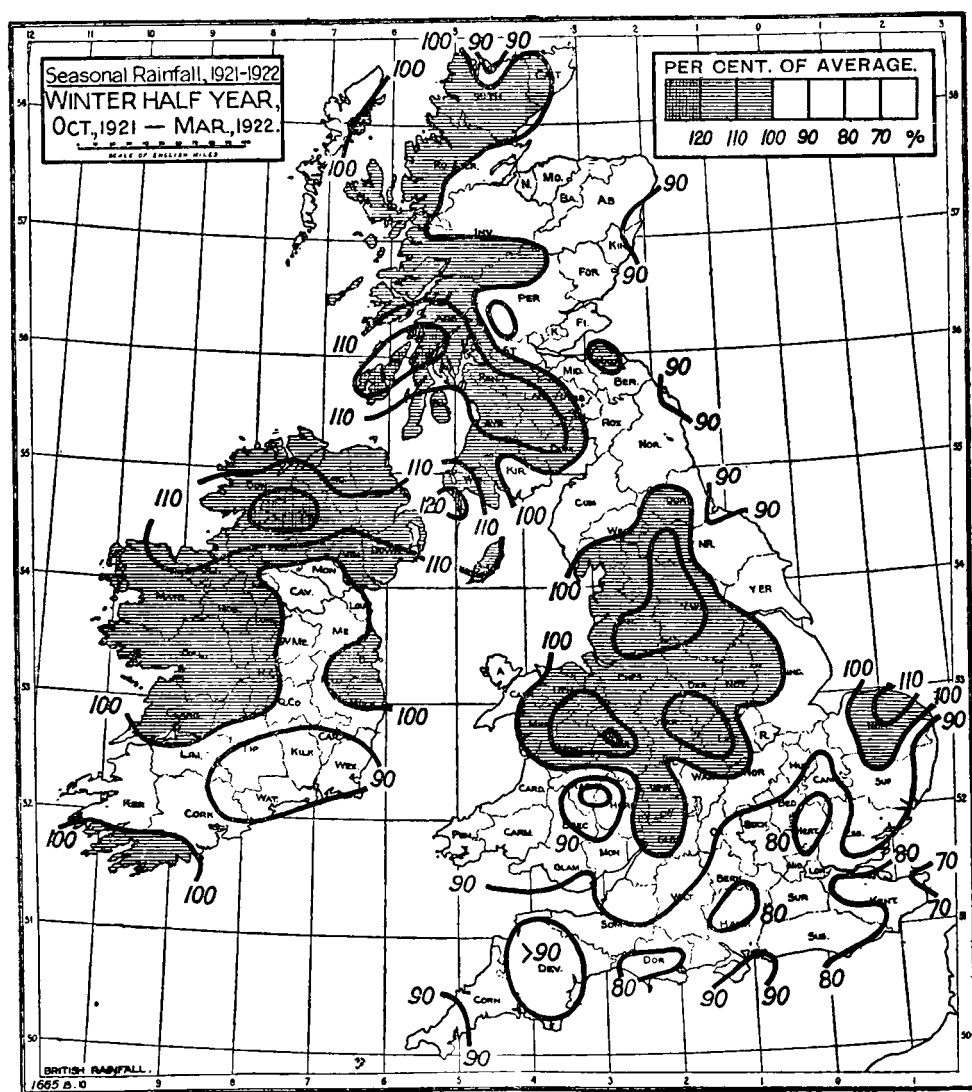
Station.	County.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Abbey Leix, Blandsfort.....	Queen's County	112	134	57	140	66	68	97	88	126	29	23	123
Birr Castle.....	King's County	100	173	68	106	83	59	89	83	167	40	27	122
Straffan House.....	Co. Kildare	104	133	73	120	54	52	105	111	120	48	23	96
Balbriggan, Ardgillan, No. 1....	" Dublin	118	98	74	136	39	60	108	114	120	47	17	85
Kells, Headfort.....	" Meath	110	118	62	125	71	68	104	136	103	48	25	108
Mullingar, Belvedere.....	" Westmeath	103	122	73	120	85	52	103	132	98	39	23	121
Greenore.....	" Louth	120	129	63	105	76	60	107	113	99	50	27	116
Castle Forbes Gardens.....	" Longford	122	167	68	102	95	57	102	110	124	51	46	107
Tuam, Gardenfield.....	" Galway	93	209	89	109	115	54	155	102	114	65	54	85
Ahascragh, Clonbrock.....	" "	109	182	73	107	112	81	138	96	158	60	41	134
Stokestown, Castlenode.....	" Roscommon	126	182	68	101	83	88	142	85	124	43	37	125
Crossmolina, Enniscoe.....	" Mayo	116	163	77	142	86	78	152	111	136	50	51	112
Westport House.....	" "	115	142	88	132	63	74	193	98	168	41	84	134
Collooney Markree Observatory .	" Sligo	135	177	86	162	54	103	130	87	117	48	66	108
Belturbet, Cloverhill.....	" Cavan	106	123	51	101	72	61	126	92	114	63	45	94
Armagh Observatory.....	" Armagh	131	123	57	147	74	79	118	106	108	47	42	95
Seaforde.....	" Down	121	132	66	179	67	85	114	103	111	49	41	111
Belfast, Queen's University.....	" Antrim	159	143	55	182	89	85	118	98	102	44	37	68
Ballymena, Harryville.....	" "	141	148	72	152	65	84	113	89	105	48	58	81
Londonderry, Creggan Reservoir.	" Londonderry	116	154	71	148	77	119	118	79	84	38	72	91
Limavady, Drenagh.....	" "	100	131	47	185	103	94	103	98	77	28	73	84
Omagh, Edenfel.....	" Tyrone	146	184	75	141	119	116	138	105	125	55	69	127
Dunfanaghy, St. Helens.....	" Donegal	98	118	57	121	48	94	90	80	89	49	57	86
Killybegs, Rockmount.....	" "	114	148	77	99	80	117	147	76	115	42	65	103
<b>England</b> .....(general mean, * 59 stations)		<b>153</b>	<b>146</b>	<b>101</b>	<b>151</b>	<b>58</b>	<b>68</b>	<b>166</b>	<b>123</b>	<b>129</b>	<b>36</b>	<b>56</b>	<b>121</b>
<b>Wales</b> .....( " " 12 " )		<b>136</b>	<b>155</b>	<b>101</b>	<b>124</b>	<b>53</b>	<b>72</b>	<b>159</b>	<b>92</b>	<b>131</b>	<b>28</b>	<b>49</b>	<b>116</b>
<b>England and Wales</b> ( " " 71 " )		<b>150</b>	<b>148</b>	<b>101</b>	<b>147</b>	<b>57</b>	<b>68</b>	<b>165</b>	<b>118</b>	<b>130</b>	<b>34</b>	<b>55</b>	<b>120</b>
<b>Scotland</b> .....( " " 43 " )		<b>130</b>	<b>121</b>	<b>76</b>	<b>130</b>	<b>127</b>	<b>99</b>	<b>117</b>	<b>81</b>	<b>88</b>	<b>58</b>	<b>68</b>	<b>84</b>
<b>Ireland</b> .....( " " 37 " )		<b>119</b>	<b>138</b>	<b>70</b>	<b>125</b>	<b>75</b>	<b>71</b>	<b>116</b>	<b>104</b>	<b>120</b>	<b>44</b>	<b>46</b>	<b>102</b>
<b>British Isles†</b> .....( " " 152 " )		<b>137</b>	<b>138</b>	<b>86</b>	<b>136</b>	<b>81</b>	<b>78</b>	<b>139</b>	<b>104</b>	<b>116</b>	<b>44</b>	<b>56</b>	<b>105</b>

\* The "general" values given in the last six rows are obtained by taking the means of the percentage values for the stations. † Including Isle of Man.

### SEASONAL RAINFALL, 1921-1922.

The rainfall of the winter half-year and that of the summer half-year have been tabulated separately\* in *British Rainfall* since 1907. The importance of the division is economic. The winter half-year is the period of acquisition of water, the summer half-year is the period of expenditure. During the winter half-year practically all the precipitation which does not go to feed the streams is accumulated underground, whereas during the summer the bulk of the rainfall is re-evaporated, and much of the naturally-stored water is drawn upon for the upkeep of rivers and for the requirements of animal and vegetable life.

The statistics which are set out in the Tables on pp. 113-115, and

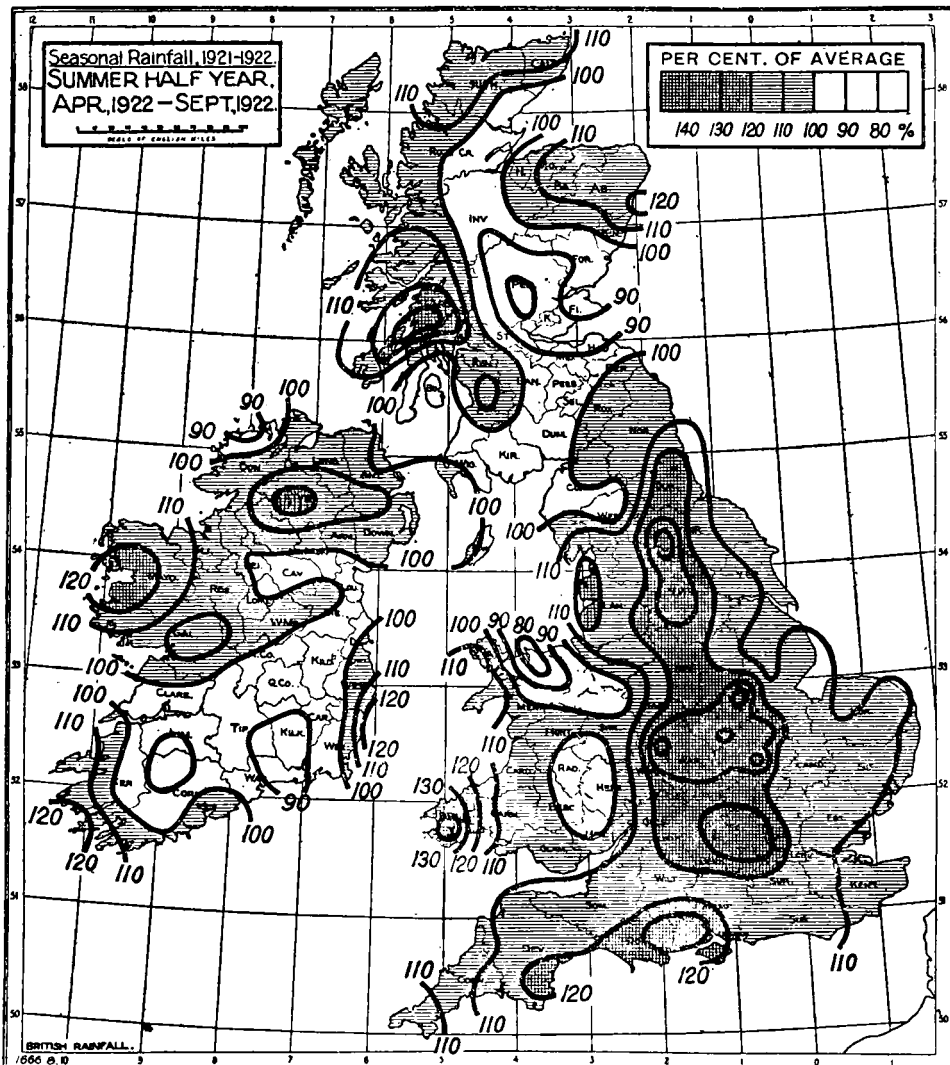


\* A summary showing the general rainfall for the British Isles and the several countries from 1906-07 to 1920-21 is given in *British Rainfall*, 1921, p. 140.

which are incorporated in the maps on pp. 110-112 refer to the 152 stations utilized in Table III of the section on Monthly Rainfall.

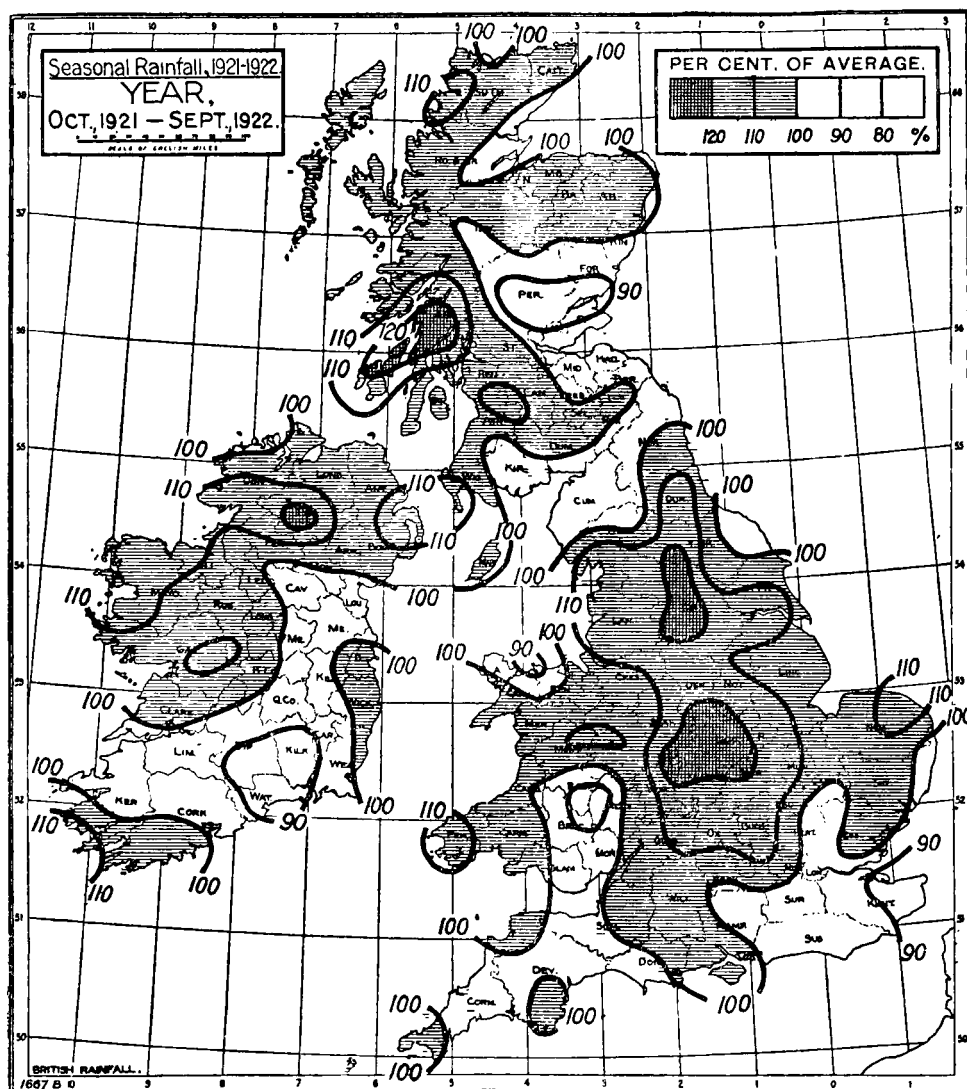
The winter half-year included three dry months (the end of the great drought of 1921) and three wet ones. In the parts of the country where the drought had been severe, notably in the southern counties of England, there was a deficiency of rainfall for the half-year. On the other hand, there was an excess of 20 per cent. or more above normal, not only in the west of Scotland and the north of Ireland, but also in the North Midlands. A striking contrast is that between Kington, in Herefordshire, and Church Stretton, Shropshire, only 25 miles apart. The monthly figures are as follows :—

		1921						1922					
		OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.
Kington	...	46	74	35	120	135	93	88	32	33	163	110	110
Church Stretton	...	53	103	88	188	216	134	146	48	46	191	82	105



The map for the summer half-year is reminiscent of the heavy cyclonic rain of July and August. The excess above the average reached 50 per cent. at Leyburn. Rainfall was also comparatively heavy in the west of Scotland and in parts of the north of Ireland. Contrasts were provided by Perthshire, the North Wales coast and Herefordshire; Kington, Hereford, showed a shortage for the fourth successive half-year.

The two half-yearly maps show much resemblance (a somewhat rare occurrence, see *British Rainfall*, 1921, page 137), and as a result the same features appear in the map for the twelve months up to September, 1922. The regions of high rainfall were the west of Scotland, North Ireland and the North Midlands. The areas with a deficiency were Kent, Herefordshire (Kington is again conspicuous on the map), North Wales, the south of Wales and the east of Scotland.



*Seasonal Rainfall, 1921-1922, in relation to the Average, 1881-1915.*

Div.	Station.	Winter	Summer	Twelve	Div.	Station.	Winter	Summer	Twelve
		6 Months, Oct. 1921- Mar. 1922.	6 Months, Apr. 1922- Sep. 1922.	Months, Oct. 1921- Sep. 1922.			6 Months, Oct. 1921- Mar. 1922.	6 Months, Apr. 1922- Sep. 1922.	Months, Oct. 1921- Sep. 1922.
		Per cent. of Average.	Per cent. of Average.	Per cent. of Average.			Per cent. of Average.	Per cent. of Average.	Per cent. of Average.
I.	St. Pancras, Camden Square ..	81	115	97	V.	Litton, Sherborne Res.....	96	116	105
II.	Tenterden, View Tower .....	81	108	92	VI.	Cirencester, Dollarward House	98	124	110
"	Margate, Cliftonville .....	69	104	81	"	Kington, Gravel Hill.....	78	91	84
"	Edenbridge, Falconhurst.....	81	115	95	"	Church Stretton, Wolstaston ..	121	101	111
"	Compton, Compton House.....	88	114	99	"	Market Drayton, Old Springs..	105	96	101
"	Brighton, Old Steyne.....	82	113	95	"	Malvern, Church Street.....	105	110	107
"	Ventnor, Royal National Hosp.	92	119	103	"	Farnborough .....	94	130	111
"	Fordingbridge, Oaklands.....	82	138	104	"	Birmingham, Edgbaston.....	99	144	121
"	Sherborne, St. John Rectory..	77	117	94	VII.	Belvoir Castle Gardens .....	92	145	118
III.	Royston, Therfield Rectory...	77	112	95	"	Boston, Black Sluice, Skirbeck	95	119	107
"	High Wycombe.....	89	138	110	"	Lincoln, Skellingthorpe Hall ..	104	108	106
"	Oxford, Magdalen College.....	89	132	110	"	Mickleover, Clyde House.....	120	124	122
"	Wellingborough, Swanspool...	97	141	119	VIII.	Chelford, Astle Hall.....	104	114	109
"	Wisbech, Bank House.....	91	119	105	"	Bury, Gin Hall, No. 1 .....	117	119	118
IV.	Chelmsford, High Street.....	92	113	102	"	Stonyhurst College .....	109	117	113
"	Hawkedon Rectory .....	92	113	103	"	Southport, Hesketh Park.....	107	125	115
"	Beccles, Geldeston .....	88	108	99	"	Cartmel, Holker Hall.....	104	119	110
"	Worstead, Dilham .....	112	119	115	IX.	Rotherham, Moorgate Grange..	102	120	111
"	Swaffham .....	100	109	105	"	Bradford, Lister Park .....	114	135	123
V.	Bishops Cannings.....	90	116	102	"	York, Museum Gardens .....	98	119	109
"	Evershot, Melbury House...	79	123	93	"	Hull, Pearson Park .....	99	111	105
"	Ashburton, Druid House.....	93	123	103	"	Leyburn, Bolton Hall.....	111	150	127
"	Cullompton .....	91	112	95	"	Felixkirk, Mount St. John ....	96	112	104
"	Barnstaple, N. Dev. Athenæum	91	115	101	"	Scarborough .....	98	101	99
"	Penzance, Morrab Gardens ....	95	116	103	"	Middlesbrough, Albert Park....	89	110	100
"	St. Austell, Trevarna .....	89	109	97	X.	Barnard Castle, County School	108	123	115
"	Altarnon Vicarage .....	85	107	93	"	Newcastle, Town Moor .....	96	124	110

## Seasonal Rainfall, 1921-1922, in relation to the Average, 1881-1915—(con.).

Div.	Station.	Winter				Div.	Station.	Summer				Div.	Station.	Twelve			
		6 Months, Oct. 1921— Mar. 1922.						6 Months, Apr. 1922— Sep. 1922.						Months, Oct. 1921— Sep. 1922.			
		Per cent. of Average.	Per cent. of Average.	Per cent. of Average.	Per cent. of Average.			Per cent. of Average.	Per cent. of Average.	Per cent. of Average.	Per cent. of Average.						
X.	Hallington, Fawcett, Newc. W. W.	95	108	102	XIV.	Kilmarnock, North Craig Res.	118	111	115								
"	Ilderton, Lilburn Tower. . . . .	92	104	98	"	Girvan, Pinmore. . . . .	107	95	102								
"	Carlisle, Spital Cemetery. . . . .	92	105	98	"	Shaws W. W., Loch Thom . . . . .	112	100	107								
"	Borrowdale, Seathwaite . . . . .	93	102	97	XV.	Lochgilphed, Poltalloch . . . . .	126	134	129								
"	Appleby, Castle Bank . . . . .	95	96	96	"	Skipness Castle. . . . .	111	97	105								
XI.	Abergavenny, Larchfield. . . . .	90	98	93	"	Inveraray Castle Gardens. . . . .	119	128	122								
"	Ystalyfera, Wern House . . . . .	95	107	100	"	Islay, Eallabus . . . . .	122	118	120								
"	Cardiff, Ely Pumping Station. . . . .	88	107	96	"	Mull, Quinish. . . . .	101	112	106								
"	Carmarthen, The Friary . . . . .	98	112	104	XVI.	Loch Leven Sluice . . . . .	94	89	92								
"	Haverfordwest, Grammar School	93	144	113	"	Loch Dhu . . . . .	108	101	106								
"	Strata Florida, Hafod . . . . .	95	104	99	"	Crieff, Strathearn Hydro. . . . .	92	78	86								
"	Lake Vyrnwy, Bank Cynon Isaf	115	102	110	"	Blair Atholl. . . . .	107	90	100								
"	Northop, Soughton Hall. . . . .	109	99	104	"	Dundee, Eastern Necropolis . . . . .	99	93	96								
"	Dolgelly, Bryntirion . . . . .	105	107	106	"	Montrose, Sunnyside Asylum. . . . .	93	90	92								
"	Llandudno . . . . .	98	76	88	XVII.	Braemar, Bank . . . . .	98	100	99								
"	Llandwrog, Glynllivon Park . . . . .	92	117	102	"	Logie Coldstone School . . . . .	96	109	102								
"	Holyhead, Salt Island . . . . .	91	112	100	"	Aberdeen, Cranford House . . . . .	87	120	102								
"	Douglas, Borough Cemetery . . . . .	110	98	105	"	New Deer Schoolhouse . . . . .	95	110	102								
XII.	Stoneykirk, Ardwell House. . . . .	123	107	116	"	Gordon Castle. . . . .	94	114	104								
"	Dalry, Glendaroch . . . . .	98	92	96	"	Grantown-on-Spey . . . . .	94	110	102								
"	Auchencairn, Torr House. . . . .	95	94	95	"	Nairn, Delnies . . . . .	97	107	102								
"	Durrisdeer, Drumlanrig Gdns. . . . .	111	94	104	"	Fort Augustus, St. Benedict's . . . . .	99	96	98								
"	Hawick, Branzholme . . . . .	98	102	100	XVIII.	Loch Quoich, Glenquoich. . . . .	99	106	102								
XIII.	Marchmont House . . . . .	97	103	100	"	Arisaig House. . . . .	103	112	107								
"	North Berwick Reservoir . . . . .	103	84	94	"	Fort William, Atholl Bank. . . . .	102	109	105								
"	Moorfoot Hills, Gladhouse Res. . . . .	95	93	94	"	Alness, Ardross Castle . . . . .	97	98	97								
XIV.	Airdrie, Hillend Reservoir . . . . .	110	100	106	"	Loch Torridon, Bendamph. . . . .	104	104	104								

*Seasonal Rainfall, 1921-1922, in relation to the Average, 1881-1915—(con.).*

SEASONAL RAINFALL.										
Div.	Station.	Winter 6 Months, Oct. 1921- Mar. 1922.		Div.	Station.	Summer 6 Months Apr. 1922- Sep. 1922.		Twelve Months, Oct. 1921- Sep. 1922.		
		Per cent. of Average.	Per cent. of Average.			Per cent. of Average.	Per cent. of Average.			
XVIII.	Stornoway .....	100	106	XXI.	Castle Forbes Gardens .....	106	100	103		
	Dunrobin Castle .....	105	91		XXII.	Tuam, Gardenfield.....	105	109	107	
	Tongue Manse .....	85	110			"	Ahascragh, Clonbrock.....	109	115	112
	Melvich Schoolhouse .....	106	114			"	Strokestown, Castlenode.....	106	104	105
	Loch More, Achfary .....	109	113			"	Crossmolina, Enniscoe.....	110	119	113
	Wick .....	94	110			"	Westport House .....	106	123	113
XX.	Ponona, Deerness .....	102	108	"		Collooney,Markree Observatory	110	108	109	
	Dunmanway, The Rectory....	106	100	XXIII.	Belturbet, Cloverhill .....	91	96	93		
	Glanmire, Lota Lodge, No. 1 ..	91	111		"	Armagh Observatory .....	103	106	105	
	Mallow, Longueville.....	92	89		"	Seaforde.....	107	108	108	
	Killarney, District Asylum....	92	95		"	Belfast, Queen's University ...	115	111	113	
	Darrynane Abbey.....	104	123		"	Ballymena, Harryville.....	109	100	105	
XXI.	Waterford, Brook Lodge.....	89	89		"	Londonderry, Creggan Res.....	112	102	107	
	Nenagh, Castle Lough.....	106	97	"	Limavady, Drenagh.....	102	107	104		
	Cahir Abbey .....	86	93	"	Omagh, Edenfel .....	128	123	125		
	Cashel, Ballinamona .....	86	89	"	Dunfanaghy, St. Helens .....	101	87	95		
	Foynes, Coolnanes .....	100	93	"	Killybegs, Rockmount .....	117	105	112		
	Gorey, Courtown House .....	90	120							
XXII.	Kilkenny, Lavistown House ..	83	83	General Values.*	England .....	95	117	105		
	Shillelagh, Coollatin Gardens	90	99		Wales .....	97	107	101		
	Abbey Leix, Blandsfort .....	96	97		England and Wales .....	95	115	104		
	Birr Castle.....	108	96		Scotland .....	102	104	103		
	Straffan House.....	106	96		Ireland .....	101	102	102		
	Balbriggan, Ardgillan, No. 1 ..	100	98		British Isles† .....	99	109	103		
	Kells, Headfort.....	91	104							
	Mullingar, Belvedere.....	97	101							
	Greenore .....	102	95							

\* Obtained by taking the means of the percentage values for the stations.

† Including Isle of Man.

SEASONAL RAINFALL.

## THE TOTAL FALL OF RAIN IN 1922 AND ITS RELATION TO THE AVERAGE.

The rainfall for the year is given for each station in the British Isles in the General Table, Part III of this volume. It is represented on the folding map opposite this page.

Such a map is dominated, however, by the contrast between the normally wet and the normally dry districts, and the characteristics of a particular year are brought out better by a map such as that opposite page 118, in which the ratio of the rainfall for the year to the average is shown.

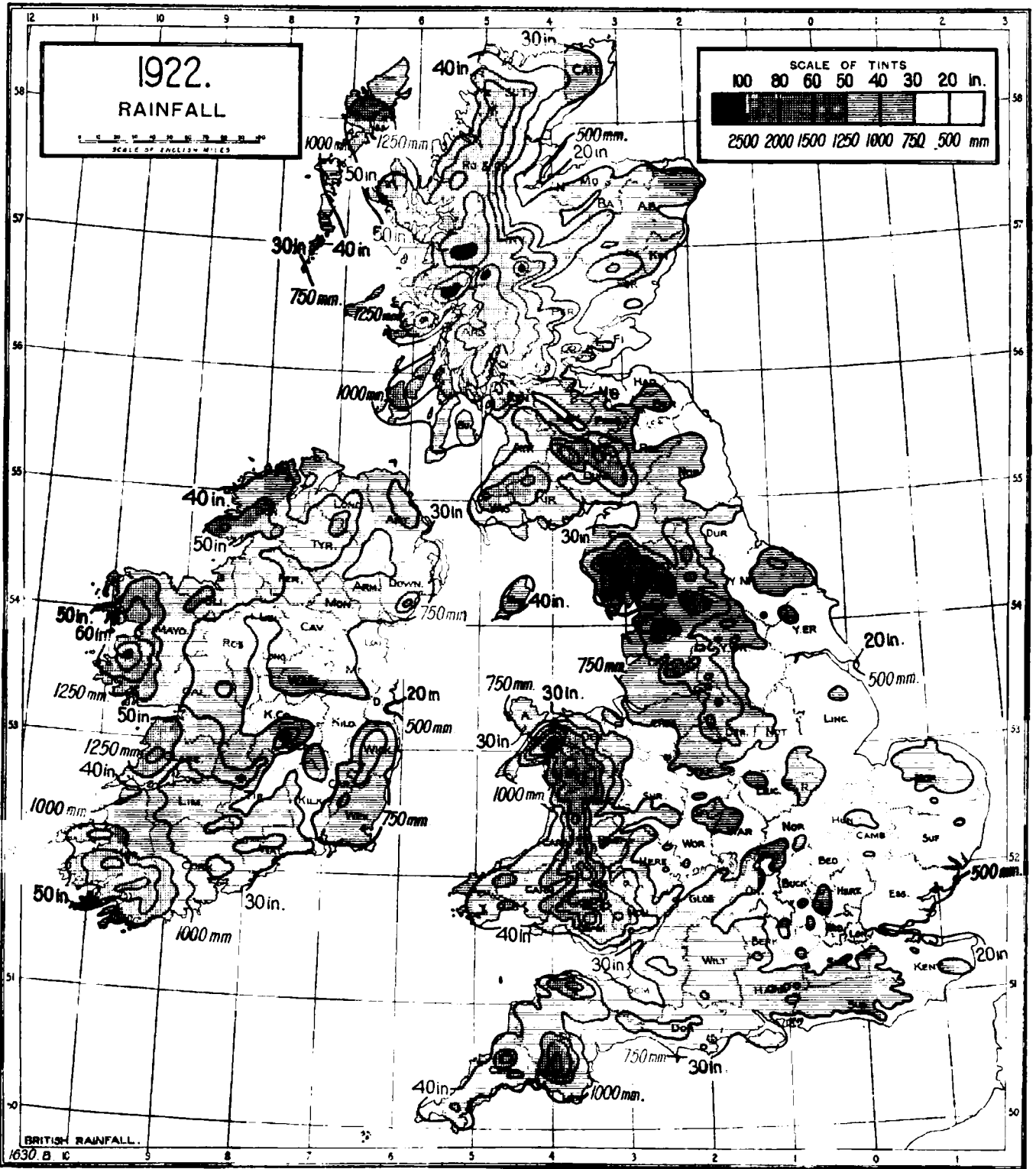
Statistics on which the latter map is based are set out in the table on pp. 118-122. The stations in this table are selected so as to be as far as possible equably distributed over the land surface of the British Isles.

For the British Isles as a whole the rainfall of the year 1922 was normal; England having a slight excess, and Wales, Scotland and Ireland a slight deficit.

The map opposite page 118 shows a well-marked belt of excess, stretching across the centre of England from Devonshire and Hampshire in the south, to the borders of Durham in the north. In places, notably on Dartmoor, in northern Hampshire, in Leicestershire, Nottinghamshire and Yorkshire the excess is more than 20 per cent. This central wet core may be attributed mainly to the great cyclonic rains of early August. There is also a well-marked wet area in Norfolk due to heavy rains in July and a similar small patch occurred in North Wales. On the other hand, there were isolated parts of England with rainfall slightly below the average, a strip along the south coast from Bognor to Beachy Head, parts of Cambridgeshire, the valleys of the Tyne and Eden and the Lake districts.

In Wales there was a fairly even distribution of excess and deficit. In Scotland there was deficiency as a general rule, and especially in the larger centres of population, the rainfall being only 82 per cent. of the average at Edinburgh and 78 at Glasgow. There was, however, rainfall in excess of the average in Argyllshire and also in the north-east from Aberdeen to Banff.

In Ireland the total for the year was well below normal over the greater part of the country, but there was excess in Connaught.





The summary for the British Isles is as follows :—

COUNTRIES.	No. of Records utilized.	Average 35 years, 1881-1915.		1922.		Diff. from Average 1881-1915.		Diff. from Average computed cartograph- ically. Per cent.
						Amt.	Per cent.	
		in.	mm.	in.	mm.	in.		
England .. .. .	114	32·67	830	34·86	885	2·19	+7	+6
Wales .. .. .	22	50·14	1,274	48·84	1,241	1·30	-3	-3
England and Wales .. .. .	136	35·23	895	37·06	941	1·83	+5	+5
Scotland .. .. .	65	50·32	1,278	47·45	1,205	2·87	-6	-6
Ireland .. .. .	47	43·30	1,100	39·97	1,015	3·33	-8	-6
British Isles .. .. .	249	41·41	1,052	41·37	1,051	·04	-0	-1

The values in the last column but one were obtained by taking the mean of the percentage values given in the table on p. 118-122. The general percentage values so obtained have been applied to the average values of actual rainfall to obtain the general rainfall for the year. In the final column is given the percentage values as computed by measuring the zones on the map of percentage variation. The agreement in the values obtained by the two methods is close, as in the previous years.

In the course of this process the areas of the various zones have been determined and these are set out in the table below. The table is of interest as showing the distribution of the rainfall in a year in which the rainfall of the British Isles as a whole was normal.

	PER CENT. OF AVERAGE.							Total Area.
	70-80	80-90	90-100	100-110	110-120	120-130	More than 130	
	Sq. mi.	Sq. mi.	Sq. mi.	Sq. mi.	Sq. mi.	Sq. mi.	Sq. mi.	Sq. mi.
England ... .. .	35	628	8,542	27,787	11,749	1,534	35	50,310
Wales ... .. .	—	1,296	3,815	2,519	370	—	—	8,000
Isle of Man ... .. .	—	—	164	66	—	—	—	230
Scotland... .. .	—	7,680	16,646	4,997	257	—	—	29,580
Ireland ... .. .	1,079	10,430	12,660	8,020	251	—	—	32,440
British Isles ... .. .	1,114	20,034	41,827	43,389	12,627	1,534	35	120,560

There was close competition for the lowest rainfall of the year between far distant districts, *e.g.* :

Shoeburyness (Essex)	..	..	..	18·66 ins.
Fortrose (Ross-shire)	..	..	..	18·64 „
Sutton (Co. Dublin)	..	..	..	17·55 „

The highest totals recorded were in the Lake District and in North Wales :—

The Styne B (Cumberland) .. .. 172·80 ins.  
Snowdon No. 7 (Carnarvon) .. .. 173·45 „

Ben Nevis was in an area of deficient rainfall, and it is unlikely that the actual fall in any part of the United Kingdom was appreciably greater than the measurements which have been quoted.

Actually the highest totals recorded in Scotland were :—

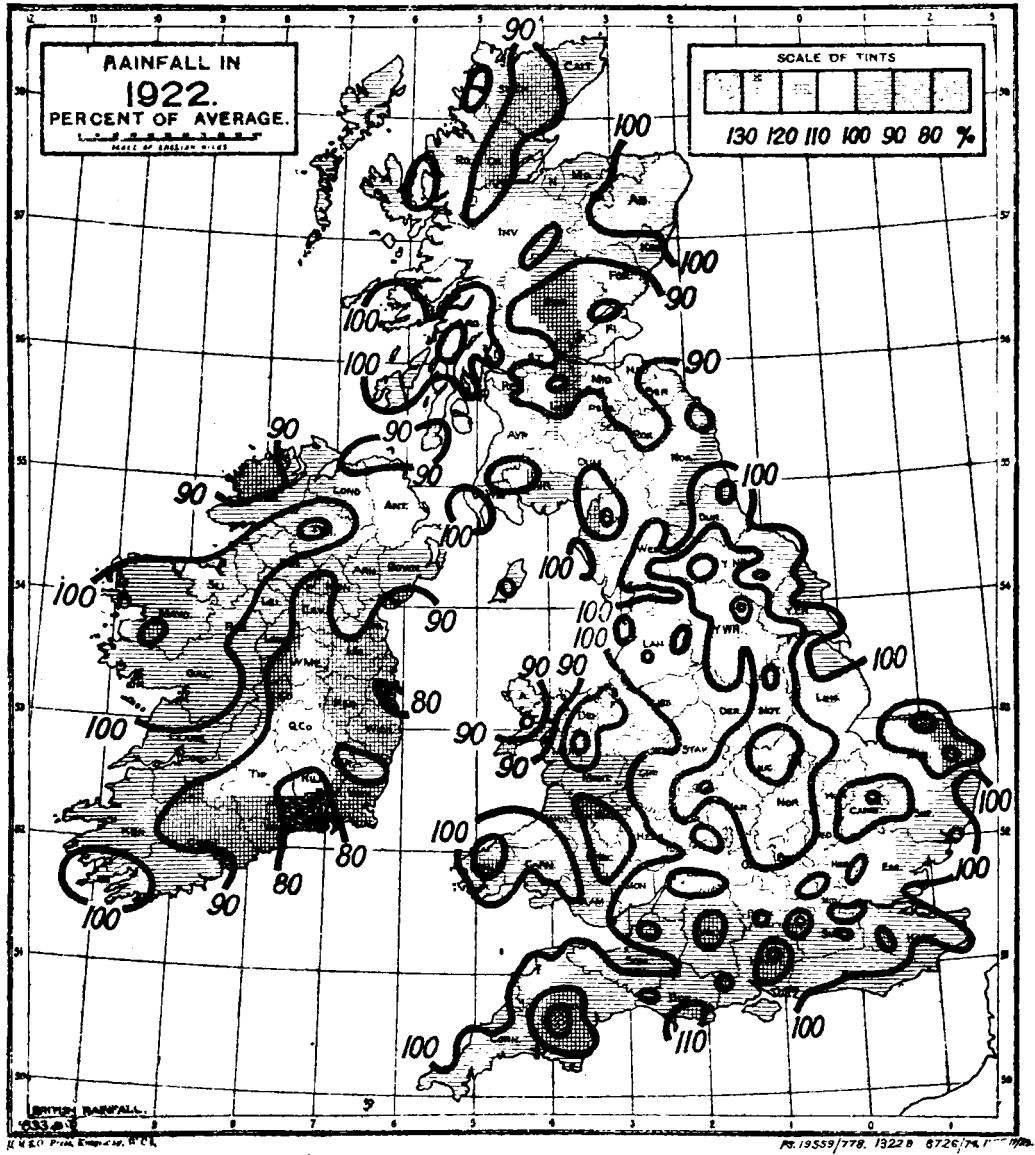
Loch Quoich (Loan) .. .. 131·15 ins.  
Ben Alder (Lochan Sgoir) .. .. 129·30 „

## COMPARISON OF THE RAINFALL OF THE YEAR 1922 WITH THE AVERAGES OF THE PERIODS 1910-1919 & 1881-1915.

### ENGLAND.

DIV.	COUNTY and river-division.	STATION.	Average	Average	Depth in 1922.	Difference
			1910- 1919.	1881- 1915.		from Average 1881-1915
			in.	n.	in.	Per Amount.cent.
I	London .....	2 St. Pancras (Camden Square) .	27·83	24·47	25·60	1·13 + 5
II	Surrey .....	4 Caterham Mental Hospital....	34·96	31·15	33·90	2·75 + 9
"	Kent .....	1 Tenterden (View Tower) ....	30·32	27·50	27·23	·27 — 1
"	" .....	1 Folkestone (Cherry Gardens)..	32·44	29·13	31·72	2·59 + 9
"	" .....	2 Margate (Cliftonville).....	23·65	22·80	20·48	2·32 — 10
"	" .....	4 Rochester (Knights Place) ....	27·91	26·03	27·17	1·14 + 4
"	Sussex .....	1 Yapton (Bonhams) .....	30·55	27·69	28·22	·53 + 2
"	" .....	2 Horsham (Wimblehurst) ....	33·58	29·96	30·73	·77 + 3
"	" .....	3 Brighton (Old Steyne).....	31·61	27·69	26·13	1·56 — 6
"	" .....	5 St. Leonards (Gensing Gardens)	30·21	28·37	27·81	·56 — 2
"	" .....	7 Crowborough (Uckfield Lodge)	41·55	36·00	38·46	2·46 + 7
"	Hampshire ....	1 Totland Bay (Aston House) ..	31·13	28·49	29·81	1·32 + 5
"	" .....	3 Fordingbridge (Oaklands) ....	35·93	31·65	36·20	4·55 + 14
"	" .....	5 Portsmouth (Victoria Park) ..	30·31	27·75	29·80	2·05 + 7
"	" .....	5 Ovington Rectory .....	39·54	33·18	41·37	8·21 + 25
"	Berkshire .....	3 Wellington College .....	32·09	26·43	33·06	6·63 + 25
"	" .....	4 Newbury (Greenham College)	34·36	29·02	32·10	3·08 + 11
III	Hertfordshire ..	2 Harpenden (Rothamsted) ....	28·96	26·73	27·37	·64 + 2
"	" .....	3 Royston (Therfield Rectory) ..	27·38	25·19	24·12	1·07 — 4
"	Buckinghamshire	3 High Wycombe .....	31·72	25·90	29·49	3·59 + 14
"	" .....	4 Newport Pagnell (The Croft) ..	26·25	23·69	26·48	2·79 + 12
"	Oxfordshire ....	3 Oxford (Magdalen College)....	25·83	23·81	25·96	2·15 + 9
"	" .....	3 Bodicote House .....	28·29	26·32	29·21	2·89 + 11
"	Northampton ..	4 Pitsford (Sedgebrook) .....	24·87	24·54	27·22	2·68 + 11
"	" .....	4 Oundle (Milton Road) .....	22·37	22·32	22·69	·37 + 2
"	Cambridgeshire ..	2 Stretham Engine.....	23·05	21·20	18·81	2·39 — 11
"	" .....	3 Wisbech (Bank House) .....	24·14	22·99	24·34	1·35 + 6
IV	Essex .....	1 Elsenham (Gaunts End).....	26·86	24·60	25·44	·84 + 3
"	" .....	4 Chelmsford (High Street) ....	24·84	22·49	23·50	1·01 + 4
"	" .....	5 Clacton-on-Sea .....	21·81	19·19	20·61	1·42 + 7
"	Suffolk .....	1 Cockfield Rectory .....	26·00	24·77	24·94	·17 + 1
"	" .....	3 Rendlesham Hall .....	23·20	23·14	23·28	·14 + 1
"	Norfolk .....	1 Beccles (Geldeston).....	26·47	23·66	23·40	·26 — 1
"	" .....	1 Norwich (Christ Ch. Rd., Eaton)	29·49	26·48	32·49	6·01 + 23
"	" .....	2 Worstead (Dilham) .....	28·64	26·29	28·54	2·25 + 9
"	" .....	3 Wells (Holkham Hall).....	26·18	23·05	27·45	4·40 + 19
"	" .....	4 Swaffham .....	26·49	25·56	26·92	1·36 + 5

RELATION OF RAINFALL IN 1922 TO THE AVERAGE OF 1881-1915.



The area coloured Red had rainfall below the average, that coloured Blue had rainfall above the average.



## ENGLAND—(con.).

DIV.	COUNTY and river-division.	STATION.	Average 1910- 1919.	Average 1881- 1915.	Depth in 1922.	Difference from Average 1881-1915.	
						Per Amount.	cent.
V	Wiltshire..... 1	Calne (High Street) .....	31.97	28.86	33.60	4.74	+16
"	"..... 3	Salisbury Plain (Chitterne Ho.) ..	31.42	28.11	32.03	3.92	+14
"	Dorset..... 1	Evershot (Melbury House) ..	41.45	38.66	39.85	1.19	+ 3
"	"..... 3	Weymouth (Westham) .....	30.77	27.98	31.11	3.13	+11
"	"..... 3	Wareham (South Street) .....	37.19	32.26	36.29	4.03	+12
"	South Devon.... 2	Launceston (Polapit Tamar) ..	44.28	39.25	42.70	3.45	+ 9
"	"..... 4	Ashburton (Druid House) ....	57.48	51.72	59.28	7.56	+15
"	"..... 5	Torquay (Cary Green) .....	34.99	33.04	36.96	3.92	+12
"	"..... 6	Cullompton .....	40.36	35.27	37.07	1.80	+ 5
"	"..... 7	Sidmouth (Sidmount) .....	36.17	32.38	32.43	.05	+ 0
"	North Devon.... 2	Arlington Court .....	57.00	53.77	52.80	.97	- 2
"	"..... 3	Torrington (Enfield) .....	42.04	39.25	40.24	.99	+ 3
"	Cornwall..... 1	Newquay (Mount Wise) .....	36.66	33.22	34.91	1.69	+ 5
"	"..... 2	Penzance (Morrab Garden) ..	43.84	40.93	44.40	3.47	+ 8
"	"..... 2	Falmouth (New Observatory) ..	46.72	43.56	45.75	2.19	+ 5
"	"..... 2	St. Austell (Trevarna) .....	49.85	45.84	47.02	1.18	+ 3
"	"..... 3	Devonport (Empacombe) ....	41.07	36.81	40.22	3.41	+ 9
"	"..... 4	Tresco Abbey .....	36.46	32.63	35.14	2.51	+ 8
"	Somerset..... 2	Street (Millfield) .....	32.88	29.47	28.48	.99	- 3
"	"..... 3	Milverton (Spring Grove) ....	..	36.68	37.84	1.16	+ 3
VI.	Gloucestershire.. 3	Cheltenham (High Street) ....	27.66	26.47	26.87	.40	+ 2
"	"..... 5	Clifton College .....	37.59	33.87	35.88	2.01	+ 6
"	"..... 7	Fairford (Kempsford) .....	29.55	25.62	28.91	3.29	+13
"	Herefordshire.. 1	Kington (Gravel Hill) .....	35.86	34.25	30.42	3.83	-11
"	"..... 2	Ledbury (Underdown) .....	30.03	27.14	27.74	.60	+ 2
"	Shropshire..... 3	Church Stretton (Preen Cottage) ..	32.41	29.07	29.45	.38	+ 1
"	"..... 4	Shifnal (Hatton Grange) ....	28.33	26.15	28.62	2.47	+ 9
"	Staffordshire.... 2	Market Drayton (Old Springs) ..	29.81	28.89	27.62	1.27	- 4
"	"..... 5	Teaon (The Heath House) ....	33.81	31.83	34.42	2.59	+ 8
"	Worcestershire.. 2	Stourport (Lincombe Lock) ..	28.84	25.57	28.47	2.90	+11
"	Warwickshire.... 1	Stratford on Avon (Shottery Hall) ..	26.31	23.91	23.97	.06	+ 0
"	"..... 1	Ryton-on-Dunsmore (Ryton Ho.) ..	28.21	25.98	29.54	3.56	+14
"	"..... 4	Birmingham (Edgbaston) ....	28.45	26.49	32.20	5.71	+22
VII	Leicestershire.... 4	Thornton Reservoir .....	29.07	26.20	31.88	5.68	+22
"	"..... 4	Belvoir Castle Gardens .....	26.62	25.11	31.04	5.93	+24
"	Lincolnshire.... 3	Boston (Black Sluice, Skirbeck) ..	25.34	22.81	24.68	1.87	+ 8
"	"..... 3	Lincoln (Skellingthorpe Hall) ..	23.88	23.12	24.67	1.57	+ 7
"	"..... 4	Skegness (Estate Office) .....	24.74	23.29	25.11	1.82	+ 8
"	"..... 4	Louth (Westgate) .....	28.37	28.00	29.71	1.71	+ 6
"	"..... 5	Brigg .....	25.38	25.38	24.20	1.18	- 5
"	Nottinghamshire 5	Southwell (Elmfield) .....	25.01	24.89	29.33	4.44	+18
"	"..... 5	Worksop (Hodsok Priory) ..	24.17	23.63	28.85	5.22	+22
"	Derbyshire..... 5	Mickleover (Clyde House) ....	29.06	26.05	30.08	4.03	+15
VIII	Cheshire..... 1	Macclesfield (West Park) ....	35.30	34.11	36.08	1.97	+ 3
"	"..... 1	Woodhead (Reservoir) .....	50.72	47.67	56.25	8.58	+18
"	"..... 2	Middlewich (Bostock Hall) ....	30.07	29.28	30.16	.88	+ 3
"	South Lancashire 2	Garston (Grassendale Park) ..	31.61	30.05	31.14	1.09	+ 4
"	"..... 3	Bolton (Smithills Hall) .....	48.99	46.06	49.75	3.69	+ 8
"	Central..... 1	Burnley (Swinden Lower) ....	47.42	44.32	49.46	5.14	+12
"	"..... 1	Stonyhurst College .....	48.13	46.55	47.09	.54	+ 1
"	"..... 3	Southport (Hesketh Park) ....	33.19	31.99	34.82	2.83	+ 9
"	North..... 2	Ulverston (Poaka Beck) .....	50.11	52.09	49.37	2.72	- 5
IX	Yorks, West Riding 1	Sedbergh (Akay) .....	59.78	54.58	60.90	6.32	+12
"	"..... 7	Sheffield (Weston Park) .....	31.54	30.41	35.60	5.19	+17
"	"..... 7	Goole .....	27.21	22.91	26.74	3.83	+17
"	"..... 8	Wakefield (Clarence Park) ....	26.28	25.38	28.96	3.58	+14
"	"..... 9	Malham Tarn .....	57.04	57.50	57.43	.07	- 0
"	"..... 10	York (Cherry Hill) .....	25.57	24.24	27.48	3.24	+13
"	"..... 11	Harrogate (Harlow Moor Obsy.) ..	32.00	30.58	35.31	4.73	+15
"	"..... 3	Pattingham .....	23.87	23.30	23.26	.04	- 0
"	"..... 3	Lowthorpe (The Elms) .....	27.08	26.47	25.29	.18	- 1
"	"..... 1	Leyburn (Bolton Hall) .....	35.22	32.63	40.35	7.73	+24
"	"..... 2	Felixkirk (Mount St. John) ....	26.81	26.54	28.21	1.67	+ 6
"	"..... 4	Malton (Broughton Rise) ....	27.90	25.51	27.83	2.32	+ 9
"	"..... 5	Whitby (Ocean Road) .....	25.53	24.73	26.47	1.74	+ 7
"	"..... 6	Middlesbrough (Albert Park) ..	24.34	23.67	23.71	.04	+ 0

**ENGLAND.—(con.).**

DIV.	COUNTY and river-division.	STATION.	Average 1910- 1919.	Average 1881- 1915.	Depth in 1922.	Difference from Average 1881-1915. Per Amount.cent.
			in.	in.	in.	in.
X	Durham . . . . . 1	Barnard Castle (County School)	29·84	29·73	33·16	3·43 +12
"	" . . . . . 2	Ushaw (St. Cuthbert's College)	29·04	28·24	29·84	1·60 + 6
"	Northumberland 3	Newcastle (Town Moor) . . . . .	28·52	27·22	29·99	2·77 +10
"	" . . . . . 4	Hallington (Fawcett Newc. W.W.)	28·57	28·24	27·10	1·14 — 4
"	" . . . . . 5	Rothbury (Craigside) . . . . .	33·37	33·78	31·97	1·85 — 5
"	" . . . . . 6	Ilderton (Lilburn Tower) . . . . .	28·72	27·95	28·06	·11 + 0
"	Cumberland . . . . 1	Penrith (Briar Cottage) . . . . .	33·91	32·77	32·22	·55 — 2
"	" . . . . . 1	Carlisle (Spital Cemetery) . . . . .	30·35	31·81	28·55	3·26 —10
"	" . . . . . 2	Borrowdale (Seathwaite) . . . . .	29·03	129·48	121·30	8·18 — 6
"	" . . . . . 3	Whitehaven (Irish Street) . . . . .	44·12	42·27	43·69	1·42 + 3
"	Westmorland . . . 1	Appleby (Castle Bank) . . . . .	37·46	35·03	36·41	1·38 + 4

**MONMOUTH AND WALES.**

XI	Monmouthshire . . 2	Tredegar Laboratory . . . . .	63·12	59·83	51·49	8·34 —14
"	" . . . . . 4	Monmouth (Pentwyn) . . . . .	34·12	30·85	32·99	2·14 + 7
"	Glamorganshire . . 1	Gorseinon (Penllergaer) . . . . .	52·45	48·74	47·01	1·73 — 4
"	" . . . . . 5	Cardiff (Ely Pumping Station)	46·01	42·12	44·35	2·23 + 5
"	" . . . . . 5	Glyncorwg . . . . .	87·05	85·42	86·34	·92 +1
"	Carmarthenshire . . 2	Carmarthen (The Friary) . . . . .	50·50	48·30	47·59	·71 — 1
"	" . . . . . 2	Llanwrda (Dolaucothy) . . . . .	60·61	57·55	60·21	2·66 + 5
"	Pembrokeshire . . 3	St. David's . . . . .	38·68	36·37	35·79	·58 — 2
"	" . . . . . 4	Pembroke (Stackpole Court) . . . . .	39·43	39·26	41·77	2·51 + 6
"	" . . . . . 4	Haverfordwest (Grammar Sch.)	48·56	46·37	51·22	4·85 +10
"	Cardiganshire . . . 2	Aberystwyth (Gogerddan) . . . . .	51·45	46·49	43·61	2·88 — 6
"	Radnorshire . . . . 1	Birmingham WW (Tyrmynydd)	63·91	62·15	56·83	5·32 — 9
"	Montgomeryshire . 4	Newton (Penarth Weir) . . . . .	35·71	34·99	32·73	2·26 — 6
"	" . . . . . 5	Lake Vyrnwy (Bank Cynon Isaf)	58·01	55·31	55·62	·31 + 1
"	Flintshire . . . . . 2	Bodfari (Nantlys) . . . . .	29·46	27·43	27·10	·33 — 1
"	Denbighshire . . . 1	Wrexham (Pack Saddle Res.) . . . . .	34·03	32·00	31·38	·62 — 2
"	Merionethshire . . 1	Corwen (Rug Gardens) . . . . .	38·77	36·18	35·87	·31 — 1
"	" . . . . . 3	Blaenau Festiniog (Oakley Qry.)	104·07	97·14	79·32	17·82 —19
"	" . . . . . 4	Dolgelly (Bryntirion) . . . . .	64·74	58·79	56·69	2·10 — 4
"	" . . . . . 2	Llandudno . . . . .	31·41	30·04	24·41	5·63 —19
"	Carnarvonshire . . 3	Llandwrog (Glynllivon Garden)	45·03	44·65	45·54	·89 + 2
"	Anglesey . . . . .	Llanerchymedd . . . . .	39·35	36·10	35·72	2·38 — 6

**ISLE OF MAN.**

XI	Isle of Man . . . . .	Douglas (Borough Cemetery) . .	41·98	41·76	41·27	·49 — 1
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**CHANNEL ISLANDS.**

XI	Guernsey . . . . .	St. Peter Port (Grange Road)	39·85	36·47	36·23	·24 — 1
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**SCOTLAND.**

XII	Wigtownshire . . . 3	Stoneykirk (Ardwell House) . .	38·36	36·35	37·34	·99 + 3
"	Kirkcudbrightshire 3	Dalry (Glendarroch) . . . . .	56·09	54·51	46·87	7·64 —14
"	" . . . . . 4	Auchencairn (Torr House) . . . . .	48·64	47·05	43·93	3·12 — 7
"	" . . . . . 5	Dumfries (Cargen) . . . . .	48·45	44·81	40·42	4·39 —10
"	Dumfriesshire . . . 3	Durrisdeer (Drumlanrig Gdns.)	48·88	43·57	41·23	2·34 — 5
"	" . . . . . 4	Moffat (Craigielands) . . . . .	52·53	52·35	48·42	3·93 — 8
"	" . . . . . 5	Langholm (Ewes) . . . . .	51·64	53·36	49·95	3·41 — 6
"	Roxburghshire . . . 3	Hawick (Wolfelee) . . . . .	38·09	37·63	33·28	4·35 —12
"	" . . . . . 3	Kelso (Springwood Park) . . . . .	26·88	26·19	21·99	4·20 —16

## SCOTLAND—(con.).

DIV.	COUNTY. and river-division.	STATION.	Average 1910- 1919.	Average 1881- 1915.	Depth in 1922.	Difference from Average 1881-1915.
			in.	in.	in.	Per Amount.cent.
XIII	Berwickshire .... 4	Marchmont House .....	32·05	32·18	31·28	·90 — 3
"	Haddingtonshire .. 4	Prestonkirk (Smeaton) .....	26·43	24·87	21·63	3·24 —13
"	Midlothianshire .. 4	Moorfoot Hills (Gladhouse Res.) ..	38·22	35·33	30·70	4·63 —13
"	" .. 5	Edinburgh (Univ. Engin. Lab.) ..	26·88	26·03	21·57	4·46 —17
XIV	Lanarkshire .... 1	Biggar .....	33·87	31·06	29·20	1·86 — 6
"	" .. 4	Airdrie (Hillend Reservoir) ..	36·79	37·32	33·90	3·42 — 9
"	" .. 5	Hamilton W.W. (Townhill) ..	37·09	35·56	30·65	4·91 —14
"	Ayrshire .... 3	Kilmarnock (North Craig Res.) ..	41·54	41·23	40·90	·33 — 1
"	" .. 6	Maybole (Culzean Gardens) ..	"	36·39	33·07	3·32 — 1
"	" .. 8	Girvan (Pinmore) .....	49·96	49·84	44·00	5·84 —12
"	Renfrewshire .... 3	Shaws W. W. (Loch Thom) ..	68·09	65·36	61·44	3·92 — 6
XV	Argyllshire .... 2	Loch Sunart (Glenborrodale) ..	68·96	68·97	65·96	3·01 — 4
"	" .. 8	Lochgilphead (Poltalloch) ....	60·31	52·23	59·64	7·41 +14
"	" .. 9	Mull of Kintyre .....	40·47	41·10	34·40	6·70 —16
"	" ..10	Skipness Castle .....	46·48	48·77	44·61	4·16 — 9
"	" ..11	Inveraray Castle Gardens ....	82·13	77·22	80·46	3·24 + 4
"	" ..14	Islay (Eallabus) .....	50·88	48·86	51·77	2·91 + 6
"	" ..14	Lismore (Mousedale) .....	46·17	43·71	42·50	1·21 — 3
"	" ..14	Mull (Quinish) .....	54·77	56·75	59·87	3·12 + 6
XVI	Kinross-shire .... 2	Loch Leven Sluice .....	34·51	35·77	29·94	5·83 —16
"	Perthshire .... 2	Loch Dhu .....	81·64	79·77	75·70	4·07 — 5
"	" .. 4	Dunblane (Kippendavie) .....	44·09	41·09	37·63	3·46 — 8
"	" .. 7	Crieff (Strathearn Hydro) ....	39·42	40·86	33·06	7·80 —19
"	" .. 8	Perth (Wellshill Cemetery) ..	"	30·79	27·36	3·43 —11
"	" ..14	Blair Atholl .....	35·51	33·09	29·78	3·31 —10
"	" ..14	Dalnaspidal .....	"	61·96	63·42	1·46 + 2
"	Forfarshire .... 1	Kirriemuir (Lintrathen) .....	33·46	34·67	29·21	5·46 —16
"	" .. 2	Dundee (Eastern Necropolis) ..	27·35	27·44	25·17	2·27 — 8
"	" .. 4	Montrose (Sunnyside Asylum) ..	26·90	27·03	24·33	2·70 —10
"	Kincardineshire .. 3	Crathes (Pinewood) .....	34·10	33·13	32·57	·56 — 2
XVII	Aberdeenshire ... 1	Braemar (Bank) .....	37·48	35·00	33·55	1·45 — 4
"	" .. 1	Logie Coldstone School .....	32·61	30·92	31·20	·32 + 1
"	" .. 1	Aberdeen (Cranford House) ..	31·39	31·74	34·69	2·95 + 9
"	" .. 3	Ellon (Esslemont House) ....	30·47	29·78	31·56	1·78 + 6
"	" .. 4	New Deer Schoolhouse .....	32·83	32·34	33·27	·93 + 3
"	Banffshire .... 2	Keith Station .....	37·97	33·79	36·93	3·14 + 9
"	Morayshire .... 2	Gordon Castle .....	30·28	29·77	29·14	·63 — 2
"	" .. 3	Grantown-on-Spey .....	33·32	31·15	30·56	·59 — 2
"	Nairnshire .... 2	Nairn (Delnies) .....	27·76	24·94	23·24	1·70 — 7
XVIII	Inverness-shire .. 3	Alvie Manse .....	32·36	30·28	28·86	1·42 — 5
"	" .. 6	Fort Augustus (St. Benedicts) ..	44·31	44·20	41·78	2·42 — 5
"	" .. 7	Loch Quoich (Glenquoich) ....	113·68	110·75	101·24	9·51 — 9
"	" ..13	Arisaig House .....	63·02	62·86	60·29	2·57 — 4
"	" ..17	Fort William (Atholl Bank) ..	74·53	77·84	73·29	4·55 — 6
"	" ..19	North Uist (Monach) .....	42·65	46·62	38·05	8·57 —18
"	Ross & Cromarty 4	Strathpeffer .....	29·76	30·54	27·23	3·31 —11
"	" .. 4	Alness (Ardross Castle) .....	39·74	38·54	35·69	2·85 — 7
"	" .. 8	Loch Torridon (Bendamph) ..	86·72	85·12	81·84	3·28 — 4
"	" ..10	Stornoway .....	50·69	49·85	47·08	2·77 — 6
XIX	Sutherlandshire .. 2	Dunrobin Castle .....	32·29	31·65	26·00	5·65 —18
"	" .. 4	Tongue Manse .....	41·81	41·00	35·17	5·83 —14
"	" .. 4	Melvich Schoolhouse .....	37·67	36·00	33·83	2·17 — 6
"	" .. 5	Loch More (Achfary) .....	78·53	75·80	76·59	·79 + 1
"	Caithness-shire .. 2	Wick .....	29·63	29·92	28·41	1·51 — 5
"	Orkney .....	Pomona (Deerness) .....	35·56	35·42	32·47	2·95 — 8
"	Shetland .....	Lerwick .....	"	38·01	39·67	1·66 + 4

## IRELAND.

DIV.	COUNTY and river-division.	STATION.	Average 1910- 1919.	Average 1881- 1915.	Depth in 1922.	Difference from Average 1881-1915.	
						Per Amount.	cent.
			in.	in.	in.	in.	
XX	Co. Cork . . . . . 6	Dunmanway (The Rectory) ..	62·16	61·00	59·62	1·38	— 2
"	" " . . . . . 7	Cork (University College) ....	39·46	39·97	37·25	2·72	— 7
"	" " . . . . . 7	Midleton (Ballinacurra) .....	37·99	40·36	32·43	7·93	—20
"	" " . . . . . 9	Mallow (Longueville) .....	40·27	37·30	31·30	6·00	—16
"	" Kerry . . . . . 3	Cahiriveen (Valencia Obsy.) ..	56·99	55·65	53·46	2·19	— 4
"	" " . . . . . 3	Killarney (District Asylum) ..	56·77	54·71	50·04	4·67	— 4
"	" " . . . . . 4	Darrynane Abbey .....	56·29	51·02	54·61	3·59	+ 7
"	" Waterford ... 3	Waterford (Brook Lodge) ....	39·87	39·47	30·63	8·84	—22
"	" Tipperary ... 1	Nenagh (Castle Lough) .....	41·33	39·52	37·70	1·82	— 5
"	" " . . . . . 3	Cahir Abbey .....	39·35	39·20	32·41	6·79	—17
"	" " . . . . . 3	Cashel (Ballinamona) .....	38·19	37·30	30·23	7·07	—19
"	" Limerick .... 2	Foynes (Coolnanes) .....	41·22	39·43	36·52	2·91	— 7
XXI	" Wexford .... 2	Foulkesmill (Longraigue) ....	40·59	39·32	33·86	5·46	—14
"	" " . . . . . 4	Gorey (Courtown House) ....	37·47	34·67	31·18	3·49	—10
"	" Kilkenny .... 2	Kilkenny Castle .....	34·20	33·15	26·68	6·47	—20
"	" Carlow .....	Bagnalstown (Fenagh House) ..	35·08	34·95	31·69	3·26	— 9
"	" " . . . . . 3	Hacketstown Rectory .....	40·61	39·50	34·15	5·35	—14
"	Queen's County .. 2	Abbey Leix (Blandsfort) ....	37·94	36·55	32·02	4·53	—12
"	King's " . . . . . 1	Birr Castle .....	33·70	32·56	29·53	3·03	— 9
"	Co. Kildare .... 2	Straffan House .....	33·09	31·36	27·35	4·01	—13
"	" Dublin .... 2	Dublin (Phoenix Park) .....	29·82	27·64	21·41	6·23	—23
"	" " . . . . . 3	Balbriggan (Ardgillan) .....	31·11	28·96	24·31	4·65	—16
"	" Meath .....	Kells (Headfort) .....	36·69	37·00	33·50	3·50	— 9
"	" Westmeath .. 1	Athlone (Twyford) .....	39·85	37·00	32·99	4·01	—11
"	" " . . . . . 1	Mullingar (Belvedere) .....	39·21	36·34	32·83	3·51	—10
"	" Louth .....	Greenore .....	32·26	31·91	28·27	3·64	—11
"	" Longford .... 2	Castle Forbes Gardens .....	39·40	37·60	35·95	1·65	— 4
XXII	" Galway .... 3	Tuam (Gardenfield) .....	45·35	44·08	44·92	.84	+ 2
"	" " . . . . . 5	Ahascragh (Clonbrock) .....	47·90	41·56	44·22	2·66	+ 6
"	" Roscommon . 4	Strokestown (Castlenode) ....	36·55	35·00	34·78	.22	— 1
"	" Mayo .....	Crossmolina (Enniscoe) .....	56·07	53·27	55·22	1·95	+ 4
"	" " . . . . . 4	Westport House .....	49·62	46·60	51·33	4·73	+10
"	" Sligo .....	Collooney (Markree Obsy.) ..	48·59	43·27	45·18	1·91	+ 4
XXIII	" Cavan .....	Belturbet (Cloverhill) .....	35·83	34·63	30·27	4·36	—13
"	" Armagh .... 5	Armagh Observatory .....	32·51	31·75	29·73	2·02	— 6
"	" Down .....	Newry (Bridge Street) .....	38·55	38·13	36·65	1·48	— 4
"	" " . . . . . 2	Seaforde .....	39·76	38·29	36·80	1·49	— 4
"	" " . . . . . 4	Donaghadee .....	30·92	31·22	29·81	1·41	— 5
"	" Antrim .... 1	Belfast (Queen's University) ..	37·62	34·46	32·59	1·87	— 5
"	" " . . . . . 5	Ballymena (Harryville) .....	45·35	41·50	39·21	2·29	— 5
"	" Londonderry 3	Londonderry (Creggan Res.) ..	43·61	41·77	39·68	2·09	— 5
"	" " . . . . . 5	Limavady (Drenagh) .....	37·20	36·99	33·40	3·59	—10
"	" Tyrone .... 3	Omagh (Edenfel) .....	42·62	40·12	46·02	5·90	+15
"	" Donegal .... 1	Malin Head .....	32·10	31·99	30·36	1·63	— 5
"	" " . . . . . 2	Letterkenny (Mental Hospital) ..	48·01	46·00	40·98	5·02	—11
"	" " . . . . . 3	Dunfanaghy (St. Helen's) ....	..	45·00	36·49	8·51	—19
"	" " . . . . . 5	Killybegs (Rockmount) .....	61·99	60·50	58·64	1·86	— 3

METEOROLOGICAL OFFICE, AIR MINISTRY.

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BRITISH RAINFALL ORGANIZATION.

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BRITISH RAINFALL, 1922.

PART III.

GENERAL TABLE  
OF  
TOTAL RAINFALL IN 1922  
AT  
STATIONS  
IN  
GREAT BRITAIN AND IRELAND  
WITH THE NAMES OF  
THE OBSERVERS  
OR OTHER AUTHORITIES FOR THE OBSERVATIONS.

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ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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## EXPLANATORY NOTE.

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The counties are divided up into numbered areas, corresponding with the river-basins. A full description of these river-divisions for England and Wales was given in a special article in Part I of *British Rainfall, 1910* (pp. 37-66), and a similar article on the river-divisions of Scotland and Ireland appeared in Part I of *British Rainfall, 1911* (pp. 49-72), with detailed maps showing all the river-divisions in each Division. Reprints of these articles are available.

The Divisions in the General Table are the same as those adopted by the Registrars-General of England and Scotland. The stations in each river-division are arranged nearly in the order of their latitude from South to North.

For convenience, the first name is that of a place which can be easily found on any large scale map; occasionally it is in an adjoining county. The second name is added to fix the site of observation more closely, *e.g.*, "Haslemere (Clammer Hill)" means Clammer Hill, near Haslemere.

In the column headed "diameter," figures in old style type indicate the length of the sides of rectangular gauges.

The letter D signifies that daily observations have been received and are complete for the year; d, that less complete daily records have been received; w indicates that weekly readings have been received, and M that the gauge is read only once a month, usually on the 1st. (R) denotes that the gauge used is a self-registering or a recording instrument, the correct reading of which depends upon the mechanism being in working order.

The total rainfall is printed in ordinary roman type under the heading of the unit in which the readings were made, *i.e.*, in inches or millimetres. The total as converted from inches to millimetres, or from millimetres to inches, is printed in old style type. If the record was taken during part of the year in inches and part in millimetres, the figures in both columns are printed in old style type, and in the few instances in which the readings have been made in *both* units throughout both columns are printed in roman type.

A few entries of total rain will be found in italics—indicating that the values have been corrected, *e.g.*, when snow has been lost, when the amount for a short period has been computed from other records, or when the gauge has been moved a short distance during the year. A record is not as a rule printed if the gauge has been moved more than a mile, or if there is a greater difference than 50 ft. of altitude between the two positions.

A note of interrogation (?) implies doubt, not necessarily error; it is not intended to cast any suspicion on the accuracy of the Observer. The absence of information is indicated by ..

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## ENGLAND AND WALES.

## DIVISION I.—LONDON. (Area, 117 sq. mi.)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.				
		Diam.	Height Ground	above Sea Level.							
<b>1.—THAMES.—Right Bank Tributaries. 67 sq. mi.</b>											
				in.	ft. in.	ft.	mm.	in.			
<b>BERMONDSEY.</b>											
D	Southwark Park .....	London County Council ..	5	9	11	19	556	21·88	154	134	
D	Shad Thames Pumping Station	London County Council ..	6	28	5	43	539	21·22	165	123	
<b>LAMBETH.</b>											
D	Brockwell Park .....	London County Council ..	8	1	0	142	657	25·85	164	122	
D	Brixton Hill Reservoir .....	Met. Water Board.....	5	1	1	121	601	23·65	176	125	
<b>BATTERSEA &amp; CLAPHAM.</b>											
D	Larkhall Rise .....	Guy M. Quiller, Esq. ....	5	1	1	55	615	24·22	168	125	
D	Clapham Com. (Bromfelde Rd.)	H. N. Prentice, Esq.....	5	1	2	70	562	22·11	154	122	
D	Battersea Park .....	London County Council ..	5	9	8	13	442	17·40?	..	101	
D	Battersea Water Works.....	Mr. F. J. Goldsworthy ...	5	3	6	6	576	22·66	152	126	
D	Nine Elms (Heathwall) .....	London County Council ..	8	39	4	54	461	18·13	178	99	
<b>WANDSWORTH.</b>											
D	Streatham (Conyers Road) ...	Met. Water Board.....	5	2	6	119	561	22·08	157	123	
D	Streatham Park (Pendle Road)	F. W. Snell, Esq. ....	8	1	0	125	609	23·97	175	133	
D	Streatham Hill Reservoir ...	Met. Water Board.....	5	3	2	205	578	22·74	161	125	
D	Putney Heath Reservoir ...	Met. Water Board.....	5	1	6	180	553	21·77	162	124	
D	Balham High Road.....(R)	P. Dodd, Esq., C.E. ....	6	1	6	89	636	25·05	189	135	
D	Wandsworth C. (Loxley Rd.) ..	F. J. Brodie, Esq. ....	8	1	0	105	630	24·81	196	138	
D	Southfields (Coronation Gds)(R)	P. Dodd, Esq., C.E. ....	6	1	6	37	555	21·87	166	120	
<b>CAMBERWELL.</b>											
D	Nunhead (Southwark W.W.) ..	Met. Water Board.....	5	1	0	175	548	21·57	170	117	
<b>DEPTFORD.</b>											
D	Telegraph Hill .....	London County Council ..	5	7	0	135	536	21·12	160	111	
D	Water Works .....	Met. Water Board.....	5	1	0	20	555	21·83	162	113	
<b>GREENWICH.</b>											
D	Deptford Pumping Station ...	London County Council ..	8	4	0	18	558	21·98	158	122	
D	Royal Observatory .....	Sir F. W. Dyson, F.R.S. ..	8	1	0	150	581	22·86	174	122	
D	Royal Observatory .....	Sir F. W. Dyson, F.R.S. ..	8	0	5	149	594	23·39	174	125	
D	Westcombe Park Road .....	Rev. T. R. Price .....	8	2	0	154	590	23·23	186	126	
<b>LEWISHAM.</b>											
D	Grove Park (The Avenue) ....	A. Malden, Esq. ....	5	1	6	180	599	23·59	169	136	
D	Forest Hill Reservoir .....	Met. Water Board.....	5	1	3	340	633	24·94	173	137	
D	Clarendon Road .....	G. E. Dacey, Esq. ....	5	1	0	98	620	24·41	199	140	
D	Clarendon Road .....	G. E. Dacey, Esq. ....	8	1	0	98	615	24·20	199	140	
<b>WOOLWICH.</b>											
D	Eltham (High Street) .....	Met. Water Board.....	5	1	0	245	588	23·15	157	126	
<b>2.—THAMES—Left Bank Tributaries. 50 sq. mi.</b>											
<b>KENSINGTON.</b>											
D	Harley Gardens .....	Mrs. Hamlyn Price .....	5	1	5	29	587	23·11	181	134	
D	Victoria & Albert Museum....	The Director .....	8	0	6	27	599	23·60	188	133	
D	Holland House.....	Mr. P. B. Rintoul.....	5	4	0	69	595	23·42	164	126	
D	Cam House.....	Rt. Hon. Lord Phillimore	5	3	0	100	578	22·77	152	121	
D	Campden Hill.....	Met. Water Board.....	8	1	0	142	681	26·83	179	145	
<b>HAMMERSMITH.</b>											
D	The Creek .....	London County Council ..	8	15	5	35	526	20·72	158	119	
<b>FULHAM.</b>											
D	Acfold Road .....	Mrs. H. W. Carter .....	5	1	0	13	597	23·49	..	..	
D	Hammersmith Cemetery .....	Mr. R. J. Brown.....	5	1	0	16	614	24·18	170	125	

## DIVISION I.—LONDON—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam.	Height Ground	above Sea Level.	1922					
2.—THAMES—Left Bank Tributaries—(con.).		in.	ft.	in.	ft.	mm.	in.			
CHELSEA.										
d	Lots Road Pumping Station..	London County Council ..	8	32	0	48	463	18·21	162	122
d	Western Pumping Station....	London County Council ...	8	1	0	19	576	22·69	158	123
d	Physic Garden.....	W. Hales, Esq. ....	5	1	0	20	580	22·84	171	130
d	Oakley Street .....	A. Hampton Brown, Esq. .	5	1	0	25	566	22·28	180	133
d	St. Luke's Gardens .....	T. W. E. Higgins, Esq., C.E.	5	1	0	25	595	23·42	171	137
WESTMINSTER.										
d	King's Scholar's Pond .....	London County Council ..	8	11	6	31	597	23·50	180	130
d	St. George's Square .....	T. H. McEwen, Esq. ....	5	0	7	..	597	23·49	..	129
d	Buckingham Palace.....	Mr. W. Osborne.....	5	8	0	35	591	23·27	175	133
d	Kensington Palace Gardens ..	Mr. W. Beecher .....	8	2	0	80	622	24·49	182	134
d	Kensington Palace .....	Air Ministry .....	8	1	0	80	622	24·49	180	127
d	Kensington Gardens .....	Prof. S. M. Dixon .....	5	1	0	78	578	22·75	170	125
d	St. James's Park.....	Air Ministry .....	8	1	0	27	594	23·39	174	129
d	Hyde Park .....	Royal Humane Society ...	8	20	0	..	506	19·93	159	110
d	Spring Gardens .....	London County Council ..	8	6	0	35	614	24·17	165	145
d	Strand .....	J. J. Steward, Esq. ....	5	40	0	80	557	21·94	167	130
ST. MARYLEBONE.										
d	Royal Botanic Gardens.....	Mr. J. L. North .....	8	1	0	130	663	26·09	174	136
d	Hamilton Terrace .....	E. Heron Allen, Esq., F.R.S.	5	0	6	..	585	23·05	..	..
HAMPSTEAD.										
d	Baitow Hill Reservoir .....	Met. Water Board.....	5	1	0	175	648	25·52	175	135
d	Kidderpore Reservoir .....	Met. Water Board .....	5	1	0	322	609	23·99	..	..
d	New End Square.....	Mr. W. Pikesley .....	5	1	0	..	654	25·76	172	134
d	Observatory .....	E. L. Hawke, Esq. ....	8	1	0	451	639	25·16	172	135
d	Golder's Hill .....	London County Council ..	5	9	8	350	560	22·04	173	136
ST. PANCRAS.										
d	Camden Square .....	Royal Meteorological Soc.	8	1	0	111	650	25·60	177	128
d	Camden Square ....	Snowdon Royal Meteorological Soc.	5	1	0	111	647	25·46	174	128
M	Camden Square .....	Royal Meteorological Soc.	5	0	11	111	647	25·48	..	..
STOKE NEWINGTON.										
d	New River Filter Beds.....	Met. Water Board.....	5	1	3	101	609	23·97	166	126
d	New River Reservoirs .....	Met. Water Board.....	5	1	0	105	622	24·48	168	127
HACKNEY.										
d	Clapton Pond .....	Norman Scorgie, Esq., C.E.	5	1	0	69	592	23·29	168	125
d	Clapton Pond .....	(R) Norman Scorgie, Esq., C.E.	8	2	3	70	591	23·26	168	125
HOLBORN.										
d	Stone Yard.....	E. F. Spurrell, Esq. ....	5	12	0	89	530	20·86	..	118
FINSBURY.										
d	New River Head.....	Met. Water Board .....	8	2	6	95	558	21·98	171	119
CITY OF LONDON.										
d	Guildhall .....	E. E. Finch, Esq., C.E. ...	8	2	6	50	561	22·10	..	..
d	Guildhall .....	(R) E. E. Finch, Esq., C.E. ...	8	51	0	99	577	22·73	..	..
BETHNAL GREEN.										
d	Victoria Park .....	London County Council ..	5	9	3	42	583	22·96	161	139
POPLAR.										
d	Isle of Dogs (Island Gardens) ..	London County Council ..	5	4	2	22	463	18·24	155	109
d	Isle of Dogs (Stewart Street) ..	London County Council ..	8	1	0	16	557	21·94	171	122
d	Old Ford Pumping Station...	Met. Water Board.....	8	0	9	19	586	23·08	175	125
d	Old Ford (Penstock House)...	London County Council ..	8	1	0	43	592	23·30	166	127
WOOLWICH.										
d	N. Woolwich Pumping Station	London County Council ..	8	0	9	12	511	20·10	154	114
d	Barking Outfall .....	London County Council ..	8	0	9	9	484	19·04	182	115

## DIVISION II.—SOUTH-EASTERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
SURREY. (Area, 725 sq. mi.).		in.	ft.	in.	ft.	mm.	in.		
1.—ARUN. 45 sq. mi.									
d Haslemere (Beech Side Cottage)	J. Jackson, Esq. ....	5	0	9	570	989	38·94	196	146
Haslemere (Clammer Hill)	Mrs. Glennie .....	5	1	6	400	919	36·16	177	137
Chiddingfold (Stonehurst)	"Surrey Advertiser" .....	5	0	10	220	846	33·29	..	..
d Chiddingfold (The Knipp)	Major A. F. Clifford .....	8	1	10	..	902	35·52	..	135
d Hambledon (Rossall)	L. R. Furneaux, Esq. ....	5	1	0	250	833	32·78	190	131
Holmbury St. Mary (Joldwynds)	F. C. Bayard, Esq. ....	5	1	0	530	885	34·86	166	135
2.—MEDWAY. 50 sq. mi.									
d East Grinstead (Lockeridge)	Lt. Col. J. F. Forbes. ....	5	0	5	320	888	34·96	173	135
d Dormans Park (Chartham Park)	I. D. Margary, Esq. ....	5	1	0	270	866	34·10	187	133
d Dormans Park (Hill Crest)	Mrs. H. R. Mill .....	5	1	0	320	881	34·70	188	145
d Lingfield (Felcourt)	R. McAlpine, Esq. ....	5	1	3	225	850	33·46	179	139
d Oxted (Stone Hall)	W. P. Metcalfe, Esq. ....	5	1	2	320	815	32·08	196	151
Oxted (West Heath)	Norman W. Grieve, Esq. ....	8	1	2	500	843	33·17	..	..
Limpsfield (Ballards Shaw)	F. C. Bayard, Esq. ....	5	1	1	500	868	34·17	204	141
3.—THAMES—Darent. 22 sq. mi.									
Chelsham (Ledgers)	Henry A. Daniell, Esq. ....	5	1	5	620	935	36·82	..	..
Farleigh (Croydon Ment. Hosp.)	Croydon Corporation .....	8	1	0	600	856	33·69	183	150
Chelsham (Fairchildes)	A. S. Daniell, Esq. ....	8	1	0	600	893	35·15	..	..
Chelsham (Fairchildes)	Mr. G. Mansfield .....	5	0	8	600	884	34·81	..	..
Addington (Hares Bnk Pmp Sta)	Croydon Corporation .....	8	1	0	331	774	30·48	201	147
d Addington Hills Reservoir	Croydon Corporation .....	8	1	0	473	763	30·03	186	139
d Norwood (Auckland Road)	Miss J. Cooper .....	5	1	5	230	564	22·22	161	126
d Penge Recreation Ground	Lt.-Col. H. W. Longdin ...	5	1	1	122	617	24·29	170	131
4.—THAMES—Wandle. 71 sq. mi.									
d Kingswood (Margery Hall Res.)	W. Vaux Graham, Esq., C.E. ....	5	1	0	691	768	30·25	168	131
d Woldingham Reservoir	W. Vaux Graham, Esq., C.E. ....	5	1	6	851	839	33·05	..	..
d Woldingham (The Moorlands)	Mrs. G. A. Anderson .....	5	1	0	750	874	34·41	183	142
Caterham Reservoir	A. E. Cornwall-Walker, Esq. ....	5	1	2	717	907	35·70	195	150
d Chipstead (Eyhurst)	D. Morphew, Esq. ....	5	1	0	538	851	33·51	193	147
d Caterham Mental Hospital	J. Leslie Gordon, Esq. M.D. ....	5	1	0	607	861	33·90	183	139
d Tadworth (Glade House)	W. J. Saunders, Esq. ....	5	1	6	545	813	32·00	183	134
d Chelsham & Woldingham	W. Vaux Graham, Esq., C.E. ....	5	1	0	479	859	33·83	170	145
d Warlingham (Council School)	R. W. Peacock, Esq. ....	5	1	0	600	856	33·70	187	146
Caterham Valley Depot	A. E. Cornwall-Walker, Esq. ....	5	1	6	431	900	35·42	209	149
d Banstead (Burgh Heath)	Capt. E. R. Taylor .....	5	1	0	571	837	32·95	176	143
d Banstead (Burgh Heath Res.)	W. Vaux Graham, Esq., C.E. ....	5	1	0	570	816	32·12	163	150
d Chipstead (The Lodge)	F. E. Goad, Esq. ....	5	0	9	525	821	32·32	186	141
d Chipstead (How Green Res.)	W. Vaux Graham, Esq., C.E. ....	5	1	0	528	836	32·91	164	141
Kenley Pumping Station	A. E. Cornwall-Walker, Esq. ....	5	1	6	275	781	30·74	195	140
d Banstead Mental Hospital	S. J. Wray, Esq. ....	5	4	6	420	701	27·62	174	138
d Purley (Oakwood Avenue)	E. W. Finch, Esq. ....	5	1	0	380	748	29·44	185	135
d Purley (Downscourt Rd.)	J. Edmund Clark, Esq. ....	5	1	0	360	775	30·53	192	134
d Purley (Pumping Station)	A. E. Cornwall-Walker, Esq. ....	5	1	3	225	779	30·66	186	141
d Sanderstead (Beechwood Road)	E. Alexander, Esq. ....	5	1	0	370	761	29·97	194	135
d Croydon Aerodrome	Air Ministry .....	8	1	0	250	687	27·05	172	129
South Croydon (Avondale Rd.)	F. C. Bayard, Esq. ....	5	2	3	205	773	30·42	172	140
d South Croydon (Newark Road)	A. H. Jukes, Esq. ....	5	1	1	177	752	29·61	189	139
d Wallington (Alcester Road)	F. C. Bayard, Esq. ....	5	4	0	144	695	27·35	189	140
d Wallington (Alcester Road)	F. C. Bayard, Esq. ....	8	1	0	141	651	25·61	179	135
Carshalton (Sewage Works)	F. C. Bayard, Esq. ....	5	1	0	118	643	25·31	155	123
Beddington (Sewage Farm)	Croydon Corporation .....	5	1	0	129	596	23·46	193	126
Croydon (Waddon New Road)	F. C. Bayard, Esq. ....	5	1	0	146	633	24·93	177	129
d Croydon (Northampton Road)	Mrs. Higgins .....	5	1	0	210	695	27·38	170	138
Beddington Cor. (Millgreen Rd.)	F. C. Bayard, Esq. ....	5	5	0	77	644	25·34	167	132
Mitcham (Brook Cottage)	F. C. Bayard, Esq. ....	5	1	0	100	540	21·27	125	107
d Wimbledon (Trinity Road)	P. J. Bevan, Esq., C.E. ....	5	1	0	53	616	24·25	169	128
d Wimbledon (Sewage Works)	J. Bowen, Esq., C.E. ....	5	1	0	55	559	21·99	170	124

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain,		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
SURREY—(con.).		in.	ft.	in.	ft.	mm.	in.		
5.—THAMES—Mole & c. 229 sq. mi.									
LowfieldHth(HuntsgreenHouse)	A. E. Robinson, Esq. ....	5	0	7	200	889	35·02	..	..
Horley (Smallfield) .....	F. C. Bayard, Esq. ....	5	1	0	215	705	27·76	177	133
Outwood (The Orchards) .....	F. C. Bayard, Esq. ....	5	1	0	280	757	29·81	173	133
d Dorking (Stone House,RoseHill)	Lt.-Col. J. R. Greenhill ...	5	1	0	240	897	35·31	177	133
Dorking (Denbies) .....	Mr. J. Ansell .....	5	0	9	610	923	36·34	192	..
d Brockham (North Lodge) .....	H. R. Kempe, Esq., C.E....	8	0	9	160	821	32·31	166	130
d Reigate (Hartswood) .....	R. W. Clutton, Esq. ....	5	1	0	174	729	28·71	178	126
South Nutfield (Hale Edge) .....	R. C. Grant, Esq. ....	5	1	0	250	709	27·93	172	132
d Earlswood (Sewage Farm) ....	F. T. Clayton, Esq., C.E....	5	1	6	196	731	28·77	167	134
d Redhill (Station Road) .....	W. H. Fowler, Esq. ....	5	18	0	270	733	28·87	180	125
Redhill (Warwick Road) .....	A. E. Cornewall-Walker, Esq.	5	1	6	284	777	30·61	193	129
d Reigate (The Knowle) .....	G. Weston, Esq. ....	5	1	0	390	696	27·39	168	124
d Reigate (Undercroft) .....	Paul Crosfield, Esq. ....	5	0	4	242	781	30·73	174	130
d Reigate (Wray Park Road) ...	W. J. MacAndrew, Esq....	5	1	3	330	760	29·93	..	117
d Reigate (Castle Grounds) .....	F. T. Clayton, Esq., C.E....	5	1	6	350	777	30·57	201	130
d Reigate (Thurso) .....	F. S. Smith, Esq. ....	8	0	11	270	699	27·50	159	120
Reigate (Laglands) .....	J. Welch, Esq. ....	5	1	2	375	793	31·21	181	133
d Reigate (Courleigh) .....	T. S. Marriage, Esq. ....	5	0	6	400	769	30·27	174	132
d Nutfield Priory .....	J. Moffatt, Esq. ....	8	1	2	313	739	29·11	187	135
Bletchingley (South Park Fm.)	Uvedale Lambert, Esq. ....	5	0	4	340	739	29·10	156	126
d Betchworth (Snower Hill) .....	T. Du Buisson, Esq. ....	8	0	11	250	769	30·27	173	127
d Buckland (The White House) ..	J. Herbert Scrutton, Esq....	8	1	0	260	847	33·34	201	147
Mickleham (Juniper Hall) .....	Miss B. V. MacAndrew ....	5	1	0	183	839	33·03	..	..
Little Bookham (Longheath) ..	"Surrey Advertiser" .....	..	..	..	..	727	28·61	..	..
d Headley Rectory .....	Rev. T. E. R. Phillips ....	5	1	0	570	820	32·30	188	131
Headley (The Hurst) .....	F. C. Bayard, Esq. ....	5	1	3	420	793	31·23	166	134
d Walton (Walton Manor) .....	Mr. J. Millichamp .....	5	1	0	600	811	31·92	193	143
Leatherhead (Water Works) ..	"Dorking Advertiser" .....	..	..	..	..	743	29·26	..	..
Ashted (The Hut) .....	F. C. Bayard, Esq. ....	5	0	5	200	688	27·08	169	130
d Cobham (Hatchford Park) .....	Sir H. B. Samuelson, Bart.	8	1	3	300	896	35·26	143	128
d Oxshott (Bevendean) .....	Mr. J. W. Harris .....	5	1	0	200	698	27·47	173	144
Banstead (The Hall) .....	F. C. Bayard, Esq. ....	8	1	0	480	835	32·87	172	143
d Epsom (The Durdans) .....	J. Barclay, Esq. ....	8	0	11	224	769	30·29	180	141
d Epsom (Hylands Road) .....	F. Holroyd, Esq. ....	5	1	0	225	709	27·90	172	132
d Epsom (Sewage Farm) .....	E. R. Capon, Esq. C.E....	8	1	0	121	624	24·55	161	126
d Whiteley Village (Fox Oak) ...	H. E. Cooke, Esq. ....	8	3	4	195	560	22·02	161	114
Cobham (Fairmile Hatch) .....	Mrs. Trollope .....	5	1	0	165	643	25·30	..	110
d Weybridge (Gower Road) .....	Miss J. A. Sanger .....	5	0	7	117	640	25·21	168	125
d Sutton (Camborne Road) .....	F. E. Wright, Esq. ....	5	1	0	250	700	27·55	165	136
d Claygate (Hertslets) .....	N. C. Armitage, Esq. ....	5	1	0	106	561	22·07	197	127
Esher (Sewage Works) .....	F. C. Bayard, Esq. ....	5	1	0	42	569	22·38	165	119
d Sutton (High Sch., Cheam Rd.)	Miss J. Harwood .....	5	1	0	197	629	24·76	176	129
d Sutton (Water Works) .....	W. Vaux Graham, Esq. C.E.	5	1	6	166	614	24·16	161	127
d Sutton (Sewage Works) .....	W. H. Grieves, Esq., C.E.	8	1	0	94	686	27·01	154	118
d Surbiton (Worthington Road)	W. Stephens, Esq. ....	5	1	0	82	683	26·88	184	139
d Surbiton (Seething Wells) .....	Met. Water Board .....	5	0	10	34	590	23·23	164	125
d Surbiton (Sew. Disposal Wks)	H. T. Mather, Esq. ....	8	0	5	41	530	20·87	..	..
d West Molesey (Walton Works)	Met. Water Board .....	5	0	6	35	575	22·65	161	122
d Norbiton (Wolverton Avenue)	Dr. W. H. Kesteven ....	5	1	0	50	781	30·76?	179	140
d New Malden (Sewage Works) ..	R. H. Jeffes, Esq. ....	5	1	0	48	543	21·36	164	115
d Kingston (County Hall) .....	H. Wilson, Esq. ....	5	0	9	31	600	23·63	178	132
d Kingston (Grammar School) ..	W. R. Warner, Esq. ....	5	1	0	32	565	22·24	178	119
d Kingston Sewage Works .....	P. G. Lloyd, Esq. ....	5	1	0	25	645	25·41	173	118
d Merton Park (Mostyn Road) ..	J. F. Caley, Esq. ....	5	1	1	..	615	24·21	178	133
d Raynes Pk (Cottenham Pk P.S.)	J. Bowen Esq., C.E. ....	5	1	2	50	615	24·22	176	126
d Raynes Park (W. Barnes P.S.)	G. Jerram, Esq., C.E....	5	1	2	47	517	20·35	161	118
Wimbledon (The Downs) .....	F. C. Bayard, Esq. ....	5	1	0	162	630	24·82	193	131
d Wimbledon (Eagle House) .....	Sir T. G. Jackson, Bart., R.A.	5	1	6	177	639	25·15	158	128
Richmond (The Terrace) .....	F. C. Bayard, Esq. ....	8	1	6	109	594	23·39	167	134
d Richmond (Kew Observatory) ..	Air Ministry .....	8	1	0	18	568	22·35	163	117
d Kew (Royal Botanic Gardens) ..	Dr. Arthur Hill. F.R.S ..	8	0	9	..	579	22·79	158	125

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in or more.	Days with ·04 in. or more.		
		Diam.	Height Ground	above Sea Level.					
SURREY—(con.).		in.	ft.	in.	ft.	mm.	in.		
6.—THAMES—Wey. 236 sq. mi.									
D Haslemere (U.D.C. Depot) . . . . .	A. G. Whitcher, Esq. . . . .	5	1	0	475	985	38·77	182	148
D Haslemere (Hangerfield) . . . . .	J. P. Trew, Esq. . . . .	5	1	1	680	928	36·54	181	143
D Haslemere (Frensham Hall Farm) . . . . .	H. Windibank, Esq. . . . .	5	1	0	550	958	37·73	187	149
Haslemere (Frensham Hall Farm) . . . . .	H. Windibank, Esq. . . . .	5	1	6	625	1003	39·50	185	148
D Haslemere (Hazelhurst) . . . . .	Mrs. T. P. Newman . . . . .	5	1	0	550	1035	40·75	179	150
Haslemere (Furnace Place) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	936	36·85	..	..
D Oakwood Hill (Honeywood Ho) . . . . .	The Lady Tredegar . . . . .	5	1	0	280	793	31·20	189	140
D Witley (King Edward's School) . . . . .	J. Wood, Esq. . . . .	5	1	3	330	878	34·56	171	131
D Witley (Great Roke) . . . . .	C. W. Dixon, Esq. . . . .	5	5	6	300	825	32·50	165	128
D Hascombe Place . . . . .	C. T. Musgrave, Esq. . . . .	5	1	0	390	849	33·44	162	135
Cranleigh (Stonewall) . . . . .	F. C. Bayard, Esq. . . . .	5	1	0	182	837	32·95	188	139
Thursley (C.E. School) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	794	31·27	..	..
Ewhurst (Copse Hill) . . . . .	Mr. H. Smith . . . . .	5	1	6	..	819	32·26	193	130
D Ewhurst (Coneyhurst) . . . . .	Mr. J. Russell . . . . .	8	1	0	561	865	34·05	202	132
Ewhurst (Woolpit) . . . . .	Mr. W. Harrison . . . . .	5	1	6	600	855	33·67	..	..
Godalming (Milford House) . . . . .	Capt. F. D. Webb . . . . .	5	1	0	304	727	28·64	..	130
Godalming (Milford C.E. School) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	796	31·33	..	..
Godalming (Westbrook) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	766	30·16	..	..
D Godalming (Charterhouse) . . . . .	O. H. Latter, Esq. . . . .	5	1	0	130	738	29·06	185	127
Shackleford (Hall Place) . . . . .	W. E. Horne, Esq., . . . . .	8	1	2	200	736	28·98	146	124
Peaslake (Dewdney) . . . . .	Sir F. G. Ogilvie, C.P. . . . .	5	1	0	532	865	34·04	..	..
D Bramley (The Limes) . . . . .	Rev. C. J. Etty . . . . .	5	0	9	136	815	32·07	165	142
Bramley (C.E. School) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	814	32·03	..	..
Wonersh (Little Tangley) . . . . .	Mr. J. Smith . . . . .	5	1	0	200	789	31·08	166	126
Compton (Sandy Knowe Gdns) . . . . .	Mrs. F. Houghton . . . . .	..	..	..	..	757	29·82	..	..
Compton (Prior's Wood) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	749	29·47	..	..
D Shere (Manor House) . . . . .	R. A. Bray, Esq. . . . .	5	1	0	330	806	31·72	182	139
Shere (The Rectory) . . . . .	F. C. Bayard, Esq. . . . .	5	1	0	255	811	31·94	146	129
Albury (Dalton Hill Gardens) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	760	29·92	..	..
Abinger Hall . . . . .	F. C. Bayard, Esq. . . . .	8	2	0	320	949	37·36	190	147
D Abinger (West Hackhurst) . . . . .	Miss L. M. Forster . . . . .	5	0	8	440	814	32·04	..	144
D Farnham (Crooksbury Ridges) . . . . .	F. R. Walters, Esq., M.D. . . . .	5	1	4	440	789	31·07	210	128
D Farnham (Short Heath Lodge) . . . . .	Col. G. Chrystie . . . . .	5	1	0	365	748	29·46	178	128
Puttenham (Berthorpe) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	724	28·51	..	..
D Guildford (Piccard's Rough) . . . . .	H. A. Powell, Esq., M.D. . . . .	5	5	0	330	680	26·78	174	118
Guildford (Briarfield) . . . . .	Miss M. E. Swaine . . . . .	5	2	6	300	739	29·10	183	..
Guildford (Roy. Gram. School) . . . . .	H. N. Weller, Esq. . . . .	5	1	2	200	729	28·70	..	..
D Guildford (Newlands Corner) . . . . .	Mr. H. Tann . . . . .	5	1	6	550	817	32·17	196	136
D Guildford (Cross Lanes) . . . . .	F. F. Smallpeice, Esq. . . . .	5	0	8	200	726	28·58	175	123
Merrow (Church House) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	819	32·26	..	..
D E. Horsley (Rowbarns Grange) . . . . .	D. W. Sissons, Esq. . . . .	5	1	7	335	843	33·21	167	140
Worplesdon (Perry Hill School) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	703	27·67	..	..
D Worplesdon Hill (Pinewood) . . . . .	G. W. Hayes, Esq. . . . .	5	1	4	180	626	24·65	160	118
Worplesdon (Openwood) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	664	26·15	..	..
Send (Sendholme) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	637	25·06	..	..
Ripley (Ripley Court) . . . . .	M. H. Pearce, Esq. . . . .	..	..	..	..	644	25·36	..	..
Mayford (Stony Yarrows) . . . . .	A. R. Ricardo, Esq. . . . .	5	1	5	140	610	24·03	150	110
Woking (Mayford House Gdns.) . . . . .	"Surrey Advertiser" . . . . .	..	..	..	..	680	26·78	..	..
D Woking (The Grange) . . . . .	Rev. F. Wilson . . . . .	5	0	8	78	683	26·90	191	127
D Woking (Hook Heath) . . . . .	W. S. Patterson, Esq. . . . .	5	1	0	160	637	25·08	146	116
D Woking (Northwood) . . . . .	S. Price-Williams, Esq., C.E. . . . .	5	1	4	114	628	24·71	..	114
D Woking (The Green) . . . . .	Mrs. Howlett . . . . .	5	0	9	122	627	24·68	155	120
D Pyrford (Kelmars) . . . . .	H. D. Richardson, Esq. . . . .	5	1	0	100	626	24·63	171	120
D Pyrford (The Crescent) . . . . .	J. E. Dowell, Esq. . . . .	5	1	0	70	613	24·14	165	115
D Horsell (The Vicarage) . . . . .	Rev. Norman Pares . . . . .	5	1	9	140	606	23·86	161	124
D Horsell (Inglewood) . . . . .	Vernon B. Longhurst, Esq. . . . .	5	1	0	115	646	25·42	183	120
D Wisley (R.H.S. Gardens) . . . . .	W. D. Cartwright, Esq. . . . .	8	1	0	150	630	24·79	183	120
D Byfleet (West Hall Gardens) . . . . .	Mr. G. Carpenter . . . . .	5	1	0	61	632	24·87	156	123
D West Byfleet (Kilmeena) . . . . .	F. Littleboy, Esq. . . . .	5	1	0	100	629	24·77	166	119
D West Byfleet (Starcross) . . . . .	Walter W. Way, Esq. . . . .	5	1	0	104	623	24·54	177	122
D Weybridge (St. George's Hill) . . . . .	H. I. Bond, Esq. . . . .	5	0	8	115	556	21·89	172	122
D Weybridge (Heath Field) . . . . .	Miss A. T. Gardiner . . . . .	5	1	0	100	615	24·22	168	124
D Weybridge (West Oaks) . . . . .	A. Whittet, Esq. . . . .	5	1	0	36	585	23·05	175	119

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
				in.	ft.	in.	mm.		
SURREY—(con.).		in.	ft.	in.	ft.	mm.	in.		
6.—THAMES—Wey.—(con.).									
D Weybridge (Station Road) . . . . .	H. K. G. Rogers, Esq. . . . .	5	1	0	85	615	24·22	177	122
Weybridge (Windsor Walk) . . . . .	Dr. W. Bramley Taylor, J.P. . . . .	..	..	..	..	627	24·70	..	..
7.—THAMES—Bourne. 55 sq. mi.									
D Knap Hill (Ulundi) . . . . .	G. C. H. Simmonds, Esq. . . . .	5	1	0	181	658	25·90	161	130
D Knap Hill (Lynbrook) . . . . .	Charles Wigan, Esq. . . . .	5	1	8	200	610	24·01	168	116
D Knap Hill (High Street) . . . . .	W. H. Cullis, Esq. . . . .	5	1	0	198	614	24·19	154	120
D Chobham (Sandpit Hall) . . . . .	K. A. H. Power, Esq. . . . .	5	1	0	100	648	25·51	161	124
D Chobham (The Manor House) . . . . .	F. A. Walter, Esq. . . . .	5	1	0	150	686	27·00	182	147
D Windlesham (Windlesham Ho.) . . . . .	Miss G. Cochrane . . . . .	5	0	9	180	738	29·05	145	115
D Chertsey (Ottershaw) . . . . .	Mrs. R. H. Otter . . . . .	5	1	0	200	639	25·14	193	130
D Chertsey (Botleys Park) . . . . .	Mr. H. Whitmarsh . . . . .	5	1	5	111	623	24·54	168	119
D Virginia Water (S. Ann's Heath) . . . . .	Rev. J. Peck . . . . .	8	1	1	120	620	24·42	174	116
D Englefield Green (Queenswood) . . . . .	S. J. Rigden, Esq. . . . .	8	1	0	200	699	27·52	181	126
D Staines (St. Ann's Cottage) . . . . .	Miss D. M. Gundry . . . . .	5	1	0	52	634	24·97	165	119
8.—THAMES—Loddon. 17 sq. mi.									
Frimley Green (Corry Hill) . . . . .	Miss D. E. Bailey . . . . .	5	1	0	285	681	26·82	140	114
D Frimley Green Waterworks . . . . .	S. G. Weller, Esq. . . . .	5	2	6	220	614	24·18	152	114
D Frimley Green (Ridgemount) . . . . .	C. C. Haviland, Esq. . . . .	5	0	9	350	743	29·24	205	133
D Camberley (Way's End) . . . . .	E. Ernest Green, Esq. . . . .	5	0	11	295	684	26·92	175	131
KENT. (Area, 1532 sq. mi.)									
1.—ROTHER & C. 217 sq. mi.									
D Dungeness . . . . .	Air Ministry . . . . .	8	1	3	22	611	24·06	171	119
D Lydd (The Paddock) . . . . .	Dr. J. A. Proctor . . . . .	5	5	8	10	691	27·20	194	132
Lydd (Westbrooke House) . . . . .	A. Finn, Esq. . . . .	5	1	3	..	587	23·09	..	..
D Brookland (Thrift Farm) . . . . .	C. Clark, Esq. . . . .	12	3	0	11	709	27·90	146	119
D Dymchurch (Hoorne) . . . . .	Mrs. Paddock . . . . .	5	1	0	9	590	23·23	166	122
D Snave (Poplar House) . . . . .	T. K. Tickner, Esq. . . . .	8	2	3	10	601	23·67	153	120
D Hawkhurst (Hensill) . . . . .	Major F. Ross Thomson . . . . .	5	3	0	180	695	27·36	157	129
Hawkhurst (Pixhall) . . . . .	Jesse W. Norris, Esq. . . . .	5	1	3	355	841	33·11	147	137
Kenardington (The Firs) . . . . .	Francis H. Lyon, Esq. . . . .	5	2	9	90	541	21·29	143	96
Tenterden (Summerhill) . . . . .	Mrs. Wilkin . . . . .	8	1	0	150	709	27·90	152	140
Tenterden (Ashenden) . . . . .	Major Herbert Neve . . . . .	5	1	0	190	701	27·58	180	132
D Tenterden (View Tower) . . . . .	J. Ellis Mace, Esq. . . . .	8	1	5	190	712	28·04	200	127
D Tenterden (View Tow.) <i>Snowdn.</i>	J. Ellis Mace, Esq. . . . .	8	1	5	190	692	27·23	185	124
D Benenden (National Sanat'm) . . . . .	H. Spurrier, Esq., M.B. . . . .	5	1	0	180	752	29·60	198	140
M Biddenden (Sandpit Wood) . . . . .	J. Ellis Mace, Esq. . . . .	5	1	0	218	734	28·88	..	..
D Hythe . . . . .	J. Singleton Green, Esq. CE . . . . .	5	1	0	0	736	28·97	202	131
D Hythe (Sandling Park) . . . . .	Rt. Hon. L. Hardy, M.P. . . . .	8	1	0	160	753	29·63	188	140
D Sandgate . . . . .	C. Law Green, Esq., C.E. . . . .	5	4	0	176	705	27·77	183	134
D Folkestone (Borough Sanat'm) . . . . .	A. E. Nichols, Esq., C.E. . . . .	5	1	0	101	711	27·99	172	128
D Folkestone (Cheriton Road) . . . . .	B. J. Duncan Walker, Esq. . . . .	5	1	0	160	758	29·84	180	139
D Folkestone (Cherry Gardens) . . . . .	H. T. Turner, Esq., C.E. . . . .	5	1	6	230	806	31·72	188	143
Capel (Lower Standen) . . . . .	H. T. Turner, Esq., C.E. . . . .	5	2	11	250	819	32·24	191	143
D Dover (Water Works) . . . . .	W. B. Smith, Esq., C.E. . . . .	5	1	6	200	774	30·47	163	140
D Dover (Buckland) . . . . .	Guy Mannering, Esq. . . . .	8	1	6	50	853	33·57	186	144
D Kearsney (Chilton Farm) . . . . .	W. B. Smith, Esq., C.E. . . . .	5	1	6	127	951	37·45	182	159
2.—STOUR & C. 386 sq. mi.									
D Lympne Aerodrome . . . . .	Air Ministry . . . . .	8	1	0	348	724	28·50	194	133
d Sellindge (Council School) . . . . .	S. H. Serpell, Esq. . . . .	5	1	0	200	708	27·88	179	133
D Lymping (Elham Valley W.W.) . . . . .	Phillip Harris, Esq. . . . .	5	1	6	485	821	32·33	210	150
D Ashford . . . . .	B. H. Headley, Esq. . . . .	5	1	0	190	736	28·97	163	138
D Dover (Martin Mill Pump. Stat.) . . . . .	F. L. Ball, Esq. . . . .	5	11	0	298	659	25·95	186	131
D Palmstead (Abbotsford) . . . . .	H. S. Stevens, Esq. . . . .	5	1	0	440	902	35·52	180	140
D Boughton Aluph (Fairlawn) . . . . .	E. Simmons, Esq. . . . .	5	1	3	220	744	29·28	147	137
D Charing Pumping Station . . . . .	F. L. Ball, Esq. . . . .	5	1	0	295	674	26·54	190	115
M Deal and Walmer W.W. . . . .	A. Mantle, Esq. . . . .	12	1	0	110	674	26·55	..	..
D Deal and Walmer W.W. . . . .	A. Mantle, Esq. . . . .	5	1	0	110	690	27·17	181	127
D Deal (Wellington Road) . . . . .	Deal Corporation . . . . .	5	1	0	17	675	26·56	168	133
D Deal (Wellington Road) . . . . .	Mrs. J. T. Miller . . . . .	5	1	0	24	685	26·96	180	134

## DIVISION II.—SOUTH-EASTERN COUNTIES.—(con).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level		1922			
KENT—(con.).		in.	ft.	in.	ft.	mm.	in.		
2.—STOUR & C.—(con.).									
d Great Mongeham Rectory.....	Rev. W. H. Rammell .....	5	1	8	100	658	25·91	164	129
d Sandwich (Upton House, Worth)	Capt. W. Elwin Napier ..	5	1	0	32	690	27·18	168	129
d Chilham (Lower Ensden) .....	F. Ivo Neame, Esq. ....	5	3	0	305	715	28·14	..	128
Wingham (Margate W.W.) .....	Mr. W. R. Hosking .....	5	1	0	138	705	27·75	156	131
d Canterbury (Oaten Hill House)	Miss H. M. Carr .....	5	1	3	50	686	27·00	165	137
d Canterbury (Medical Hall) .....	A. Lander, Esq. ....	5	1	0	39	609	23·97	158	118
d Canterbury (London Road).....	Miss B. Spillett .....	5	0	6	66	681	26·80	184	137
Canterbury (Irrigation Works)	C. Terry, Esq., C.E. ....	5	2	6	15	662	26·07	180	135
d Minster (Gas Works) .....	R. H. Ruthven, Esq. ....	5	1	0	60	605	23·81	..	112
d Ramsgate (Southwood W. W.) ..	R. H. Ruthven, Esq. ....	8	1	0	169	584	23·00	172	117
d Ramsgate (Archer House) .....	Miss L. M. Wainwright ...	5	1	0	75	569	22·41	162	117
d Reculver .....	Allington Collard, Esq. ...	5	5	2	27	537	21·14	170	123
d Broadstairs (Domus) .....	Capt. W. B. Marling .....	8	1	0	60	607	23·88	171	126
d Broadstairs (Collis Court Road)	A. Watkins, Esq. ....	5	1	0	120	589	23·17	168	124
d St. Peter's .....	H. Hurd, Esq., C.E. ....	5	0	9	140	577	22·72	179	133
d St. Peter's Court .....	A. J. Richardson, Esq. ....	5	1	0	135	594	23·40	183	124
d Birchington (Hollydene) .....	W. Tomlin, Esq., Junr. ...	5	6	0	75	567	22·33	156	131
d Birchington (Rose Bank) .....	Mr. G. Hoare .....	5	5	0	45	585	23·01	140	121
d Margate (Cliftonville) .....	J. W. Gunnis, Esq. ....	8	1	0	120	663	26·11	180	136
d Margate (Cliftonville) .....	C. J. Pemble, Esq. ....	5	1	0	51	520	20·48	162	114
3.—SWALE & C. 167 sq. mi.									
d Selling (Luton) .....	F. Ivo Neame, Esq. ....	5	4	9	263	716	28·18	177	147
d Bicknor Rectory .....	Rev. E. W. Edward .....	5	1	6	517	779	30·67	183	146
d Dunkirk (Dunkirk House) .....	Col. E. F. Gosset .....	5	0	11	400	628	24·74	179	137
d Teynham (Norton Court) .....	A. L. Mercer, Esq. ....	5	1	4	90	614	24·17	..	..
d Teynham (New Gardens) .....	Late Col. J. F. Honeyball.	5	1	5	30	603	23·72	187	132
d Whitstable (Council School) ..	G. Kirkby, Esq. ....	5	1	0	21	557	21·92	163	121
d Herne Bay (Water Works) .....	J. Roberts, Esq. ....	5	1	0	130	544	21·41	..	..
Sheppey (Eastchurch, O. Rides)	H.C. Warren, Esq. ....	5	2	0	40	517	20·36	..	113
4.—MEDWAY. 506 sq. mi.									
d Bedgebury Park Gardens .....	H. Arnold, Esq. ....	5	1	0	280	793	31·21	..	120
d Woodchurch (Hengherst) .....	W. Mitchell, Esq. ....	5	1	0	152	651	25·62	177	129
d Kilndown School .....	J. A. Ager, Esq. ....	5	1	3	365	741	29·18	162	135
d Scotney Castle .....	E. W. Hussey, Esq. ....	5	3	9	203	715	28·14	..	..
d Goudhurst (Lidwells) .....	Rev. H. P. FitzGerald .....	12	1	0	270	772	30·39	196	142
d High Halden (Middle Quarter)	Mr. B. H. Budding .....	5	1	0	114	721	28·37	185	128
d Biddenden (Augustus Villa) ...	E. Donne, Esq. ....	5	0	8	175	656	25·82	176	132
Goudhurst (Gore Court) .....	J. A. Druce, Esq. ....	..	..	..	..	701	27·62	..	..
d Tunbridge Wells (Hawkenbury)	D. W. Horner, Esq. ....	5	1	6	435	863	33·99	187	138
d Tunbridge Wells (Sydenhurst) ..	D. W. Horner, Esq. ....	5	1	6	435	839	33·02	208	142
d Tunbridge Wells (Calverley Park)	Dr. F. C. Linton .....	5	1	0	356	783	30·82	177	130
d Tun. Wells (The White House)	Miss Monica Robins .....	5	1	6	360	805	31·69	174	136
d Horsmonden (Broad Ford Ho)	Mrs. L. E. Maude .....	5	1	0	96	766	30·14	180	146
d Speldhurst (Little Court) .....	P. L. Rooper, Esq. ....	8	1	3	350	791	31·13	201	142
d Pembury (The Spring) .....	Miss L. M. Fowler .....	5	1	0	416	846	33·31	211	141
d Pembury Waterworks .....	W. H. Maxwell, Esq., C.E.	8	1	8	197	769	30·28	176	136
d Paddock Wood (Matfield Grange)	C. A. Perkin, Esq. ....	5	1	0	360	754	29·69	173	..
d Paddock Wood (Matfield) .....	D'Arcy W. Reeve, Esq. ...	5	1	0	321	799	31·47	180	141
d Edenbridge (Falconhurst) .....	Hon. Mrs. John Talbot ..	5	1	6	375	818	32·21	179	147
d Headcorn (Summerhill) .....	E. M. Richford, Esq. ....	5	1	6	100	645	25·38	171	..
d Penshurst Place .....	Lord De L'Isle and Dudley.	5	1	0	100	843	33·21	208	137
d Chiddingstone Hoath (Truggers)	Alsager Vian, Esq. ....	5	0	8	388	960	37·81	185	141
d Penshurst (Parkholt) .....	Mr. J. M. Sturgess .....	5	0	9	265	750	29·51	165	127
d Tonbridge (Mabledon Park) .....	J. F. W. Deacon, Esq. ...	5	1	0	190	803	31·63	177	139
d Tonbridge (Brooklands) .....	G. J. Kimmins, Esq. ....	5	0	10	120	769	30·27	176	142
d Tonbridge (Lyons) .....	Dr. E. S. Cardell .....	..	0	8	70	620	24·41	169	127
d Hildenborough (Hollanden Ho.)	C. H. Scott, Esq. ....	8	1	0	99	781	30·74	183	133
d Ulcombe Place .....	A. O. Walker, Esq. ....	5	1	0	350	617	24·29	183	130
d Langley (Rumwood Court) .....	Mr. W. J. Gould .....	5	1	9	354	692	27·26	203	135

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		D am.	Height Ground	above Sea Level.		1922			
KENT—(con.).		in.	ft.	in.	ft.	mm.	in.		
4.—MEDWAY—(con.).									
d Otham (Synyards)	Ambrose Boyson, Esq.	5	1	0	315	745	29·33	208	145
d Wateringbury (The Limes)	Alan Lambert, Esq.	5	1	0	130	691	27·19	192	143
d Wateringbury (Manor Farm)	W. Pye English, Esq.	5	3	0	152	653	25·70	185	125
d Wateringbury	J. Garratt, Esq.	5	1	6	130	633	24·90	161	131
d Sevenoaks (River Hill)	Lt.-Col. J. M. Rogers, D.S.O.	8	2	6	530	757	29·80	192	134
d Maidstone (W. W., Barming)	W. J. Ware, Esq., C.E.	5	1	6	250	653	25·72	183	129
d Maidstone (Brenchley Gardens)	T. F. Bunting, Esq., C.E.	5	0	9	50	653	25·73	184	135
d Maidstone (Mill Street)	T. F. Bunting, Esq., C.E.	8	6	0	38	660	25·97	183	128
d East Malling (Broadwater)	C. B. Mercer, Esq.	5	1	6	166	685	26·99	194	141
d East Malling (Blacklands)	Major C. E. Tristram	5	1	0	80	680	26·77	..	..
d Maidstone (Allington Lock)	Mr. W. Smith	5	1	0	20	659	25·93	169	135
d Detling (The Croft)	Old R. Cooke, Esq.	5	1	2	330	742	29·21	211	146
d Detling (The Croft)	New R. Cooke, Esq.	5	1	0	330	743	29·24	211	146
d Detling (Pollhill Fields)	R. Cooke, Esq.	5	1	0	553	710	27·97	..	..
d Chatham (Woolmans Wood)	W. Coles Finch, Esq.	5	3	0	470	664	26·13	180	133
d Halling Pumping Station	F. L. Ball, Esq.	5	1	0	75	631	24·86	155	131
d Chatham (Luton W.W.)	W. Coles Finch, Esq.	5	3	0	88	596	23·48	164	125
d Rochester (Knights Place)	Miss F. H. Pye	5	3	0	320	690	27·17	170	131
d Gillingham	"Chatham News"	..	..	..	..	616	24·24	174	..
d Strood Water Works	W. Banks, Esq., C.E.	5	3	0	112	615	24·23	182	126
d Frindsbury (The Shrubbery)	Warwick Stunt, Esq.	5	3	0	150	583	22·95	161	116
d Frindsbury (Stonehouse Farm)	E. W. Wood, Esq.	5	5	0	20	623	24·54	161	125
5.—THAMES—Darent. 256 sq. mi.									
d Westerham (Quebec Square)	Met. Water Board	5	1	0	380	885	34·86	189	150
d Westerham Hill Pumping Stat.	Met. Water Board	5	1	0	539	864	34·03	198	151
d Sevenoaks (Tonbridge Rd Res.)	A. Grainger, Esq.	5	1	6	556	809	31·87	..	..
d Sevenoaks (Grammar School)	Geoffrey Garrod, Esq.	8	1	0	486	803	31·61	205	144
d Sevenoaks (Speldhurst Close)	Rev. D. D. Mackinnon	5	1	0	470	828	32·61	187	144
d Tatsfield (Betsoms Hill)	Met. Water Board	5	0	7	820	908	35·76	196	148
d Seal (St. Lawrence Reservoir)	A. Grainger, Esq.	8	1	0	665	845	33·27	..	..
d Seal (Wilderness Gardens)	Mr. J. Shelton	5	1	0	300	810	31·90	183	145
d Seal (Kemsing Pumping Stat.)	A. Grainger, Esq.	5	1	0	292	829	32·65	..	..
d Sevenoaks (Chevening Gardens)	Mr. J. C. Sutton	5	1	0	360	896	35·29	183	146
d Knockholt (Kent Waterworks)	Met. Water Board	5	1	0	785	818	32·21	187	145
d Otford (Beechy Lees)	Mr. R. Edwards	5	0	10	480	845	33·26	203	148
d Biggin Hill	Air Ministry	8	1	0	601	903	35·56	211	146
d Fairseat (Fairseat House)	Col. W. Pitt, C.M.G.	5	1	0	670	823	32·39	..	..
d Downe (Petleys)	G. N. Murton, Esq.	5	1	0	512	864	34·03	152	137
d Chelsfield	W. A. Waring, Esq.	5	4	0	424	731	28·77	176	135
d Keston (Forest Lodge)	F. C. Bayard, Esq.	5	1	0	300	893	35·16	177	155
d West Wickham (Wickham Court)	F. C. Bayard, Esq.	5	1	2	300	794	31·26	168	138
d Eynsford Hill	Arthur Mee, Esq.	8	1	0	358	607	23·91	163	124
d West Wickham (Ingleside)	G. B. Kershaw, Esq., C.E.	5	1	0	248	750	29·51	180	140
d Hayes (Hayes Place)	F. C. Bayard, Esq.	8	1	0	350	801	31·52	186	148
d Orpington (Kent Waterworks)	Met. Water Board	5	1	0	220	781	30·75	180	145
d Orpington (Lynwood)	W. Jones, Esq.	5	1	4	272	709	27·93	..	..
d Orpington (Brookland)	C. H. Bryant, Esq.	5	1	0	207	725	28·56	191	140
d Crockenhill (Wested Farm)	A. T. Miller, Esq.	5	1	0	331	678	26·71	..	..
d Hartley (The Old Downs)	Lt. Col. J. Waley Cohen	5	1	0	300	698	27·49	..	..
d Cobham (Sole Street House)	J. Scratton, Esq.	5	1	8	311	715	28·14	..	..
d Cobham (Scaler's Hill)	A. W. Booth, Esq.	5	1	9	250	719	28·29	170	134
d Bromley Common (Elmfield)	Rev. J. P. Faunthorpe	5	0	9	240	633	24·92	184	124
d Bickley (Sunnydene)	Sir J. Wrench Towse	5	1	0	227	677	26·65	158	133
d Bickley (St. Luke's Vicarage)	Rev. C. C. Gosselin	5	2	0	..	645	25·41	175	129
d Bickley (Farrants)	L. E. Chalmers, Esq.	5	1	0	250	737	29·03	170	130
d Bromley (High Street)	H. Wynne Thomas, Esq.	5	1	0	200	662	26·08	..	..
d Bromley (Gilbert Road)	Edward Kinder, Esq.	5	1	4	200	656	25·82	..	..
d Bromley (Hammelton Road)	Rev. F. N. Style	5	1	0	231	652	25·68	..	..
d Bromley Hill (Windermere)	Col. E. Satterthwaite, C.B.V.D	5	0	9	200	687	27·04	196	143
d Beckenham (Croydon Road)	J. A. Angell, Esq., C.E.	8	1	0	110	763	30·04	184	137
d Chislehurst (Hawkwood)	F. C. Bayard, Esq.	5	1	0	300	639	25·14	166	123

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam.	Height Ground	above Sea Level.					
KENT—(con.).		in.	ft.	in.	ft.	mm.	in.		
5.—THAMES—Darent—(con.).									
D Southfleet (Kent Waterworks)	Met. Water Board.....	5	1	0	82	571	22·46	160	119
D Wilmington (Kent Waterworks)	Met. Water Board.....	5	1	0	25	539	21·23	144	112
D Dartford (West Hill House)	Mr. J. Taylor.....	5	1	3	100	658	25·91	160	125
D Gravesend (Park House)	W. G. Rea, Esq. ....	5	38	4	78	533	20·99	167	105
D Stone (City of Lond.Mntl. Hos.)	Dr. R. H. Steen .....	5	0	10	124	528	20·79	160	108
D Higham Waterworks	C. H. Clark, Esq. ....	8	1	0	141	651	25·64	186	124
D Bexley Heath (Rookwood)	G. Berry Hamlin, Esq. ....	5	1	0	161	599	23·57	183	126
M Bexley Heath (Rookwood)	G. Berry Hamlin, Esq. ....	5	1	0	161	573	22·56	..	..
D Grain	Air Ministry .....	8	1	0	10	483	19·02	170	117
D Erith (Crossness)	London County Council ..	14	0	6	16	517	20·34	169	120
D Belvedere	(R)Callender's Cable Co.Ltd....	7	1	0	15	479	18·85	..	..
SUSSEX (Area, 1458 sq. mi.)									
1.—LAVANT & C. 175 sq. mi.									
Selsey (Mayfield)	C. S. Grant, Esq.....	5	1	0	50	685	26·99	163	132
D Selsey (Large Acres) ..Field	E. Heron Allen, Esq., F.R.S. 5	5	1	0	21	732	28·82	179	134
D Selsey (Large Acres) ..Lawn	E. Heron Allen, Esq., F.R.S. 5	5	1	0	25	734	28·89	179	134
D Bognor (Waterloo Square)	A. G. Thompson, Esq., C.E. 8	8	1	0	21	618	24·33	158	114
D Bognor (Albert Road)	H. L. F. Guermonprez, Esq. 8	8	1	0	17	637	25·08	149	120
D Colworth (Manor Farm)	Harold W. Drewitt, Esq. ....	5	4	6	18	664	26·15	151	124
D Bognor (Lidsey Lodge)	H. Neale, Esq. ....	8	1	2	25	700	27·56	153	..
D Merston (Abelands)	Miss V. Kennard.....	5	0	6	24	731	28·80	169	129
D Bosham (Cobnor)	Major S. W. B. Beale ....	5	0	6	12	665	26·17	170	130
D Yapton (Drove Farm)	W. Harrison, Esq.....	5	1	0	14	711	28·01	169	132
D Yapton (Bonhams)	W. Harrison, Esq.....	5	1	0	24	717	28·22	169	133
D Chichester (Westgate)	G. Ashley Tyacke, Esq. ....	8	0	6	40	785	30·92	171	133
D Chichester (West Street)	Dr. Walter Dick .....	5	1	0	40	789	31·06	177	129
D Chichester (Oakwood House)	Mrs. Baring Du Pré .....	5	0	5	101	799	31·45	147	133
D Chichester (West Broyle Gdns.)	T. Weller-Poley, Esq. ....	5	1	4	107	793	31·20	162	139
D Emsworth (West Bourne)	Rev. L. B. Birkett .....	5	1	0	30	712	28·03	184	140
D Funtington	J. A. Greenwood, Esq. ....	5	1	0	95	821	32·32	177	139
D West Stoke Rectory	Rev. Preb. W. F. Shaw ..	5	1	0	176	794	31·26	141	127
D Chichester (Goodwood Gardens)	Mr. F. Brock .....	5	1	3	133	841	33·13	189	137
D Emsworth (Watergate House)	W. M. Christy, Esq. ....	5	1	0	222	901	35·48	191	140
D West Dean Park	Mr. W. H. Smith.....	10	1	6	190	946	37·26	..	148
D Chilgrove House	E. L. Woods, Esq. ....	5	1	0	266	887	34·90	164	130
D Compton (Compton House)	Kenneth M. Langdale, Esq. 5	5	1	0	263	985	38·78	184	140
D Elsted (Telegraph House)	The Earl Russell .....	5	1	0	625	978	38·50	161	133
2.—ARUN. 285 sq. mi.									
D Littlehampton (Met. Station)	C. Thomas Gardner, Esq... 5	5	1	0	27	611	24·05	160	122
D Patching (Dulaney House)	Mr. J. J. Hunt.....	5	0	9	125	796	31·35	164	144
D Patching Farm	Michael Drewitt, Esq. ....	5	1	0	180	784	30·86	161	140
D Cocking Rectory	Mrs. Randall .....	5	1	0	195	1018	40·09	175	145
D Harting (Down Place)	R. G. Blackwell, Esq... 5	5	1	0	401	1106	43·56	173	144
D Fittleworth Rectory	Rev. A. C. Lucey .....	5	1	4	135	925	36·43	162	137
D Bepton (Fairfield)	Major W. A. Chauncy.....	5	0	8	158	873	34·36	148	133
D Selham (Selham House)	C. C. Lacaita, Esq. ....	5	1	0	115	873	34·35	148	126
D Midhurst (Meadowlea)	Gilbert Eames, Esq.....	5	1	0	..	875	34·46	151	126
D Stedham (Rotherhill)	Dr. W. A. Wills .....	8	0	6	190	1027	40·45	177	148
D Midhurst (Hollist)	Nigel V. Combe, Esq. ....	5	0	10	107	924	36·39	..	120
D Petworth Park Gardens	Mr. E. W. Pull .....	5	1	0	182	951	37·43	172	126
D Tillington (River House)	Hon. Lady Cunliffe, C.B.E. 5	5	1	0	230	810	31·88	..	..
D Wisborough Green (Lowfold)	B. de F. Osmaston, Esq. ....	5	1	6	150	735	28·95	..	118
D Linchmere (Borden Wood)	Edmund Lamb, Esq. ....	8	1	0	260	1008	39·68	161	141
D Fernhurst (Ashurst)	J. G. Ohlenschlager, Esq. ... 5	5	1	0	280	905	35·65	176	136
D Fernhurst (Blackdown House)	Lady Philipson Stow .....	5	1	0	550	898	35·34	166	135
D Petworth (Roundwyck)	Brig.Gen.C.Lewis, CMG, DSO 5	5	0	6	105	793	31·21	148	134
D Lower Beeding (The Warren)	Leicester M. Reed, Esq. ....	5	0	10	430	937	36·87	166	141
D Horsham (Christ's Hospital)	Major Gabriel Green, M.C. 8	8	1	3	160	787	30·97	170	131
D Horsham (Sewage P.S.)	C. G. Atkinson, Esq.....	8	1	5	121	715	28·15	173	131
D Horsham (Wimblehurst)	Miss E. M. Allcard .....	5	1	0	195	781	30·73	181	130
D Rusper (The Nunnery)	Sir Cecil J. B. Hurst, K.C.B. 5	5	1	6	260	801	31·53	160	132

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
SUSSEX—(con.).		in.	ft. in.	ft.	mm.	in.		
3.—ADUR & C. 237 sq. mi.								
D Rottingdean School	Mr. T. A. Sandalls	5	1 0	120	677	26·67	171	134
D Worthing (Victoria Park)	Dr. R. H. Wilshaw	8	1 0	35	653	25·71	159	119
East Preston (Bay Trees)	Rev. J. B. Orme	5	0 9	25	701	27·59	178	120
D Brighton (Old Steyne)	E. H. Barton, Esq.	5	1 0	32	664	26·13	174	132
D Hove (Marine Park)	Dr. A. Griffith	8	1 0	41	649	25·56	178	129
D Brighton (Dyke Road)	R. A. Penney, Esq.	5	3 10	240	674	26·54	188	135
D Brighton W.W. (Goldstone Bot.)	A. B. Cathcart, Esq., C.E.	8	0 7	140	674	26·54	166	132
D Brighton W.W. (Lewes Road)	A. B. Cathcart, Esq., C.E.	8	4 9	140	744	29·28	179	144
D Brighton (Grammar School)	S. E. Graves, Esq.	5	0 9	195	688	27·07	169	128
D Brighton W.W. (Shoreham)	A. B. Cathcart, Esq., C.E.	8	1 9	12	695	27·38	167	137
D Brighton W.W. (Mile Oak)	A. B. Cathcart, Esq., C.E.	8	1 3	167	749	29·47	173	142
D Brighton W.W. (Race Hill Res.)	A. B. Cathcart, Esq., C.E.	8	1 0	466	776	30·56	179	144
Preston Park (Cromer Lodge)	P. J. Trouncer, Esq.	8	1 3	96	761	29·98	..	..
D Falmer (Brighton W. W.)	A. B. Cathcart, Esq., C.E.	8	1 3	209	786	30·93	194	140
D Patcham (Brighton W. W.)	A. B. Cathcart, Esq., C.E.	5	1 6	207	783	30·83	188	142
D Bramber (Burletts)	Hatton G. Sugden, Esq.	5	3 6	75	881	34·70	188	143
D Steyning (The Crescent)	D. Hide, Esq.	5	1 6	87	871	34·30	150	130
D Washington Vicarage	Rev. A. H. S. Patrick	5	1 0	251	762	29·99	166	131
M Ditchling (Sillwood House)	Miss Tupper	5	1 0	220	946	37·25	..	..
Hassocks (The Croft)	Harold Taylor, Esq.	5	1 0	200	939	36·99	..	..
D Burgess Hill (Leylands Road)	Frank Dean, Esq.	5	0 9	200	882	34·72	152	136
D Wykehurst Park Gardens	Mr. T. Tyson	5	1 6	360	825	32·46	152	137
Cuckfield (Henmead Hall)	Mrs. Maxwell Campbell	5	3 5	365	929	36·57	179	145
D Billingshurst (Duncan's Farm)	Miss Edith Beck	5	1 0	130	846	33·29	160	144
4.—OUSE. 224 sq. mi.								
D Seaford College	J. S. M. Hunt, Esq.	5	1 6	39	541	21·32	..	..
D Seaford (Bowden House School)	J. F. Thomas, Esq.	5	0 9	190	675	26·59	171	128
Seaford (Newlands)	T. Davys Manning, Esq.	5	0 9	110	629	24·78	144	126
D Newhaven (Poverty Bottom WW)	J. T. Bickford, Esq.	8	1 1	51	683	26·89	168	131
D Lewes (Little Dene)	Mr. F. Down	8	0 11	58	842	33·14	..	117
D Lewes W. W. (Kingston)	A. Wells, Esq.	8	1 3	13	845	33·25	205	145
D East Hoathly (Halland Park)	Mr. R. Shanks	5	1 0	140	736	28·98	..	..
Framfield (High Cross)	Maj. R. L. Thornton, C.B.E.	5	0 9	195	766	30·15	..	..
D Wivelsfield Green	T. D. Evans, Esq.	5	1 0	..	882	34·74	..	136
D Haywards Heath (Gower Road)	Mr. J. F. Shirley	5	3 4	242	786	30·94	192	143
Buxted (Strawberry Hall)	C. Rintoul, Esq.	5	1 0	180	794	31·27	174	..
D Sheffield Park Gardens	Mr. G. Figgis	5	1 10	..	873	34·39	167	137
D Mayfield (Five Ashes)	Miss Emily Aston	5	1 5	300	793	31·20	200	138
Lindfield (The Bungalow)	Mrs. M. Weedon	5	0 11	177	860	33·85	185	..
D Lindfield (Council School)	L. Woolcock, Esq.	5	1 0	113	813	31·99	162	134
Oldlands Hall	(R) F. Eckstein, Esq.	8	2 0	400	997	39·24	190	150
D Ardingly (Lywood House)	G. Forrester Scott, Esq.	5	0 9	240	907	35·69	208	144
D Ardingly (Wakehurst Place)	G. W. E. Loder, Esq.	8	1 3	437	943	37·14	200	141
D Horsted Keynes (Birchgrove)	Miss G. C. Price-Davies	5	1 0	400	901	35·46	197	141
D Balcombe (The Gables)	Mr. G. J. Warren	8	1 3	358	975	38·39	198	152
D Balcombe (Stockcroft)	R. Newton, Esq.	5	1 1	341	973	38·30	191	141
D Balcombe (Waterworks)	F. Martin, Esq., C.E.	8	1 0	471	971	38·25	..	135
Balcombe (Highley Manor)	Mr. B. T. Brooks	8	1 6	420	1147	45·15	187	145
5.—CUCKMERE & C. 189 sq. mi.								
D Eastbourne (West Lodge)	W. F. Beauford, Esq.	5	1 2	120	740	29·12	178	126
D Eastbourne (Wilmington Sq.)	Dr. W. G. Willoughby	5	1 0	36	714	28·10	175	121
D Eastbourne (Motcombe Gdns)(R)	Major L. Roseveare, C.E.	11	1 7	59	714	28·11	164	120
D Eastbourne (Bakewell Road)	Chas. Harding, Esq.	8	1 10	75	761	29·98	175	134
D Eastbourne (Arundel Road)	Miss Woodd	8	1 6	87	745	29·33	169	126
D Eastbourne (Arundel Road)	J. C. Wright, Esq.	5	1 0	70	749	29·50	..	..
D West Dean	A. Wilkins, Esq.	8	1 6	112	708	27·89	190	140
D Jevington (Church Farm)	A. Wilkins, Esq.	8	1 6	274	729	28·69	159	145
D Litlington (Plough & Harrow Inn)	A. Wilkins, Esq.	8	1 6	19	814	32·06	163	130
D Willington Sewage Farm	A. C. Matthews, Esq.	5	1 0	24	777	30·60	154	126
D Pevensey Pumping Station	A. C. Matthews, Esq.	5	1 0	12	675	26·59	150	129
D Pevensey Bay (Beach House)	J. H. Anderson, Esq., C.E.	5	1 5	21	580	22·83	..	118
D Pevensey Bay Pumping Station	A. C. Matthews, Esq.	5	1 0	7	601	23·68	151	124

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
SUSSEX—(con.).		in.	ft.	in.	ft.	mm.	in.		
5.—CUCKMERE & C.—(con.).									
d Berwick.....	J. Pickard, Esq.....	5	1	2	75	687	27·06	..	131
d St. Leonards (Gensing Gardens)	W. Ruskin Butterfield, Esq.	8	1	0	179	706	27·81	207	134
Hailsham (North Street) .....	R. Matthews, Esq. ....	5	1	0	100	795	31·31	..	..
d Hurstmonceaux Place .....	H. A. James, Esq. ....	5	1	8	83	688	27·08	142	117
d Hailsham (Magham Down) .....	E. M. Bear, Esq. ....	5	1	0	90	761	29·96	160	135
d Hastings (Newgate) .....	(R) P. H. Palmer, Esq., C.E....	8	5	6	240	733	28·87	162	132
d Hastings (Halton Reservoir) .....	P. H. Palmer, Esq., C.E....	5	1	3	301	707	27·85	174	133
d Hastings (Fairlight Reservoir) .....	P. H. Palmer, Esq., C.E....	5	1	3	523	683	26·88	155	130
d Hastings (Cemetery) .....	Walter Field, Esq. ....	5	0	8	478	655	25·79	190	126
d Ninfield (Hazard's Grn Pmp. St.) .....	C. P. King, Esq. ....	8	0	10	74	662	26·07	192	130
d Battle (Forewood W.W.) .....	P. H. Palmer, Esq., C.E. .	5	1	3	46	708	27·89	171	132
d Horeham Road (Coxlow) .....	Miss P. C. Harrison .....	5	1	0	260	686	27·00	176	126
d Horeham Rd. (Hollycroft Cott.) .....	J. Hamlin, Esq. ....	5	1	0	300	812	31·97	177	139
d Heathfield (The White Cottage) .....	J. F. Leigh Clare, Esq. ....	5	1	0	500	759	29·90	166	138
Heathfield (South Ridge) .....	"Sussex Express" .....	8	2	6	550	794	31·27	177	..
Cross-in-hand (Heatherden) ...	"Sussex Express" ..	..	..	..	..	859	33·84	..	..
6.—ROTHER. 194 sq. mi.									
d Westfield Vicarage .....	Rev. E. J. Morgan .....	5	5	6	101	709	27·93	196	127
Icklesham Vicarage .....	Rev. Philip Houghton .....	5	0	6	110	622	24·50	143	117
d Winchelsea (Mariteau House) ..	C. W. Campion, Esq. ....	5	1	0	120	759	29·88	194	130
d Winchelsea (Road End) .....	Major R. P. Mair .....	5	1	1	52	766	30·14	..	..
d Brede Pumping Station .....	P. H. Palmer, Esq., C.E....	5	1	3	37	743	29·27	154	131
d Udimore (The Wick) .....	Major R. P. Mair .....	8	1	0	92	747	29·41	162	126
Rye (The Point) .....	W. Gay, Esq. ....	5	0	3	..	762	30·01	..	..
d Rye (Fairfield House) .....	Walter Dawes, Esq. ....	5	1	1	145	660	25·99	142	120
d Brightling (The Cottage) .....	T. W. C. Terry, Esq. ....	5	1	0	130	853	33·58	169	138
d Beckley (Little Harmers) .....	B. E. de N. Ramus, Esq. ...	5	1	0	150	778	30·62	184	129
d Heathfield (Tottingworth Park) ..	Mr. J. Masson .....	5	1	0	500	846	33·31	180	151
d Northiam (Great Dixter) .....	Nathaniel Lloyd, Esq., OBE	8	1	0	210	707	27·84	173	129
d Mayfield (Xaverian College) ..	Rev. F. A. Hollingshead ..	5	1	0	400	777	30·57	171	133
d Hurst Green (Boarzell) .....	Sir F. W. Fison, Bart. ....	8	1	0	271	728	28·65	176	127
7.—MEDWAY. 117 sq. mi.									
d Crowborough (Jarvis Brook) ..	Crowborough Water Co. ..	5	1	0	325	931	36·65	186	147
d Crowborough (Uckfield Lodge) ..	Mrs. A. M. Driberg .....	8	1	0	785	977	38·46	181	151
d Crowborough (Te Whare) .....	Miss Hames .....	5	1	0	796	1063	41·85	238	156
d Crowborough (Smallfield) .....	J. Godfrey, Esq. ....	5	2	0	600	988	38·90	160	149
d Wadhurst (Lower Cousley Wd.) ..	F. Wilkin, Esq. ....	5	1	0	416	739	29·10	179	136
d Forest Row (Wych Cross Place) ..	D. W. Freshfield, Esq., D.C.L.	5	1	0	600	919	36·20	132	125
d Forest Row (Hindleap Lodge) ..	Mr. A. Adam .....	5	1	0	620	996	39·23	181	161
Forest Row (Charlwood Farm) ..	A. Hoare, Esq. ....	5	2	0	350	953	37·54	158	..
d Coleman's Hatch (Holly Hill) ..	J. MacAndrew, Esq. ....	5	1	6	352	919	36·18	184	155
d Frant (Henley House) .....	Rev. E. Malden .....	5	1	6	440	843	33·17	199	146
d Frant (Eridge Castle) .....	Mr. A. Wilson .....	5	2	0	400	889	34·99	181	155
Frant (Highfield) .....	C. M. R. Cleeve, Esq. ....	5	2	3	413	815	32·08	178	141
d Tunbridge Wells (Frant Road) ..	Alban G. Robins, Esq. ....	5	1	0	430	892	35·11	195	138
d Crawley Down (The Grange) ..	T. H. W. Buckley, Esq. ...	5	0	9	430	893	35·14	177	141
d East Grinstead (Highfields) ..	G. Mason, Esq. ....	5	1	0	400	838	32·99	175	142
d E. Grinstead (Brockhurst Obsy) ..	F. J. Hanbury, Esq. ....	8	1	0	435	921	36·25	194	150
8.—THAMES—Mole. 27 sq. mi.									
d Turners Hill (Hill House) .....	Miss R. M. Ravenshaw ...	8	1	6	477	1001	39·41	185	156
d Worth (Worth Lodge) .....	C. W. Nix, Esq. ....	5	3	0	340	929	36·58	202	146
Crawley (The Beeches) .....	N. Longley, Esq. ....	8	1	0	260	855	33·65	162	134
9.—THAMES—Wey. 10 sq. mi.									
Liphook (Ripsley) .....	W. D. Bosanquet, Esq. ....	5	1	0	401	915	36·01	180	144
Shottermill (Catworth) .....	J. Norman, Esq. ....	5	2	3	595	920	36·22	163	..

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.				
HAMPSHIRE. (Area, 1622 sq. mi.)		in.	ft.	in.	ft.	mm.	in.	
1.—ISLE OF WIGHT. 150 sq. mi.								
Chale (Blackgang)	James Gibb, Esq.	5	6	0	300	598	23·55	116
d Ventnor (Flint Cottage)	J. S. Ineson, Esq.	5	1	0	99	726	28·58	165
d Ventnor (Royal National Hos.)	Miss M. Gibson	5	1	0	60	771	30·35	178
d Ventnor (Newport Road)	A. W. Jolliffe, Esq.	5	4	10	300	793	31·21	173
d Shanklin (Pomona Road)	E. C. Cooper, Esq., C.E.	8	1	0	184	939	36·96	124
d Sandown (Free Library)	C. E. Gilchrist, Esq.	8	1	0	30	859	33·80	192
d Brighthstone Rectory	Rev. E. W. Silver	5	1	0	120	797	31·37	124
d Brighthstone (Pitt Place)	A. A. H. Wykeham, Esq.	8	1	0	200	1002	39·44	121
d The Needles (Golf Club)	A. H. Newnham, Esq.	5	1	0	300	723	28·48	134
d Totland Vicarage	Mrs. Hall	5	0	11	150	736	28·99	179
d Totland Bay (Aston House)	J. Dover, Esq.	8	1	0	140	757	29·81	168
d Freshwater (Pumping Station)	J. Dover, Esq.	8	1	0	10	781	30·73	140
d Bembridge (The Grange)	Major F. A. Edwards	5	0	9	100	836	32·91	176
d Newport (The Mall)	F. Morey, Esq.	5	1	0	48	969	38·13	166
d Ryde (New Lodge, S. John's Pk)	Mrs. Dobie	5	1	1	147	909	35·77	197
Ryde (Perivale)	Major E. C. Murray	5	1	3	193	837	32·97	174
d Ryde (Buckland Grange)	Lt. Col. Sir Hugh Daly	5	1	0	90	836	32·93	197
d Ryde (Pier Street)	G. Nicholson, Esq.	12	10	8	35	792	31·17	157
d Ryde (Esplanade Gardens)	B. F. Holness, Esq., C.E.	5	1	9	12	841	33·09	167
d Wootton (Fernhill)	Major C. G. Brodie, M.C.	8	0	6	118	859	33·82	180
d East Cowes (Spring Hill)	G. Shedden, Esq.	5	1	0	121	811	31·94	172
d Cowes W. W. (Broadfields)	J. W. Webster, Esq., C.E.	5	1	0	161	873	34·37	153
d Cowes (Upper Moor Green)	J. G. K. Day, Esq.	5	4	0	160	862	33·94	166
2.—STOUR. 32 sq. mi.								
d Bournemouth (East Cliff)	Dr. F. G. Penrose	8	2	8	116	739	29·08	156
Bournemouth (Pleasure Gdns)	C. Dales, Esq.	5	1	0	41	934	36·78	166
d Bournemouth (West Cliff)	Rev. G. A. Rideout	5	1	0	145	902	35·50	169
d Bournemouth (Rodney House) 1S.	Hyla Greves, Esq.	5	1	0	145	851	33·50	158
d Bournemouth (Rodney House) 3S.	Hyla Greves, Esq.	5	1	0	145	877	34·54	161
d Bournemouth (Rodney House) 2S.	Hyla Greves, Esq.	5	1	0	145	871	34·28	161
d Bournemouth (Vale View)	C. Dales, Esq.	5	1	0	145	691	27·20	168
d Bournemouth (Derby Road)	Mrs. G. Bennett	10	2	0	102	758	29·85	157
d Bournemouth (Howard Road)	E. D. Shawfield, Esq.	5	0	10	117	873	34·38	156
d Christchurch (Heron Court)	The Earl of Malmesbury	5	1	2	20	957	37·66	166
Ringwood (St. Leonards)	S. O. Ferry, Esq.	5	0	8	60	838	32·98	170
3.—EAST AVON & C. 114 sq. mi.								
d Ringwood (Bisterne)	Major J. D. Mills	8	1	2	45	901	35·49	150
Ringwood (West Mount)	R. F. Williams, Esq.	5	1	0	120	951	37·43	196
Ringwood (Grey Friars)	R. W. Christy, Esq.	5	1	0	79	798	31·40	144
d Fordingbridge (Cuckoo Hill)	Heywood Sumner, Esq.	5	1	0	150	920	36·23	182
d Fritham (Fritham House)	H. H. S. Northcote, Esq.	5	1	0	399	943	37·13	181
d Fordingbridge (Dockens)	E. W. Poore, Esq.	8	1	0	140	850	33·45	161
d Fordingbridge (Oaklands)	S. B. Rake, Esq.	8	1	0	135	919	36·20	204
4.—TEST & SOLENT. 551 sq. mi.								
d Milford-on-Sea (Salt Grass)	A. C. G. Heygate, Esq.	5	1	0	6	826	32·52	160
Milford-on-Sea (Milford House)	E. L. Agar, Esq.	5	0	8	23	777	30·58	163
d Lymington (The Salterns)	P. A. Ouvry, Esq.	5	1	0	4	787	30·98	171
d Lymington (Woodmancote)	Major G. M. Harding	5	1	10	70	799	31·47	169
d Lymington (Wisteria)	F. Collins, Esq.	5	1	8	70	854	33·62	154
d New Milton (White Cottage)	Rev. W. M. Furneaux, D.D.	5	0	8	105	850	33·48	173
d Calshot	Air Ministry	8	0	10	9	646	25·42	169
Burley (Manor House)	Col. F. Willan	5	1	4	210	836	32·93	128
d Fawley (Cadland)	Mr. Lewis Smith	8	4	6	52	811	31·92	165
d Hythe (Heathfield, Dibden)	Mr. Jesse Reeves	5	1	3	131	935	36·83	191
Lyndhurst (Deerhurst)	R. Paget, Esq.	5	1	6	250	991	39·01	167
d Lyndhurst (Allum Green)	Miss S. R. Fenwick	5	0	8	...	976	38·43	166
d Hythe (Dibden House)	Lt. Col. H. W. Kettlewell	5	0	6	85	956	37·64	172
d Totton (Shorne Hill)	Capt. J. H. W. Rennie	5	1	0	130	930	36·60	190

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
HAMPSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
4.—TEST & SOLENT—(con.).									
Southampton (East Park) . . . . .	Col. E. M. Jack, R.E. . . . .	8	1	0	66	874	34·42	182	141
Southampton (Shirley) . . . . .	J. A. Crowther, Esq., C.E. . . . .	5	8	0	70	754	29·69	173	138
Southampton Common Res. . . . .	E. C. Rodda, Esq., C.E. . . . .	5	1	0	193	871	34·30	..	..
Cadnam (Copythorne House) . . . . .	N. M. Lawrence, Esq. . . . .	5	1	0	130	968	38·12	200	143
Romsey (Embley Gardens) . . . . .	J. J. Crosfield, Esq. . . . .	5	1	0	130	862	33·94	173	139
Romsey (Harefield) . . . . .	Lt. Col. W. Y. Langford . . . . .	5	1	0	120	903	35·54	157	145
Melchet Court . . . . .	Mr. F. Clipstone . . . . .	5	3	6	200	855	33·64	162	136
Romsey (Timsbury) . . . . .	(R) E. C. Rodda, Esq., C.E. . . . .	8	1	8	96	822	32·37	190	142
Braishfield Manor . . . . .	Alfred C. King, Esq. . . . .	5	1	0	206	831	32·70	183	138
Lockerley (Critchells) . . . . .	late R. G. Townsend . . . . .	5	1	0	115	864	34·00	191	139
Horsebridge (Bossington House) . . . . .	Mrs. Mansell-Jones . . . . .	8	0	9	98	872	34·32	171	143
Ashley (Old Manor House) . . . . .	Lt.-Col. A. S. Byng . . . . .	5	1	3	235	851	33·49	..	..
Ashley (Upper Somborne) . . . . .	Mr. C. Alleway . . . . .	8	1	0	250	934	36·78	174	145
Broughton . . . . .	W. Steele Tomkins, Esq. . . . .	5	5	0	130	837	32·94	162	131
Stockbridge (Houghton Lodge) . . . . .	Mr. G. Morris . . . . .	5	1	0	190	874	34·41	174	144
Crawley (Chilbolton Down) . . . . .	R. Hargreaves, Esq. . . . .	8	1	2	350	829	32·62	164	135
Micheldever (Stoke Charity) . . . . .	Rev. C. B. Lloyd . . . . .	5	1	0	221	850	33·45	174	139
Abbots Ann Rectory . . . . .	Rev. F. de Paravicini . . . . .	5	0	10	220	784	30·85	165	128
Andover (Sewage Works) . . . . .	C. Jerome, Esq. . . . .	8	1	0	..	759	29·88	162	128
Andover . . . . .	Air Ministry . . . . .	8	1	0	295	744	29·30	..	..
Fyfield Rectory . . . . .	Rev. E. K. R. Reynolds . . . . .	5	1	3	255	786	30·94	180	133
St. Marybourne (Bournside) . . . . .	Prof. C. V. Boys, F.R.S. . . . .	5	1	0	300	764	30·07	173	132
Worting (Manydown Park) . . . . .	(R) S. E. Bates, Esq. . . . .	..	1	8	415	748	29·44	..	127
Oakley (Malshanger) . . . . .	Late Major Godfrey Walter . . . . .	5	1	0	400	812	31·97	170	141
Hurstbourne Tarrant (Rookery) . . . . .	R. E. C. Burder, Esq. . . . .	5	1	0	331	858	33·78	..	..
Litchfield (Dunley Manor) . . . . .	Sir Alfred Herbert . . . . .	5	3	10	420	764	30·07	160	134
Vernham Dean (Rowe House) . . . . .	Mrs. E. H. Gamble . . . . .	5	0	7	620	948	37·33	165	143
5.—ITCHEN & SPITHEAD. 422 sq. mi.									
Alverstoke (Monckton House) . . . . .	Major J. Blake . . . . .	5	1	3	15	818	32·19	175	136
Alverstoke (Glencoe) . . . . .	J. G. Thomas, Esq. . . . .	5	1	3	20	823	32·41	171	133
Portsmouth (Eastney) . . . . .	A. W. Ward, Esq., C.E. . . . .	8	0	6	16	661	26·02	151	126
Portsmouth (Victoria Park) . . . . .	Dr. A. Mearns Fraser . . . . .	5	1	0	15	757	29·80	170	135
Hayling Island (Richmond Ho.) . . . . .	E. S. McEuen, Esq. . . . .	5	1	2	16	739	29·08	172	134
Lee-on-Solent (Edinburgh Ho Sch) . . . . .	Trevor J. Tatham, Esq. . . . .	5	1	0	15	771	30·35	169	135
Porchester (Noel Cottage) . . . . .	Miss R. M. Frost . . . . .	5	1	9	..	697	27·45	154	119
Titchfield . . . . .	Capt. E. H. Buxton . . . . .	5	0	10	25	761	29·94	176	139
Fareham (Fareham House) . . . . .	W. S. Stevenson, Esq., M.D. . . . .	5	1	6	30	770	30·32	159	136
Fareham (Roche Court) . . . . .	Mrs. H. F. Rawstorne . . . . .	5	1	0	104	853	33·58	179	138
Havant (Farlington) . . . . .	H. Ashley, Esq., C.E. . . . .	5	1	0	77	714	28·12	175	130
Havant (Farlington) . . . . .	H. Ashley, Esq., C.E. . . . .	5	1	0	77	730	28·75	..	..
Havant . . . . .	H. Ashley, Esq., C.E. . . . .	5	1	0	25	754	29·68	177	130
Havant . . . . .	H. Ashley, Esq., C.E. . . . .	5	1	0	25	759	29·88	..	..
Rowlands Castle (Oaklands) . . . . .	Late Col. F. Stubington . . . . .	7	1	0	160	881	34·68	179	136
Netley (Lake House) . . . . .	Miss Pennington . . . . .	8	1	0	54	866	34·08	194	146
Cowplain (Forest View) . . . . .	H. C. Pearson, Esq. . . . .	5	5	0	222	920	36·22	200	141
Wickham (The Lower House) . . . . .	Mj.-Gen. Sir CH Powell, KCB . . . . .	5	1	0	100	839	33·02	144	135
Wickham (Park Place) . . . . .	Lt.-Col. H. R. Farquhar . . . . .	5	1	0	150	830	32·67	163	139
Southampton (Chapel) . . . . .	J. A. Crowther, Esq., C.E. . . . .	5	5	0	10	839	33·05	178	143
Southampton (Portwood) . . . . .	J. A. Crowther, Esq., C.E. . . . .	5	2	0	10	881	34·69	168	142
Botley (Fairthorne Manor) . . . . .	Mr. D. F. Lailev . . . . .	8	1	0	70	910	35·81	195	150
Botley (Brook House) . . . . .	Beckett Powell, Esq. . . . .	5	3	2	45	911	35·88	..	..
Botley (Botley Hill) . . . . .	Lady Jenkins . . . . .	5	1	6	36	875	34·47	193	142
Botley (Uplands Farm) . . . . .	Mr. Wilmot H. Yates . . . . .	5	1	0	60	911	35·86	180	..
Curdrige (Beechcroft) . . . . .	Miss L. M. S. Pasley . . . . .	5	1	0	96	862	33·95	183	146
Curdrige (Kitnocks House) . . . . .	Major C. F. Randolph . . . . .	5	0	6	185	864	34·01	183	150
Soberton (Mislingford) . . . . .	E. T. Hildred, Esq., C.E. . . . .	5	1	0	136	894	35·21	167	140
Soberton (Mislingford) . . . . .	E. T. Hildred, Esq., C.E. . . . .	5	1	0	136	893	35·16	..	..
Chalton (Woodcroft) . . . . .	C. J. P. Cave, Esq. . . . .	5	1	0	230	944	37·16	..	..
West End (Oaklands) . . . . .	Capt. P. C. Pearson, R.N. . . . .	5	1	0	45	895	35·24	171	140
Bishops Waltham (Palace Ho.) . . . . .	A. F. Hardy, Esq. . . . .	5	1	3	116	902	35·51	181	139
Bishops Waltham (Swanmore H.) . . . . .	W. H. Myers, Esq. . . . .	8	0	0	390	1114	43·85	177	148

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.					
		in.	ft.	in.	ft.	mm.	in.		
HAMPSHIRE—(con.).									
5.—ITCHEN & SPITHEAD—(con.).									
D Droxford (Uplands) .....	Miss Bridge .....	5	1	0	279	979	38·56	186	146
D Droxford (Fairfield House) ....	H. Hamilton Bridge, Esq. ....	5	1	0	254	957	37·68	193	152
D Droxford (Fir Hill) .....	Cap. Mackenzie-Grieve, R.N. ....	5	3	6	212	928	36·53	177	148
D Eastleigh (Fair Oak School) ....	G. E. Edwards, Esq. ....	5	1	0	120	917	36·09	143	123
D Petersfield (Ditcham Park) ....	C. J. P. Cave, Esq. ....	8	1	0	555	967	38·09	190	144
M Petersfield (Downley) .....	C. J. P. Cave, Esq. ....	5	1	2	374	1048	41·25	..	..
D Fair Oak (Fisher's Pond) .....	G. M. Mathews, Esq. ....	5	1	0	91	781	30·73	158	127
D Otterbourne House .....	E. Christian, Esq. ....	5	1	6	111	864	34·02	186	144
D Otterbourne (W. W., Shawford) ..	E. C. Rodda, Esq., C.E. ....	5	1	0	113	868	34·19	177	142
D Owslebury Vicarage .....	Rev. A. E. Briggs .....	5	1	1	376	888	34·96	200	150
D Westbury House Gardens ....	Col. H. LeRoy Lewis, CB, DSO ..	5	2	10	296	1041	40·97	185	140
D Twyford (Pumping Station). (R) ..	E. C. Rodda, Esq., C.E. ....	8	1	9	139	903	35·53	177	138
D Twyford (Mallards Close) .....	G. R. Marsh, Esq. ....	5	1	0	153	850	33·47	172	138
D Hursley Park .....	(R) Sir G. A. Cooper, Bart. ....	10	1	6	250	798	31·43	170	137
D West Meon (Westwood) .....	Major G. E. Galbraith ....	5	1	7	470	999	39·35	187	137
D Kilnston Manor .....	Mrs. Heathcote .....	5	4	6	323	920	36·23	..	..
D Petersfield (Broadhanger) .....	Mrs. R. M. Caulfield ....	5	1	0	730	1142	44·95	200	162
D Winchester (East Hill) .....	Mrs. E. Wilde .....	5	1	0	256	793	31·23	174	133
M Winchester (East Hill) .....	Mrs. E. Wilde .....	5	1	0	215	734	28·90	..	..
D Titchborne Rectory .....	Rev. C. H. Conybeare ....	5	1	0	240	862	33·93	..	..
D Ovington Rectory .....	Rev. H. F. LaM. Stowell ....	5	1	0	221	1051	41·37	186	143
D Ovington (Barley Down) .....	J. Stevens, Esq. ....	12	3	6	300	899	35·40	179	145
D Itchen Abbas (Chilland) .....	W. J. Arnold, Esq. ....	5	1	3	200	801	31·53	175	138
6.—ARUN. 32 sq. mi.									
M Petersfield (Sunwood) .....	C. J. P. Cave, Esq. ....	5	0	10	479	994	39·13	..	..
D Petersfield (Buriton House) ....	L. G. Bonham Carter, Esq. ....	5	2	0	300	1020	40·15	146	126
D Petersfield (Weston) .....	Capt. P. W. Seward .....	5	1	0	330	1080	42·52	158	143
D Petersfield (Durford Edge) ....	Rev. N. J. Miller .....	5	1	3	375	938	36·94	181	135
D Petersfield (Stoner Hill) .....	C. J. P. Cave, Esq. ....	5	0	9	748	1171	46·10	196	146
D Liss (Overcombe) .....	Miss Jebb .....	5	1	3	500	940	37·01	192	128
D Liss (Heathmount) .....	(R) R. A. Bosanquet, Esq. ....	..	4	6	500	1009	39·71	152	134
D Liss (Highfield) .....	J. S. Gamble, Esq., CIE, FRS ..	5	0	9	325	981	38·62	203	142
D Liss (The Lodge) .....	Ernest Latter, Esq. ....	5	1	3	240	1014	39·93	188	139
D Liss (Berry Grove House) .....	Col. A. de B. V. Paget ....	5	1	1	250	917	36·09	164	127
D Liss (Kippences) .....	Rev. W. A. H. Thorold ....	5	0	9	250	949	37·38	149	129
D Greatham (Manor House) .....	F. Coryton, Esq. ....	5	0	7	250	916	36·07	166	133
D Greatham (Le Court) .....	Sir Heath Harrison, Bart. ....	5	0	9	350	1000	39·38	177	136
7.—THAMES—Wey. 92 sq. mi.									
D Colmer Rectory .....	Rev. A. C. Hervey .....	5	1	1	560	996	39·21	..	127
D East Tisted (Rotherfield Park) ..	Mr. J. E. Vine .....	5	1	0	550	1106	43·56	181	150
D Newton Valence Vicarage ....	Rev. A. C. MacLachlan ....	5	1	0	586	972	38·28	193	139
D Newton Valence Place .....	Rear Adl. E. Jervoise, C.B.E. ....	8	1	5	615	945	37·22	189	140
D Selborne (The Wakes) .....	Mrs. Bibby .....	5	1	0	400	1029	40·53	189	144
D Grayshott .....	Mrs. Lyndon .....	5	1	0	661	972	38·28	196	141
D Liphook (Bordon Camp) .....	The Divisional Officer, R.E. ....	8	1	0	265	1008	39·68	161	..
D Bentworth Rectory .....	Lt. Col. W. J. Long, C.M.G. ....	5	1	0	587	887	34·90	182	135
D Alton (Shalden Manor) .....	J. Gathorne Wood, Esq. ....	8	3	0	594	947	37·29	191	148
D Alice Holt Forest .....	Office of Woods .....	8	1	0	264	852	33·54	182	133
8.—THAMES—Loddon. 164 sq. mi.									
D Upton Grey (Hoddington Ho.) ..	F. Anderson, Esq. ....	8	1	0	378	878	34·55	160	137
D Aldershot (Sewage Works) ....	Dr. G. W. Routley .....	5	1	0	231	793	31·23	189	133
D Greywell .....	S. G. Weller, Esq. ....	5	2	6	266	794	31·27	..	115
D Basingstoke (Pumping Station) ..	J. H. Drew, Esq., C.E. ....	5	0	9	320	676	26·63	165	123
D Sherborne St. John Rectory ....	Rev. D. W. Chute .....	5	1	3	267	723	28·46	168	134
D South Farnborough .....	Air Ministry .....	8	1	0	234	722	28·42	172	124
D Winchfield (Elvetham Park) ....	Mr. G. B. Mitchison ....	8	1	0	217	756	29·75	193	137
D Bramley (Street Farm House) ....	F. Walkinshaw, Esq. ....	8	1	0	227	717	28·24	165	133
D Stratfieldsaye Rectory .....	Rev. F. Page-Roberts ....	5	1	0	164	713	28·09	197	136
D Heckfield (Park Corner) .....	Miss Martineau .....	5	1	2	257	690	27·16	180	130
9.—THAMES—Kennet. 65 sq. mi.									
D Highclere (Castle Gardens) .....	Mr. A. W. Blake .....	5	1	3	500	1133	44·60	161	150
D Highclere (Boxhall Cottage) ....	D. R. Sharpe, Esq. ....	5	1	0	450	826	32·51	..	..

## DIVISION II.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.		Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height above Ground Sea Level.			
BERKSHIRE. (Area, 722 sq. mi.)		in.	ft. in. ft.	mm.	in.	
1.—TEST. 2 sq. mi.						
2.—THAMES—Bourne. 15 sq. mi.						
3.—THAMES—Loddon & c. 182 sq. mi.						
d Wellington College	E. O. Tancock, Esq.	5	1 0 283	840	33·06	181 135
d Wokingham	C. W. Marks, Esq.	5	1 0 174	635	25·00	156 127
d Bracknell (Hillside)	Mrs. Littlewood	5	1 0 207	723	28·46	165 129
d Winkfield (Ryemead)	Mrs. Aubrey Elliott	5	0 10 220	693	27·29	185 137
d Windsor (Royal Gardens)	Mr. A. MacKellar	5	1 0 88	653	25·71	192 127
d Windsor (Bicton)	Miss M. G. Cookson	8	1 0 88	660	26·00	164 124
d Maidenhead (The Pagoda)	H. G. Barker, Esq.	..	..	659	25·95	158 135
d Maidenhead (Hall Place)	Sir G. A. C. East, Bart.	8	1 2 275	652	25·66	163 132
d Remenham Hill (Wedmore)	Lt.-Col. C. D. Burnell, D.S.O.	5	1 0 300	734	28·90	188 146
d Hambleden Lock	Mr. S. J. Bourner	5	2 0 120	705	27·74	181 141
d Hurley (Temple House)	Mrs. Owen Williams	5	1 0 106	721	28·39	188 147
d Bisham Vicarage	Rev. W. Farrer	5	1 0 100	623	24·51	171 133
d Bisham School	H. A. Jones, Esq.	5	1 0 100	627	24·67	161 135
4.—THAMES—Kennet & c. 224 sq. mi.						
d Hampstead Marshall (Redhill)	Mrs. Lewis	5	1 0 400	891	35·09	.. 129
d Mortimer (Wokefield Park)	A. Palmer, Esq.	5	4 0 220	662	26·08	164 130
d Brimpton (Stonehouse)	F. Hadden, Esq.	5	0 7 350	739	29·11	167 133
d Newbury (Greenham Common)	H. L. Bowman, Esq., D.Sc.	5	1 0 328	815	32·10	173 140
d Newbury (Wash Hill)	C. F. B. Marshall, Esq.	5	1 6 360	850	33·48	186 143
d Newbury (Grammar School)	H. Liggins, Esq.	5	0 9 279	851	33·51	176 140
d Newbury (Andover Road)	J. H. Spackman, Esq.	5	1 0 329	823	32·39	181 139
d Upton Nervet Rectory	Rev. A. E. Brisco Owen	8	1 0 312	752	29·59	190 135
d Shinfield (University Col. Farm)	Prof. W. G. Duffield	5	1 0 201	641	25·24	160 131
d Bucklebury Place	Dr. Carl Langer	5	1 0 409	628	24·72	144 127
d Beenham House	Capt. W. Waring	8	2 3 315	699	27·52	148 134
d Reading W. W. (Bath Road)	L. C. Walker, Esq., C.E.	5	1 8 218	611	24·05	162 122
d Earley (Elm Road)	Comr. W. G. Lingham	5	1 1 265	656	25·83	194 136
d Tilehurst (The Limes)	T. Latham, Esq.	4	3 0 200	713	28·09	187 150
d Reading (Forbury Gardens)	J. Bowen, Esq., C.E.	5	1 5 145	644	25·35	181 140
d Reading (University College)	Prof. W. G. Duffield	5	1 0 153	642	25·28	176 129
d Reading (Victoria Square)	W. Haynes, Esq.	5	1 0 145	653	25·70	172 134
d Reading (Caversham Lock)	R. A. Swarbrick, Esq.	5	17 3 143	573	22·55	144 126
d Lambourn (Clarionville)	F. Gullett, Esq.	5	1 0 500	804	31·64	178 142
5.—THAMES—Ock & c. 319 sq. mi.						
d Reading (Englefield)	J. H. Benyon, Esq.	5	1 1 175	728	28·67	159 137
d Frilsham House	Mr. W. E. Austen	5	1 0 370	733	28·86	166 138
d Hampstead Norris	John Brown, Esq.	5	1 6 300	799	31·45	178 152
d Farnborough Rectory	Rev. J. B. H. Whitehurst	5	1 0 713	896	35·26	171 ..
d Upton	Miss Fry	5	1 0 240	725	28·53	175 133
d Uffington Vicarage	Rev. E. M. Hadow	5	1 0 287	805	31·70	189 137
d Steventon (Milton Hill)	R. H. Betteridge, Esq.	5	1 6 300	765	30·13	.. ..
d Wallingford (St. Leonard's R.)	Rev. A. Simmons	5	2 0 142	685	26·97	163 122
d Wallingford (Woodlea)	G. F. Slade, Esq., M.B.E.	5	0 6 200	742	29·21	174 128
d Wallingford Castle	Miss Hedges	5	1 6 175	697	27·45	171 136
d Abbots Wittenham Rectory	Rev. W. F. B. Ward	5	1 0 190	601	23·66	171 116
d Long Wittenham (Manor Ho.)	Adm. W. R. Clutterbuck	12	1 0 170	689	27·14	157 121
d Long Wittenham (Willington)	H. J. Hewett, Esq.	5	1 0 167	726	28·60	165 133
d Faringdon (Bleak House)	Miss Turner	5	1 0 367	605	23·84	173 131
d Abingdon (Twickenham House)	G. Saxby, Esq.	5	10 0 210	630	24·81	157 129
d Abingdon (Sewage Works)	Raphael V. Hall, Esq., C.E.	5	0 6 169	611	24·07	135 118
d Abingdon (Donnington)	R. W. Langford, Esq.	5	1 6 196	708	27·88	170 128
d Abingdon (Northcourt House)	M. T. Tatham, Esq.	5	1 0 190	640	25·20	168 119

## DIVISION III.—SOUTH MIDLAND COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
MIDDLESEX. (Area, 232 sq. mi.)		in.	ft. in.	ft.	mm.	in.		
1.—THAMES—Colne & Brent. 185 sq. mi.								
Weybridge (Shepperton Lock) . . . . .	R. A. Swarbrick, Esq. . . . .	5	1 0	41	583	22·97	147	120
Shepperton (Charlton Court) . . . . .	Met. Water Board. . . . .	8	1 0	42	604	23·77	177	123
Hampton . . . . .	Met. Water Board. . . . .	8	1 0	50	531	20·92	168	112
Hampton (The Manor House) . . . . .	J. Hughes, Esq. . . . .	5	2 3	43	537	21·16	162	113
Staines Reservoir . . . . .	Met. Water Board. . . . .	5	1 0	50	611	24·07	186	124
Twickenham (Sewage Works) . . . . .	F. W. Pearce, Esq., C.E. . . . .	5	1 7	37	586	23·06	172	122
Hounslow (S. Stephen's Vicarage) . . . . .	Rev. R. Dixon Box . . . . .	5	1 0	67	584	22·98	170	118
Isleworth (Mandeville House) . . . . .	A. Worsley, Esq. . . . .	8	0 10	30	665	26·17	158	128
Sipson (Hollycroft) . . . . .	Mr. W. J. Mitchell . . . . .	5	1 0	94	573	22·56	146	135
Chiswick (Ellesmere Road) . . . . .	A. E. Brounger, Esq. . . . .	5	1 1	20	590	23·22	180	123
Kew Bridge (Waterworks) . . . . .	Met. Water Board. . . . .	5	1 0	36	628	24·73	171	128
Ealing (Northfield Avenue) . . . . .	C. L. Modlen, Esq. . . . .	5	1 0	60	553	21·79	..	..
Hanwell (Oaklands Road) . . . . .	R. G. Davies, Esq. . . . .	5	1 0	81	603	23·74	173	125
Ealing (Webster Gardens) . . . . .	Mrs. Hugh Baker . . . . .	5	1 6	97	602	23·69	168	131
Ealing (Longfield Avenue) . . . . .	W. R. Hicks, Esq., C.E. . . . .	5	0 9	114	541	21·31	164	122
Ealing (St. Stephen's Road) . . . . .	H. W. Peal, Esq. . . . .	5	0 10	156	607	23·89	169	129
Hillingdon (Dawley Court) . . . . .	Cecil De Salis, Esq. . . . .	9	0 10	120	676	26·62	..	..
Ealing (Hanger Hill Reservoir) . . . . .	Met. Water Board. . . . .	5	1 0	206	666	26·23	169	131
Perivale (Northern Sewage Farm) . . . . .	W. R. Hicks, Esq., C.E. . . . .	5	0 5	56	653	25·71	188	143
Uxbridge (Frays Lodge) . . . . .	J. C. Hibbert, Esq. . . . .	8	0 10	125	693	27·29	185	142
Willesden Reservoir . . . . .	Met. Water Board. . . . .	5	2 6	199	569	22·42	144	122
Willesden Green (Strode Road) . . . . .	Miss Lamport . . . . .	5	1 0	150	605	23·84	192	135
Willesden (Richmond Avenue) . . . . .	W. Godden, Esq. . . . .	5	6 0	176	597	23·49	181	136
Willesden (Stonebridge Fm.) (R) . . . . .	F. Wilkinson, Esq., C.E. . . . .	10	5 9	100	608	23·94	170	129
Sudbury (Station Approach) . . . . .	L. H. Powers, Esq. . . . .	8	1 0	153	609	23·97	188	123
Highgate (North Hill) . . . . .	L. J. Tatham, Esq. . . . .	5	1 0	400	613	24·13	175	127
Highgate (North Hill Depot) . . . . .	E. J. Lovegrove, Esq., C.E. . . . .	5	5 4	309	607	23·91	163	126
Harrow (Oakhurst) . . . . .	Hugh Gardner, Esq. . . . .	5	1 5	295	577	22·71	167	128
Harrow (Bessborough Rd. Depot) . . . . .	J. P. Bennetts, Esq., C.E. . . . .	5	1 0	215	643	25·31	174	135
Hendon (Sewage Works) . . . . .	(R) A. O. Knight, Esq., C.E. . . . .	6	1 6	153	531	20·90	166	123
Hendon (Central School) . . . . .	J. W. Butler, Esq. . . . .	5	1 4	200	691	27·19	187	143
Wealdstone House . . . . .	Miss H. O. E. Cobb . . . . .	5	1 0	236	573	22·55	..	..
Pinner (West End Lane) . . . . .	Mrs. Fowler . . . . .	5	1 5	165	621	24·44	165	121
Hatch End (Royston Park) . . . . .	W. J. Hill, Esq. . . . .	5	2 2	286	692	27·24	..	..
Harefield (Harefield House) . . . . .	Iate Walter J. B. Byles, Esq. . . . .	5	0 10	294	703	27·66	..	140
Northwood (Watford Road) . . . . .	E. Preedy, Esq. . . . .	5	1 0	400	656	25·81	171	131
Northwood (Haslemere) . . . . .	Miss McBean . . . . .	5	1 0	240	701	27·62	..	135
Harrow Weald (Hill House) . . . . .	A. A. Crossman, Esq. . . . .	5	3 6	284	672	26·45	193	137
North Finchley (Rowsley) . . . . .	Miss M. Shoults . . . . .	5	0 8	295	627	24·70	165	125
Mill Hill (Ridgway House) . . . . .	Major N. G. Brett-James . . . . .	5	0 10	375	607	23·91	152	129
Bushey Heath (Highfield) . . . . .	W. B. Worthington, Esq., C.E. . . . .	5	1 0	503	654	25·75	179	132
Barnet (Dyrham Park) . . . . .	Mr. H. Juniper . . . . .	5	1 0	310	675	26·58	..	..
Potters Bar (Mount Grace) . . . . .	Mr. E. W. Halsey . . . . .	5	1 3	375	665	26·20	173	136
2.—THAMES—Lea. 47 sq. mi.								
Crouch End (Barrington Road) . . . . .	E. J. Lovegrove, Esq., C.E. . . . .	8	3 10	122	684	26·93	182	136
Harringay (Wightman Rd. Depot) . . . . .	E. J. Lovegrove, Esq., C.E. . . . .	8	23 3	113	532	20·93	162	123
Harringay (Wightman Road) . . . . .	L. R. Bennett, Esq. . . . .	5	1 0	140	589	23·20	168	126
Tottenham (Drayton Road) . . . . .	Medical Officer of Health. . . . .	5	1 3	51	630	24·79	149	127
Hornsey (High Street) . . . . .	Met. Water Board. . . . .	5	1 0	109	664	26·13	179	150
Muswell Hill (Grand Avenue) . . . . .	G. Michael Williams, Esq. . . . .	5	1 0	317	639	25·14	..	..
Muswell Hill (Leaside Avenue) . . . . .	Mrs. Sowerby Wallis . . . . .	5	1 2	315	643	25·31	189	..
Muswell Hill (Tollington Sch.) . . . . .	K. H. Shelton, Esq. . . . .	5	1 0	325	650	25·60	..	..
Muswell Hill (Page's Lane) . . . . .	Miss Abethell . . . . .	5	0 8	310	637	25·06	187	130
Muswell Hill (Sewage Farm) . . . . .	E. J. Lovegrove, Esq., C.E. . . . .	8	4 5	214	633	24·90	187	131
Wood Green (Maryland Road) . . . . .	Mr. F. C. Hornsey . . . . .	5	1 0	110	617	24·30	175	131
Wood Green (Town Hall) . . . . .	(R) C. H. Croxford, Esq. . . . .	8	5 6	126	564	22·19	163	122
Finchley (Victoria Park) . . . . .	P. T. Harrison, Esq., C.E. . . . .	5	1 0	272	624	24·56	166	136
Bowes Park (Palmerston Road) . . . . .	W. H. Heathfield, Esq. . . . .	5	1 5	100	629	24·75	166	124
Palmer's Green (Broomfield Pk.) . . . . .	R. Phillips, Esq. . . . .	8	1 0	138	596	23·47	154	123
Edmonton (Latymer School) . . . . .	W. G. Launder, Esq. . . . .	5	1 0	70	541	21·29	159	117

## DIVISION III.—SOUTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height above Ground Sea Level.			1922			
		in.	ft.	in.	ft.	mm.	in		
MIDDLESEX—(con.).									
2.—THAMES—Lea—(con.).									
D Ponders End (Bylock Hall) . . . . .	H. E. Freir, Esq. . . . .	5	1	0	50	594	23·37	168	129
D Ponders End Pumping Station. Met. Water Board. . . . .		8	1	0	45	586	23·08	151	130
D Enfield (Southbury Road) . . . . .	Met. Water Board. . . . .	5	1	0	223	619	24·37	170	134
D Enfield (Public Offices) . . . . .	Dr. W. P. Warren . . . . .	8	43	0	143	619	24·36	185	126
D Enfield (Rowantree Road) . . . . .	Dr. W. P. Warren . . . . .	5	1	0	218	658	25·92	174	135
D Enfield (Roselands, Turkey St.) . . . . .	E. S. Rashleigh, Esq. . . . .	5	0	7	80	594	23·39	164	126
D Waltham Cross (Sewage Works) . . . . .	J. E. Sharpe, Esq. . . . .	5	0	6	61	573	22·58	137	116
HERTFORDSHIRE. (Area, 635 sq. mi.)									
1.—THAMES—Thame. 10 sq. mi.									
D Tring (Grove Lodge) . . . . .	Miss Boyson . . . . .	5	1	0	450	757	29·82	169	140
Tring (Pendley Manor) . . . . .	Mrs. J. G. Williams . . . . .	5	2	0	420	723	24·54	178	140
2.—THAMES—Colne & Brent. 199 sq. mi.									
D Northwood (Woodhouse Eaves) . . . . .	Miss S. F. Fox, M.D. . . . .	5	1	0	400	704	27·71	193	133
D Bushey Heath (California La.) . . . . .	Miss K. Cooper . . . . .	5	1	0	252	635	25·01	164	142
D Rickmansworth (Croxley Green) . . . . .	S. Ingleby Oddie, Esq. . . . .	5	1	0	390	703	27·69	184	126
D Totteridge (West Lodge) . . . . .	W. H. Newman, Esq. . . . .	5	1	0	400	657	25·86	186	139
D Barnet (Summerhill) . . . . .	F. A. Milne, Esq. . . . .	5	1	0	350	645	25·39	190	141
D Barnet (Bedford Avenue) . . . . .	Miss Haines . . . . .	5	1	4	295	692	27·25	166	131
D Watford (Oxhey Grange) . . . . .	J. Doyle Penrose, Esq. . . . .	5	1	0	230	661	26·02	181	138
D Watford (Bushey Hall Road) . . . . .	J. Durst, Esq. . . . .	5	1	2	200	707	27·83	173	137
D Bushey (Colne Valley W. W.) . . . . .	C. P. Sinclair, Esq. . . . .	5	1	2	305	634	24·95	156	131
D Elstree (Aldenham House) . . . . .	Mr. Edwin Beckett . . . . .	10	4	9	240	577	22·70	168	132
D Watford (Cassiobury Pk. Av.) . . . . .	E. A. Robins, Esq. . . . .	5	1	0	263	646	25·42	179	138
D Watford (Park Road) . . . . .	E. J. Slinn, Esq. . . . .	5	1	6	380	667	26·26	168	132
D Sarratt (Micklefield Green) . . . . .	T. O. Hickman, Esq. . . . .	5	0	6	420	779	30·68	165	127
D Shenley (Kitwells) . . . . .	T. H. Riches, Esq. . . . .	5	1	0	420	690	27·16	166	132
M Shenley (Kitwells) . . . . .	T. H. Riches, Esq. . . . .	5	1	0	384	665	26·17	125	110
D Sarratt (Goldingtons) . . . . .	P. Clutterbuck, Esq. . . . .	5	4	0	407	795	31·29	163	143
D Chipperfield (Little Callipers) . . . . .	A. W. Rivington, Esq. . . . .	5	1	0	300	672	26·46	176	147
D King's Langley (Langley Rise) . . . . .	T. Goldring, Esq. . . . .	5	1	0	475	761	29·97	196	143
D King's Langley (Barnes Lodge) . . . . .	J. C. Shorrock, Esq. . . . .	5	1	0	295	783	30·83	149	130
D Hemel Hempstead (Apsley Mills) . . . . .	Messrs. J. Dickinson & Co. . . . .	24	1	4	389	806	31·75	176	145
D St. Albans (Co. Mental Hosp.) . . . . .	G. Goodchild, Esq. . . . .	5	1	0	423	650	25·59	177	139
D St. Albans (County Museum) . . . . .	late G. E. Bullen, Esq. . . . .	5	1	0	590	737	29·00	193	136
D Gorhambury . . . . .	Mr. J. Ison . . . . .	5	1	0	450	805	31·69	178	138
D Berkhamsted (Rossway) . . . . .	Maj. Gen. Sir C. F. Hadden . . . . .	5	1	3	450	721	28·37	179	136
D Berkhamsted (Anglefield) . . . . .	E. T. Browne, Esq. . . . .	5	1	0	550	793	31·23	179	136
D Berkhamsted Golf Club . . . . .	T. S. Wheeler, Esq. . . . .	8	1	0	394	783	30·81	170	140
D Tring (Cowroast Lock) . . . . .	W. Yates, Esq., C.E. . . . .	5	3	6	416	750	29·54	141	132
D Childwickbury Gardens . . . . .	Mr. E. J. May . . . . .	8	1	2	420	857	33·72	181	136
D Harpenden (Rothamsted) . . . . .	Lawes Agricultural Trust . . . . .	8	0	9	217	695	27·37	167	140
3.—THAMES—Lea. 340 sq. mi.									
D New Barnet (Gas Works) . . . . .	F. J. Bancroft, Esq., C.E. . . . .	8	1	0	428	667	26·25	189	144
D Hadley (Hadley Bourne) . . . . .	Mrs. Weber . . . . .	5	1	0	83	721	28·38	179	127
D Cheshunt (Manor House) . . . . .	J. E. Sharpe, Esq. . . . .	5	1	0	400	609	23·99	166	133
D Northaw School . . . . .	J. H. Tucker, Esq. . . . .	5	1	0	100	635	24·98	164	128
D Cheshunt Yard . . . . .	Met. Water Board . . . . .	5	1	0	209	608	23·92	172	123
D Cheshunt Park . . . . .	Mr. W. Standerwick . . . . .	5	0	9	250	545	21·44	187	142
D Cheshunt (Darnicle Hill P. Stn.) . . . . .	J. E. Sharpe, Esq. . . . .	5	1	0	123	681	26·82	167	133
D Essendon Place Gardens . . . . .	"Hertford Mercury" . . . . .	5	1	5	123	686	27·00	164	115
D Broxbourne (St. Cross) . . . . .	Capt. H. S. F. Jebb . . . . .	5	1	5	135	491	19·34	161	125
D Hoddesdon (High Street) . . . . .	H. F. Haylar, Esq. . . . .	5	2	6	95	545	21·45	174	133
D Hoddesdon (Feilde's Weir) . . . . .	Met. Water Board . . . . .	8	3	8	270	630	24·80	165	132
D Hatfield (Surveyor's Office) . . . . .	Lt. Col. A. Ernest Prescott . . . . .	5	1	0	270	659	25·93	177	134
D Haileybury College . . . . .	B. M. C. Marshall, Esq. . . . .	8	1	4	250	648	25·52	182	131
D Hertford (Bayfordbury) . . . . .	H. W. Clinton Baker, Esq. . . . .	8	1	2	110	614	24·17	165	132
D Stanstead Abbots (Warrax) . . . . .	E. H. Barlow, Esq. . . . .	5	1	2	175	609	23·97	183	135
D Gilston Park . . . . .	Mr. J. A. Cook . . . . .	8	1	0	117	627	24·68	189	133
D Hertford (Sewage Works) . . . . .	Met. Water Board . . . . .	8	1	0	217	613	24·12	189	133

## DIVISION III.—SOUTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam.	Height Ground	above Sea Level.					
HERTFORDSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—THAMES—Lea.—(con.).									
d Ware (Red House) . . . . .	Met. Water Board. . . . .	5	1	0	115	584	22·99	186	128
d Ware (Chadwell Spring) . . . . .	Met. Water Board. . . . .	5	1	0	140	596	23·48	167	131
d Welwyn (Codicote Lodge) . . . . .	Mr. J. G. Miller . . . . .	5	1	0	340	678	26·68	..	125
d Much Hadham (Boy's School). . . . .	J. Langsford, Esq. . . . .	5	3	0	204	545	21·46	153	123
d Much Hadham. . . . .	T. Woodham Mott, Esq. . . . .	5	1	0	212	613	24·12	173	129
d Bishop Stortford (Twyford Ho.) . . . . .	Laurie Frere, Esq. . . . .	5	0	8	181	608	23·95	185	132
Watton (Frogmore Hall) . . . . .	Lt. Col. J. B. Gilliatt, D.S.O. . . . .	5	0	9	250	605	23·84	..	..
d Standon . . . . .	F. H. Wace, Esq. . . . .	5	1	0	375	604	23·78	174	130
d Bennington House . . . . .	Miss E. A. Parker . . . . .	5	1	0	407	675	26·56	201	129
d Little Hadham (Hadham Hall) . . . . .	W. Minet, Esq. . . . .	5	0	10	338	618	24·32	164	137
d Braughing (Hamels Park) . . . . .	Mr. F. A. Akers . . . . .	5	1	0	400	699	27·53	197	146
d Hitchin (Preston) . . . . .	R. de V. Pryor, Esq. . . . .	8	2	6	484	687	27·05	173	142
d Buntingford (Coles) . . . . .	Mrs. Greg . . . . .	5	1	0	375	638	25·12	160	131
Weston Park . . . . .	Col. W. M. Pryor, D.S.O. . . . .	5	0	10	470	636	25·04	166	121
d Furneaux Pelham (The Brewery) . . . . .	G. Warren Bindloss, Esq. . . . .	5	1	0	300	633	24·90	177	136
d Royston (Therfield Rectory) . . . . .	Rev. H. R. Humphreys . . . . .	5	1	0	513	613	24·12	165	133
4.—OUSE. 86 sq. mi.									
d Offley (School House) . . . . .	C. W. Mears, Esq. . . . .	5	1	0	526	660	25·98	166	136
d Offley Vicarage . . . . .	Rev. E. P. Gatty . . . . .	5	1	6	525	656	25·84	180	138
d Graveley Rectory . . . . .	Rev. R. E. C. Walker. . . . .	5	0	10	325	701	27·58	190	137
d Hitchin (Newlands) . . . . .	F. Ransom, Esq. . . . .	5	1	0	271	651	25·63	189	132
d Hitchin (Chiltern Road). . . . .	A. Latchmore, Esq. . . . .	5	1	0	298	578	22·76	172	121
d Hitchin (High Down) . . . . .	Miss E. Pollard . . . . .	5	1	1	421	629	24·78	232	134
d Letchworth (Roxley Ho. William) . . . . .	Mrs. H. Bendixson . . . . .	5	1	6	375	607	23·88	172	138
d Letchworth (Sewage Farm) . . . . .	A. W. E. Bullmore, Esq., C.E. . . . .	5	1	0	214	578	22·77	160	126
d Letchworth (Gernon Road) . . . . .	A. W. Brunt, Esq. . . . .	5	1	0	280	572	22·53	173	128
d Holwell Rectory . . . . .	Rev. J. F. Llewelyn. . . . .	5	0	7	200	589	23·20	..	107
Baldock . . . . .	Dr. Bertram Suggit . . . . .	5	1	0	210	561	22·07	183	119
d Barley (Dalnyveed) . . . . .	E. M. Cook, Esq. . . . .	5	1	0	300	588	23·14	166	123
d Ashwell . . . . .	Dr. R. E. H. Woodforde . . . . .	5	1	0	175	548	21·56	161	121
d Royston (Earlshill House) . . . . .	J. Phillips, Esq. . . . .	8	1	3	225	625	24·61	192	132
BUCKINGHAMSHIRE. Area, 743 sq. mi.									
1.—THAMES—Cherwell. 30 sq. mi.									
2.—THAMES—Thame. 158 sq. mi.									
Weston Turville (Yaxley Lodge) . . . . .	Miss Morris. . . . .	5	1	3	352	660	25·99	148	127
d Weston Turville . . . . .	G. Eland, Esq. . . . .	5	1	0	320	557	21·93	..	109
d Tring (Bulbourne) . . . . .	W. Yates, Esq., C.E. . . . .	5	2	3	396	734	28·91	178	136
d Aylesbury . . . . .	W. H. Taylor, Esq. . . . .	5	4	6	251	612	24·10	197	132
d Birtton (Burcott Cottage) . . . . .	Col. W. Plomer . . . . .	8	1	0	300	629	24·78	153	130
Mentmore Gardens . . . . .	Mr. J. MacGregor . . . . .	5	1	3	400	651	25·63	..	..
3.—THAMES—Wye & c. 129 sq. mi.									
d Eton (Tangier Island) . . . . .	E. A. Stickland, Esq. . . . .	5	0	6	68	681	26·80	172	136
d Slough (Upton) . . . . .	R. Bentley, Esq. . . . .	8	2	0	80	624	24·56	..	..
d Slough (Upton) . . . . .	R. Bentley, Esq. . . . .	5	2	0	78	657	25·86	190	137
d Taplow (Hitcham Grange) . . . . .	Hon. C. S. Irby . . . . .	5	1	0	175	595	23·43	161	134
d Stoke Poges (Stoke Court) . . . . .	Mr. F. W. Beevers . . . . .	8	1	3	196	663	26·09	145	131
d Henley-on-Thames (Greenlands) . . . . .	Lord Hambleden . . . . .	5	1	0	116	711	27·98	155	132
d Hedsor . . . . .	Lord Boston. . . . .	8	1	0	170	817	32·18	143	136
d Bourne End (The Bourne) . . . . .	A. Morse, Esq. . . . .	5	1	0	240	728	28·67	160	133
d Marlow (Thames Bank) . . . . .	S. H. Wright, Esq. . . . .	8	2	0	105	717	28·24.	175	139
d High Wycombe (Flackwell Hth.) . . . . .	E. Dickson Park, Esq. . . . .	5	1	10	365	691	27·20	178	136
d High Wycombe . . . . .	H. S. Wheeler, Esq. . . . .	5	0	11	253	749	29·49	189	141
d High Wycombe (R. Gram. Sch) . . . . .	G. W. Arnison, Esq. . . . .	8	1	0	545	745	29·32	..	..
d Penn (Rayners) . . . . .	Mr. E. Peett . . . . .	5	1	10	547	785	30·90	184	141
d Penn (Ashwell Manor) . . . . .	Capt. A. G. Soames. . . . .	5	1	7	550	742	29·23	193	141
d Hampden House . . . . .	Earl of Buckinghamshire. . . . .	5	1	0	695	776	30·54	175	144

## DIVISION III.—SOUTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
BUCKINGHAMSHIRE—(con.).		in.	ft. in.	ft.	mm.	in.		
4.—THAMES—Colno. 133 sq. mi.								
D Slough (Ditton Park) .....	Capt. F. Creagh-Osborne, C.B.	5	3 0	70	662	26·07	152	126
D Slough (Langley) .....	R. H. Major, Esq.	8	0 10	85	649	25·54	165	128
D Chalfont St. Giles (Roughw'd Pk)	Thurston Agelasto, Esq.	5	1 0	450	783	30·83	182	138
D Amersham (St. Mary's Sch.) No. 1	W. Garton, Esq.	5	1 8	340	734	28·90	182	133
D Amersham (St. Mary's Sch.) No. 2	W. Garton, Esq.	5	1 0	340	770	30·30	187	141
D Amersham (The Plantation) .....	G. Weller, Esq.	8	1 0	464	744	29·28	182	142
D Amersham Common (Stanmore)	W. Garton, Esq.	5	1 0	517	826	32·53	191	139
D Chesham Bois Rectory .....	Rev. T. H. Fitzpatrick	5	0 11	530	804	31·67	172	140
D Wendover (Mayortorne Manor)	Miss I. Fry	5	0 9	490	759	29·89	165	144
5.—OUSE. 293 sq. mi.								
D Oving House .....	H. Yates Thompson, Esq.	5	1 0	515	724	28·51	176	143
M Oving House .....	H. Yates Thompson, Esq.	5	1 6	515	720	28·33	..	..
D Swanbourne House School .....	L. L. C. Evans, Esq.	5	1 0	411	597	23·52?	155	141
D Mursley Hall .....	A. W. Beecham, Esq.	8	1 0	490	703	27·66	190	132
D Mursley Observatory .....	A. W. Beecham, Esq.	5	0 10	490	713	28·08	179	133
D Addington (C. of E. School) .....	J. H. Webster, Esq.	5	0 7	320	683	26·90	179	129
D Leighton Buz. (Stockgrove Pk.)	Mr. J. Clues	5	1 2	500	693	27·27	..	122
D Great Horwood .....	W. Weston, Esq.	5	0 9	370	731	28·76	177	140
D Stony Stratford (Calverton L.)	Mrs. Hawkins	5	1 8	230	728	28·65	158	129
D Wolverton (St. George's Vic.) ..	Rev. Canon W. L. Harnett	5	1 0	270	674	26·52	176	124
D Wolverton (The School House)	H. J. Hipsley, Esq.	5	1 0	264	660	25·98	191	129
D Wolverton (Council School) .....	H. J. Hipsley, Esq.	5	5 0	263	649	25·53	..	..
D Newport Pagnell (The Croft) ..	F. Littleboy, Esq.	5	1 9	191	673	26·48	179	128
OXFORDSHIRE. (Area, 756 sq. mi.)								
1.—SEVERN—Upper Avon. 10 sq. mi.								
D Sibford Ferris (Woolman Cottage)	Joshua Lamb, Esq.	5	1 0	570	787	31·00	173	136
2.—THAMES—Windrush & c. 261 sq. mi.								
Kencot Rectory .....	Rev. H. E. Cooper	5	1 0	290	745	29·35	..	..
D Witney (Cokethorpe) .....	Major H. G. Feilden	5	4 6	230	710	27·94	161	137
D Witney (Church Green) .....	E. S. Fry, Esq.	5	1 0	270	712	28·04	164	132
Burford (Electricity Works) ..	"North Wilts Herald"	..	..	..	688	27·10	..	..
D Charlbury (Cornbury Park) .....	Mr. B. Campbell	5	1 0	435	864	34·03	..	124
D Wootton Rectory .....	Rev. F. R. Marriott	5	1 0	370	813	32·02	172	139
D Lyneham .....	R. de M. Pratt, Esq.	5	1 7	351	843	33·17	176	147
D Glympton Park .....	Lt.-Col. G. H. Barnett	5	2 6	..	767	30·19	157	135
D Chadlington (Langston House)	Lt.-Col. F. W. Schofield, CMG.	5	1 0	430	781	30·75	185	137
D Chipping Norton (Bungalow) ..	T. H. Burbidge, Esq.	5	1 0	700	792	31·19	179	148
D Chipping Norton (Heythrop) ..	Lt.-Col. H. E. Du C. Norris	10	3 6	660	728	28·65	173	146
3.—THAMES—Cherwell. 250 sq. mi.								
D Nuneham Park Gardens .....	Mr. A. J. Hines	8	3 0	280	644	25·37	130	110
D Oxford (Hincksey Pumping Sta.)	J. E. Wilkes, Esq., C.E.	8	1 0	187	660	25·97	176	121
D Oxford (Osney Lock) .....	Thames Conservancy	5	2 11	191	647	25·49	165	123
D Oxford (Magdalen College) .....	J. J. Manley, Esq.	5	1 0	186	659	25·96	170	123
D Oxford (Magdalen College) .....	J. J. Manley, Esq.	5	33 6	194	605	23·84	..	..
D Oxford (Radcliffe Observatory)	Dr. A. A. Rambaut, F.R.S.	8	1 8	210	670	26·39	174	123
D Oxford (Radcliffe Observty.) (R)	Dr. A. A. Rambaut, F.R.S.	11	2 4	210	671	26·43	173	124
D Oxford (Northmoor Road) .....	Miss E. M. Tawney	5	1 0	217	678	26·69	176	117
D Headington (Warneford Asy.) ..	Dr. A. W. Neill	5	1 0	300	637	25·10	154	118
D Headington (Charlton Lea) .....	Mr. L. Dawes	5	1 0	300	698	27·47	172	130
D Elsfeld Manor House .....	Miss M. J. Parsons	5	1 0	355	674	26·54	181	130
D Bletchington School .....	H. C. Witcombe, Esq.	5	1 6	329	961	37·85?	194	138
D Middleton Park .....	The Earl of Jersey	5	2 6	326	781	30·73	170	135
D Steeple Aston (The Grange) .....	Arthur E. Bradshaw, Esq.	8	1 0	400	838	32·98	192	143
D Steeple Aston (Hill House) .....	B. S. Ogle, Esq.	5	0 5	406	821	32·33	192	143
West Adderbury (St. Amand's)	Miss M. M. Bradford	8	1 0	320	786	30·94	147	140
D Adderbury (Cross Hill) .....	G. H. Norris, Esq.	5	1 1	338	715	28·17	172	124
Adderbury (The Rookery) .....	C. C. Bradford, Esq.	8	1 0	323	779	30·68	173	137
D Bodicote House .....	J. F. Starkey, Esq.	8	1 0	388	742	29·21	174	136
D Bodicote .....	A. Ridge, Esq.	5	1 0	391	766	30·14	179	139
D Bodicote Vicarage .....	Rev. H. N. Fowler	5	1 0	390	740	29·15	178	138

## DIVISION III.—SOUTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
OXFORDSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
3. THAMES—Chirwell—(con.).									
Broughton Rectory.....	Rev. B. W. Bradford .....	5	1	6	370	793	31·20	170	..
Wroxton .....	Hon. Mrs. Fitz Gerald .....	12	1	6	500	815	32·08	169	136
d Shenington School Gardens ...	Rev. A. Blythman .....	5	1	3	540	931	36·66	198	156
4.—THAMES—Thame & c. 210 sq. mi.									
d Caversham (Kidmore End Sch.)	T. F. Higgins, Esq. ....	5	1	0	330	809	31·87	174	135
d Harpsden (Cray) .....	B. E. Dunbar Kilburn, Esq. ....	5	1	0	230	658	25·92	168	127
d Henley-on-Thames (Hart St.) ..	A. Edward Hobbs, Esq. ....	5	1	6	110	674	26·55	173	135
d Henley-on-Thames (Hart St.) ..	A. Edward Hobbs, Esq. ....	5	7	6	116	659	25·93	173	135
d Henley-on-Thames (Greys Lane)	G. Potter, Esq. ....	5	0	9	123	686	27·01	157	132
d Henley-on-Thames (Greys Gr.)	Mrs. Wolferstan .....	5	2	0	350	760	29·93	186	137
d Nettlebed (Joyce Grove) .No. 1	Mr. F. Morby .....	5	1	0	590	851	33·50	177	147
d Nettlebed (Joyce Grove) .No. 2	Mr. F. Morby .....	5	1	0	605	835	32·88	177	148
d Benson Observatory .....	Air Ministry .....	8	1	0	186	616	24·24	171	124
d Culham School House .....	F. Mitchell, Esq. ....	5	0	10	180	660	25·99	174	129
d Clifton Hampden (Manor House)	Lord Aldenham .....	5	1	0	190	673	26·50	166	128
d Watlington (Pyrton Manor) ...	Major H. Ducat Hamersley ..	5	1	0	325	674	26·52	170	137
d Lewknor (Manor House) .....	Miss Spencer .....	5	1	3	360	676	26·60	183	135
d Wheatfield .....	A. J. Spencer, Esq. ....	5	0	8	275	608	23·94	152	125
d Toot Baldon (Potlands) .....	D. Clinkard, Esq. ....	5	1	0	288	655	25·77	157	113
d Thame (Tythrop House) .....	A. W. Smith, Esq. ....	8	1	2	266	635	25·01	152	129
Stanton St. John (Woodperry)	Mrs. Thomson .....	6	1	0	336	723	28·46	160	138
5.—OUSE. 25 sq. mi.									
NORTHAMPTONSHIRE. (Area, 1003 sq. mi.)									
1.—SEVERN—Upper Avon. 60 sq. mi.									
d Winwick Warren .....	Col. R. H. Ainsworth ....	8	1	5	648	753	29·66	195	143
d Naseby Reservoir .....	T. W. Millner, Esq. ....	5	1	6	519	674	26·54	193	132
2.—THAMES—Cherwell. 77 sq. mi.									
d King's Sutton (Manor House) ..	Major C. A. Markham ....	5	1	0	338	733	28·85	140	130
d King's Sutton School .....	A. H. Tilbury, Esq. ....	5	1	0	380	756	29·77	..	..
d Grimsbury (Banbury W.W.) ..	W. E. Wood, Esq. ....	5	1	3	320	651	25·65	178	126
3.—OUSE. 148 sq. mi.									
d Brackley (Waterworks) .....	T. A. Staniforth .....	5	1	2	470	791	31·13	..	127
d Brackley House .....	Major J. Allen .....	5	1	0	425	834	32·85	185	149
d Towcester (Easton Neston) ...	J. P. Maitland, Esq. ....	8	1	0	325	813	31·99	155	136
d Hartwell Vicarage .....	Rev. C. Ryder-Macnally ..	5	1	10	405	807	31·78	195	143
d Hargrave Hall .....	C. K. Murchison, Esq. ....	5	1	0	273	610	24·03	..	..
4.—NENE. 622 sq. mi.									
d Salcey Forest .....	Office of Woods .....	8	1	3	370	738	29·07	146	123
d Blisworth (Crieff House) .....	A. Westley, Esq. ....	5	1	0	330	805	31·68	186	140
d Blisworth .....	Dr. D. Jeaffreson .....	5	1	0	275	799	31·45	178	139
d Blisworth .....	T. W. Millner, Esq. ....	5	1	6	300	751	29·57	178	140
d Castle Ashby .....	Major C. A. Markham ....	5	1	4	230	773	30·42	182	144
d Little Houghton House .....	Christopher Smyth, Esq. ....	5	2	0	270	767	30·18	171	136
d Northampton (Dallington Av.)	Major C. A. Markham ....	5	1	0	265	752	29·62	180	141
d Northampton (General Hosp.) ..	Major C. A. Markham ....	5	1	1	259	723	28·45	170	140
d Northampton (Mental Hosp.) ..	W. R. Budgen, Esq. ....	8	1	2	398	721	28·37	181	144
d Northampton (Stimpson Avnue)	F. Tomlinson, Esq., C.E. ...	8	18	0	329	690	27·18	154	134
d Northampton (Cheyne Walk) ..	R. H. Primavesi, Esq. ....	5	8	6	240	706	27·78	194	..
d Hazelborough Woods .....	Office of Woods .....	8	1	0	241	795	31·30	184	139
d Daventry (Tunnel End) .....	T. W. Millner, Esq. ....	5	1	6	394	709	27·90	187	133
d Althorp Park .....	Mr. C. F. Crump .....	5	1	3	414	757	29·81	164	142
d Sywell Hall .....	T. A. Dickson, Esq. ....	5	1	0	371	746	29·38	178	139
d Pitsford (Sedgebrook) .....	Major C. A. Markham ....	5	1	0	311	691	27·22	153	131
d Pitsford (Sedgebrook) .....	Major C. A. Markham ....	5	1	0	311	701	27·59	..	..
d Wellingborough (Swanspool) ..	R. S. Henshaw, Esq., C.E. ..	5	1	0	169	724	28·49	188	139
d Wellingborough (Sewage Works)	R. S. Henshaw, Esq., C.E. ..	5	1	0	139	676	26·63	174	132

## DIVISION III.—SOUTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.					
NORTHAMPTONSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
4.—NENE—(con.).									
d Wellingborough (Castle St.)	J. E. Ekins, Esq.	5	4	6	160	706	27·80	187	136
d Wellingboro' (Bushfield W.W.)	R. S. Henshaw, Esq., C.E.	8	0	11	286	694	27·31	185	136
d Watford Court	Major C. A. Markham	9	1	2	380	742	29·22	196	151
d Ashby St. Ledgers	Mr. A. Williams	5	0	10	500	694	27·33	194	142
d Ravensthorpe Reservoir	F. Tomlinson, Esq., C.E.	8	1	0	370	746	29·36	189	146
d Scaldwell	Late Capt. R. Soames	5	1	0	406	660	26·00	..	..
d Lamport Hall Gardens	Mr. H. Tyrrell	8	1	0	440	774	30·47	174	144
d Raunds (Day School)	L. G. H. Lee, Esq.	8	1	0	214	627	24·69	178	125
d Kettering W.W. (Cransley)	T. R. Smith, Esq., C.E.	8	0	6	275	699	27·52	177	131
d Kettering (Sewage Works)	T. R. Smith, Esq., C.E.	8	0	11	199	675	26·57	178	137
d Kettering W.W. (Thorpe Malsor)	T. R. Smith, Esq., C.E.	5	0	11	352	713	28·08	207	139
d Kettering W.W. (Clover Hill)	T. R. Smith, Esq., C.E.	5	0	7	344	719	28·30	171	133
d Kettering (Warkton)	Mr. R. H. Brett	5	1	3	275	632	24·88	149	127
d Rothwell (Loddington)	Mr. J. Oliff	5	1	6	400	713	28·06	159	..
d Thrapston (Islip)	G. E. Abbott, Esq.	5	..	..	145	613	24·13	166	..
d Thrapston (Drayton House)	Mr. G. Medcraft	5	1	6	220	706	27·80	167	135
d Tichmarsh Rectory	Rev. A. M. Luckock	..	..	..	150	688	27·07	162	131
d Desborough	Mr. F. U. Grudgings	5	2	6	400	771	30·37	..	..
d Rothwell (Shotwell Mill)	W. T. Lynam, Esq.	5	1	6	340	657	25·85	164	131
d Barnwell (Lilford Hall)	Mr. F. W. Gallop	5	1	0	..	726	28·60	175	129
d Oundle (Milton Road)	J. M. Siddons, Esq., C.E.	5	3	6	131	576	22·69	..	120
d Oundle School	K. Fisher, Esq.	8	1	0	147	611	24·06	184	128
d Bulwick Park	Viscountess Chetwynd.	5	0	11	225	669	26·36	..	..
d Peterborough (Westbourne Ho.)	E. H. Colman, Esq.	8	1	0	35	566	22·29	179	117
d Peterborough (Ashfield)	Late J. A. Percival, Esq.	5	0	7	30	533	21·00	177	118
d Peterborough (Abbeyfields)	Major J. Shipley Ellis	5	0	9	49	584	22·99	180	122
d Peterborough (Milton House)	Major C. A. Markham	5	3	0	96	735	28·95	166	133
d Wittering Rectory	Rev. S. B. Warde	5	1	0	180	697	27·44	177	129
d Wittering (Whitewater)	E. Betts, Esq.	8	3	0	241	734	28·89	..	112
d Wittering (Bone Mill)	E. Betts, Esq.	5	3	0	..	702	27·65	155	134
d Eye (Northolt)	S. M. Egar, Esq.	5	1	0	17	545	21·47	177	119
d Eye (Newborough)	R. Williams, Esq.	5	1	0	8	557	21·91	175	126
5.—WELLAND. 96 sq. mi.									
d Marston Trussell Rectory (R)	Rev. J. Knight Law	10	2	9	314	733	28·86	186	125
d Market Harboro' (Dingley Hall)	Mr. J. Hanson	5	1	6	400	729	28·71	163	127
d Carlton Park Gardens	Mr. R. W. Thatcher	5	1	1	400	669	26·32	..	..
d Rockingham Castle Gardens	Mr. A. E. Higgott	5	4	0	410	768	30·22	169	130
d Gretton (Gretton House)	Mr. J. Rogers	9	1	0	354	785	30·90	169	140
d Gretton School	W. Leeson, Esq.	5	1	0	365	691	27·19	207	131
d Colleyweston (Cuckoo Lodge)	E. Betts, Esq.	8	3	0	241	702	27·63	148	112
d Market Deeping (Etton)	W. H. A. Court, Esq., C.E.	8	1	0	25	548	21·58	155	116
HUNTINGDONSHIRE. (Area, 366 sq. mi.)									
1.—OUSE. 327 sq. mi.									
d Gamlingay (Woodbury H. Gdns)	Major Phipps Foster	5	1	0	200	569	22·38	150	127
d St. Neots (Waresley Park)	Miss Duncombe	5	0	11	190	565	22·23	168	136
d Fenstanton (Yewhurst)	Capt. F. W. Brooke	5	0	5	40	522	20·56	179	116
d Hemmingford Grey (Millview)	G. F. Wilson, Esq.	5	1	6	20	520	20·48	155	112
d Brampton (The Lilacs)	Rev. G. H. Raynor	5	1	0	45	548	21·56	174	119
d Huntingdon (Hinchingsbrke.) (R)	Mr. W. Prowting	5	2	0	70	568	22·37	178	122
d St. Ives (Slepe House)	Dr. W. R. Grove	5	1	0	25	493	19·42	154	106
d Catworth	J. H. Annet, Esq.	5	0	9	210	668	26·30	188	136
d St. Ives (Hiam Farm)	Mr. E. G. Parsons	5	1	1	100	455	17·91	..	..
2.—NENE. 39 sq. mi.									
BEDFORDSHIRE. (Area, 467 sq. mi.)									
1.—THAMES—Colno. 20 sq. mi.									
d Dunstable (Kensworth Vicarage)	Mrs. Litle	5	1	3	585	770	30·33	..	127
d Luton (Stockwood)	Mrs. E. R. Crawley	5	0	6	539	633	24·91	181	133

## DIVISION III.—SOUTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
BEDFORDSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
2.—THAMES—Lea. 32 sq. mi.									
D Luton (Pumping Station)	J. W. Tomlinson, Esq., C.E.	5	1	0	343	650	25·58	184	140
D Luton	J. W. Tomlinson, Esq., C.E.	5	1	0	390	636	25·05	169	133
D Luton (Tennyson Road)	Harold F. Smith, Esq.	5	1	1	530	635	25·02	177	129
D Luton (High Town Road)	Rev. W. F. Hicks	5	1	0	430	721	28·40	193	137
D Luton (The Downs)	G. W. Pryer, Esq.	5	1	0	479	683	26·87	180	147
3.—OUSE. 408 sq. mi.									
D Milton Bryant (Manor House)	C. J. Kilby, Esq.	5	1	0	510	703	27·69	138	124
D Shillington	Dr. Kilham Roberts	5	1	0	182	613	24·14	164	135
D Shefford (Stondon Manor)	R. Long, Esq.	5	1	0	241	555	21·85	147	115
D Woburn (Crawley Mill Farm)	A. Blenkinsop, Esq.	8	1	0	292	679	26·75	..	..
D Woburn (Fruit Farm, Ridgmont)	E. J. Hobbs, Esq.	5	1	0	270	689	27·12	179	134
D Stotfold (Three Co. Mental Hos.)	Dr. L. O. Fuller	5	1	0	220	523	20·58	170	118
D Meppershall	K. R. Reynolds, Esq.	5	0	9	235	516	20·33	..	..
D Shefford (Clifton Bury)	A. Inskip, Esq.	5	2	1	150	562	22·14	..	..
D Shefford Council School	G. F. Aldritt, Esq.	5	1	0	134	580	22·85	188	126
D Shefford (Stanford)	H. Inskip, Esq.	5	2	0	60	533	21·00	..	..
D Sandy (The Lodge)	Mr. R. Pettifer	5	1	0	200	559	22·00	169	..
D Sandy (Beeston Grange)	Lt.-Col. Maunsell Bowers	5	1	0	80	533	20·99	172	128
D Bedford (Castle Road)	Miss M. E. Newbery	5	7	0	108	571	22·46	170	123
D Goldington (Castle Mills)	W. H. Rogers, Esq.	5	1	4	90	539	21·20	..	..
D Great Barford House	J. Arnold Whitchurch, Esq.	5	1	0	120	566	22·29	166	114
D Sharnbrook (Castle Close)	L. Stileman-Gibbard, Esq.	5	0	8	210	623	24·53	185	126
D Sharnbrook (Colworth Gardens)	Mr. J. Hoad	5	2	0	250	611	24·04	149	127
4.—NENE. 7 sq. mi.									
CAMBRIDGESHIRE. (Area, 859 sq. mi.)									
1.—STOUR. 17 sq. mi.									
2.—OUSE. 740 sq. mi.									
D Ashwell (Odsey)	Sir Geo. Fordham	5	1	0	256	557	21·95	183	127
D Guilden Morden Vicarage	Rev. L. G. S. Price	5	1	0	140	502	19·77	160	116
D Abington Pigotts Rectory	Rev. M. de Courcy-Ireland.	5	1	0	70	509	20·02	..	..
D Abington Pigotts (Manor Farm)	Rev. M. de Courcy-Ireland.	12	1	0	70	511	20·10	139	115
D Bartlow (Shudy Camps)	Miss M. G. Archer	5	0	9	300	619	24·38	161	124
D Meldreth (Chiswick Farm)	A. Howard, Esq.	5	1	1	70	536	21·09	181	132
D Fowlmere (Fruit Farm)	H. F. Smith, Esq.	5	1	0	61	471	18·54	172	109
D Foxton (The Bury)	J. Gifford, Esq.	5	1	0	60	568	22·35	177	124
D Whittlesford (Scots)	Robert Maynard, Esq.	5	0	6	68	507	19·97	..	109
D Harston Vicarage	Mrs. E. C. Baldwin	5	0	8	47	554	21·80	147	120
D Wimpole Hall	Mr. W. J. Snell	5	1	0	141	502	19·77	142	115
D Shelford (Stapleford House)	J. H. H. Linton, Esq.	5	2	3	64	568	22·37	160	133
D Gamlingay (Old Woodbury)	Hon. C. E. Hill Trevor	5	0	10	200	560	22·06	178	123
D Balsham Rectory	Rev. H. J. E. Burrell	5	1	6	399	573	22·54	186	127
D Grantchester Mill	J. Nutter, Esq.	5	5	0	31	517	20·37	140	118
D Fulbourne (Fleam Dyke)	W. W. Gray, Esq., C.E.	5	1	0	99	475	18·71	156	106
D Fulbourne Pumping Station	W. W. Gray, Esq., C.E.	5	1	0	37	563	22·16	185	125
D Cambridge W.W. (Cherryhinton)	W. W. Gray, Esq., C.E.	5	1	0	35	546	21·49	190	121
D Cambridge (Hills Road, South)	Smith Nutter, Esq.	8	0	10	45	594	23·37	188	135
D Cambridge (Sidney Street)	Messrs. W. E. Pain & Sons	8	53	0	83	571	22·50	182	114
D Cambridge (Corporation Store Yd)	Julian Julian, Esq., C.E.	5	1	0	52	536	21·10	162	117
D Cambridge (Tenison Avenue)	W. B. Parsons, Esq.	8	1	2	40	613	24·15	167	120
D Cambridge (Botanic Gardens)	F. G. Preston, Esq.	5	1	0	41	568	22·36	166	117
D Cambridge (Corporation Ppg.St.)	Julian Julian, Esq., C.E.	5	1	0	28	559	21·99	185	120
D Caxton	Dr. E. P. H. Dudley	5	1	0	160	557	21·92	171	121
D Boxworth	E. H. Thornhill, Esq.	5	1	0	76	582	22·90	177	118
D Swaffham Prior Vicarage	Rev. L. Fisher	5	1	4	44	563	22·17	185	127
D Burwell	R. Stephenson, Esq.	5	2	0	58	548	21·56	161	126
D Conington (Conington Hall)	Philip T. Gardner, Esq.	8	0	5	50	666	26·23	178	129
D Cottenham (Bernard House)	Miss Bull	5	1	6	30	529	20·84	164	119
D Fordham	W. V. Bloom, Esq.	5	1	0	30	512	20·16	159	124

## DIVISION III.—SOUTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
CAMBRIDGESHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.	
2.—OUSE—(con.).								
d Stretham Engine .....	Mr. J. Housley .....	9	4	9	13	478	18·81	..
Stretham (Orchard House) ....	C. Wright, Esq. ....	8	5	0	42	525	20·67	154
d Chatteris (Holwood Farm) ....	Mr. J. W. Watson .....	5	1	0	12	501	19·71	..
Littleport (Highfield House) ...	H. G. Martin, Esq. ....	8	2	7	67	541	21·31	142
d Chatteris (Aylesby House).....	A. H. Ruston, Esq. ....	8	1	0	31	593	23·34	145
d Chatteris (The Priory) .....	H. F. Fryer, Esq. ....	5	1	0	32	514	20·22	136
d March .....	Major R. G. Clark .....	9	2	0	10	633	24·91	155
d Upwell (Marmont Priory Lock) ..	Major R. G. Clark .....	8	1	1	..	575	22·65	197
d Wisbech (Queen's Road) .....	H. Dann, Esq. ....	5	7	6	10	670	26·38	172
3.—NENE. 102 sq. mi.								
d Stanground Sluice .....	Major R. G. Clark .....	8	1	6	15	564	22·22	177
d Parson Drove (Clows Cross) ...	W. Kingston, Esq. ....	8	3	0	13	531	20·90	177
d Wisbech (Bank House) .....	Hon. Anna J. Peckover ..	8	0	8	6	618	24·34	182

## DIVISION IV.—EASTERN COUNTIES.

ESSEX. (Area, 1532 sq. mi.)

<b>1.—THAMES—Lea. 132 sq. mi.</b>								
d West Ham (Abbey Mills) .....	London County Council ..	8	0	10	15	553	21·76	165
d Leyton (Town Hall) .....	E. H. Essex, Esq., C.E. ..	5	1	0	22	564	22·19	158
d Leytonstone (High Road) .....	Miss G. Lister .....	5	1	8	100	625	24·61	159
d Lea Bridge (Waterworks) .....	Met. Water Board. ....	8	0	6	23	562	22·13	169
d Walthamstow (Ferry Lane).....	Met. Water Board. ....	8	8	0	30	595	23·43	181
d Woodford (Haggar Lane) .....	Met. Water Board. ....	8	0	8	176	526	20·72	161
d Buckhurst Hill Reservoir .....	Met. Water Board. ....	8	1	7	275	638	25·13	170
d Buckhurst Hill (Ardmore) ....	Miss E. F. Howard .....	8	1	0	270	759	29·88	168
d Chingford (Crescent Road) .....	Miss M. L. Mathieson ....	5	2	9	200	579	22·80	175
d Chingford Mill .....	Met. Water Board. ....	8	0	6	40	605	23·83	168
d Loughton (High Beech Res.) ...	Met. Water Board. ....	8	1	0	376	695	27·35	170
d Waltham Abbey (Rammey Marsh) ..	Met. Water Board. ....	8	1	0	60	585	23·03	178
d Waltham Abbey (Pumping Stn.) ..	Met. Water Board. ....	8	1	3	66	582	22·91	172
d Waltham Abbey (Gunpr. Fact.) ..	The Superintendent .....	5	2	0	64	522	20·56	..
d Hatfield Broad Oak (Barrington) ..	A. H. Gosling, Esq. ....	5	0	10	300	653	25·73	179
d Bishop Stortford (Hassobury) ..	Major W. S. Gosling .....	5	0	10	290	673	26·50	181
d Stansted (Ravens) .....	Col. R. Egerton .....	5	1	0	290	682	26·86	200
d Elsenham (Gaunts End) .....	H. Cotterell, Esq. ....	5	1	0	363	646	25·44	183
d Stansted (Benfield Place) .....	L. D. Gosling, Esq. ....	..	..	..	300	650	25·59	167
<b>2.—THAMES—Roding &amp; c. 316 sq. mi.</b>								
d Tilbury (Park View Observatory) ..	S. A. Hill-Willis, Esq. ....	5	1	0	6	540	21·27	149
d Grays (Stanley Road) .....	A. C. James, Esq., C.E. ..	5	3	3	21	578	22·77	176
d Grays Sewage Works .....	L. D. Holgate, Esq. ....	8	6	0	9	521	20·52	174
d East Ham (Central Park) .....	F. J. Kendall, Esq. ....	12	1	0	15	560	22·06	157
d East Ham Well .....	Met. Water Board. ....	8	1	0	17	484	19·04	168
d Ilford Sewage Works .....	J. Sandford, Esq. ....	5	1	1	31	488	19·22	155
d Leigh-on-Sea (Herschell Road) ..	Mrs. Elliot .....	5	0	10	100	540	21·26	..
Leigh (Brick House) .....	Miss Bentall .....	5	..	..	..	493	19·39	..
d Vange Pumping Station .....	Southend Water Works Co. ..	5	1	0	43	527	20·73	178
d Pitsea Pumping Station .....	Southend Water Works Co. ..	5	1	0	28	510	20·07	153
d Hornchurch .....	W. J. Grant, Esq. ....	8	1	8	46	517	20·37	175
d Wanstead (Red Bridge) .....	Met. Water Board. ....	5	2	0	27	552	21·73	158
d Manor Park (Albany Road) .....	A. J. Wilmshurst, Esq. ....	5	2	11	40	578	22·77	181
d Harold Wood (Longmoor) .....	Sir J. G. Broodbank .....	5	4	0	120	569	22·41	195
d Havering-atte-Bower (Fernside) ..	Benjamin Smith, Esq. ....	5	1	0	341	650	25·58	214
d Buckhurst Hill (Princes Road) ..	A. J. Bull, Esq. ....	5	1	3	200	608	23·92	172
d Theydon Bois (Birch Hall) .....	Mrs. Gerald Buxton, O.B.E. ..	5	0	11	300	681	26·79	..
d Epping (The Hemnalls) .....	Miss A. Nicholl .....	8	0	8	345	869	34·21	158
d Ongar (Marden Ash) .....	W. E. Calver, Esq. ....	5	1	6	190	580	22·83	173
d Ongar (Folyats) .....	J. M. Newall, Esq. ....	5	0	10	210	572	22·51	..
d North Weald (Canes) .....	H. W. Hart, Esq. ....	5	2	0	250	689	27·12	170

## DIVISION IV.—EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.					
ESSEX—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—CROUCH. 186 sq. mi.									
D Shoeburyness	Air Ministry	5	1	0	11	489	19·27	158	117
M Shoeburyness	Air Ministry	8	1	0	13	474	18·66	..	..
D Southend (Corporation Obsy.)	E. J. Elford, Esq.	8	1	0	90	485	19·11	168	122
Southend (Lancaster Gardens)	H. J. G. Ralph, Esq.	5	1	0	78	540	21·27	185	130
D Southend (Water Works)	Southend Water Works Co.	8	1	0	112	531	20·90	176	138
D Leigh Reservoirs	Southend Water Works Co.	5	1	0	117	523	20·58	141	125
D Great Wakering	Air Ministry	5	1	0	9	465	18·31	169	117
D Eastwood Pumping Station	Southend Water Works Co.	8	1	0	50	549	21·60	188	128
D Thundersley Reservoir	Southend Water Works Co.	5	1	0	277	546	21·48	140	127
D Nevendon Pumping Station	Southend Water Works Co.	5	1	0	43	543	21·37	159	126
D Billericay (Service Tank)	Southend Water Works Co.	5	1	0	310	566	22·27	165	130
D Billericay (Ramsden Hall)	T. W. Bacon, Esq.	5	0	9	260	615	24·20	180	135
D Wickford (Runwell Hall)	Lt.-Col. H. Kemble	5	1	0	75	599	23·60	154	129
D Southminster (Dudswell)	Mrs. H. G. Owen	5	0	10	60	569	22·42	160	129
D Southminster (The New Moor)	E. J. Attenborough, Esq.	..	..	..	..	524	20·64	142	122
D Bradwell-on-Sea (Bradwell H.)	J. C. Chillingworth, Esq.	5	1	1	27	579	22·79	181	128
4.—BLACKWATER. 425 sq. mi.									
Shenfield (Cliveden)	Mr. F. Copeman	5	1	0	320	651	25·62	136	121
Shenfield (The Lodge)	Harcourt P. Landon, Esq.	5	0	7	305	623	24·52	173	..
D South Hanningfield (Peardowns)	W. Hill, Esq.	8	1	10	133	606	23·85	179	124
D Ingatestone (Fryerning)	A. E. Christy, Esq.	5	1	0	290	629	24·76	177	130
D Danbury Rectory	Rev. J. Bridges Plumptre	5	1	0	365	575	22·63	182	130
D Writtle (Melbourne)	J. A. Rosling, Esq.	5	0	9	140	614	24·16	186	129
D Chelmsford (County Laboratories)	R. M. Wilson, Esq.	5	1	0	134	626	24·64	178	126
D Chelmsford (High Street)	Miss F. J. Chancellor	8	1	6	98	597	23·50	191	129
D Little Waltham Hall	Miss M. Harrison	8	1	0	190	571	22·47	163	129
D Pleshey Vicarage	Rev. C. H. B. Woodd	8	1	3	..	565	22·23	178	126
D Great Leighs (Lyons Hall)	J. H. Tritton, Esq.	5	3	0	130	601	23·64	158	122
Witham (Faulkbourne Hall)	Miss C. L. Parker	5	0	8	100	584	23·00	183	133
D Hartford End (Leez Priory)	M. E. Hughes-Hughes, Esq.	5	1	0	170	609	23·96	199	127
D Kelvedon (Lawn House)	F. Randolph-Symmons, Esq.	5	1	0	96	628	24·74	179	134
D Kelvedon (White Barn)	W. & H. J. Sheldrake, Esqs.	5	1	5	135	571	22·50	170	128
D Felsted School	J. H. Owen, Esq.	5	1	2	248	541	21·30	160	119
D Coggeshall (The Hamlet)	Rev. A. F. Curtis	5	1	0	100	658	25·90	209	131
D Little Dunmow Council School	Miss M. A. L. Scott	5	1	0	258	567	22·32	..	..
D Great Dunmow	Messrs. Hasler & Co., Ltd.	5	1	0	215	508	20·00	168	127
D Little Dunmow (Throws)	Miss Webb	5	1	4	283	555	21·85	..	..
D Pattiswick Hall	Harris Smith, Esq.	5	0	8	200	573	22·56	151	122
D Great Saling (Woolpits)	Mrs. Joseph Smith	5	0	9	284	562	22·11	161	130
D Shalford (Littles)	W. F. Hart, Esq.	5	1	8	260	579	22·78	156	129
D Gt. Bardfield (South Lodge)	A. W. Brunwin, Esq.	5	1	0	250	615	24·22	179	133
5.—COLNE & C. 283 sq. mi.									
D Clacton-on-Sea	Mr. A. W. Shadick	8	1	0	55	524	20·61	170	120
Tiptree	Messrs. Wilkin & Sons, Ltd.	5	0	6	170	575	22·62	159	..
D Fingringhoe	T. B. Grubb, Esq.	8	1	0	67	573	22·56	143	118
D Walton-on-the-Naze	The Town Clerk	5	1	0	69	478	18·83	141	116
D Colchester (Maypole Farm)	R. P. Blyth, Esq.	5	0	10	112	574	22·60	136	114
Colchester (King's Ford)	Hon. Lady Digby	5	0	10	103	592	23·32	217	139
D Colchester (Boro' Surveyor's Off.)	H. Collins, Esq., C.E.	8	17	0	82	557	21·95	158	116
D Lexden (Hill House)	S. F. Hurnard, Esq.	5	1	0	90	567	22·34	165	116
M Lexden (Hill House)	S. F. Hurnard, Esq.	5	1	0	90	569	22·41	..	..
Lexden Rectory	Rev. T. S. Raffles	5	1	4	116	612	24·09	175	..
D Great Bromley (Broughton)	W. A. Roberts, Esq.	5	1	0	115	631	24·86	182	130
Earls Colne (Chalkney House)	H. F. Hills, Esq.	5	1	0	180	578	22·76	..	130
Halstead (Atwoods)	R. E. Vaisey, Esq.	5	1	0	252	615	24·20	167	132
D Halstead (The Brewery)	Lt. E. T. Adams, R.N.V.R.	5	1	0	140	596	23·48	165	118
Gt. Maplestead (Monk's Lodge)	T. F. Miller, Esq.	5	0	9	230	599	23·57	..	..
D Great Yeldham (The Oak House)	G. A. Goodchild, Esq.	5	2	0	200	630	24·82	192	140

## DIVISION IV.—EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
ESSEX—(con.).		in.	ft.	in.	ft.	mm.	in.		
<b>6.—STOUR. 110 sq. mi.</b>									
d Manningtree (Dale Hall).....	Nigel C. Cooke, Esq.....	5	1	0	110	589	23·20	161	119
d Sudbury (Bulmer Lodge).....	Miss Burke .....	5	1	3	202	642	25·26	181	125
d Belchamp Walter (The Hall)†..	Major T. G. C. Reynolds...	5	1	3	150	613	24·13	179	125
<b>7.—OUSE. 80 sq. mi.</b>									
d Widdington Rectory.....	Rev. Jas. W. Court .....	5	1	6	340	589	23·18	135	123
d Arkesden (Wood Hall).....	Charles Beadle, Esq.....	5	0	9	400	677	26·65	..	121
d Great Chesterford Mills.....	Ernest H. King, Esq. ....	5	1	0	130	584	22·98	..	..
SUFFOLK. (Area, 1489 sq. mi.)									
<b>1.—STOUR. 271 sq. mi.</b>									
d East Bergholt (Ackworth Ho.)	A. Harwood, Esq. ....	8	1	6	145	544	21·41	190	132
d Capel St. Mary School .....	Bernard B. Taylor, Esq. ..	5	1	6	156	610	24·03	187	119
d Great Cornard (The Firs).....	A. B. Legard, Esq. ....	5	1	0	64	615	24·20	163	122
d Great Cornard (The Limes).....	E. Oliver, Esq. ....	5	0	9	65	581	22·88	155	113
d Sudbury (Lunt Fall Res.).....	R. Beaumont, Esq., C.E. ..	5	1	3	90	484	19·07?	142	117
d Sudbury (Friars Street).....	E. Ransom, Esq. ....	5	1	7	93	622	24·49	211	135
d Hadleigh (Bushey Coopers Frm)	E. A. Lee, Esq. ....	5	1	0	190	603	23·74	196	124
d Waldingfield (Holbrook Hall)...	Mrs. St. Leger Glyn .....	5	4	6	185	627	24·70	..	..
d Hitcham Rectory.....	Rev. R. R. Cobbold .....	5	1	5	255	613	24·13	198	127
d Hitcham (Loose Hall).....	T. A. Harwood, Esq.....	5	1	0	275	580	22·83	186	121
d Hawkedon Rectory.....	Rev. B. P. Oakes .....	5	3	4	303	637	25·09	184	139
d Cockfield Rectory.....	Rev. Canon Edwin Hill ..	5	1	0	305	633	24·94	188	137
<b>2.—ORWELL. 166 sq. mi.</b>									
d Ipswich (Rookwood, Copdock)	F. L. Bland, Esq. ....	8	1	0	164	607	23·91	190	118
d Ipswich (Tuddenham Road)...	F. Woolnough, Esq.....	8	1	0	106	709	27·90	160	138
d Ipswich (Museum).....	F. M. Cullum, Esq. ....	8	0	10	72	567	22·31	156	122
d Ipswich (Dale Hall).....	Percy Turner, Esq. ....	8	1	6	135	607	23·88	181	133
d Elmsett (Laurel Cottage).....	A. E. Ladbroke, Esq. ....	5	3	0	210	617	24·28	..	120
d Nettlestead (High Hall).....	A. S. P. White Cooper, Esq.	5	1	6	230	614	24·18	155	124
d Ringshall Rectory.....	Rev. G. C. Blaxland.....	5	2	9	280	631	24·85	170	119
d Haughley (Haughley House)...	Major S. H. Creagh.....	5	1	0	188	552	21·73	172	121
<b>3.—DEBEN &amp; C. 486 sq. mi.</b>									
d Felixstowe (Wireless Tel. Stat.)	Coastguard Officer.....	8	1	6	15	617	24·30	179	121
d Woodbridge Abbey .....	Col. R. J. Carthew .....	8	1	2	46	657	25·87	202	131
d Orford (The Gables).....	A. E. Rope, Esq.....	5	0	8	30	612	24·08	172	130
d Melton (St. Audrey's Hospital)	A. F. Philpott, Esq. ....	8	1	2	74	614	24·16	167	124
d Melton (Bromeswell Rectory)...	Rev. F. Shadwell .....	5	1	0	35	629	24·76	184	137
d Rendlesham Hall .....	Lord Rendlesham .....	5	1	0	88	591	23·28	156	123
d Charsfield (Red House).....	Hugh P. Youngman, Esq..	5	1	9	150	641	25·23	..	..
d Helmingham (Bocking Hall)...	W. B. Damant, Esq. ....	5	1	6	180	681	26·81	173	141
d Snape .....	G. H. Garrett, Esq. ....	5	1	6	50	619	24·35	164	133
d Campsea Ashe (High House)...	Viscount Ullswater, G.C.B.	8	2	6	60	601	23·65	163	..
d Leiston (Lower Abbey).....	M. K. Rope, Esq. ....	5	0	7	30	548	21·58	156	123
d Halesworth Rectory .....	Rev. H. C. Newbery .....	5	1	0	50	693	27·27	189	140
d Halesworth (Estate Office)....	C. W. Stanford, Esq. ....	5	2	3	120	685	26·98	167	142
d Wangford (Reydon Grove).....	C. P. Runnacles, Esq. ....	5	1	5	20	591	23·25	175	128
d Wangford (Ford House).....	Hon. Agnes Eden .....	5	0	10	25	689	27·11	174	140
d Lowestoft (Mill Road).....	Mr. Mark Bean.....	8	1	1	18	683	26·87	200	142
<b>4.—YARE &amp; C. 208 sq. mi.</b>									
d Horham Rectory .....	Rev. J. E. Soden.....	5	1	3	175	825	32·50	192	155
d Rumburgh Vicarage .....	Rev. W. Linton Wilson ..	5	1	0	148	645	25·41	191	135
d Bungay (Flixton Hall).....	Sir Shafto Adair, Bart....	5	1	0	79	682	26·85	184	134
d Beccles (Ballygate).....	R. L. T. Clarkson, Esq....	8	1	0	55	686	27·01	194	141
d Lowestoft (Belle Vue Park)....	C. W. Edwards, Esq. ....	5	1	0	84	634	24·94	189	129
d Herringfleet (The Gables).....	G. H. Wyllys, Esq. ....	5	0	8	55	702	27·65	202	148
d Lound Rectory .....	Mrs. Howes .....	5	1	0	63	693	27·27	198	136
d Lound Pumping Station .....	Lowestoft Water & Gas. Co.	8	1	0	34	697	27·43	181	135
d Fritton Warren .....	Major-Gen. R. Upcher, D.S.O.	5	0	8	42	723	28·48	183	148
d Fritton Hall .....	A. R. Buxton Esq. ....	8	0	10	40	718	28·28	204	145
d Yarmouth (Burgh Hall).....	H. P. Frederick, Esq.....	5	0	10	45	658	25·91	187	136

† Formerly called Sudbury (Belchamp Hall).

## DIVISION IV.—EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.					
SUFFOLK—(con.).		in.	ft.	in.	ft.	mm.	in.		
5.—OUSE. 378 sq. mi.									
Drinkstone .....	J. E. Townsend, Esq. ....	5	3	0	270	632	24·89	176	..
d Newmarket(Sewage Outfall) ..	W. H. Eley, Esq., C.E. ....	5	1	0	81	597	23·52	145	124
d Bury St. Edmunds(Guildhall St.)	R. H. Wilson, Esq. ....	5	..	..	105	677	26·65	179	160
d Bury St. Edmunds (Risbygate) ..	F. E. Rogers, Esq. ....	5	0	8	150	607	23·91	181	136
d Bury St. Edmunds(NorthgateSt.)	Rev. J. S. Pratt, ....	5	1	0	100	576	22·68	180	123
d BurySt. Edmunds(Hengrave Hl)	Sir John Wood, Bart., M.P. ....	5	1	5	85	598	23·54	152	129
d Mildenhall .....	H. R. W. Forster, Esq. ....	5	1	3	50	554	21·81	168	133
x Barningham (The Beeches) ..	Miss A. K. Lingwood ....	8	0	9	136	589	23·17	..	..
d Elveden Hall .....	The Earl of Iveagh, K.P. ....	5	1	0	130	653	25·72	196	134
NORFOLK. (Area, 2044 sq. mi.)									
1.—YARE. 658 sq. mi.									
d Brockdish Rectory .....	Rev. Wilson W. White ....	8	1	3	115	656	25·84	182	130
d Diss (The Cedars) .....	Dr. H. M. Speirs ....	5	1	8	108	617	24·28	157	128
d Pulham St. Mary (Hill House) ..	W. G. Rutter, Esq. ....	5	1	0	120	795	31·30	230	160
d Denton Rectory .....	Rev. Canon T. H. Bindley ....	5	0	10	50	707	27·85	202	134
d LongStratton(Gt.MoultonRec.)	Rev. T. D. Chute ....	5	1	0	150	749	29·48	169	136
d Stratton St. Mary Rectory ....	Hubert Satchell, Esq. ....	5	1	0	140	732	28·83	204	142
d Beccles (Geldeston) .....	Miss E. Dowson ....	5	1	0	37	594	23·40	183	131
d Ditchingham .....	W. G. Rutter, Esq. ....	5	1	0	25	672	26·46	196	134
d Beccles (Raveningham Hall) ..	N. H. Bacon, Esq. ....	8	1	3	60	637	25·07	159	110
d Spooner Row (Wattlefield Hall) ..	E. F. Routh Clarke, Esq. ....	5	1	4	165	774	30·46	197	161
d Wymondham (Morley School) ..	T. E. Ormond, Esq. ....	8	1	8	100	739	29·10	204	151
d Wymondham .....	J. B. Pomeroy, Esq. ....	8	1	3	118	852	33·53	201	158
d Hingham Rectory .....	Rev. Canon A. C. W. Upcher ....	5	0	11	195	738	29·04	186	145
d Keswick Old Hall .....	E. Knight, Esq. ....	5	1	0	90	861	33·89	195	156
d Gorleston Coastguard Station ..	Air Ministry .....	8	1	0	16	699	27·54	187	140
d Yarmouth (Northgate Street) ..	A. W. Preston, Esq. ....	5	1	0	7	736	28·97	205	140
d Norwich(ChristChurchRdEaton)	A. W. Preston, Esq. ....	5	1	0	98	825	32·49	202	152
d Norwich(CarrowAbbeyGardens)	Miss Colman .....	5	1	3	35	812	31·96	186	148
d Brundall (Blofeld Road) .....	A. W. Preston, Esq. ....	5	1	0	55	803	31·63	203	151
d Norwich (Ipswich Road) .....	J. H. Willis, Esq. ....	5	1	0	110	793	31·23	203	148
d Norwich (Heigham Cemetery) ..	A. W. Preston, Esq. ....	5	3	2	37	817	32·17	207	150
d ThorpeSt. Andrew(Thorpehurst)	Capt. J. H. Mander, O.B.E. ....	5	1	6	45	830	32·68	210	148
d Norwich (Marlingford Hall) ...	Major E. H. Evans-Lombe ....	5	1	6	75	813	31·99	181	161
d Drayton Hall .....	J. H. Walter, Esq. ....	5	0	8	..	793	31·21	..	..
d Swanton Morley Rectory .....	Rev. G. D. Barry .....	5	1	0	105	708	27·89	..	..
d Bylaugh Park Gardens .....	Mr. G. Beeton .....	5	1	0	130	816	32·13	194	155
d Swanington (Heath House) ..	P. Norgate, Esq. ....	5	1	3	101	744	29·29	202	148
d East Bilney Hall .....	A. W. Preston, Esq. ....	5	4	0	140	820	32·27	189	141
d Reepham (Old Brewery House) ..	A. W. Preston, Esq. ....	5	1	5	150	912	35·90	230	175
d Cawston Rectory .....	Rev. T. H. Marsh .....	5	1	0	120	864	34·01	185	157
2.—YARE—Bure & c. 368 sq. mi.									
d Acle .....	A. W. Preston, Esq. ....	5	0	6	51	729	28·70	215	132
d Sprowston (Oak Lodge) .....	A. W. Preston, Esq. ....	5	1	0	100	777	30·57	213	151
d Sprowston (Council School) ..	G. S. Martin, Esq. ....	5	1	0	110	855	33·68	..	..
d Yarmouth(OrmesbySt.Michael)	Gt. Yarmouth W. W. Co. ....	8	1	0	22	774	30·49	252	146
d Hemsby (Schoolhouse) .....	R. C. Jones, Esq. ....	5	5	0	25	644	25·37	..	..
d Wroxham House .....	D. Chisholm, Esq. ....	5	1	6	..	832	32·74	171	147
d Coltishall .....	F. A. Bainbridge, Esq. ....	5	0	11	12	783	30·83	197	140
d Wroxham (Hoveton Hall) .....	G. F. Buxton, Esq., C.B. ....	5	3	6	25	779	30·68	204	151
d Aylsham (Rippon Hall) .....	Major H. S. Marsham .....	5	0	7	90	828	32·61	176	153
d Worstead (Frankfort Manor) ..	J. R. W. Pigott, Esq. ....	5	5	4	50	761	29·96	180	143
d Worstead (Dilham) .....	A. W. Preston, Esq. ....	5	0	8	..	725	28·54	211	147
d Worstead (Lyngate Cottage) ..	The late R. T. Cross, Esq. ....	8	1	0	55	706	27·79	171	135
d Aylsham (Woodgate House) ..	Lt.-Col. J. W. Purdy .....	5	1	0	100	770	30·30	194	147
d Hindolveston (Church Farm) ..	R. G. Lee, Esq. ....	5	1	0	..	844	33·22	180	152
d NorthWalsham(EmpsonHouse)	W. S. Horn, Esq. ....	5	1	0	102	709	27·93	186	139
d North Walsham (Gunton Park) ..	A. W. Preston, Esq. ....	8	1	6	..	737	29·02	170	150
d Mundesley (Raxawa House) ..	C. S. Morris, Esq. ....	5	3	0	..	691	27·22	..	..
d Bacoesthorpe Rectory .....	Rev. H. Milnes Walker .....	5	1	6	280	707	27·82	166	143
d Cromer (Northrepps Hall) ..	A. W. Preston, Esq. ....	5	1	2	225	760	29·93	192	149

## DIVISION IV.—EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
NORFOLK—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—STIFFKEYS & C. 288 sq. mi.									
d Little Massingham	Rev. P. H. L. Brereton	5	1	2	278	804	31·65	207	149
d Sandringham House Gardens	Mr. T. H. Cook	5	0	9	121	781	30·76	222	153
d Walsingham	Rev. Canon J. Blake-Humfrey	5	0	6	54	828	32·59	194	146
d Holt (Gresham's School)	J. M. Hailey, Esq.	5	0	10	215	776	30·54	..	..
d Cromer (The Warren)	F. H. Barclay, Esq.	8	1	8	101	701	27·61	176	139
d Langham Episcopi	Rev. John H. Toy	5	0	6	139	725	28·55	212	150
d Sheringham Hall	Miss E. Upcher	5	0	10	120	699	27·53	185	..
d Blakeney	Mr. R. Lee	5	1	3	29	792	31·17	185	154
d Wells (Holkham Hall)	Earl of Leicester, G.C.V.O.	8	3	6	39	697	27·45	157	129
d Hunstanton	Capt. C. E. Gray	5	1	0	30	631	24·83	223	151
4.—OUSE & C. 700 sq. mi.									
d E Harling (Garboldisham Mnr)	Mjr E. Wriothlesley Denny, D.S.O.	8	1	3	70	681	26·80	189	138
d Thetford (Ford Street Gdns.)	Mr. A. Pipe	5	1	0	44	683	26·88	178	131
d Thetford (Kilverstone Hall)	Baron Fisher of Kilverstone	8	4	0	70	646	25·43	203	136
d Thetford (Waterworks)	E. S. Greenwood, Esq.	8	1	0	165	660	25·97	203	146
d Attleborough (Quidenham Hall)	Mr. J. Dewhurst	5	1	0	100	725	28·55	..	123
d Old Buckenham Hall	(R) Mr. P. Leonard	..	..	..	..	714	28·12	188	137
d Hargham Hall	Sir H. R. Beevor, Bart., M.D.	8	0	6	120	774	30·48	177	145
d Watton (Merton Hall Gardens)	Mr. G. Barrell	5	1	0	156	750	29·52	197	144
d Watton	A. A. Gompertz, Esq.	5	1	0	166	783	30·82	184	145
d Downham (Dial House)	Messrs. T. H. Wenn & Co.	5	1	6	..	622	24·48	177	129
d Downham (High Street)	S. M. Jackson, Esq.	5	1	6	16	607	23·89	..	..
d Wallington Hall	J. L. Luddington, Esq.	5	0	6	58	669	26·36	174	136
d Swaffham	W. H. Plowright, Esq.	5	5	0	250	684	26·92	172	127
d Swaffham (The Villa)	H. Lee Warner, Esq.	5	0	9	246	751	29·56	187	136
d Swaffham (Homewood)	Messrs. Vynne & Everett, Ltd.	5	2	7	210	856	33·71	166	139
d Sporle	T. S. Matthews, Esq.	5	4	0	230	751	29·55	202	147
d Great Dunham (The Rectory)	Rev. E. C. S. Upcher	5	1	0	250	777	30·58	186	155
d Wiggenshall (St. Germans Sluice)	Major R. G. Clark	8	1	6	..	663	26·12	168	147
d East Winch (Holland House)	J. C. Cottam, Esq.	5	1	3	55	687	27·05	176	..
d King's Lynn (Manure Works)	J. Brown, Esq.	5	3	10	10	647	25·48	173	136
d King's Lynn (High Street)	S. S. Burlingham, Esq.	5	43	0	63	619	24·36	194	124
d Tittleshall	Capt. H. J. Buxton	5	1	6	285	797	31·38	198	153
5.—NENE. 30 sq. mi.									
d Emneth	F. M. Bland, Esq.	5	1	0	6	609	23·99	179	139

## DIVISION V.—SOUTH-WESTERN COUNTIES.

WILTSHIRE. (Area, 1375 sq. mi.)

**1.—LOWER AVON. 386 sq. mi.**

d Erlestoke Vicarage	Rev. H. S. Travers	5	0	6	320	831	32·72	156	134
d Market Lavington (Old House)	Miss A. Pleydell Bouverie	5	0	9	290	783	30·83	173	138
d Trowbridge (Rood Ashton)	Mr. W. Strugnell	8	1	6	250	911	35·85	182	141
d Bradford (Woodleigh)	A. Scratton, Esq.	5	2	4	226	841	33·13	182	137
d Bradford (Winsley Manor)	E. W. Knatchbull, Esq.	5	0	6	400	772	30·40	181	138
d Bradford (Manvers House)	Dr. C. E. S. Flemming	5	1	6	130	808	31·81	172	132
d Seend (Cleeve House)	(R) W. Heward Bell, Esq.	..	1	0	160	732	28·83	187	147
d Seend (Manor Cottage)	Rev. E. Seymour Awdry	5	1	0	305	661	26·03	196	139
d Seend (Ferrum Towers)	H. W. Langley Haigh, Esq.	8	1	3	250	799	31·45	188	143
d Holt (The Retreat)	A. V. H. Beaven, Esq.	5	2	6	145	783	30·81	165	137
d Devizes (Wilts Co. Asylum)	Dr. S. J. Cole	8	2	3	385	617	24·29	..	..
d Devizes (Highclere)	H. W. Green, Esq.	5	1	6	480	772	30·39	182	144
d Devizes (Southbroom Vicarage)	Rev. H. C. B. Lethbridge	5	1	0	425	764	30·07	173	137
d Calne (High Street)	E. W. Brown, Esq.	4	1	0	242	853	33·60	172	138

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
WILTSHIRE—(con.).		in	ft.	in.	ft.	mm.	in.		
1.—LOWER AVON—(con.).									
d Chippenham (Rowden Hill) ...	Miss A. M. Collen .....	5	1	4	223	819	32·26	167	146
Chippenham (Kington Langley) ..	Charles Garnett, Esq. ....	8	1	0	270	822	32·35	..	..
d Wroughton (Basset Down Ho.) ..	Mrs. Story Maskelyne ....	5	1	0	500	875	34·46	178	140
w Luckington Court .....	Major A. Johnson-Ferguson ..	5	0	9	365	844	33·24	..	..
d Malmesbury (Cowbridge Ho.) ..	C. E. de Bertodano, Esq. . .	5	1	0	236	841	33·10	190	145
d Malmesbury (Manor House) ...	H. L. Storey, Esq. ....	8	2	10	290	754	29·68	186	138
d Malmesbury (Easton Grey) ....	Mr. W. Balcombe .....	5	3	9	350	847	33·34	170	134
2.—STQUR. 33 sq. mi.									
d Mere (Charnage) .....	A. R. White, Esq. ....	5	1	0	426	839	33·05	193	154
Mere (Salisbury Street) .....	F. D. Raymond, Esq. ....	5	1	0	400	925	36·42	..	..
d Stourhead .....	Sir H. H. A. Hoare, Bart. . .	5	1	0	583	999	39·34	..	133
d Kilmington Rectory .....	Rev. H. A. Boys .....	5	1	6	710	971	38·22	202	149
3.—EAST AVON. 554 sq. mi.									
d Tisbury (The Academy) .....	J. Bristol, Esq. ....	5	0	9	380	1108	43·61	172	140
d Fonthill House Gardens .....	Hugh Morrison, Esq., M.P. .	5	1	0	350	966	38·04	172	150
d Salisbury (Sewage Works) .....	W. J. Goodwin, Esq. C.E. . .	5	2	2	153	841	33·09	170	135
d Salisbury (Fowlers Hill) .....	Mrs. T. Awdry .....	5	1	0	225	779	30·66	177	138
d Salisbury (Brown Street) .....	Mrs. T. H. Baker .....	5	1	0	155	889	34·99	229	147
d Salisbury (Atherton House) ..	Wilfrid Fletcher, Esq. ....	5	0	11	250	827	32·55	198	142
d Stratford-sub-Castle (Manor Ho.)	Miss F. Carpenter .....	5	0	9	165	760	29·93	180	130
d Woodford (Nunthorpe) .....	Mrs. Chetwynd-Stapylton. .	5	1	0	260	787	30·97	184	128
d Porton .....	Air Ministry .....	5	1	0	340	780	30·71	169	130
d Wylve Rectory .....	Rev. E. Montagu Parken. . .	5	1	8	246	784	30·88	161	127
d Codford (Stockton House Gdns.)	Mr. N. Williams .....	5	1	0	260	879	34·60	165	137
d Maiden Bradley .....	The Duke of Somerset . . .	5	1	6	626	1007	39·66	165	140
d Sutton Veny (Greenhill) .....	Basil R. Hoare, Esq. ....	5	1	0	390	869	34·21	144	121
d Sutton Veny (The Cottage) .....	P. Benton, Esq. ....	5	1	0	370	912	35·91	181	131
d Heytesbury .....	Dr. Hammond T. Hinton. . .	5	1	7	300	855	33·65	181	135
d Salisbury Plain (Chitterne Ho.)	Admiral Charles Napier. . .	12	1	0	312	814	32·03	163	144
d Salisbury Plain (Shrewton) ..	F. J. Wardale, Esq. ....	5	0	9	322	780	30·71	199	138
d Chirton Old Manor Farm .....	Mr. T. Selfe .....	5	3	0	374	800	31·50	183	137
d Bishops Cannings .....	Mrs. H. H. Mogg .....	5	1	0	446	831	32·73	165	137
4.—TEST. 77 sq. mi.									
Landford (Northlands) .....	Cedric R. Boulton, Esq. ....	5	1	10	167	771	30·37	143	..
d Ludgershall (Conholt Park) . (R)	E. A. Wigan, Esq. ....	8	1	0	800	914	35·97	146	132
5.—THAMES—Kennet. 169 sq. mi.									
d Marlborough College .....	F. R. Luff, Esq. ....	5	1	0	424	907	35·69	210	139
d Marlborough (Mildenhall) .....	Rev. Gordon Soames .....	5	1	0	456	812	31·98	159	138
d Aldbourne (Upham House) .....	Mrs. Currie .....	5	1	6	875	830	32·67	..	131
6.—THAMES—Cole & c. 156 sq. mi.									
d Wroughton (Burderop Park) ..	A. Ashford, Esq. ....	5	0	9	570	774	30·46	170	137
d New Swindon .....	H. J. Southwell, Esq. ....	8	0	11	378	741	29·16	174	137
DORSETSHIRE. (Area, 988 sq. mi.)									
1.—PARRETT. 61 sq. mi.									
d Evershot (Melbury House) .....	Mr. R. Rintoul .....	5	1	6	500	1012	39·85	145	123
d Chedington Court .....	Sir Henry Peto, Bart. ....	9	1	0	605	1048	41·25	168	130
d Leigh Vicarage .....	Rev. T. L. Jenkins .....	5	0	10	250	1002	39·44	183	138
d Sherborne Castle .....	Mr. T. Turton .....	5	1	0	195	851	33·50	191	139
Sherborne (Castleton) .....	Reading T. Grantham, Esq. .	5	1	6	200	815	32·09	..	..
Nether Compton Rectory .....	Rev. Canon E. W. Goodden .	5	0	8	160	772	30·39	156	129
2.—AXE. 25 sq. mi.									
d Broadwindsor (Blackdown Ho.)	C. E. M. Pinney, Esq. ....	5	0	9	515	1137	44·75	173	145
Forde Abbey .....	Freeman Roper, Esq. ....	5	0	11	226	1052	41·42	181	144

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
DORSETSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—FROME & C. 502 sq. mi.									
Portland Bill (New Lighthouse)	Air Ministry	8	1	0	19	616	24·24	156	105
Portland (H. M. Naval Depôt)	W. Young, Esq., C.E.	8	1	6	25	827	32·55	166	119
Weymouth (Westham)	G. Nicolson, Esq.	5	1	0	20	790	31·11	178	120
Weymouth (Springfield)	Major J. H. C. Devenish	5	1	3	90	794	31·27	179	124
Chickerell (Montevideo)	Mrs. N. M. Richardson, O.B.E.	5	1	0	100	802	31·58	187	126
Tyneham House	Mrs. W. H. Bond	8	1	6	255	893	35·15	164	128
Corfe Castle (Kingston Vicarage)	Rev. R. A. Bond	5	1	3	452	919	36·17	177	136
Corfe Castle (Bucknowle Ho.)	C. Waterston, Esq.	5	1	6	170	865	34·07	157	114
Creech Grange	J. W. G. Bond, Esq.	5	1	0	241	1026	40·40	164	131
Abbotsbury (New Barn)	J. C. P. White, Esq.	5	1	6	111	827	32·55	174	126
Upwey (Friar Waddon)	T. H. Tyson, Esq., C.E.	5	1	0	215	998	39·28	175	138
Upwey (Higher Well)	T. H. Tyson, Esq., C.E.	8	1	0	290	915	36·04	172	139
Wareham (East Holme)	G. D. Bond, Esq.	5	1	0	23	946	37·24	155	125
Wareham (South Street)	S. W. Bennett, Esq.	5	2	6	18	922	36·29	142	128
Wareham (Binnegar Hall)	Mr. J. W. Hayward	5	1	0	65	944	37·17	171	118
Wareham (Trigon)	Mrs. L. Sturdy	8	1	4	60	895	35·24	160	122
Dorchester (Kingscote)	E. A. Ffooks, Esq.	5	1	0	226	1068	42·04	173	140
Dorchester Water Works	H. D. Strange, Esq.	8	1	0	315	1037	40·81	189	132
Dorchester (Wollaston House)	Capt. J. E. Acland	5	1	0	200	1054	41·50	190	132
Dorchester (Stinsford)	J. Wrudham Hull, Esq.	5	1	0	207	1091	42·97	174	131
Holton Heath	Air Ministry	8	1	0	64	870	34·25	166	120
Parkstone (Firgrove)	E. N. M. Wadman, Esq.	5	1	0	180	837	32·94	180	129
Parkstone (Combe)	Rev. J. C. Fox	5	0	10	103	922	36·31	152	128
Parkstone (Bournemouth Road)	W. H. Symes, Esq.	5	1	3	160	922	36·31	172	135
Branksome (Bourne Valley)	P. G. G. Moon, Esq.	8	1	3	84	850	33·47	140	122
Branksome (Alderney Res.)	P. G. G. Moon, Esq.	8	1	3	213	730	28·74	169	133
Broadstone House	Mrs. Schuster	5	0	6	140	826	32·53	..	..
Lyme Regis (Horn Bridge)	E. T. Stoward, Esq.	5	1	0	100	942	37·07	182	..
Lyme Regis (Boat Close)	Henry Ellis, Esq.	5	1	6	495	936	36·86	180	129
Lyme Regis (Rotherfield)	Rev. E. J. Synge	5	0	8	145	967	38·08	202	140
Lyme Regis (Overton)	C. Wanklyn, Esq.	5	3	0	425	865	34·06	201	125
Lyme Regis (Evington)	J. E. Hewitt, Esq.	5	0	9	300	949	37·38	174	134
Lyme Regis (Highcliff)	Miss G. Lister	5	1	3	330	829	32·65	172	127
Charmouth (Hammond's Mead)	A. Barrow, Esq.	5	1	3	50	870	34·25	..	..
Bridport (Coneygar)	H. Gordon, Esq., C.E.	5	1	0	110	960	37·81	181	139
Bradford Peverell	Mrs. Middleton	6	1	2	381	1095	43·10	145	126
Moreton (Oaker's Wood)	Miss Fetherstonhaugh	5	1	0	160	872	34·33	148	123
Tolpuddle	Rev. Harold R. Long	5	0	6	100	935	36·81	179	135
Puddletown Vicarage	Rev. A. R. Helps	5	2	8	195	1079	42·50	169	148
Bere Regis (Manor House)	Mr. W. Bedford	8	1	0	115	847	33·36	164	131
Bere Regis (Barrow Hill)	Mr. A. E. Lucas	5	1	0	120	868	34·18	162	124
Bere Regis (Bloxworth House)	F. G. A. Lane, Esq.	5	1	6	118	942	37·09	168	141
Wynford House	Col. Lord Wynford, D.S.O.	5	1	0	410	1228	48·33	187	149
Cattistock Lodge	late H. H. Palaiet, Esq.	5	1	0	350	1231	48·45	212	157
Beaminster (Hamilton Lodge)	Fiennes Trotman, Esq.	5	1	0	210	1087	42·80	197	145
4.—STOUR. 388 sq. mi.									
Kinson (Eglinton)	W. C. Keevil, Esq.	5	0	6	45	915	36·02	170	129
Wimborne (Corfe Mullen W. W.)	G. V. Sparrow, Esq., C.E.	5	1	0	81	926	36·44	162	133
Wimborne (Corfe Mullen, For. H.)	E. Philip Belben, Esq.	8	2	0	300	846	33·32	181	134
Winterbourne Whitchurch Vic.	Rev. H. H. Tilney Bassett	8	0	6	241	1005	39·55	165	138
Sturminster Marshall (Baillie Ho.)	Rev. J. Cross	5	1	0	85	897	35·32	165	132
Wimborne (Codford House)	G. H. Batterbury, Esq., M.D.	5	0	9	69	943	37·14	209	136
Blandford (Bryanston Gardens)	Mr. J. Jaques	5	1	0	155	1083	42·63	184	156
Turnworth	Lt.-Col. W. Parry Okeden	5	1	0	473	1038	40·86	181	135
Horton Vicarage	Rev. R. de Bary	5	1	0	133	692	27·23	..	..
Holwell (Westrow House)	W. Warry, Esq.	5	1	0	252	835	32·86	175	136
Wimborne St. Giles (St. Giles Ho.)	The Earl of Shaftesbury, K.P.	5	1	6	165	917	36·09	174	134
Gussage St. Michael Manor	Miss Ellen Good	5	1	4	201	912	35·92	173	137
Iwerne Courtney Rectory	Rev. R. H. Gundry	5	1	2	200	939	36·96	169	134
Iwerne Minster House Gardens	J. H. Ismay, Esq.	5	1	0	244	934	36·77	187	135
Fontmell Magna (Glebe Cottage)	Dr. J. Appleyard	8	1	8	300	813	31·99	158	129

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level	1922			
DORSETSHIRE—(con.)		in.	ft. in.	ft.	mm.	in.		
4.—STOUR—(con.).								
Handley (W. Woodyates Man.)	F. B. Eastwood, Esq.	5	1 0	368	874	34·42	..	..
d Shaftesbury (Old Parsonage)	G. P. Barter, Esq.	5	1 0	722	760	29·93?	191	139
d Bourton	Rev. H. A. Boys	5	1 4	353	881	34·69	198	157
5 —EAST AVON. 12 sq. mi.								
SOUTH DEVONSHIRE. (Area, 1707 sq. mi.)								
1.—PARRETT. 7 sq. mi.								
2.—TAMAR & C. 395 sq. mi.								
d Plymouth (Boveysand Lodge)	Rev. J. F. Case	5	1 6	75	943	37·11	174	146
d Plymouth (Cattewater)	Air Ministry	8	1 0	82	981	38·61	195	149
d Plymouth (The Hoe)	H. Victor Prigg, Esq., C.E.	8	1 0	117	934	36·77	193	154
d Plymouth (Drake's Reservoir)	F. Howarth, Esq., C.E.	5	1 0	149	1076	42·35	195	149
d Plymouth (Freedom Park)	H. Victor Prigg, Esq., C.E.	8	1 0	208	1151	45·31	189	162
d Devonport (Rowdens Res.)	F. Howarth, Esq., C.E.	5	1 0	201	982	38·67	197	145
d Plymouth (Hartley Reservoir)	F. Howarth, Esq., C.E.	5	1 0	321	1177	46·35	196	158
d Bickley (Roborough Reservoir)	F. Howarth, Esq., C.E.	5	1 0	548	1353	53·26	217	167
d Lee Moor Clay Works	R. Martin, Esq.	8	1 0	900	2015	79·33	208	187
d Bere Alston (Rumleigh)	Sir A. W. Croft, K.C.I.E.	5	1 6	125	1262	49·67	220	166
m Sheepstor	F. Howarth, Esq., C.E.	5	1 0	1024	1676	66·00	..	..
d Sheepstor (Red Stone)	F. Howarth, Esq., C.E.	5	1 0	763	1678	66·06	217	179
d Sheepstor (Burrator)	F. Howarth, Esq., C.E.	5	1 0	755	1823	71·79	217	185
d Sheepstor (Head Weir)	F. Howarth, Esq., C.E.	5	1 0	720	1750	68·88	217	182
d Dousland Reservoir	F. Howarth, Esq., C.E.	5	1 0	721	1429	56·24	220	172
d Dartmoor (Deancombe Farm)	F. Howarth, Esq., C.E.	5	1 0	830	1765	69·47	217	187
d Dartmoor (Lowery)	F. Howarth, Esq., C.E.	5	1 0	899	1741	68·55	213	181
d Dartmoor (Leather Tor Farm)	F. Howarth, Esq., C.E.	5	1 0	910	1701	66·95	224	185
m Dartmoor (Siwards Cross)	F. Howarth, Esq., C.E.	5	1 0	1200	1694	66·70	..	..
m Dartmoor (Cramber Tor)	F. Howarth, Esq., C.E.	5	1 0	1435	1599	62·95	..	..
d Whitchurch (Grenofen)	Henry Chichester, Esq.	5	0 11	325	1354	53·30	213	167
d Whitchurch (Ashleigh)	Col. G. H. Bittleston	5	0 9	500	1431	56·36	223	172
d Whitchurch (Langstone)	Col. H. F. Coleridge, C.B.E.	5	1 0	700	1479	58·22	206	171
d Whitchurch (Ashbrook)	Rev. H. B. Grylls	5	1 0	400	1356	53·37	212	176
d Tavistock	W. J. Monk, Esq.	5	1 0	457	1399	55·06	217	173
d Tavistock (The Library)	J. Spurway, Esq.	8	20 0	282	1258	49·51	202	169
m Dartmoor (Leeden Tor)	F. Howarth, Esq., C.E.	5	1 0	1270	1447	56·99	..	..
m Dartmoor (N. Hessary Tor) No. 1F	F. Howarth, Esq., C.E.	5	1 0	1625	1581	62·24	..	..
m Dartmoor (N. Hessary Tor) No. 2F	F. Howarth, Esq., C.E.	5	1 0	1502	1515	59·63	..	..
d Lifton (Kelly House)	Rev. Maitland Kelly	8	2 6	462	1169	46·01	199	168
d Coryton Manor (Lewdown)	R. L. Newman, Esq.	5	1 2	450	1227	48·30	..	168
d Launceston (Polapit Tamar)	R. C. Coode, Esq.	5	1 0	315	1085	42·70	204	159
3.—ERM & C. 217 sq. mi.								
d Salcombe (Blackstone Lodge)	W. J. Shaw, Esq.	5	1 3	280	1053	41·45	182	148
d South Huish	W. F. Balkwill, Esq.	5	5 6	68	1163	45·79	..	..
d Kingsbridge (Bank House)	W. H. Skinner, Esq.	5	5 0	60	1165	45·88	174	141
d Kingsbridge (Bank House)	W. H. Skinner, Esq.	5	40 0	100	1019	40·11	158	128
d East Allington (Fallapit Gdns.)	Lord Ashcombe	5	1 0	327	1437	56·57	166	162
d Ermington (Strode)	Capt. H. Gore Hawker	5	1 0	75	1264	49·77	194	157
d Ivybridge (Filham House)	H. Alger, Esq.	5	1 0	162	1322	52·03	205	162
d Wrangaton (Blackadcn Aslm.)	H. Victor Prigg, Esq., C.E.	5	1 0	608	1628	64·10	226	174
d South Brent (Glazebrook)	Vere Cholmondeley, Esq.	5	1 0	500	1804	71·03	..	160
d South Brent (The Schools)	"Western Guardian"	..	..	..	1814	71·43	..	..
d South Brent (Great Aish)	Miss Kingwell	5	1 0	500	1853	72·94	215	172
d South Brent (Badworthy)	T. W. Latham, Esq.	5	1 6	550	1993	78·47	..	..
4.—DART. 197 sq. mi.								
d Churston Ferrers (Greenway)	Mrs. C. Williams	5	0 10	..	1263	49·73	166	144
d Brixham (Combe Bank)	H. Clayton, Esq.	5	6 6	115	1133	44·59	182	136
d Ashprington (Myrtle Cottage)	G. H. Beecheno, Esq.	5	1 0	250	1199	47·20	172	149
d Waddeton Court	Sir A. L. Goodson, Bart.	5	1 0	175	1398	55·03	218	171
d Paignton Vicarage	Rev. H. M. Drake	5	1 0	42	1095	43·13	179	145
d Paignton (Queen's Park)	C. Bellinger, Esq.	8	1 0	11	978	38·51	177	136

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
SOUTH DEVONSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
4.—DART—(con.).									
d Paignton (Torquay Road) . . . . .	H. Le B. Gunner, Esq. . . . .	5	1	0	10	1007	39·66	..	..
d Paignton (Claylands) . . . . .	G. M. Rosling, Esq. . . . .	8	1	2	150	1075	42·33	184	132
d Totnes (Berry Pomeroy) . . . . .	C. Barran, Esq. . . . .	5	1	0	185	1213	47·74	175	148
d Totnes (Staverton) . . . . .	J. A. Devenish, Esq. . . . .	5	0	11	50	1213	47·74	173	146
d Totnes (Broadhempston) . . . . .	Charles Mole, Esq. . . . .	5	1	0	135	1055	41·52	181	141
d Ipplepen Vicarage . . . . .	Rev. R. D. Cooke . . . . .	5	1	0	275	1125	44·31	175	145
d Holne (Church Park Cottage) . . . . .	L. W. Frost, Esq. . . . .	5	1	6	620	1877	73·89	201	167
d Ashburton (Orchard Mount) . . . . .	J. F. Scarlett, Esq. . . . .	5	1	0	300	1442	56·77	196	157
d Ashburton (Druid House) . . . . .	J. S. Amery, Esq. . . . .	5	1	0	584	1505	59·28	208	162
d Princetown (Huccaby House) . . . . .	Major H. H. Joll, D.S.O. . . . .	5	1	0	900	1544	60·79	190	170
d Two Bridges (Moor Lodge) . . . . .	T. C. Bridges, Esq. . . . .	5	0	9	1190	2202	86·71	218	191
w Dartmoor (Cowsic Valley) . . . . .	F. Howarth, Esq., C.E. . . . .	8	1	6	1352	1944	76·55	..	..
m Dartmoor (Black Dughill) No. 5F. . . . .	Howarth, Esq., C.E. . . . .	8	1	0	1590	1321	52·00	..	..
m Dartmoor (Beardown Tor) No. 3 . . . . .	F. Howarth, Esq., C.E. . . . .	8	1	0	1550	1331	52·40	..	..
m Dartmoor (White Tor) No. 1 . . . . .	F. Howarth, Esq., C.E. . . . .	8	1	0	1640	1317	51·85	..	..
m Dartmoor (Devil's Tor) No. 2 . . . . .	F. Howarth, Esq., C.E. . . . .	8	1	0	1785	1284	50·55	..	..
m Dartmoor (Cowsic Head) No. 4 . . . . .	F. Howarth, Esq., C.E. . . . .	8	1	0	1580	1623	63·90	..	..
5.—TEIGN. 209 sq. mi.									
Torquay (Cary Green) . . . . .	G. E. Body, Esq. . . . .	5	1	0	12	939	36·96	179	132
Torquay (Merton Lodge) . . . . .	Miss Brown . . . . .	5	1	0	250	881	34·70	176	136
d Torquay (Abbey Road) . . . . .	Henry Brown, Esq. . . . .	5	1	0	125	987	38·85	180	145
d Torquay (Lower Warberry) . . . . .	G. P. Hope, Esq. . . . .	5	1	1	220	988	38·88	217	149
n Newton Abbot (The Chestnuts) . . . . .	E. D. Wylie, Esq. . . . .	5	0	5	100	1031	40·57	197	152
d Newton Abbot (Seale Hayne Coll.) . . . . .	C. T. Mackintosh, Esq. . . . .	5	0	9	350	993	39·11	165	131
d Teignmouth (Den Gardens) . . . . .	G. Rossiter, Esq. . . . .	8	1	6	20	865	34·08	178	133
Teignmouth (Hazledown Res.) . . . . .	G. Rossiter, Esq. . . . .	8	2	0	425	924	36·39	174	141
Teignmouth (Shaldon Res.) . . . . .	G. Rossiter, Esq. . . . .	5	1	0	218	995	39·19	165	130
Teignmouth (Landscore Res.) . . . . .	G. Rossiter, Esq. . . . .	8	1	0	133	931	36·64	173	141
d Teignmouth (The Shrubbery) . . . . .	E. A. Norton, Esq. . . . .	8	1	0	275	932	36·70	184	136
d Teignmouth (The Hill) . . . . .	E. W. Jenks, Esq. . . . .	5	1	2	335	855	33·66	166	127
d Ilsington School House . . . . .	W. J. J. H. Burnett, Esq. . . . .	5	1	0	650	1348	53·06	195	155
d Ilsington (Blueburn) . . . . .	Miss K. A. Cary . . . . .	5	1	0	980	1360	53·55	218	153
d Dawlish (Sefton) . . . . .	T. H. Mead-Briggs, Esq. . . . .	5	0	5	53	905	35·61	179	141
Dawlish (The Lawn) . . . . .	S. F. C. Churchward, Esq. . . . .	5	1	0	18	913	35·96	175	132
d Chudleigh Knighton Vicarage . . . . .	Rev. A. H. Skipper . . . . .	5	1	0	110	1015	39·96	189	147
Dawlish (Burrows Reservoir) . . . . .	S. F. C. Churchward, Esq. . . . .	5	1	0	420	862	33·92	134	118
d Bovey Tracey (Hedgebarton) . . . . .	S. C. Chapman, Esq., C.E. . . . .	5	1	0	1137	1638	64·48	200	171
Ashcombe (Thorns Reservoir) . . . . .	S. F. C. Churchward, Esq. . . . .	5	1	0	550	990	38·97	..	..
d Lustleigh (Rockmead) . . . . .	Rev. W. A. Jones . . . . .	5	1	0	300	1307	51·44	199	158
d Manaton School . . . . .	D. W. Horner, Esq. . . . .	5	4	0	900	1177	46·36	200	152
d Moretonhampstead (Bullaton) . . . . .	S. C. Chapman, Esq., C.E. . . . .	8	1	0	928	1192	46·93	215	161
d Moretonhampstead (Mardon) . . . . .	S. C. Chapman, Esq., C.E. . . . .	8	1	0	835	1060	41·73	215	152
North Bovey (Manor House) . . . . .	Mr. J. G. Laurence . . . . .	5	1	0	700	1342	52·82	200	166
d Christow (Kennick) . . . . .	S. C. Chapman, Esq., C.E. . . . .	8	1	0	836	1167	45·95	221	156
d Christow (Smithacott) . . . . .	S. C. Chapman, Esq., C.E. . . . .	5	1	0	861	1184	46·60	219	164
d Moretonhampstead (Stinhall) . . . . .	S. C. Chapman, Esq., C.E. . . . .	5	1	6	844	1182	46·52	189	161
m Moretonhampstead (Blickngstne) . . . . .	S. C. Chapman, Esq., C.E. . . . .	8	1	0	1158	1045	41·15	..	..
d Christow (Laployd) . . . . .	S. C. Chapman, Esq., C.E. . . . .	5	1	6	1041	1237	48·71	211	156
d Moretonhampstead Rectory . . . . .	Rev. S. D. Dewey . . . . .	5	1	5	601	1084	42·69	198	147
d Chagford (Thornworthy) . . . . .	H. B. Varwell, Esq. . . . .	5	1	0	1150	1754	68·66	..	..
6.—EXE. 445 sq. mi.									
Exmouth (Douglas Avenue) . . . . .	Mrs. S. G. Gillum . . . . .	5	0	10	80	774	30·49	166	123
d Exmouth (Nidderdale) . . . . .	Mrs. Herbert Stewart . . . . .	5	1	0	51	811	31·92	190	123
d Exmouth (Manor Grounds) . . . . .	S. Hutton, Esq., C.E. . . . .	5	1	0	13	807	31·76	178	134
Exmouth (Filters, Salterton Rd.) . . . . .	S. Hutton, Esq., C.E. . . . .	5	8	6	195	876	34·50	186	139
Exmouth (Filters, Capel Lane) . . . . .	S. Hutton, Esq., C.E. . . . .	5	8	0	240	835	32·86	182	137
d Kenton . . . . .	E. J. Pitt, Esq. . . . .	5	1	0	85	924	36·38	169	144
d Topsham (Altamira) . . . . .	Mrs. Wimbush . . . . .	5	0	9	50	784	30·87	..	..
d Exeter (Hatfield, Longdown) . . . . .	C. Holman, Esq. . . . .	5	0	10	450	936	36·84	178	130
d Aylesbeare (Rosamondford) . . . . .	A. T. Loram, Esq. . . . .	5	0	4	220	816	32·11	153	120

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
SOUTH DEVONSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
6.—EXE—(con.).									
d Exeter (Devon & Exeter Inst.)	J. E. Coombes, Esq. ....	5	13	7	155	827	32·56	190	136
d Exeter (Elmfield House) .....	Late W. B. Heberden, Esq. ....	5	1	0	100	797	31·36	168	137
d Exeter (The Close) .....	The Ven. Arch. J. N. Leeke. ....	5	1	2	140	843	33·18	183	137
d Exeter (The Close) .....	Rev. Canon D. McLaren. ....	5	1	0	140	834	32·85	172	134
d Exeter (Hele's School) .....	W. Littler, Esq. ....	8	7	0	160	808	31·82	195	136
d Rockbeare Manor .....	Lt. Col. H. Spencer Follett. ....	5	1	0	185	784	30·87	170	130
d Broad Clyst (Brockhill) .....	Mrs. Bayne. ....	5	1	0	80	750	29·52	182	131
d Whimble (Ousley) .....	A. A. Sanders, Esq. ....	5	1	0	200	809	31·84	..	116
d Crediton (Hookway) .....	A. F. Parbury, Esq. ....	5	1	0	151	881	34·70	187	146
d Crediton (Ship Hotel) .....	R. Stanley Clarke, Esq. ....	8	1	2	150	863	33·99	201	147
d Silverton (Killerton) .....	Mr. J. Wilson. ....	5	1	0	161	800	31·50	..	126
d Crediton (Okefield) .....	Seymour F. Pope, Esq. ....	5	0	9	325	867	34·14	198	143
d Copplestone (Coplestone House)	Miss Pope .....	5	0	11	315	913	35·96	207	156
d Bradninch (Dunmore House) ..	Miss H. R. Hepburn .....	5	1	0	300	903	35·57	173	146
d Cullompton .....	Murray T. Foster, Esq. ....	5	1	0	202	941	37·07	187	151
d Tiverton (St. Aubyn's Park) ..	F. C. Fox-Strangways, Esq. ....	5	1	0	394	1068	42·03	200	151
d Tiverton (St. Peter Street) ..	Miss Gill .....	5	6	0	270	1067	42·00	200	150
d Tiverton (Fore Street) .....	G. Rossiter, Esq. ....	5	1	3	235	1116	43·94	199	161
d Tiverton (Hartnolls) .....	Maj.-Gen. F. A. Bowles, C.B. ....	5	1	4	226	1033	40·66	198	150
d Tiverton (Alstree, Halburton) ..	Miss M. G. Izat. ....	5	1	0	240	1055	41·55	179	157
d Hemyock (Windlehurst) .....	Sir Arthur Tedder, C.B. ....	5	1	0	750	1012	39·85	201	160
d Bampton (Castle Grove) .....	Major B. Moutray Read ..	5	1	0	270	1162	45·76	..	..
7.—AXE & C. 237 sq. mi.									
d Budleigh Salterton (Lindenwd) ..	Lt.-Col. J. H. Hamersley..	5	1	0	120	849	33·42	174	137
d Budleigh Salterton (Squabmoor) ..	S. Hutton, Esq., C.E. ....	5	1	0	267	899	35·38	..	..
d East Budleigh (Bicton Gardens) ..	Mr. E. H. High. ....	5	1	0	90	835	32·86	170	131
d East Budleigh (Bicton Common) ..	S. Hutton, Esq., C.E. ....	5	1	0	300	889	34·98	..	..
d Sidmouth (Sidmount) .....	Miss C. M. Radford. ....	5	1	0	149	824	32·43	181	136
d Sidmouth (Sidmount) .....	Miss C. M. Radford. ....	5	1	0	186	843	33·20	184	133
d Sidmouth (Winslade Cottage) ..	Miss G. Collins. ....	5	1	0	145	901	35·47	..	..
d Sidmouth (Salcombe Regis) .....	J. W. B. Unwin, Esq. ....	5	0	7	340	885	34·85	..	..
d Seaton (The Copse) .....	H. J. Roberts, Esq. ....	5	1	0	220	917	36·11	184	132
d Lyme Regis (Pinhay) .....	Mr. P. K. Kaye. ....	5	1	11	465	933	36·75	181	132
d Lyme Regis (Ware) .....	A. J. Woodroffe, Esq. ....	5	0	10	318	943	37·12	181	133
d Ottery St. Mary (West Hill) .....	B. Stansbury, Esq. ....	5	1	6	340	898	35·34	186	136
d Kilminster (Haddon Corner) .....	A. Hitchcock, Esq. ....	5	1	0	400	1030	40·54	188	141
d Kilminster (Haddon Corner) .....	A. Hitchcock, Esq. ....	5	1	0	400	1034	40·70	..	..
d Kilminster (Summerleaze) .....	A. Hitchcock, Esq. ....	5	1	0	82	964	37·96	..	..
d Axminster (Lea Combe House) ..	Major A. C. F. Luttrell. ....	5	2	6	170	1121	44·12	164	144
d Hawkchurch (Tempest's Ho.) .....	Col. G. L. Eliot. ....	5	1	6	700	1049	41·28	194	142
d Honiton (Beech Grove) .....	Major A. T. Baker. ....	5	0	10	340	935	36·79	159	136
d Axminster (Coaxdon Hall) .....	Dr. Cecil Woodhouse. ....	5	1	0	165	1005	39·55	183	138
d Membury (Yarty House) .....	Major W. H. Wilkin. ....	5	1	0	245	991	39·01	178	135
d Membury (Green Down) .....	James Lee, Esq. ....	5	1	0	500	1087	42·78	181	140
d Stockland (The Library) .....	Mr. A. W. Reed. ....	5	3	0	350	1081	42·58	174	152
NORTH DEVONSHIRE. (Area, 898 sq. mi.)									
1.—NORTH COAST STREAMS. 77 sq. mi.									
d Woolacombe (Hotel Grounds) .....	Miss Chichester .....	5	1	0	60	791	31·14	186	145
d Morthoe (Twitchen House) .....	Col. R. Longstaff, D.S.O. ....	8	1	0	430	975	38·37	198	159
d Ilfracombe (Reservoir) .....	O. M. Prouse, Esq., C.E. ....	5	1	0	395	1150	45·28	208	172
d Ilfracombe (Bickleighscombe) ..	Mrs. Slade King .....	5	1	0	300	1077	42·39	200	157
d Ilfracombe (Langleigh) .....	H. B. Holland, Esq. ....	5	0	6	100	1056	41·59	172	156
d Ilfracombe (Meteorological Stn.) ..	O. M. Prouse, Esq., C.E. ....	5	1	0	74	857	33·76	178	139
d Martinhoe Rectory .....	Rev. R. W. Oldham .....	5	2	3	808	1021	40·19	192	151
d Lynton (Lee Abbey) .....	Mr. J. Delbridge. ....	5	0	6	320	992	39·05	..	..
d Lynmouth (Gwynallt) .....	A. L. Ford, Esq. ....	8	0	8	284	1164	45·81	193	159
2.—TAW. 442 sq. mi.									
d Sticklepath (Pixies Garden) .....	Miss Wells .....	5	1	0	840	1416	55·73	197	164
d Spreyton (Lyndenes) .....	Lt. Col. J. Simpson. ....	5	1	0	655	1008	39·67	..	..
d Chulmleigh (Leigh House) .....	Mr. W. Gillies. ....	5	1	0	350	1015	39·97	200	166

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
NORTH DEVONSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
2.—TAW—(con.).									
d Witheridge	H. J. Mansfield, Esq.	5	1	2	600	1167	45·95	174	161
d South Molton (Langdon House)	A. F. Amy, Esq.	5	1	0	435	1119	44·04	..	..
d East Anstey (Rhyll Manor)	Mrs. Hancock	5	1	6	850	1177	46·33	182	165
d Filleigh (Castle Hill Gardens)	The Countess Fortescue	12	4	0	317	1183	46·56	220	180
d Molland	S. J. Case, Esq.	5	1	9	674	1291	50·82	212	172
d Tawstock Court	(R) Basil E. Peto, Esq.	8	1	9	150	1082	42·61	..	..
d West Buckland (County School)	Rev. E. C. Harries	5	1	2	650	1157	45·55	188	154
d Barnstaple (N. Dev. Athenæum)	Miss E. Young	8	1	0	25	997	39·27	202	159
d Barnstaple (Fort Hill)	Rev. F. Sterry	5	2	3	200	1031	40·60	215	163
d Goodleigh (Willesleigh House)	Lt.-Col. Montague H. Hall	5	1	0	375	1042	41·01	193	..
Braunton (Great Field)	Miss E. Young	..	..	..	95	901	35·48	170	..
d Arlington Court	Miss Chichester	5	1	0	613	1341	52·80	212	182
d Challacombe	O. M. Prouse, Esq., C.E.	5	1	0	815	1489	58·64	194	177
3.—TORRIDGE. 342 sq. mi.									
Okehampton (Uplands)	E. P. Burd, Esq.	5	1	0	700	1414	55·68	212	173
d Dolton (Hilliers)	A. Smythies, Esq.	5	1	3	380	1025	40·37	161	144
d Torrington (Enfield)	G. M. Doe, Esq.	5	1	0	337	1022	40·24	184	152
d Torrington (Stevenstone House)	Lt. Col. B. C. James	5	1	0	395	1035	40·76	..	..
d Parkham (Melbury Moor)	F. Harding, Esq.	5	1	0	633	1296	51·02	188	155
d Parkham (Melbury Reservoir)	F. Harding, Esq.	5	1	0	517	1357	53·43	188	160
d Buckland Brewer	Miss B. G. Rogers	5	0	11	469	1113	43·84	201	161
d Littleham (Orleigh Court)	W. H. Rogers, Esq.	5	1	0	260	1109	43·68	209	163
d Landcross (South Close)	C. R. J. Hibbert, Esq.	5	1	0	100	892	35·13	182	143
d Bideford (Webbery)	Mrs. C. E. Boyd	5	1	10	355	926	36·47	191	151
d Bideford (Slade Park)	J. C. T. Heriz-Smith Esq.	5	1	6	198	936	36·86	180	141
d Westleigh House	Rev. H. G. de C. StevensGuille	5	1	0	188	906	35·67	208	143
d Northam (Fairlea)	Col. F. W. Bennet	5	3	0	190	912	35·89	183	138
d Westward Ho! (Bellevue)	A. H. Boyd, Esq.	8	1	0	200	915	36·01	201	146
d Westward Ho! (Royal Golf Clb)	Major A. Newton-King	5	1	6	10	854	33·62	171	..
d Instow	Col. F. W. Evatt	5	1	0	105	936	36·84	169	145
4.—WEST COAST STREAMS. 32 sq. mi.									
d Hartland Abbey	Mr. G. Sleep	5	1	6	222	910	35·83	159	144
d Clovelly Court	Mr. H. Tuke	5	1	0	360	1131	44·53	190	170
5.—EXE. 5 sq. mi.									
CORNWALL. (Area, 1363 sq. mi.)									
1.—CAMEL & N.W. COAST STREAMS. 458 sq. mi.									
Crowan (Camborne W.W.)	Cornwall Rainfall Assocn.	..	..	..	511	1067	42·01	213	..
d Hayle (Gwythian Road)	Caldwell Harpur, Esq.	5	0	10	98	1033	40·68	203	157
d Camborne (Roskear)	F. Osborne, Esq.	5	2	0	349	1114	43·85	192	154
d Redruth (Trewirgie)	A. P. Jenkin, Esq.	5	1	0	399	1117	43·97	214	165
d Redruth (Green Lane Nurseries)	F. Sanders, Esq.	5	0	6	..	1117	43·96	..	..
d St. Agnes (Church Town)	Dr. W. C. Whitworth	5	5	0	318	791	31·15	213	155
d St. Agnes (Trevaunance)	J. Hitchins, Esq.	5	0	7	100	966	38·03	177	147
d Newquay (Tresillian House)	Lt.-Col. E. Gully-Bennet	5	2	0	290	970	38·18	214	175
d Newquay (Reservoir)	Dr. C. C. Vigurs	5	1	0	214	857	33·72	..	..
d Newquay (Mount Wise) No. 1.	Dr. C. C. Vigurs	5	1	0	190	887	34·91	195	157
d Newquay (Mount Wise) No. 2.	Dr. C. C. Vigurs	5	1	0	190	868	34·18	..	..
d Bodmin (Polgwin)	H. D. Foster, Esq.	5	1	0	400	1200	47·26	192	177
d Bodmin (Castle Hill House)	W. G. Wales, Esq., C.E.	5	1	0	484	1200	47·23	223	174
d Helland (Tredethy)	Mrs. Hext	5	1	6	..	1072	42·19	..	..
d Wadebridge (Bryn)	Rev. G. Thorne Phillips	5	1	6	60	1011	39·80	..	..
d Wadebridge (Trewornan)	Brig.-Gen. L. J. Hext, CMG.	5	1	0	30	975	38·38	203	167
d St. Kew (Skisdon)	Mrs. Braddon	5	1	0	100	1056	41·56	206	157
d St. Minver (Treberthick)	A. T. Roseveare, Esq.	9	1	0	140	867	34·14	..	..
d Camelford (Stannon Clay Wks.)	E. Leamon, Esq.	8	1	5	800	1461	57·54	213	174

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
CORNWALL—(con.).		in.	ft.	in.	ft.	mm.	in.		
1—CAMEL & N.W. COAST STREAMS—(con.)									
D Bude .....	Karl Durston, Esq. ....	5	1	0	50	829	32·64	183	148
D Bude (Bramble Hill) .....	J. E. Barclay Bevan, Esq..	5	0	8	100	909	35·79	205	148
D Morwenstow Vicarage .....	Rev. H. Lynne-Jones ....	5	0	10	331	902	35·50	213	151
D Morwenstow (Tonacombe Man.)	W. W. Martyn, Esq. ....	5	1	0	450	929	36·56	194	148
2.—FOWEY & S.E. COAST STREAMS. 620 sq. mi.									
D Ruan Minor .....	Miss H. F. Shepherd .....	5	1	0	210	950	37·39	190	152
Mullion .....	H. H. Penrose, Esq. ....	5	0	10	178	906	35·66	189	147
D Porthcurno .....	F. Sinclair, Esq. ....	5	1	0	150	981	38·63	222	168
St. Keverne (Lanarth) .....	P. D. Williams, Esq. ....	5	1	10	290	1203	47·35	220	156
Bosahan .....	Cornwall Rainfall Assocn..	..	..	..	240	797	31·36	175	..
Helston (Tenderah) .....	J. Walker Tyacke, Esq....	5	1	2	220	1061	41·77	219	164
Constantine (Pons-a-Verran) ..	Cornwall Rainfall Assocn..	..	..	..	60	1112	43·79	..	..
D Mawnan (Carwinion) .....	R. N. Rogers, Esq. ....	5	0	6	160	1141	44·94	207	161
Penzance (Trewidden) .....	Mr. J. H. Murley .....	5	1	0	..	1176	46·29	..	..
Penzance (Lower Larrigan) ..	E. T. Gregory, Esq. ....	5	1	6	70	1134	44·65	210	197
D Penzance (Morrab Garden) ..	C. H. Benn, Esq. ....	5	1	0	55	1128	44·40	213	176
D Penzance (Hea Moor) .....	F. G. Tupper, Esq. ....	5	2	0	280	1275	50·20	181	172
Penzance (Tregwainton House)	T. Robins Bolitho, Esq. ..	10	1	0	400	1228	48·35	201	..
Marazion .....	T. Field Michell, Esq. ....	5	2	0	30	1150	45·29	190	158
D Falmouth (Pendennis Castle) ..	Air Ministry .....	8	0	9	..	898	35·35	197	149
D Falmouth Observatory .....	J. B. Phillips, Esq. ....	5	1	0	168	1162	45·75	208	158
D Penryn (Ashfield) .....	J. G. Stephens, Esq. ....	5	1	0	95	1079	42·46	208	147
D St. Stythyans (Trevaes) .....	Major E. C. B. Williams ..	5	0	11	480	1339	52·72	213	170
D Gwennap (Trevince) .....	C. H. Beauchamp, Esq. ....	8	1	0	240	1192	46·94	221	175
St. Day (Council School) .....	Cornwall Rainfall Assocn..	..	..	..	390	1228	48·34	202	..
Truro (Killiow) .....	Miss Daubuz .....	5	1	0	250	1048	41·25	206	159
D Truro (Tregolls) .....	Miss C. L. Rashleigh .....	5	1	0	65	1033	40·66	212	155
D Truro W.W. (Lower Tregurrow)	W. J. Lean, Esq. ....	5	1	0	71	1049	41·31	190	164
Grampound (Creed) .....	Cornwall Rainfall Assocn..	..	..	..	130	1003	39·48	203	..
D Fowey .....	C. I. Wellington, Esq. ....	5	1	0	52	906	35·66	188	168
D St. Austell (Charlestown Old Vic.)	C. A. Battiscombe, Esq. ....	5	0	6	200	1130	44·49	186	155
D St. Austell (Trevarna) .....	W. M. Coode, Esq. ....	5	1	0	300	1194	47·02	210	175
D Looe (Morval) .....	Capt. A. H. Tremayne, R.N.	5	1	0	150	1316	51·82	195	170
D Looe (Bray) .....	Mrs. G. Sneyd .....	5	1	0	450	1110	43·71	194	154
D Lostwithiel (Lanwithan) .....	Miss Foster .....	5	1	0	80	1236	48·67	201	170
D Menheniot (Coldrenick) .....	Rev. F. E. Trelawny .....	5	1	0	301	1299	51·14	179	160
D Liskeard (St. Pinnock Rectory) ..	Rev. S. H. Farwell Roe ...	5	0	5	400	1520	59·85	237	189
D Liskeard (Trevillis) .....	Miss D. P. Foster .....	5	1	0	320	1302	51·26	213	170
Liskeard (County School) .....	R. A. G. Travers, Esq. ....	5	1	0	407	1336	52·59	210	169
St. Clear (Tregaric) .....	Lt.-Col. J. D. A. Roberts..	5	1	0	800	1232	48·50	..	..
D Bolventor Vicarage .....	Rev. J. W. Timson .....	5	2	6	845	1736	68·34	207	197
3.—TAMAR & C. 279 sq. mi.									
D Devonport (Empacombe) .....	J. Sandercock, Esq. ....	5	1	0	20	1022	40·22	201	148
D Devonport (Cremyll) .....	S. B. Wilcox, Esq. ....	5	1	4	25	1001	39·41	210	152
Torpoint (Trethill House) .....	Lt.-Col. J. D. A. Roberts..	5	1	6	200	948	37·34	..	..
D Saltash (Pentillie Castle) .....	W. T. Johnson, Esq. ....	5	2	4	150	1147	45·17	192	..
St. Mellion Rectory .....	Rev. Canon F. T. Wintle..	5	1	0	401	1149	45·24	206	155
D Callington (Pencrebar) .....	Miss Horndon .....	5	1	9	450	1221	48·05	208	169
D Albaston .....	N. R. Rosekilly, Esq. ....	5	4	0	600	1087	42·80	189	147
D Launceston (Landue) .....	Miss S. E. Tregoning .....	5	0	11	225	1078	42·43	206	159
D Launceston (Hexworthy) .....	R. B. Rogers, Esq. ....	5	1	0	270	1127	44·39	200	157
D Altarnon Vicarage .....	Rev. A. H. Thorold ....	5	1	0	620	1493	58·80	220	175
D Launceston (Old Tree House) ..	Mrs. Saunders .....	8	1	6	600	1100	43·32	207	170
Egloskerry (Tregear) .....	E. G. B. Lethbridge, Esq..	5	1	0	613	1119	44·04	..	..
D North Tamerton (Davies) .....	Miss M. A. Bray .....	5	4	0	390	997	39·25	195	164
4.—INSULAR—Iles of Scilly. 6½sq. mi.									
D St. Mary's .....	Air Ministry .....	8	1	0	131	829	32·62	221	153
Tresco Abbey .....	Maj. A. A. Dorrien Smith.	8	3	0	40	893	35·14	222	..

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.					
SOMERSETSHIRE. (Area, 1630 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
1.—LOWER AVON. 300 sq. mi.									
d Wanstrow (The Manor Cottage)	P. E. B. Warburton, Esq.	5	1	0	465	978	38·50	155	131
d Shepton Mallet (Pondsmead)	R. A. Hobhouse, Esq.	8	1	0	710	1202	47·32	197	158
d Frome W.W. (Egford)	L. Slaughter, Esq.	8	2	0	270	978	38·50	220	137
d Frome (Orchardcroft)	H. G. Chislett, Esq.	5	1	0	265	818	32·20	168	129
d Frome (Selwood School)	Miss A. K. Coombs	5	1	7	320	905	35·65	220	132
d Mells (Selwood)	Miss E. G. Horner	5	1	0	344	907	35·71	191	139
d Binegar (Gurneyslade)	Rev. G. B. Hicks	5	1	0	588	1166	45·90	193	151
d Stratton-on-Fosse (Downside Ab)	Rev. G. B. Hicks	8	1	0	600	1086	42·76	191	144
d Orchardleigh Park	Major A. C. Duckworth	8	0	11	350	866	34·09	176	144
d Beckington	E. M. Nelson, Esq.	8	1	3	270	836	32·93	167	139
d Chewton Mendip (The Priory)	The Earl Waldegrave	5	1	0	550	1193	46·97	192	149
d Midsomer Norton (Island Ho.)	Dr. G. S. Pollard	5	1	6	300	958	37·70	177	143
d Midsomer Norton (Dymboro)	Dr. A. Bulleid	5	1	0	357	941	37·06	160	134
d Litton (Sherborne Res.)	J. A. McPherson, Esq., C.E.	5	1	0	338	1171	46·12	173	144
d Harptree Hill	J. A. McPherson, Esq., C.E.	8	1	0	784	1130	44·49	..	..
d Hinton Blewitt Manor	Maurice Church, Esq.	5	0	8	500	1089	42·88	196	145
d Temple Cloud	Dr. Theodore Martin	5	1	0	340	941	37·06	173	130
d Clutton (Council School)	W. J. Pullen, Esq.	5	1	6	426	973	38·31	167	129
d Pensford (Sutton Court)	Lord Strachie	8	1	0	280	1016	39·99	182	141
d Monkton Combe (Crossways)	M. J. Lipscomb, Esq.	5	1	0	180	909	35·80	..	123
d Pensford (Hunstrete House)	H. Leyborne Popham, Esq.	5	0	9	400	905	35·63	189	142
d Chew Magna	J. A. McPherson, Esq., C.E.	5	1	4	180	1014	39·93	163	140
d Pensford (Publow School Ho.)	A. Hayes, Esq.	5	1	0	230	974	38·35	179	134
d Bath (Henrietta Park)	Bath Corporation	5	1	0	67	789	31·07	182	129
d Bath (Combe Lodge)	Major T. H. Clark	5	1	0	520	847	33·35	161	136
d Bath (Combe Down)	Dr. T. F. Vaisey	5	0	8	500	908	35·74	171	145
d Bath (Statutory Hospital)	Bath Corporation	5	1	0	520	864	34·01	148	133
d Bath (Claverton Old Rectory)	Rev. V. E. Skrine	5	1	1	200	852	33·54	178	133
d Bath (Lansdown Place)	Sir Percy K. Stothert, K.B.E.	5	1	2	410	852	33·54	184	137
d Bath (Lansdown Croft)	Sidney Robinson, Esq., M.P.	5	1	0	550	828	32·60	..	..
d Bath (Charlcombe)	J. Dent Young, Esq., C.E.	8	2	0	325	872	34·34	181	139
d Batheaston Reservoir	J. Dent Young, Esq., C.E.	6	2	0	248	837	32·95	196	135
d Barrow Gurney Reservoir	J. A. McPherson, Esq., C.E.	5	1	6	300	992	39·06	189	138
d Long Ashton (Research Station)	W. H. Neild, Esq.	12	0	8	162	939	36·97	189	135
d Failand House	Miss Agnes Fry	5	1	0	385	971	38·24	201	135
d Pill (Boys' School)	D. E. Roberts, Esq.	5	5	0	50	781	30·76	..	..
d Portishead (West Hill)	Rev. Arthur Lewis	5	0	10	248	776	30·56	170	127
2.—YEO, AXE & BRUE. 405 sq. mi.									
d Castle Cary (Alford House)	Admiral P. F. Tillard	5	1	0	98	745	29·35	168	143
d Somerton (Butleigh Court)	R. Neville Grenville, Esq.	8	1	2	95	802	31·56	180	135
d Bruton (Pitcombe Vicarage)	Rev. F. P. Synge	5	2	4	295	790	31·11	212	137
d Bruton (Redlynch Park)	W. F. Pepper, Esq.	5	1	0	390	844	33·22	188	139
d Ditcheat Rectory	Rev. H. H. Tripp	5	1	0	200	805	31·70	178	131
d Street (Overleigh House)	J. B. Clark, Esq.	5	0	8	100	703	27·66	173	134
d Street (Hind Hayes)	Joseph Clark, Esq.	5	1	5	78	698	27·49	163	124
d Street (Millfield)	W. S. Clark, Esq.	8	1	0	100	723	28·48	170	133
d Glastonbury (Wyrall)	J. Morland, Esq.	5	0	8	110	657	25·85	165	128
d Glastonbury (St. Michael's)	Ven. Archdeacon W. Farrer	5	1	0	220	732	28·83	171	132
d Edington	Major A. C. F. Luttrell	5	2	0	90	740	29·14	166	132
d Shepton Mallet (Pilton)	Miss Allen	5	1	3	354	883	34·78	190	140
d Shepton Mallet (Charlton)	C. E. Burnell, Esq.	5	1	0	481	967	38·05	184	137
d Shepton Mallet (Field House)	F. H. Berryman, Esq.	5	1	0	500	983	38·69	181	146
d Shepton Mallet (Sewage Farm)	Mr. C. Marshman	5	0	8	310	948	37·33	192	147
d Wells (Somerset & Bath Asym.)	J. E. P. Spera, Esq., M.D.	5	1	2	300	862	33·92	178	130
d Wells (Wookey Hole Paper Mills)	W. S. Hodgkinson & Co., Ltd.	5	2	0	200	884	34·79	..	..
d Burnham (Chalbury)	H. A. Smith Spark, Esq.	5	1	0	20	738	29·06	175	127
d Burnham	W. H. Chowins, Esq., C.E.	8	0	9	24	717	28·23	160	128
d Burnham (Berrow Road)	Rev. C. E. B. Frupp	5	1	0	10	726	28·59	171	125
d Burnham (Brent Knoll)	Miss FitzGerald	5	2	0	26	793	31·22	164	129
d Compton Martin	J. A. McPherson, Esq., C.E.	8	1	0	276	1083	42·62	..	..
d Ubley (Rookery Farm)	J. A. McPherson, Esq., C.E.	8	1	0	525	1183	46·56	..	..
d Blagdon (Nordrach-on-Mendip)	W. R. Thurnam, Esq., M.D.	5	0	5	862	1295	50·98	181	154
d Winscombe (The Down)	J. Grubb, Esq.	5	1	0	295	973	38·29	176	138

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

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		Diam.	Height Ground	above Sea Level.	1922				
SOMERSETSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
2.—YEO, AXE & BRUE—(con.).									
D Banwell (Eversleigh) .....	Dr. Kenneth Anderson ..	5	1	6	50	905	35·62	174	144
Blagdon Hill .....	J. A. McPherson, Esq., C.E.	8	1	0	550	1076	42·35	..	..
Blagdon (Pumping Station) ..	I. A. McPherson, Esq., C.E.	8	1	0	112	964	37·95	181	139
Blagdon (Coombe Lodge) .....	J. A. McPherson, Esq., C.E.	8	1	0	388	1052	41·40	..	..
Ubley (Pixey Hole) .....	J. A. McPherson, Esq., C.E.	8	1	0	300	933	36·75	..	..
Nempnett (West Town) .....	J. A. McPherson, Esq., C.E.	8	1	0	263	981	38·61	..	..
Burrington (Burrington Links) ..	J. A. McPherson, Esq., C.E.	8	1	0	335	997	39·25	..	..
D Burrington (Langford) .....	Miss M. B. Smith .....	5	1	8	40	990	38·98	179	136
D Weston-spr-Mare (Clarence Pk.) ..	W. H. Allen, Esq. ....	5	1	2	29	811	31·91	169	138
Butcombe (Cholwell) .....	J. A. McPherson, Esq., C.E.	8	1	0	370	1079	42·49	..	..
D Worle (Springfield House) .....	J. Stuckey, Esq. ....	5	4	0	25	743	29·26	161	132
D Worle Vicarage .....	Rev. M. I. Holme .....	5	1	6	150	840	33·06	204	133
D Wrington (The Cottage) .....	H. C. Bristowe, Esq., M.D.	5	5	6	100	852	33·54	153	120
D Wrington (The Rectory) .....	Rev. G. M. Ashdown .....	5	5	0	69	930	36·62	164	130
D Wrington (West Hay) .....	Miss M. C. Meade-King ..	5	1	8	98	912	35·90	181	135
Yatton (Chelvey) .....	J. A. McPherson, Esq., C.E.	8	0	8	60	882	34·73	152	133
Flax Bourton (West Town) ....	Theodore Robinson, Esq. ....	5	4	0	80	1010	39·78	203	150
Nailsea (The Lawn) .....	E. Armstrong, Esq. ....	..	..	..	..	902	35·52	..	..
D Flax Bourton (The Grange) ....	C. C. Onslow Master, Esq. ....	5	1	0	120	860	33·87	149	132
D Clevedon (Gas Works) .....	J. Harger Pye, Esq. ....	5	1	2	22	839	33·04	171	126
D Clevedon W. W. (Tickenhm Rd) ..	J. Harger Pye, Esq. ....	5	1	6	70	823	32·41	169	129
d Clevedon (Bowling Green) .....	Major A. B. Trestrail ....	5	0	11	126	861	33·90	..	..
D Clevedon (Mt. Heber Cottage) ..	G. M. S. Farmer, Esq. ....	5	1	0	144	837	32·96	182	124
3.—PARRETT. 568 sq. mi.									
D Crewkerne (The Reservoir) ....	E. H. Munford, Esq. ....	8	1	0	426	962	37·88	178	143
D Crewkerne (Bincombe House) ....	Miss Sparks .....	5	1	3	293	966	38·03	192	153
D Crewkerne (Merefield House) ..	J. Tompsett, Esq. ....	8	1	1	231	984	38·73	181	138
D Crewkerne (Mark's Barn) .....	Miss V. Blake .....	8	0	9	260	848	33·39	201	140
Chard (Chaffcombe House) .....	Mrs. Hartley .....	5	0	11	400	928	36·52	190	144
D Combe St. Nicholas .....	Rev. G. de Y. Aldridge ....	5	2	6	580	1041	40·97	217	150
Coker Court Gardens .....	Mr. T. H. Gilham .....	8	1	6	250	930	36·61	160	133
D West Coker .....	G. F. Deedes, Esq. ....	5	1	6	265	767	30·21	173	122
D Ilminster (Whitelackington Ho.) ..	S. Creed, Esq. ....	9	3	0	200	951	37·46	181	121
D Ilminster (Dillington Park) (R) ..	Mr. W. Goldthorpe .....	8	3	0	161	925	36·40	169	131
D Yeovil (Pen Mill Sewage Wrks) ..	Dr. C. W. Gee .....	5	1	0	102	811	31·95	206	132
D Stoke-under-Ham .....	Miss Gillett .....	8	1	0	80	808	31·80	146	131
D Angersleigh (Leigh Court) .....	A. Eastwood, Esq. ....	8	1	0	360	924	36·37	180	143
D Wellington (Old Way House) .....	T. Fox, Esq. ....	5	1	1	300	894	35·19	211	143
D Tintinhull (Manor House) .....	Rev. Dr. S. J. M. Price ....	5	0	10	145	763	30·03	144	125
D Taunton (The Park) .....	Dr. John Allen .....	5	1	0	71	767	30·20	194	140
D Milverton (Spring Grove) .....	Major R. C. Coldwell .....	5	1	0	449	961	37·84	186	143
D Wiveliscombe (Culverhead) .....	T. R. Marsh, Esq., C.M.G.	5	1	0	450	1088	42·82	173	153
D Langport (The Grange) .....	Miss V. M. Page .....	5	1	0	50	717	28·21	200	133
D Langport (Huish Episcopi) .....	Miss A. M. Kelway .....	8	1	1	30	708	27·87	171	132
D N. Cheriton (Maperton House) ..	Mr. W. Smith .....	5	1	3	390	863	33·96	165	139
d North Cadbury Court .....	Major A. L. Langman. ....	5	1	0	250	711	27·99	..	..
Somerton .....	R. W. Pretor-Pinney, Esq. ....	5	1	2	121	711	27·99	..	155
D Kingston (Caplins) .....	Mr. H. Jones .....	5	0	10	250	774	30·49	189	145
D Aisholt (Timbercombe) .....	Mrs. White .....	5	1	2	700	868	34·18	184	155
D Bagborough Rectory .....	C. Hubert Lance, Esq. ....	9	1	0	470	871	34·31	194	150
D Enmore (Smocombe) .....	late Col. H. Andrews Speed ..	5	1	2	320	916	36·07	200	158
D Bridgwater (Blake Gardens) .....	F. Parr, Esq., C.E. ....	5	3	1	27	741	29·18	164	142
Bridgwater (Wembdon Road) .....	H. Corder, Esq. ....	5	0	10	30	759	29·87	173	..
D Bridgwater (Ashford) .....	F. Parr, Esq., C.E. ....	5	1	1	102	782	30·79	173	140
D Cannington (Brymore) .....	H. H. P. Bouverie, Esq. ....	5	2	0	65	785	30·92	173	138
4.—NORTH COAST STREAMS. 158 sq. mi.									
Williton (Aller Farm) .....	R. G. Hosegood, Esq. ....	5	2	6	175	861	33·91	159	133
D Bicknoller (Ford) .....	John Tracey, Esq. ....	5	1	3	150	871	34·27	187	138
Bicknoller (Weacombe House) ..	Lord St. Audries .....	5	1	0	320	834	32·84	178	139
M Quantock H. (Erridge Combe) ..	Lord St. Audries .....	5	1	0	850	987	38·84	..	..
D Bicknoller (Willett) .....	H. C. Venning, Esq. ....	5	1	0	450	917	36·09	143	132
D Williton (The White House) ....	S. L. Rogers, Esq. ....	5	1	0	98	831	32·72	165	135

## DIVISION V.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922				
SOMERSETSHIRE—(con.).									
4.—NORTH COAST STREAMS—(con.).									
		in.	ft.	in.	ft.	mm.	in.		
	Holford (Dytche School)..... J. E. Overend, Esq.....	5	1	0	260	682	26·86	168	130
D	Quantockshead (St. Audries) ..Mr. F. S. Hayne .....	5	1	0	264	808	31·82	168	138
D	Kilve Court ..... J. C. Hurle, Esq. ....	5	1	0	150	752	29·60	189	140
D	Dunster (The Schools) ..... E. G. Cattle, Esq. ....	5	1	0	90	872	34·33	175	140
	Minehead (The Poplars) ..... late T. Hosegood, Esq.....	5	1	6	100	875	34·44	..	..
D	Minehead (Northfield Road) ... W. Y. Tamlyn, Esq. ....	5	1	0	95	894	35·18	177	149
	Porlock (Lynch Mead Allerford) J. Dyke Acland, Esq. ....	5	1	0	115	930	36·62	192	148
D	Culbone (Lillycombe) ..... E. T. Macdermot, Esq. ....	5	1	0	1210	1277	50·27	207	171
5.—EXE. 122 sq. mi.									
D	Brushford Rectory ..... Rev. B. J. du Boe.....	5	1	0	450	1203	47·35	196	157
D	Brushford Nurseries ..... Mr. G. Ruff .....	5	1	2	430	1189	46·81	203	164
D	Hawkridge (Liscombe) ..... Mr. E. W. Darby .....	5	3	6	980	1498	58·98	237	178
d	Winsford School ..... W. Dicker, Esq. ....	5	1	0	685	1496	58·89	..	..
D	Cutcombe (Wheddon Cross) ... H. H. P. Bouverie, Esq....	5	1	2	945	1402	55·20	201	160
	Exford (North Ley) ..... F. G. Heal, Esq. ....	5	5	0	1000	1593	62·72	..	..
6.—AXE. 42 sq. mi.									
	Tatworth Vicarage ..... Rev. H. Stuart King .....	5	1	3	345	1113	43·80	175	155
D	Cricket St. Thomas (Cricket Ho.) Mr. G. F. Richardson ....	5	0	6	444	1123	44·22	167	146
D	Chard (High Street Council Sch.) F. Barnard, Esq. ....	5	1	2	425	1125	44·29	193	148
D	Buckland St. Mary ..... H. B. Debenham, Esq.....	5	0	9	750	1031	40·58	201	145
7.—STOUR. 35 sq. mi.									
D	Temple Combe Rectory ..... Rev. H. A. Boys.....	5	0	6	215	877	34·53	181	148
D	Temple Combe (Cheriton Ho.) .. Rev. H. A. Boys .....	..	..	..	..	844	33·24	181	142
D	Wincanton (Roundhill Grange) Maj.-Gen. C. H. P. Ducat ..	5	1	11	375	852	33·53	196	143

## DIVISION VI.—WEST MIDLAND COUNTIES.

## GLOUCESTERSHIRE. (Area, 1243 sq. mi.).

<b>1.—WYE. 50 sq. mi.</b>									
D Chepstow (Castleford) .....	Mrs. W. R. Lysaght .....	5	0	8	146	963	37·91	184	151
D Chepstow (Pen Moel) .....	W. R. Price, Esq. ....	5	1	0	240	1034	40·72	189	156
D St. Briavels (St. Briavels House)	Surg. Capt. O. W. Andrews, R.N.	5	1	0	750	1122	44·18	211	152
Forest of Dean (Mailscoot Ldge)	Office of Woods .....	8	1	0	630	898	35·34	..	..
Forest of Dean (Ruardean H. Lo)	Office of Woods .....	8	1	0	932	878	34·58	..	..
D Lydbrook (Viaduct House) ....	G. S. Damsell, Esq. ....	5	1	0	95	840	33·06	201	140
<b>2.—SEVERN—Right Bank Tributaries. 176 sq. mi.</b>									
Forest of Dean (Whitemead Pk)	Office of Woods .....	8	1	0	200	894	35·19	..	..
Forest of Dean (Worcester Lo.)	Office of Woods .....	8	0	11	712	889	35·02	..	..
d Cinderford (Belle Vue Road) ..	Dr. J. N. Beadles .....	5	1	1	780	961	37·82	..	..
D Westbury-on-Severn (Chaxhill)	Miss Grant .....	5	3	0	122	760	29·93	137	115
D Newent (Clifford Manor) .....	F. F. Grafton, Esq.....	5	1	5	312	837	32·96	164	137
D Oxenhall (Dymock Woods) .....	Office of Woods .....	8	1	0	232	726	28·59	159	127
D Bromsberrow Heath Pump Stat.	W. Osborne Thorp, Esq., C.E.	5	1	0	181	656	25·82	157	126
Tewkesbury (Forthampton Ct.)	Mr. B. Webster .....	5	1	0	48	747	29·41	201	140
D Tewkesbury (Upper Lode) .....	E. J. Bradley, Esq.....	5	1	0	41	559	22·01	166	118
<b>3.—SEVERN—Left Bank Tributaries. 372 sq. mi.</b>									
D Wickwar .....	F. G. Ansell, Esq. ....	5	1	0	260	846	33·32	142	127
d Thornbury (Thornbury House) ..	H. V. Gillett, Esq. ....	5	2	1	110	868	34·19	..	118
Tortworth Court .....	Mr. J. Banting .....	8	1	0	264	855	33·66	178	141
Tortworth School .....	E. A. Smith, Esq. ....	5	2	0	264	855	33·67	178	141
D Dursley (The Manor) .....	Miss H. M. Hutton .....	5	1	1	274	897	35·33	194	144
d Avening House .....	Lady Eleanor Atkinson ..	8	1	3	350	835	32·89	..	123
D Berkeley Castle Gardens .....	Mr. T. B. Ashbee .....	5	1	6	60	845	33·28	148	137
D Nailsworth (Three Corners) ....	F. R. Rushton, Esq.....	5	0	9	325	966	38·02	214	150

## DIVISION VI.—WEST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
GLOUCESTERSHIRE—(con.).		in.	ft. in.	ft.	mm.	in.		
3.—SEVERN—Left Bank Tributaries.—(con.).								
d Berkeley (Sharpness Docks) . . . F. G. Marling, Esq. . . . .	5	2 0	50	896	35·29	190	138	
d Minchinhampton (Rowan Cott) E. Metcalfe Day, Esq. . . . .	5	1 0	620	803	31·62	..	..	
d Minchinhampton (Camp Field) . Piers F. Legh, Esq. . . . .	5	1 6	650	964	37·97	186	144	
d Stroud (Field Place) . . . . . A. W. Stanton, Esq. . . . .	5	1 0	226	698	27·47	..	124	
d Stonehouse (Wycliffe College) . W. A. Sibly, Esq. . . . .	5	1 0	120	866	34·10	188	146	
d Bisley (Jaynes Court) . . . . . Hugh T. Coles, Esq. . . . .	5	0 11	777	900	35·45	218	155	
Stroud (Berrimans) . . . . . E. Armitage, Esq. . . . .	5	1 0	750	1005	39·56	..	..	
Stonehouse (Parklands) No. 1 (R) W. Grey Robinson, Esq. . . . .	8	2 6	103	768	30·22	192	132	
Stonehouse (Parklands) No. 2 . . W. Grey Robinson, Esq. . . . .	5	2 6	103	760	29·91	188	132	
d Whitminster (The Junction) . . F. A. Jones, Esq., C.E. . . . .	5	1 0	33	863	33·99	209	143	
Haresfield Court . . . . . R. I. Tidswell, Esq. . . . .	5	0 10	100	894	35·18	226	144	
d Harescombe Grange . . . . . Stamford Hutton, Esq. . . . .	5	1 0	557	859	33·83	195	147	
Quedgeley House . . . . . Lt.-Col. J. F. Curtis-Hayward . . . . .	5	1 0	65	855	33·66	175	140	
d Witcombe Reservoir . . . . . C. J. Scudamore, Esq. . . . .	8	3 0	297	836	32·92	166	143	
d Gloucester (Weston Road) . . . Rev. F. H. Fowler . . . . .	5	1 0	56	785	30·89	210	140	
d Gloucester (The Park) . . . . . G. Embrey, Esq. . . . .	8	1 3	56	771	30·35	217	146	
d Gloucester (Denmark Road) . . . Harley Butt, Esq. . . . .	5	1 5	79	705	27·77	185	131	
d Gloucester (Llanthony Lock) . . E. J. Bradley, Esq. . . . .	5	1 2	39	681	26·79	164	128	
d Gloucester (Maisemore Lock) . . E. J. Bradley, Esq. . . . .	5	1 1	39	674	26·54	185	136	
Badgeworth Court . . . . . A. J. Stephens, Esq. . . . .	5	1 0	180	781	30·73	..	..	
d Churchdown (Barrow Hill) . . . Mrs. J. H. Jones . . . . .	5	1 0	225	767	30·20	193	140	
d Dowdeswell Reservoir . . . . . J. S. Pickering, Esq., C.E. . . . .	5	1 3	357	852	33·53	160	133	
d Cheltenham (Thirlestane Hill) (R) J. Player, Esq. . . . .	8	2 0	240	775	30·52	186	136	
d Charlton Kings (The Grange) . . Miss E. M. Heberden . . . . .	5	0 9	300	823	32·40	195	139	
d Cheltenham (Hewletts Res.) . . J. S. Pickering, Esq., C.E. . . . .	8	1 6	419	757	29·82	192	144	
d Cheltenham (Sandford Mead) . . J. S. Pickering, Esq., C.E. . . . .	5	2 6	210	741	29·19	178	137	
Cheltenham (Kemerton Lodge) . . Rev. Percy Burd . . . . .	5	1 0	211	763	30·05	192	..	
d Cheltenham (Old Bath Road) . . F. A. Jones, Esq., C.E. . . . .	5	1 0	290	774	30·48	183	138	
d Cheltenham (High Street) . . . . Lieut. J. Orgee, D.S.C., R.N. . . . .	5	1 0	214	683	26·87	175	127	
d Cheltenham (Swindon) . . . . . J. C. M. Stanton, Esq. . . . .	8	1 2	136	694	27·32	191	139	
d Tewkesbury Pumping Station . . J. S. Pickering, Esq., C.E. . . . .	5	1 0	47	596	23·46	169	127	
d Alderton Rectory . . . . . Rev. A. D. Pennington . . . . .	..	2 2	185	514	20·23	162	116	
Beckford Hall . . . . . Capt. H. Ashton Case . . . . .	..	1 0	130	671	26·42	..	..	
4.—SEVERN—Upper Avon. 99 sq. mi.								
d Winchcombe (Sudeley Castle) . . Major J. H. D. Brocklehurst . . . . .	5	0 0	357	795	31·29	166	143	
d Broadway (Buckland Manor) . . J. Whiteley, Esq. . . . .	5	1 0	..	745	29·35	162	143	
d Chipping Campden (Hidcote) . . . late Major W. Wright . . . . .	5	1 0	520	690	27·16	169	133	
d Mickleton (Bank House) . . . . M. J. Salter, Esq. . . . .	5	1 0	250	638	25·13	174	128	
5.—LOWER AVON & C. 198 sq. mi.								
d Bath (Monkswood Reservoir) . . J. Dent Young, Esq. C.E. . . . .	5	2 0	365	765	30·13	185	143	
d Bristol Docks (Underfall Yard) . T. A. Peace, Esq. . . . .	8	19 6	45	769	30·26	178	122	
Bristol (Telephone Avenue) . . . J. A. McPherson, Esq., C.E. . . . .	5	50 0	80	884	34·82	183	141	
d Bristol (Tyndalls Park Road) . . Major E. J. Dunscombe, RFA . . . . .	5	1 4	150	943	37·11	189	138	
d Bristol (Cotham) . . . . . H. A. Rogers, Esq. . . . .	5	1 4	180	945	37·22	180	143	
Clifton (Oakfield Road) . . . . . J. A. McPherson, Esq., C.E. . . . .	5	1 0	200	954	37·56	180	136	
d Clifton (Harley Place) . . . . . Miss Hooper . . . . .	5	1 5	260	945	37·19	205	140	
d Clifton College . . . . . A. G. Statton, Esq. . . . .	8	1 2	225	911	35·88	178	135	
d Clifton (Stoke Bishop) . . . . . H. L. P. Lowe, Esq. . . . .	8	1 3	243	915	36·03	169	133	
Bristol (Belmont Rd.) . . . . . H. Vickers Webb, Esq. . . . .	5	1 5	150	905	35·61	180	133	
d Filton . . . . . F. W. Gayner, Esq. . . . .	5	2 0	202	787	31·00	166	129	
d Winterbourne (Kendleshire) . . J. Marsh, Esq. . . . .	5	1 0	170	767	30·21	156	130	
d Frampton Cotterell (Park Ho) . . H. H. Harding, Esq. . . . .	5	1 0	158	817	32·16	181	133	
d Chipping Sodbury (The Ridge) . . Col. P. Burges . . . . .	5	1 0	375	825	32·50	189	138	
d Almondsbury (Over Court Park) . J. Cann-Lippincott, Esq. . . . .	5	1 0	147	840	33·06	183	138	
6.—THAMES—Right Bank Tributaries. 15 sq. mi.								
7.—THAMES—Windrush & c. 333 sq. mi.								
d Fairford (Dunfield, Kempsford) . A. T. Iles, Esq. . . . .	5	1 0	260	734	28·91	182	134	
d Fairford Vicarage . . . . . Rev. Canon R. C. S. Jones . . . . .	5	0 9	280	766	30·14	171	141	
d Fairford (Draycott) . . . . . Miss G. Edmonds . . . . .	5	2 0	200	823	32·41	177	140	
d Lechlade (St. John's Lock) . . . R. A. Swarbrick, Esq. . . . .	5	3 2	239	646	25·42	169	120	

## DIVISION VI.—WEST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
		in.	ft. in.	ft.	mm.	in.		
GLOUCESTERSHIRE—(con.).								
7.—THAMES—Windrush & c.—(con.).								
d Lechlade (Claydon House) . . . . .	T. T. S. Metcalfe, Esq. . . . .	5	1 0	250	733	28·85	184	136
d Lechlade (Southrop) . . . . .	Thomas Arkell, Esq. . . . .	5	1 0	..	713	28·05	..	..
d Cirencester (Cripps Mead) . . . . .	Mrs. Wilfred Cripps . . . . .	5	0 8	366	855	33·68	183	142
d Cirencester (Dollarward House) . . . . .	C. P. Hooker, Esq. . . . .	5	1 6	366	904	35·59	197	146
d Cirencester (Dollarward House) . . . . .	C. P. Hooker, Esq. . . . .	8	1 0	366	901	35·46	197	146
d Cirencester (Argyll House) . . . . .	Prof. E. Blundell . . . . .	5	2 2	350	839	33·04	154	126
d Cirencester (Bartonbury) . . . . .	E. C. Rankin, Esq. . . . .	5	0 9	429	837	32·97	194	142
d Aldsworth . . . . .	T. Rich, Esq. . . . .	5	1 6	430	833	32·79	153	129
d Great Barrington . . . . .	H. J. Barrett, Esq. . . . .	5	1 6	430	837	32·95	177	142
d Northleach (Sherborne House) . . . . .	Mr. A. Mitchell . . . . .	5	1 0	420	797	31·36	159	146
d Northleach (Leygore Manor) . . . . .	Arthur E. Moss, Esq. . . . .	5	1 0	650	844	33·23	216	148
d Bourton-on-Water (Eastfield) . . . . .	E. W. Kendall, Esq. . . . .	5	1 6	434	842	33·14	180	142
d Bourton-on-Water (Chardwar) . . . . .	G. F. Moore, Esq. . . . .	5	1 6	430	834	32·84	183	142
d Bourton-on-Water Rectory . . . . .	Rev. Canon W. E. White . . . . .	5	0 10	433	838	33·00	170	138
d Stow-on-the-Wold (Icomb Place) . . . . .	Capt. G. H. Simpson Hayward . . . . .	8	1 3	500	852	33·54	176	143
d Stow-on-the-Wold (Duncombe) . . . . .	W. T. Arkell, Esq. . . . .	5	1 0	650	765	30·13	..	..
HEREFORDSHIRE. (Area, 840 sq. mi.)								
1.—WYE. 685 sq. mi.								
d Goodrich Court Gardens . . . . .	T. Spencer, Esq. . . . .	5	1 6	200	748	29·45	184	135
d Walford (Hill Court) . . . . .	G. R. Trafford, Esq. . . . .	5	1 1	161	719	28·30	177	138
d Ross (County Observatory) . . . . .	F. J. Parsons, Esq. . . . .	5	1 0	224	708	27·89	181	122
d Ross (Birchlea) . . . . .	Miss M. L. Southall . . . . .	5	1 0	210	747	29·42	188	134
d Bridstow (Ashe Leigh) . . . . .	Major W. Stanley R. Cox . . . . .	5	1 6	240	702	27·65	151	129
d Kentchurch Rectory . . . . .	Rev. R. P. Dansey . . . . .	5	1 0	220	878	34·58	189	138
d Perrystone Court . . . . .	Brig.-Gen. G. S. Clive, D.S.O. . . . .	5	1 3	450	633	24·94	..	..
d Brockhampton Court . . . . .	Lt.-Col. A. W. Foster . . . . .	8	4 0	500	787	31·00	..	..
d Fownhope (Lower House) . . . . .	Miss F. Cresswell . . . . .	5	3 0	200	734	28·88	201	147
d Fownhope (Morney Cross) . . . . .	A. P. Maudslay, Esq., D.Sc. . . . .	5	0 8	180	676	26·63	179	126
d Woolhope (The Hyde) . . . . .	J. A. Thompson, Esq. . . . .	5	1 0	440	713	28·09	179	131
d Vowchurch (Whitehouse) . . . . .	A. S. Wood, Esq. . . . .	8	1 0	450	974	38·35	193	..
d Hereford (Longworth Hall) . . . . .	R. H. Barneby, Esq. . . . .	5	1 0	200	641	25·23	..	..
d Hereford (Belmont Abbey) . . . . .	Rev. John Owen, O.S.B. . . . .	8	1 0	292	639	25·14	161	124
d Hereford (Barton House) . . . . .	Rev. A. G. Jones . . . . .	8	1 0	179	629	24·77	184	128
d Hereford (Breinton Court) . . . . .	H. A. Wadworth, Esq. . . . .	5	3 0	238	591	23·25	168	123
d Hereford (Broomy Hill) . . . . .	W. Cooke, Esq. . . . .	8	0 10	201	595	23·44	151	114
d Hereford (Holmer Hall) . . . . .	Rev. Preb. M. Hopton . . . . .	8	1 3	244	603	23·75	193	129
d Credenhill (Stretton Sugwas) . . . . .	Capt. S. H. Armitage . . . . .	5	1 0	226	627	24·67	182	136
d Credenhill . . . . .	F. E. Whiting, Esq. . . . .	5	1 5	275	642	25·29	164	132
d Burghill Court . . . . .	Miss E. D. Woodhouse . . . . .	5	1 0	293	542	21·34	175	115
d Ocle Pychard (Ocle Court) . . . . .	G. Creswell, Esq. . . . .	8	1 2	298	723	28·47	200	139
d Sarnesfield Court . . . . .	Rev. W. Marshall . . . . .	5	0 10	378	709	27·90	183	129
d Almeley (The Bungalow) . . . . .	B. G. Ronalds, Esq. . . . .	5	1 0	396	716	28·20	186	131
d Weobley School . . . . .	A. J. Dean, Esq. . . . .	5	1 0	320	719	28·30	219	133
d Pembridge (Dilwyn) . . . . .	Dr. T. Lambert Hall . . . . .	5	0 8	290	667	26·24	179	125
d Pembridge (Burton Court) . . . . .	Lt.-Col. P. L. Clowes, C.B. . . . .	5	1 6	400	733	28·84	202	141
d Bromyard (Dumbleton Cottage) . . . . .	T. V. Philpott, Esq. . . . .	5	1 0	393	741	29·19	184	143
d Bromyard (Rowden Abbey) . . . . .	Mrs. Ashmore . . . . .	5	1 0	450	766	30·17	187	147
d Bromyard (Buckenhill) . . . . .	Mrs. Phipps . . . . .	8	1 6	410	738	29·07	173	141
d Kingston (Montfort House) . . . . .	G. H. Evans, Esq. . . . .	5	0 6	600	990	38·98	208	158
d Kingston (Sunset) . . . . .	H. Langston, Esq. . . . .	5	1 6	495	797	31·39	..	..
d Kingston (Gravel Hill) . . . . .	Col. G. F. Pearson . . . . .	5	0 8	535	773	30·42	194	135
d Kimbolton (Grantsfield) . . . . .	J. M. Hutchinson Esq. . . . .	5	1 0	424	709	27·93	200	141
d Leysters (Rosedale House) . . . . .	E. S. Chattock, Esq. . . . .	5	0 6	600	725	28·55	196	140
2.—SEVERN—Right Bank Tributaries. 155 sq. mi.								
d Much Marcle (The Mount) . . . . .	Miss A. M. Charles . . . . .	5	0 8	240	646	25·43	168	134
d Ledbury (Underdown) . . . . .	S. H. Bickham, Esq. . . . .	5	1 0	307	705	27·74	187	139
d Ledbury (Underdown) . . . . .	S. H. Bickham, Esq. . . . .	5	1 0	306	694	27·34	..	..
d Ledbury (Putley Court) . . . . .	J. Riley, Esq. . . . .	5	1 0	290	777	30·59	175	145
d Ledbury (Wellington Heath Vic) . . . . .	Rev. F. S. Stooke-Vaughan . . . . .	5	1 0	505	630	24·79	189	138
d Cradley (Mill Bank) . . . . .	Lt.-Col. E. H. Thurlow . . . . .	5	1 0	325	724	28·52	146	..
d Brimfield (The Hall) . . . . .	A. A. Gatty, Esq. . . . .	5	0 7	240	680	26·77	..	..
d Leintwardine . . . . .	E. Charnock, Esq. . . . .	5	1 6	450	900	35·44	219	152

## DIVISION VI.—WEST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam.	Height Ground	above Sea Level.					
SHROPSHIRE. (Area, 1343 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
1.—MERSEY—Weaver. 27 sq. mi.									
2.—DEE. 30 sq. mi.									
d Whitchurch (Fenns Bank) . . . . .	M. W. Sowden, Esq., C.E. . . . .	8	1	0	271	68·1	26·80	182	151
d Overton (Sodylt Hall) . . . . .	W. H. Horsfall, Esq. . . . .	5	1	0	266	74·1	29·18	169	141
3.—SEVERN—Right Bank Tributaries. 722 sq. mi.									
d Ashford House. . . . .	W. Downes Hall, Esq. . . . .	5	0	5	315	78·4	30·86	169	145
d Ludlow (Spring Field) . . . . .	A. A. Barnes, Esq., C.E. . . . .	5	1	0	302	73·4	28·89	192	142
d Ludlow (Spring Field) . . . . .	A. A. Barnes, Esq., C.E. . . . .	5	1	0	301	72·0	28·35	..	..
d Bromfield (Oakley Park) . . . . .	Mr. J. R. Francis . . . . .	5	1	0	300	76·6	30·16	180	146
d Bromfield (Warwick House) . . . . .	F. Brayshaw, Esq. . . . .	5	1	0	320	79·0	31·10	207	148
d Bitterley Rectory . . . . .	Rev. J. R. Burton . . . . .	5	1	6	509	66·7	26·24	178	135
d Llanfairwaterdine (The Green) . . . . .	Miss M. A. Davies . . . . .	5	1	9	950	75·6	29·75	..	..
d Clun (Trinity Hospital) . . . . .	Rev. H. J. Scott . . . . .	5	1	0	665	92·2	36·30	182	..
d Craven Arms(Newington Ho.)(r) . . . . .	R. E. Serjeantson, Esq. . . . .	8	1	1	406	64·0	25·21	181	132
d Wistanstow Rectory . . . . .	Rev. W. M. D. La Touche . . . . .	8	1	0	482	77·1	30·38	192	146
d Burwarton Hall. . . . .	Rt. Hon. Viscount Boyne . . . . .	5	0	10	894	91·4	36·00	168	159
d Clun Forest (Cwm Ffrydd) . . . . .	Sydney Wilson, Esq. . . . .	5	1	0	1155	103·1	40·61	..	..
d Lydbury North (Totterton H.) . . . . .	Major W. H. B. Whitaker . . . . .	5	1	6	700	79·4	31·25	203	141
d Bishops Castle (Castle Street) . . . . .	E. Griffiths, Esq. . . . .	5	2	0	720	78·8	31·04	195	152
d Bishops Castle (Claremont) . . . . .	Richard Parry, Esq. . . . .	5	1	0	681	79·7	31·39	181	144
d Bishops Castle Vicarage . . . . .	Rev. G. W. Stewart . . . . .	5	1	6	596	89·1	35·06	192	147
d Bishops Castle (More Rectory) . . . . .	Rev. Ridley Relton . . . . .	5	0	9	600	75·9	29·90	..	..
d Bishops Castle (Roveries H.)(r) . . . . .	A. H. Sykes, Esq. . . . .	8	4	6	600	71·3	28·08	..	..
d Church Stretton (Sewage Works) . . . . .	E. J. Marsh, Esq. . . . .	5	1	0	582	90·7	35·73	180	159
d Church Stretton (Watling St.) . . . . .	Mr. W. Bowden . . . . .	5	1	0	..	94·5	37·21	190	157
d Church Stretton (West Leigh) . . . . .	H. Constantine, Esq. . . . .	5	0	8	700	90·8	35·75	197	159
d Bridgnorth (Cantreyn) . . . . .	W. Bayliss, Esq. . . . .	5	3	0	290	66·8	26·30	173	132
d Bridgnorth (Cantreyn) . . . . .	W. Bayliss, Esq. . . . .	5	0	3	288	73·3	28·84	173	140
d Church Preen (Preen Cottage) . . . . .	Mr. J. Hopkins . . . . .	5	1	0	760	74·8	29·45	164	142
d Church Stretton (Wolstaston) . . . . .	Rev. Alan Clover . . . . .	5	1	0	795	88·8	34·96	184	149
d Much Wenlock (Willey Park) . . . . .	Col. Lord Forester . . . . .	5	3	0	492	74·6	29·37	191	139
d Dorrington (Netley Hall) . . . . .	Miss Hope-Edwardes . . . . .	5	1	6	351	78·8	31·02	204	148
d Shrewsbury (Beckbury House) . . . . .	G. H. Horsfall, Esq. . . . .	5	0	9	220	58·5	23·04	166	136
d Shrewsbury (Radbrook Hall) . . . . .	D. D. Macpherson, Esq. . . . .	5	0	8	235	60·4	23·77	189	143
4.—SEVERN—Left Bank Tributaries. 564 sq. mi.									
d Bridgnorth (Coton Hall) . . . . .	Lt.-Col. E. M. Wakeman . . . . .	5	1	6	460	77·3	30·44	184	149
d Worfield (School House) . . . . .	Frank Turner, Esq. . . . .	5	1	0	140	60·7	23·89	178	133
d Madeley (C. of E. Schools) . . . . .	H. R. Shaw, Esq. . . . .	12	1	0	387	58·6	23·06	..	..
d Shifnal (Hatton Grange) . . . . .	Mr. G. Risebrow . . . . .	5	4	4	262	72·7	28·62	194	158
d Shifnal (National Schools) . . . . .	T. F. Chard, Esq. . . . .	5	1	5	283	77·4	30·47	179	146
d Wellington W.W. (Wrekin Res.) . . . . .	G. H. Connor, Esq. . . . .	8	2	6	478	59·7	23·51	..	..
d Shrewsbury (St. Michael's Sch.) . . . . .	W. H. Barclay, Esq. . . . .	5	30	9	229	55·2	21·73	..	..
d Shrewsbury (Coton Hill) . . . . .	Dr. M. Gepp . . . . .	5	0	8	190	57·8	22·74	176	132
d Shrewsbury (Roden) . . . . .	J. W. Nowell, Esq. . . . .	8	1	2	207	65·6	25·84	178	124
d Shrewsbury (Fitz Rectory) . . . . .	Rev. W. Brewster . . . . .	5	1	2	238	66·6	26·23	193	149
d Newport (Aston Hall) . . . . .	Col. R. Leeke . . . . .	5	0	11	280	74·4	29·29	196	145
d Newport (Agricultural College) . . . . .	C. Crowther, Esq. . . . .	5	1	0	220	64·3	25·30	187	138
d Newport (Chetwynd Park) . . . . .	Mrs. Burton Borough . . . . .	5	1	0	240	74·7	29·42	208	146
d Newport (Chetwynd Pk. Gdns.) . . . . .	Mr. N. Sherwood . . . . .	5	1	0	250	76·1	29·94	217	144
d Grinshill (Sansaw Hall Gardens) . . . . .	Capt. F. B. Bibby . . . . .	5	0	10	300	68·3	26·91	182	144
d Myddle (Marton Hall) . . . . .	Major W. S. Gosling . . . . .	5	0	8	280	70·6	27·79	169	151
d Cheswardine (Knighton Res.) . . . . .	H. C. Jones, Esq., C.E. . . . .	8	1	0	351	77·9	30·66	188	142
d Cheswardine Hall . . . . .	Lt. Col. R. C. Donaldson-Hudson . . . . .	5	1	6	530	69·3	27·27	159	135
d Oswestry (Mount Res.) . . . . .	G. W. Lacey, Esq., C.E. . . . .	5	1	0	698	78·7	31·00	217	140
d Oswestry (Council School) . . . . .	E. Compton, Esq. . . . .	5	1	0	450	75·4	29·67	203	141
d Ellesmere . . . . .	H. C. Jones, Esq., C.E. . . . .	8	1	0	368	69·1	27·20	159	136
d Norton-in-Hales School . . . . .	Chas. Chadwick, Esq. . . . .	5	2	0	350	78·7	30·98	192	155

## DIVISION VI.—WEST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922				
STAFFORDSHIRE. (Area, 1171 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
1.—MERSEY—Weaver. 50 sq. mi.									
d Biddulph Grange.....	Robert Heath, Esq. ....	5	0	7	525	987	38·87	207	166
2.—SEVERN—Left Bank Tributaries. 160 sq. mi.									
d Kingswinford (Ashwood P.S.) ..	F. J. Dixon, Esq., C.E. ....	5	1	0	207	710	27·96	159	140
d Dudley (Shavers End) .....	F. J. Dixon, Esq., C.E. ....	5	1	0	745	740	29·13	184	129
d Wolverhampton (Copthorne Rd)	Kenneth C. Berrington, Esq	5	0	9	500	768	30·22	174	144
d Wolverhampton (Town Hall) ..	G. Green, Esq., C.E. ....	5	15	6	482	770	30·31	175	143
d Wolverhampton (West Park) ..	Dr. R. H. H. Jolly.....	5	1	5	430	716	28·19	179	133
d Patshull Park .....	Earl of Dartmouth, K.C.B.	8	1	3	273	683	26·89	153	132
d Shifnal (Weston Park) .....	Earl of Bradford .....	5	1	6	400	723	28·45	196	141
d Norbury Junction .....	H. C. Jones, Esq. ....	8	1	0	332	739	29·10	202	140
d Market Drayton (Old Springs) ..	F. E. Harding, Esq. ....	5	1	3	422	701	27·62	191	143
d Maer Hall Gardens.....	Mrs. F. J. Harrison, O.B.E.	8	1	6	390	858	33·77	..	150
d Muckleston (Willoughbridge Lo)	M. D. Hill, Esq.....	5	0	9	450	696	27·41	189	150
3.—TRENT—Right Bank Tributaries. 518 sq. mi.									
d West Bromwich.....	(R) A.D. Greatorex, Esq., C.E..	8	1	7	543	779	30·65	187	147
d Wednesbury (Ocker Hill).....	A. W. Willet, Esq., C.E. ...	5	1	0	476	822	32·36	184	139
d Walsall (Bescot Sewage Farm) ..	J. Taylor, Esq., C.E. ....	8	0	11	376	775	30·51	205	139
d Walsall (Wednesbury Sew. Wks)	G. Wicks, Esq.....	5	2	8	381	735	28·93	196	135
d Bilston (The Lunt Outfall) ....	Edgar Willan, Esq., C.E. ...	8	1	0	423	743	29·26	187	136
d Aldridge (Bourne Vale) .....	F. J. Dixon, Esq., C.E. ....	5	1	0	419	749	29·50	179	131
d Bloxwich (Sneyd Reservoir) ...	A. W. Willet, Esq., C.E. ....	5	1	0	507	785	30·91	177	134
d Brownhills .....	S. Harrison, Esq., C.E. ....	8	1	2	492	776	30·54	186	145
d Brewood (Slade Heath P.S.) ...	F. J. Dixon, Esq., C.E. ....	5	1	0	340	671	26·43	178	138
d Hammerwich (Cannock Chase Rs)	A. W. Willet, Esq., C.E. ...	5	1	0	475	715	28·13	189	145
d Brewood (Belvide Reservoir) ..	H. C. Jones, Esq., C.E. ....	5	1	0	367	717	28·25	190	135
d Lichfield (St. John Street) ....	Dr. F. M. Rowland, C.B.E. ...	5	1	0	269	770	30·32	190	135
d Hednesford (Scout House) .....	F. J. Dixon, Esq., C.E. ....	5	1	0	750	639	25·14	178	124
d Rugeley (Longdon) .....	F. J. Dixon, Esq., C.E. ....	5	1	0	413	735	28·92	163	136
d Lichfield (Hanch Reservoir) ...	F. J. Dixon, Esq., C.E. ....	5	1	0	259	672	26·44	170	122
d Rugeley (Brindley Bank) .....	F. J. Dixon, Esq., C.E. ....	5	1	0	254	739	29·11	168	135
d Milford Waterworks .....	W. Plant, Esq., C.E. ....	5	1	0	246	746	29·37	173	138
d Shugborough .....	The Earl of Lichfield .....	5	1	3	260	783	30·82	..	113
d Stafford (Rising Brook) .....	W. Fred. Wright, Esq. ....	5	1	0	273	722	28·41	186	136
d Stafford (Corporation Depot) ..	W. Plant, Esq., C.E. ....	5	1	6	249	752	29·60	177	139
d Eccleshall (Johnson Hall) .....	Major W. Moat .....	5	1	2	400	742	29·20	180	134
d Stone (Meaford Hall) .....	Lt. Col. W. S. W. Parker Jervis	5	0	9	325	793	31·20	195	154
d Standon (Hatton W.W.) .....	R. C. Frain, Esq., C.E. ....	5	1	8	355	775	30·52	182	150
4.—TRENT—Left Bank Tributaries. 193 sq. mi.									
Burton (Hoar Cross) .....	F. W. Lycett, Esq. ....	8	1	0	400	816	32·11	..	166
d Burton Reservoir.....	F. J. Dixon, Esq., C.E. ....	5	1	0	309	746	29·36	155	134
d Burton (Borough Hospital) ..	Dr. J. M. Cowie .....	8	1	6	220	878	34·58	197	139
d Burton (Shobnall) .....	Messrs. Bass & Co. Ltd. ....	5	5	6	156	694	27·33	173	125
d Stone (Alleyne's Grammar Sch.) ..	H. Malcolm Fraser, Esq. ....	5	1	6	415	819	32·25	208	157
d Stone (Idlerocks) .....	Mrs. Wedgwood .....	5	1	0	740	809	31·84	200	149
d Longton (The Meir) .....	R. C. Frain, Esq., C.E. ....	5	1	0	618	826	32·52	227	142
5.—TRENT—Dove. 250 sq. mi.									
d Tean (The Heath House) .....	Lt. Col. B. H. Philips, C.M.G.	5	1	0	647	874	34·42	192	155
d Rocester (Dove Leys) .....	Lt. Col. Sir. G. P. Heywood, D.S.O.	5	1	6	350	881	34·70	165	145
d Oakamoor (Lightoaks) .....	M. A. Bolton, Esq. ....	5	1	6	650	854	33·63	182	150
d Ashbourne (Mayfield House) ..	Graham C. Lawson, Esq. ....	8	1	0	374	896	35·26	189	133
d Mayfield (Doveside) .....	Mr. T. Bridge .....	8	1	0	421	886	34·90	185	135
d Alstonfield Vicarage .....	Rev. A. E. Brown .....	5	1	1	905	1063	41·84	..	..
d Alstonfield (The Manor) .....	B. R. S. Pemberton, Esq. ....	5	1	0	912	1095	43·12	209	162
d Leek (Wall Grange) .....	R. C. Frain, Esq., C.E. ....	5	1	0	458	911	35·87	198	154
d Leek (Hillesdon) .....	A. Y. Worthington, Esq. ....	5	1	0	750	960	37·80	207	162
d Leek (Haregate) .....	Mr. G. Sweetmore .....	5	0	9	680	984	38·75	208	157

## DIVISION VI.—WEST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
WORCESTERSHIRE. (Area, 751 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
1.—SEVERN—Right Bank Tributaries. 231 sq. mi.									
d Redmarley (Haselden) . . . . .	Miss F. L. Newbury . . . . .	5	0	5	280	685	26·97	170	141
Upton-on-Severn (Willow Bank) . . . . .	J. Selwyn Cowley, Esq. . . . .	5	1	0	46	681	26·81	191	138
d Upton-on-Severn (The Eades) . . . . .	Lt.-Col. E. W. Tennant . . . . .	5	0	9	100	659	25·95	181	135
d Malvern (British Camp Res.) . . . . .	W. Osborne Thorp, Esq., C.E. . . . .	5	1	0	677	700	27·55	167	137
d Malvern (Church Street) . . . . .	W. Osborne Thorp, Esq., C.E. . . . .	5	1	0	350	788	31·02	175	145
d West Malvern . . . . .	W. Osborne Thorp, Esq., C.E. . . . .	5	1	0	832	778	30·62	162	141
d Malvern (Belle Vue House) . . . . .	A. Mander, Esq. . . . .	5	4	0	520	797	31·36	187	139
d Malvern (Free Library) . . . . .	E. W. Harris, Esq. . . . .	5	1	0	377	786	30·93	191	139
d Malvern (Clarence Road) . . . . .	S. Bottomley, Esq. . . . .	5	1	0	300	745	29·34	204	139
d Malvern (Hornyard Road) . . . . .	Rev. T. Wolseley Lewis . . . . .	5	1	0	498	751	29·57	178	133
d Knightwick Sanatorium . . . . .	H. Gordon-Smith, Esq. . . . .	5	1	0	300	758	29·83	180	133
d Worcester (Diglis Lock) . . . . .	E. J. Bradley, Esq. . . . .	5	1	0	49	680	26·78	191	124
d Worcester (St. John's School) . . . . .	E. R. Bowen, Esq. . . . .	5	1	0	82	697	27·44	161	131
d Martley Rectory . . . . .	Rev. J. F. Hastings . . . . .	5	1	0	220	796	31·34	188	152
d Ombersley (Holt Lock) . . . . .	E. J. Bradley, Esq. . . . .	5	1	1	55	709	27·93	175	130
d Shelsley Grange . . . . .	A. G. Burney, Esq. . . . .	5	1	0	350	751	29·56	188	145
Rochford Rectory . . . . .	Rev. Allan Ellison . . . . .	5	1	0	315	722	28·44	..	..
d Tenbury (St. Michael's Obsy.) . . . . .	Frederick Lowe, Esq. . . . .	5	1	0	314	690	27·16	190	135
d Stockton-on-Teme (Eardiston) . . . . .	Miss M. Wallace . . . . .	5	0	5	200	746	29·37	176	138
d Bewdley (Winterdyne) . . . . .	Miss K. M. Sturt . . . . .	5	1	0	175	685	26·95	176	133
2.—SEVERN—Left Bank Tributaries. 194 sq. mi.									
d Earl's Croome (Levant Lodge) . . . . .	F. W. Burnett, Esq. . . . .	5	2	0	110	682	26·84	182	136
Kempsey (Napleton Ho.) . . . . .	Major H. Berkeley Hill . . . . .	5	1	3	100	618	24·34	159	..
d Kempsey (The Lodge) . . . . .	Mrs. Isaac . . . . .	5	1	0	80	640	25·19	155	129
d Worcester (London Road) . . . . .	Late Canon Manley Power . . . . .	5	1	0	150	680	26·77	188	135
d Worcester (Water Works) . . . . .	T. Caink, Esq., C.E. . . . .	5	1	0	52	662	26·07	167	124
d Worcester (Barbourne) . . . . .	B. Brotherton, Esq. . . . .	5	1	0	92	697	27·46	168	129
d Worcester (Bevere Lock) . . . . .	E. J. Bradley, Esq. . . . .	5	1	1	52	699	27·51	161	129
d Droitwich (Friar Street Depôt) . . . . .	H. Hulse, Esq., C.E. . . . .	12	4	0	98	685	26·98	189	143
d Bromsgrove (Tardebigge Res.) . . . . .	F. A. Jones, Esq., C.E. . . . .	5	4	6	455	746	29·36	196	134
d Barnt Green (Upwood) . . . . .	Miss M. Gibbins . . . . .	5	0	9	650	726	28·59	186	139
d Stourport (Lincombe Lock) . . . . .	E. J. Bradley, Esq. . . . .	5	1	0	62	723	28·47	180	166
d Bewdley (C.E. School) . . . . .	J. Bates, Esq. . . . .	8	1	0	80	728	28·65	179	141
d Kidderminster (Brinton Park) . . . . .	J. T. Cowderoy, Esq. . . . .	5	1	0	160	673	26·48	186	133
d Kidderminster (Park Hall) . . . . .	G. E. Wilson, Esq. . . . .	5	1	0	200	719	28·30	143	132
d Bewdley (Elan Aqueduct) . . . . .	F. W. Macaulay, Esq., C.E. . . . .	5	1	0	91	738	29·06	182	151
d Halesowen (Romsley) . . . . .	F. J. Dixon, Esq., C.E. . . . .	5	1	0	614	895	35·23	171	147
d Pedmore (The Dene) . . . . .	T. Grazebrook, Esq. . . . .	5	0	6	340	800	31·51	176	147
d Stourbridge . . . . .	W. Fiddian, Esq. . . . .	8	1	0	215	797	31·37	179	144
d Halesowen (Hasbury Cottage) . . . . .	Rev. A. S. Rashleigh . . . . .	5	1	1	532	799	31·46	193	144
d Netherton (Lodge Farm Res.) . . . . .	A. W. Willett, Esq., C.E. . . . .	5	1	0	445	747	29·42	183	134
d Dudley (Borough Cemetery) . . . . .	F. H. Gibbons, Esq., C.E. . . . .	5	1	3	591	749	29·50	..	122
Dudley (Trindle House) . . . . .	S. Staffs. Drainage Comm. . . . .	8	1	0	575	1004	39·52	..	..
3.—SEVERN—Upper Avon. 260 sq. mi.									
d Blockley (Upton Wold) . . . . .	E. W. Arkell, Esq. . . . .	5	1	0	800	860	33·87	195	150
Bredon (The Croft) . . . . .	Jasper Lambert, Esq. . . . .	5	1	1	120	626	24·66	173	..
d Shipston (Tidmington House) . . . . .	Miss Staunton . . . . .	5	1	0	231	661	26·03	..	..
d Evesham (Bengeworth) . . . . .	Messrs. Ross Bros., Ltd. . . . .	5	1	0	128	622	24·49	178	131
d Evesham (Lansdowne) . . . . .	R. Burlingham, Esq. . . . .	5	5	0	108	707	27·85	152	123
d Evesham (Sewage Works) . . . . .	L. Abbott, Esq. . . . .	8	3	0	86	640	25·21	187	137
d Evesham (Great Hampton) . . . . .	H. C. Boutflower, Esq. . . . .	5	1	0	130	646	25·43	164	132
Shipston (Cookhill Co. School) . . . . .	T. Barber, Esq. . . . .	5	1	0	400	666	26·22	173	..
d Redditch (Hewell Gardens) . . . . .	Mr. F. Molyneux . . . . .	5	1	0	469	757	29·80	189	146
d Alvechurch (Bordesley Hall) . . . . .	A. H. Wiggan, Esq. . . . .	12	4	0	490	818	32·20	177	149
d Alvechurch (High Croft) . . . . .	D. B. Grubb, Esq. . . . .	5	1	0	580	821	32·33	179	149
d Alvechurch (Fairfield) . . . . .	D. McMichael, Esq. . . . .	5	1	0	400	807	31·78	174	150
d Bromsgrove (Lower Bittal Res.) . . . . .	F. A. Jones, Esq., C.E. . . . .	5	3	0	457	829	32·64	194	146
4.—THAMES—Windrush & c. 10 sq. mi.									
5.—TRENT—Right Bank Tributaries. 56 sq. mi.									
d Halesowen (Frankley) . . . . .	F. W. Macaulay, Esq., C.E. . . . .	5	0	10	570	908	35·74	193	151

## DIVISION VI.—WEST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam.	Height Ground	above Sea Level.					
WARWICKSHIRE. (Area, 902 sq. mi.)		in.	ft.	in.	mm.	in.			
1.—SEVERN—Upper Avon. 603 sq. mi.									
d Long Compton (Weston Park) . . . . .	H. A. Warriner, Esq. . . . .	8	3	0	510	704	27·71	169	120
d Shipston-on-Stour (Cherington) . . . . .	L. G. Slade, Esq. . . . .	8	1	2	300	764	30·09	186	134
d Bidford (Moor Hall) . . . . .	E. H. Cubberley, Esq. . . . .	5	1	0	125	655	25·79	173	135
d Stratford-on-Avon (Milcote) . . . . .	F. W. Jones, Esq., C.E. . . . .	5	1	6	122	620	24·42	155	130
d Stratford-on-Avon (Avonfield) . . . . .	G. W. Everard, Esq. . . . .	5	6	0	120	585	23·01	164	..
d Stratford-on-Avon (Shottery H.) . . . . .	R. C. Carter, Esq. . . . .	5	0	8	140	609	23·97	160	121
d Alcester (Ragley Hall) . . . . .	Mr. C. Harding . . . . .	5	1	0	270	653	25·73	..	117
d Ashorne . . . . .	Mr. G. T. Osborn . . . . .	5	1	0	160	673	26·49	..	..
d Stratford-on-Avon (Snitterfield) . . . . .	F. W. Jones, Esq., C.E. . . . .	5	1	6	274	650	25·58	177	135
d Southam (Stockton House) . . . . .	G. B. Blyth, Esq. . . . .	6	1	4	394	627	24·68	194	129
d Studley College . . . . .	Miss E. H. Ekins . . . . .	5	0	9	235	699	27·52	164	135
d Warwick Castle Gardens . . . . .	Mr. H. F. Smale . . . . .	5	1	0	197	688	27·08	188	143
d Leamington (Pump Room Gdns.) . . . . .	H. Gibbins Ward, Esq. . . . .	8	0	9	165	639	25·17	161	131
d Willoughby Vicarage . . . . .	Rev. H. Trethewy . . . . .	5	1	0	300	688	27·10	179	149
d Henley-in-Arden (Hillfield) . . . . .	W. E. Milner, Esq. . . . .	5	1	0	450	727	28·64	171	134
m Henley-in-Arden (Hillfield) . . . . .	W. E. Milner, Esq. . . . .	5	0	10	450	723	28·48	..	..
d Tanworth-in-Arden . . . . .	F. Davies, Esq. . . . .	5	2	0	504	797	31·38	..	..
d Lapworth Rectory . . . . .	Lendon Bell, Esq. . . . .	5	0	11	436	779	30·67	168	135
d Lapworth Croft . . . . .	T. Birkett Barker, Esq. . . . .	5	1	6	410	825	32·49	141	127
d Dunchurch Lodge Gardens . . . . .	Mr. W. Lavender . . . . .	..	..	..	380	714	28·10	173	133
d Rugby (Bilton Grange) . . . . .	J. S. Buckby, Esq. . . . .	5	1	0	400	617	24·29	152	124
d Rugby (Caldecott) . . . . .	R. Broxton, Esq. . . . .	5	1	0	390	670	26·36	164	126
d Ryton-on-Dunsmore (Ryton Ho) . . . . .	Charles Browett, Esq. . . . .	5	1	2	260	750	29·54	177	143
d Coventry (Radcliffe Road) . . . . .	J. B. Morris, Esq. . . . .	5	1	0	339	761	29·97	186	137
d Coventry (City Hospital) . . . . .	E. H. Snell, Esq., M.D. . . . .	8	1	0	269	755	29·72	188	140
d Coventry (Keresley Grange) . . . . .	Miss H. Rotherham . . . . .	5	0	10	413	786	30·94	219	148
d Nuneaton (Astley Vicarage) . . . . .	Rev. I. F. H. Carr-Gregg . . . . .	5	1	0	440	726	28·59	..	..
2.—THAMES—Windrush & c. 2 sq. mi.									
3.—THAMES—Cherwell. 15 sq. mi.									
d Farnborough . . . . .	Miss C. A. Prater . . . . .	5	1	0	515	848	33·39	188	144
4.—TRENT—Right Bank Tributaries. 282 sq. mi.									
d Northfield (West Heath House) . . . . .	J. B. Shewell, Esq. . . . .	5	1	0	590	817	32·15	179	143
d Solihull (Marsh Cottage) . . . . .	Capt. E. P. Currall . . . . .	5	1	0	420	777	30·57	190	141
d Selly Oak (Bourneville) . . . . .	Messrs. Cadbury Bros., Ltd. . . . .	5	1	0	432	839	33·03	200	143
d Selly Oak (South Hill) . . . . .	W. Littleboy, Esq. . . . .	5	0	9	460	788	31·04	172	141
d Olton (Richmond Road) . . . . .	G. F. Lyndon, Esq. . . . .	5	1	0	400	851	33·50	198	143
d Moseley (Prospect Road) . . . . .	Rev. F. Oscar Lane . . . . .	5	1	0	550	834	32·85	182	137
d Moseley (Highfield Road) . . . . .	J. Newland Brown, Esq. . . . .	8	2	3	550	848	33·39	188	137
d Moseley (Russell Road) . . . . .	Ralph Priestman, Esq. . . . .	5	1	0	429	865	34·05	179	138
d Birmingham (Sparkhill) . . . . .	D. H. Owen, Esq. . . . .	5	1	0	426	887	34·93	194	141
d Birmingham (Edgbaston) . . . . .	A. J. Kelley, Esq. . . . .	8	1	6	525	818	32·20	192	144
m Birmingham (The Crescent) . . . . .	J. J. Gilbert, Esq. . . . .	5	7	0	480	853	33·59	..	..
d Birmingham (Gravelly Hill) . . . . .	W. Ll. Mold, Esq. . . . .	5	3	0	470	879	34·59	189	146
d Birmingham (Erdington) . . . . .	F. W. Macaulay, Esq., C.E. . . . .	5	1	2	472	765	30·11	194	145
d Minworth Greaves . . . . .	Birmingham Drainage Bd. . . . .	8	0	6	259	760	29·91	180	138
d Whitacre (Birmingham W.W.) . . . . .	F. W. Macaulay, Esq., C.E. . . . .	5	1	0	269	719	28·32	192	133
d Sutton Coldfield (The Park) . . . . .	Mr. H. Harland . . . . .	5	1	0	370	770	30·33	173	137

## DIVISION VII.—NORTH MIDLAND COUNTIES.

LEICESTERSHIRE. (Area, 824 sq. mi.)

**1.—SEVERN—Upper Avon. 41 sq. mi.**

d Welford (The Reservoir) . . . . .	T. W. Millner, Esq. . . . .	5	1	6	430	745	29·34	195	139
d Lutterworth Water Works . . . . .	W. Keay, Esq., C.E. . . . .	8	1	11	414	708	27·86	..	..
d Bitteswell (C.E. School) . . . . .	L. L. Cort, Esq. . . . .	5	1	6	401	793	31·23	..	..

## DIVISION VII.—NORTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
LEICESTERSHIRE—(con.).		in	ft.	in.	ft.	mm.	in.		
2.—WELLAND. 96 sq. mi.									
d Market Harborough (Rose Hill)	G. O. Nicholson, Esq.	5	1	0	350	724	28·50	164	130
d East Langton Grange	J. W. Logan, Esq., M.P.	5	1	0	300	664	26·13	..	119
d Kibworth Beauchamp	E. V. Phillips, Esq.	9	2	6	390	788	31·01	171	132
Hallaton Hall	Mr. T. Beers	8	1	3	366	678	26·69	..	..
d Knossington Rectory	Rev. G. G. Wilkinson	5	0	11	575	831	32·73	189	145
3.—WITHAM. 7 sq. mi.									
4.—TRENT—Right Bank Tributaries. 680 sq. mi.									
d Wistow Hall Gardens	The Lord Cottlesloe	5	1	0	309	724	28·49	160	133
d Countesthorpe (Wigston Sew Fm.)	W. G. J. Clark, Esq., C.E.	8	0	9	257	717	28·24	204	126
d Leicester (Stoughton Drive)	Theodore B. Ellis, Esq.	5	0	6	315	667	26·26	185	125
d Leicester (Town Hall Square)	E. G. Mawbey, Esq., C.E.	5	0	6	212	676	26·63	177	125
d Leicester (Town Hall Sq.)	(R) E. G. Mawbey, Esq., C.E.	7	1	8	212	676	26·61	178	125
d Leicester (Westcotes Drive)	C. Modlen, Esq.	5	0	11	200	683	26·90	168	129
d Market Bosworth (Osbaston Hall)	Sir Thomas Cope, Bart.	8	1	0	393	720	28·33	205	147
* Leicester City Mental Hosp.	S. C. Leak, Esq.	8	1	0	266	742	29·23	187	138
d Leicester (Gilroes Cemetery)	E. G. Mawbey, Esq., C.E.	5	1	0	285	743	29·25	180	132
d Thornton Reservoir	G. T. Edwards, Esq., C.E.	8	1	2	371	810	31·88	180	150
d Cropstone (Bradgate Res.)	G. T. Edwards, Esq., C.E.	8	1	0	246	878	34·56	183	145
d Barkby Hall	Victor R. Pochin, Esq.	5	0	6	227	749	29·50	176	137
d Swithland (The Brand)	G. T. Edwards, Esq., C.E.	8	1	0	172	812	31·96	164	142
d Ashby-de-la-Zouch (Coleorton)	Mr. C. Watson	5	2	0	540	783	30·82	..	..
d Barrow-upon-Soar (The Mount)	Mrs. C. Stuart Thomson	5	1	6	..	716	28·20	150	132
d Hoby (The Grange)	A. A. Ironside, Esq.	5	1	0	241	686	27·00	166	126
d Asfordby Rectory	Rev. W. R. Finch	5	0	11	212	744	29·28	173	132
d Asfordby (Ironworks)	The Stanton Ironw'rks Co. Ltd.	5	1	1	300	740	29·15	134	111
d Melton Mowbray (White Lodge)	R. Barker, Esq.	8	1	0	236	773	30·44	187	131
d Melton Mowbray	Hon. Gerald Walsh	5	1	0	345	767	30·21	186	132
d Charnwood For. (Blackbrook R)	A. H. Walker, Esq., C.E.	5	1	0	379	817	32·18	191	152
d Loughborough (Nan Pantan Res)	A. H. Walker, Esq., C.E.	8	1	0	269	854	33·63	189	139
Loughborough (The Widenings)	Adrian Young, Esq.	5	0	7	197	742	29·23	193	138
d Loughborough (Sewage Farm)	A. H. Walker, Esq., C.E.	8	1	0	134	710	27·95	146	124
d Burton-on-the-Wolds (Burtn H.)	Earl of Huntingdon	5	1	0	270	738	29·07	160	141
d Prestwold Hall	Mr. W. Coe	8	1	0	209	774	30·49	188	138
d Croxton Kerrial School	C. J. Prowse, Esq.	5	1	0	480	825	32·47	187	135
d Belvoir Castle Gardens	The Duke of Rutland, K.G.	8	1	0	259	788	31·04	171	128
RUTLAND. (Area, 152 sq. mi.)									
1.—WELLAND. 125 sq. mi.									
d Uppingham (Farleigh)	D. J. Walters, Esq.	5	0	8	503	735	28·95	..	..
d Uppingham (Ridlington)	N. W. Wortley, Esq.	5	4	7	527	777	30·60	178	141
2.—WITHAM. 5 sq. mi.									
3.—TRENT—Right Bank Tributaries. 22 sq. mi.									
LINCOLNSHIRE. (Area, 2646 sq. mi.)									
1.—NENE. 100 sq. mi.									
d Tydd (North Level Sluice)	Mr. S. Fovargue	5	3	0	10	611	24·05	174	116
d Long Sutton (Lutton Lodge)	Mrs. T. A. Dring	5	2	2	20	588	23·16	190	127
2.—WELLAND. 341 sq. mi.									
d Crowland (Bank House)	J. Goodacre, Esq.	5	6	0	10	569	22·41	107	98
d Market Deeping (Wilsthorpe)	W. H. A. Court, Esq., C.E.	8	3	10	55	580	22·82	162	109
Holywell Hall	Lt.-Col. A. A. H. Reynardson	5	0	9	137	785	30·90	182	..
d Bourne (Secondary School)	L. Davies-Shiel, Esq.	5	1	0	40	709	27·93	184	130
d Bourne (Guthram)	F. S. Robins, Esq., C.E.	8	1	6	19	574	22·60	183	121
d Bourne (Edenham School)	O. Davies, Esq.	5	1	0	115	787	30·99	182	131
d Spalding (Pode Hole)	H. Bain, Esq.	8	1	3	12	668	26·31	220	134
d Grimsthorpe Castle Gardens	Mr. F. J. Foster	5	1	0	200	784	30·87	178	131

\* Formerly called Humberstone Asylum.

## DIVISION VII.—NORTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
LINCOLNSHIRE—(con.).		in.	ft. in.	ft.	mm.	in.		
<b>3.—WITHAM &amp; C. 1085 sq. mi.</b>								
d Stainby Rectory .....	Rev. W. L. de B. Thorold	4	0 9	496	837	32·95	143	127
d Stroxton Rectory .....	Rev. S. C. Wood	5	0 10	350	823	32·41	..	..
d Denton Manor .....	Sir C. G. E. Welby, Bt., C.B.	5	1 0	310	781	30·76	198	134
d Grantham (Saltersford) .....	H. Preston, Esq.	5	0 6	188	773	30·43	186	130
d Grantham (Guildhall) .....	G. A. Ballard, Esq., C.E.	5	13 6	206	748	29·45	181	133
d Boston (Black Sluice, Skirbeck) .....	F. S. Robins, Esq., C.E.	8	1 3	11	627	24·68	191	136
d Boston (Grand Sluice) .....	J. H. Johnson, Esq., C.E.	8	8 0	18	614	24·19	186	129
d Boston (Bargate End) .....	A. O. Scrivener, Esq.	8	1 4	9	624	24·58	185	124
d Sleaford (Kesteven County Asy.) .....	Dr. J. A. Ewan	5	0 9	100	645	25·41	191	126
d Fulbeck Hall .....	Col. King Fane	5	1 0	180	651	25·63	211	127
d Cranwell .....	Air Ministry	8	1 0	236	644	25·35	178	120
d New Leake (Lade Bank Engine) .....	J. H. Johnson, Esq., C.E.	8	1 0	10	582	22·90	..	108
d Carrington Grange .....	Mr. T. J. Ward	5	6 0	15	624	24·58	169	135
d Wellingore .....	Miss A. S. Morley	5	1 0	..	621	24·45	182	119
d Navenby Rectory .....	Mr. J. Thompson	5	1 0	218	657	25·87	..	..
d Carlton-le-Moorland .....	J. Brocklebank, Esq.	5	1 2	49	699	27·51	172	128
d East Kirkby (E. Kirkby House) .....	Capt. R. S. Fieldsend	5	1 0	90	623	24·51	188	137
d Revesby Reservoir .....	J. Shaw, Esq.	5	2 0	124	659	25·96	174	136
d Woodhall Spa (Galm House) .....	J. Collins, Esq.	5	1 6	72	639	25·17	214	129
d Bardney Railway Station .....	A. Burridge, Esq., C.E.	8	7 6	25	542	21·34	175	116
d Horncastle .....	H. R. Maynard, Esq.	5	2 0	120	695	27·38	194	138
d Lincoln (Skellingthorpe Hall) .....	A. H. Berge-Coupland, Esq.	5	1 0	40	627	24·67	151	..
d Lincoln (Station) .....	Great Central Rly. Co.*	9	3 6	20	587	23·11	173	..
d Lincoln (Sessions House) .....	Arthur Smith, Esq.	5	1 3	58	631	24·83	174	111
d Lincoln (Cottesford Place) .....	F. A. Peacock, Esq.	6	0 9	224	688	27·10	189	127
d Hackthorn Hall .....	E. W. Cracroft, Esq.	5	4 6	105	651	25·65	188	124
d Willingham-by-Stow .....	R. C. Bacon, Esq.	8	2 0	65	677	26·65	187	129
d Springthorpe Rectory .....	Rev. B. Davies	5	1 0	75	623	24·54	161	119
<b>4.—GREAT EAU &amp; C. 443 sq. mi.</b>								
d Skegness (Estate Offices) .....	F. A. Jenkins, Esq.	8	1 0	13	638	25·11	192	142
d East Keal Rectory .....	Rev. R. H. Simpson	5	0 7	180	618	24·33	188	131
d Spilsby (Ashby Road) .....	J. Jarvis Rainey	5	1 0	160	669	26·36	179	130
d Hagworthingham (Glebe House) .....	Mr. R. Wright	5	1 8	240	701	27·61	180	139
d Alford (Finsbury Street) .....	Mr. E. Hodgson	5	1 0	38	632	24·88	184	..
d Mablethorpe (Trusthorpe Hall) .....	I. N. Woodiwiss, Esq.	8	1 3	10	747	29·42	202	142
d Louth (Westgate) .....	Rev. W. E. Yates	5	0 9	120	755	29·71	227	141
d S. Elkington (Elkington Hall) .....	Countess of Wilton	5	1 9	234	763	30·04	173	136
d Kirmond .....	C. Fieldsend, Esq.	5	1 2	309	778	30·64	197	138
d Wold Newton Manor .....	W. Maurice Wright, Esq.	5	1 0	230	745	29·35	..	..
d Grainsby Hall .....	Mr. J. Butters	5	1 0	75	713	28·08	212	142
<b>5.—HUMBER—Right Bank Tributaries. 428 sq. mi.</b>								
d North Willingham House .....	Mrs. Charles Wright	5	3 0	..	818	32·20	224	160
d Market Rasen .....	Great Central Rly. Co.	9	3 6	100	537	21·13	148	..
d Brigg Station .....	Great Central Rly. Co.	9	3 6	16	496	19·52	..	..
d Brigg .....	A. Atkinson, Esq., C.E.	8	1 2	11	615	24·20	180	127
d Grimsby (Abbey Road) .....	W. J. Wood, Esq.	5	3 6	23	658	25·91	180	133
d Grimsby .....	Great Central Rly. Co.	9	15 0	42	552	21·74	156	..
d Barnetby .....	Great Central Rly. Co.	9	3 6	52	620	24·40	161	..
d Brocklesby Park .....	Mr. F. C. Stainsby	5	2 0	108	722	28·41	168	137
d Burton-on-Stather (Normanby) .....	A. G. Wilkes, Esq.	5	1 0	185	644	25·36	179	133
d Winterton (Beech House) .....	Dr. E. J. Tongue	5	1 3	50	620	24·42	170	119
d Horkstow .....	E. J. Turton, Esq.	5	0 10	75	612	24·11	175	145
d Ferryby Sluice .....	A. Atkinson, Esq. C.E.	5	1 0	18	621	24·46	185	..
d New Holland .....	Great Central Rly. Co.	9	3 6	18	625	24·59	131	..
<b>6.—TRENT—Right Bank Tributaries. 172 sq. mi.</b>								
d Woolsthorpe .....	T. Wallis Gordon, Esq., C.E.	5	1 3	182	720	28·35	162	..
d Swinderby (Ling Moor) .....	Capt. Cecil H. Wray	5	1 0	50	745	29·32	175	149
d Torksey .....	Miss M. Burt	5	1 0	18	697	27·44	177	132
d Gate Burton Hall .....	Mr. J. H. Creed	5	2 0	97	631	24·85	..	119
d Gainsborough .....	Great Central Rly. Co.	9	..	76	581	22·89	145	..

\* Kept for the Canal Department of the Great Central Railway Company.

## DIVISION VII.—NORTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
LINCOLNSHIRE—(con.).		ft.	in.	ft.	in.	mm.	in.		
7.—TRENT—Left Bank Tributaries. 77 sq. mi.									
d Wroot (S. Level Pump Station)	Mr. F. S. Trafford	10	4	0	13	601	23·64	..	120
d Crowle (N. Level Pump. Station)	Mr. H. G. Trafford	5	2	6	13	595	23·44	..	117
.. Keadby	Great Central Rly. Co.	9	3	6	17	594	23·37	171	..
NOTTINGHAMSHIRE. (Area, 843 sq. mi.)									
1.—WITHAM. 10 sq. mi.									
2.—TRENT—Right Bank Tributaries. 218 sq. mi.									
Loughborough (Costock School)	Miss S. E. Beecroft	5	1	0	167	721	28·40	181	137
d Kingston (Midland Agric. Coll.)	J. H. Beale, Esq.	5	1	0	125	610	24·03	163	109
d Plumtree (Normanton-on-Wolds)	T. A. Hill, Esq.	8	2	0	170	707	27·83	191	126
d Nottingham (Wilford Hill Res.)	F. W. Davies, Esq., C.E.	8	0	10	296	687	27·04	188	134
3.—TRENT—Derwent. 2 sq. mi.									
4.—TRENT—Erewash. 42 sq. mi.									
d Nottingham (Strelley)	T. L. K. Edge, Esq.	8	1	0	386	752	29·59	199	134
d Nottingham (Strelley Hall)	T. L. K. Edge, Esq.	5	1	0	377	741	29·17	187	129
m Nottingham (Strelley Hall)	T. L. K. Edge, Esq.	5	1	0	377	755	29·72	..	..
d Bulwell (Watnall Reservoir)	F. W. Davies, Esq., C.E.	8	0	11	472	799	31·47	210	140
d Eastwood Waterworks	F. W. Davies, Esq., C.E.	8	1	2	244	726	28·60	165	122
d Eastwood Hall	Messrs. Barber Walker & Co.	5	1	0	218	945	37·22?	175	132
d Eastwood (Moorgreen Res.)	Great Northern Rly Co.	5	6	0	301	765	30·13	197	143
d Annesley (Selston W.W.)	S. Maylan, Esq.	5	1	0	475	797	31·39	166	119
5.—TRENT—Left Bank Tributaries. 569 sq. mi.									
Beeston (Council Depot)	E. A. Bush, Esq.	5	1	0	120	706	27·81	180	..
d Lenton (Lenton Fields)	R. F. T. Granger, Esq.	8	1	0	132	697	27·46	186	124
d Nottingham (Trent Lane) .. (r.)	T. Wallis Gordon, Esq., C.E.	8	1	0	85	682	26·86	179	122
d Nottingham (The Castle)	T. Wallis Gordon, Esq., C.E.	8	1	0	192	717	28·25	194	132
d Nottingham (The Castle)	T. Wallis Gordon, Esq., C.E.	8	76	0	268	623	24·53	169	115
d Nottingham (Burford Road)	A. B. Tinn, Esq.	5	1	0	170	731	28·79	186	125
d Nottingham (Stoke Bardolph)	T. Wallis Gordon, Esq., C.E.	8	1	0	66	760	29·92	169	..
d Nottingham (Mapperley Hill)	Dr. G. L. Brunton	8	1	0	400	731	28·79	..	..
Bagthorpe (Isolation Hospital)	P. Boobyer, Esq., M.D.	8	2	0	189	726	28·59	188	121
d Nottingham (Basford W.W.)	F. W. Davies, Esq., C.E.	8	1	0	169	744	29·30	180	128
d Burton Joyce Water Works	F. W. Davies, Esq., C.E.	8	0	9	65	784	30·87	174	139
Bulcote (Corporation Farm)	T. Wallis Gordon, Esq., C.E.	10	1	0	65	740	29·15	176	..
Lowdham (Chilwell Nurseries)	Mr. J. D. Pearson	5	1	7	90	721	28·39	..	..
d Bulwell (Bestwood W. W.)	F. W. Davies, Esq., C.E.	8	1	2	317	705	27·76	174	126
d Daybrook (Red Hill Reservoir)	F. W. Davies, Esq., C.E.	8	0	11	407	787	30·98	214	134
d Daybrook (Ramsdale Hill Res.)	F. W. Davies, Esq., C.E.	8	0	11	495	804	31·67	211	140
Bulwell Hall Park	T. Wallis Gordon, Esq., C.E.	8	1	0	252	761	29·97	187	..
d Hucknall (Forge Mills)	Messrs. J. & T. Walker, Ltd.	5	4	3	200	711	28·00	155	123
Bleasby (Farnsworth Farm)	G. F. Campion, Esq.	5	1	0	170	733	28·85	..	..
d Papplewick (Water Works)	F. W. Davies, Esq., C.E.	8	0	10	317	811	31·91	191	131
Southwell (The Residence)	Vn. Acn. W. J. Conybeare	5	1	0	106	779	30·66	176	..
d Southwell (Elmfield)	Dr. H. Handford	5	1	0	133	745	29·33	175	119
m Southwell (Elmfield)	(A) Dr. H. Handford	5	1	0	133	738	29·06	..	..
m Southwell (Elmfield)	(B) Dr. H. Handford	5	1	0	130	756	29·76	..	..
d Sutton-in-Ashfield (Rushley P.S.)	Messrs. G. & F. W. Hodson	5	1	0	462	874	34·42	160	130
d Sutton-in-Ashfield (Sew. Wks.)	F. J. Grierson, Esq.	5	1	0	453	872	34·32	184	145
d Mansfield (Rainworth W.W.)	J. Gibson, Esq., C.E.	5	1	0	360	894	35·20	199	135
d Mansfield (High Oakham)	P. J. Shacklock, Esq.	5	1	0	425	988	38·88	204	149
d Mansfield (West Bank)	W. Pickard, Esq.	8	1	0	405	871	34·27	199	138
Mansfield (Debdale Hall)	Francis N. Ellis, Esq.	5	1	0	400	894	35·18	145	132
d Clipstone Water Works	J. Gibson, Esq., C.E.	5	1	0	225	788	31·04	172	125
d Ollerton (Boughton W.W.)	F. W. Davies, Esq., C.E.	8	0	7	141	750	29·52	177	123
d Ollerton (Thoresby Gardens)	Mr. A. Simmons	8	0	9	125	917	36·11	157	127
Clumber Gardens	A. E. Elliott, Esq.	5	4	0	164	833	32·80	192	142
Elkesley Pumping Station	C. Horobin, Esq., C.E.	5	1	0	120	733	28·86	17	115

## DIVISION VII.—NORTH MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
NOTTINGHAMSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
5.—TRENT—Left Bank Tributaries—(con.).									
Workshop (Hardwick)	A. E. Elliott, Esq.	5	1	6	149	747	29·39	161	118
d Workshop (Carlton Road)	J. Edeson, Esq.	5	1	1	130	623	24·52?	187	118
Workshop	Great Central Rly. Co.	9	3	6	127	710	27·95	159	..
d Workshop (Osberton Gardens)	James Hay, Esq.	5	3	6	70	728	28·67	169	130
Retford	Great Central Rly. Co.	9	3	6	52	674	26·55	181	..
d Retford (Grammar School)	W. P. McFerran, Esq.	8	1	2	53	730	28·74	171	131
d Retford (Morton Hall)	W. H. Mason, Esq.	5	1	0	140	727	28·64	163	121
d Retford (Sewage Disposal Works)	R. E. Wilson, Esq.	5	1	0	74	776	30·54	201	146
d Workshop (Wigthorpe Hill)	R. C. Ramsden, Esq.	5	1	0	100	709	27·91	169	119
d Workshop (Hodsock Priory)	Lt.-Col. H. Mellish, C.B.	8	1	0	56	733	28·85	184	123
m Workshop (Hodsock Priory)	Lt.-Col. H. Mellish, C.B.	5	1	0	56	722	28·42	..	..
Workshop (Hodsock Priory) (r.)	Lt.-Col. H. Mellish, C.B.	11	1	6	56	733	28·85	185	120
d Scrooby	Mr. J. Mallender	5	1	0	44	707	27·82	182	126
d Bawtry Hall (The Gardens)	Mr. F. E. Hogbin	5	1	0	31	737	29·01	160	120
Stockwith	Great Central Rly. Co.	9	3	6	21	653	25·72	172	..
6.—OUSE—Don. 2 sq. mi.									
DERBYSHIRE. (Area, 1029 sq. mi.)									
1.—MERSEY, UPPER. 93 sq. mi.									
Comb's Reservoir	Great Central Rly. Co.	9	3	6	710	1016	39·99	216	..
Chapel-en-le-Frith	Great Central Rly. Co.	9	3	6	965	985	38·77	209	..
d Whaley Bridge (Mosley Hall)	S. Arrowsmith, Esq.	5	1	0	760	1148	45·21	220	169
d Glossop W. W. (Swineshaw)	Mr. J. Garner	12	3	0	733	1075	42·34	214	178
Woodhead Station	Great Central Rly. Co.	9	3	6	878	1344	52·93	211	..
2.—MERSEY—Weaver. 2 sq. mi.									
3.—TRENT—Right Bank Tributaries. 68 sq. mi.									
d Repton (The Croft)	H. C. Hayward, Esq.	5	1	4	170	772	30·39	187	141
d Stanton-by-Bridge W.W.	H. Raden, Esq., C.E.	8	1	2	144	697	27·43	152	129
4.—TRENT—Dove. 156 sq. mi.									
d Hilton (Council School)	G. T. Rogers, Esq.	5	1	6	174	618	24·33	..	..
d Snelston Hall	Mr. A. Bennett	5	1	0	531	864	34·01	174	143
d Ashbourne Water Works	E. Wright, Esq.	5	1	0	582	888	34·95	168	138
d Ashbourne (The Mansion)	R. E. Sadler, Esq.	5	1	0	396	927	36·50	191	145
5.—TRENT—Left Bank Tributaries. 84 sq. mi.									
Findern (The Longlands)	Mrs. B. W. Spilsbury	5	0	9	186	699	27·54	165	124
d Etwall (Blakeley Lodge)	Mr. R. Giles	5	1	0	190	673	26·51	..	..
d Etwall (Sewage Farm)	Mr. B. Hydes	5	13	0	201	619	24·35	158	124
d Micklegate (C. Mental Hospital)	G. V. Bartlett, Esq., M.D.	5	3	0	300	702	27·64	153	128
d Micklegate (Clyde House)	Mr. J. Campbell	5	2	0	280	764	30·08	178	127
Littleover (The Knoll)	W. Blews Robotham, Esq.	5	1	0	300	726	28·59	179	13
d Littleover (Hilltop)	E. McInnes, Esq.	5	2	6	346	697	27·44	187	132
6.—TRENT—Derwent. 428 sq. mi.									
d Spondon (Derby Sewage Wks.)	C. A. Clews, Esq., C.E.	5	1	3	135	701	27·61	184	127
d Derby (Osmaston Rd.)	Sir Henry Fowler	5	1	10	..	720	28·34	172	126
d Derby (Wild Street)	Messrs. J. Davis & Son, Ltd	5	1	0	174	745	29·31	198	141
d Derby (L.M. & S. Railway)	J. Sayers, Esq.	5	1	5	156	679	26·72	164	121
d Derby (Royal Infirmary)	W. Banks, Esq.	5	1	0	195	767	30·19	..	140
d Derby (The Arboretum)	C. A. Clews, Esq., C.E.	8	1	0	196	701	27·62	169	121
Kirk Langley (Langley Hall)	G. W. Peach, Esq.	5	1	5	396	787	30·98	185	136
d Duffield (The Kirkstyles)	Messrs. J. Davis & Son	5	1	0	235	801	31·54	187	138
d Belper (Herbert Strutt Sch.)	Cecil Round, Esq.	5	0	8	223	867	34·13	208	145
d Belper (Fernslope)	F. J. Jackson, Esq.	5	1	6	356	847	33·35	176	133
d Belper (Quarry Bank)	J. Hunter, Esq., C.E.	5	0	10	281	830	32·66	179	135

## DIVISION VII.—NORTH-MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
DERBYSHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
6.—TRENT—Derwent—(con.).									
Ambergate Reservoir . . . . .	No. 61 S. B. Winsor, Esq., C.E. . .	5	1	0	700	845	33·28	157	138
d Wirksworth (Manor House) . . . . .	T. Atkinson, Esq. . . . .	5	1	0	498	1072	42·19	210	155
d Whatstandwell (Meerbrk Sough) Messrs. G. & F. W. Hodson	5	1	0	246	966	38·04	197	140	
Matlock Bath (Lower Tower) . . . . .	Miss E. Chadwick . . . . .	5	1	1	500	945	37·21	..	..
d Darley Dale (Whitworth Inst.) . . . . .	E. Evans, Esq. . . . .	5	1	8	361	924	36·38	198	151
d Darley Hall . . . . .	A. Clay, Esq. . . . .	5	1	0	400	921	36·27	210	150
d Darley Dale (Stancliffe Hall) (R) . . . . .	Maj. T. Bedford Franklin. . . . .	8	1	0	560	968	38·12	198	138
d Clay Cross (Press Reservoirs) . . . . .	Gilbert Frith, Esq., C.E. . . . .	8	1	0	810	1005	39·56	151	141
Buxton (Hurdlow Top) . . . . .	E. H. d'E. Darby, Esq. . . . .	8	2	3	1267	1053	41·46	..	..
d Chatsworth Gardens . . . . .	Mr. G. F. Marples . . . . .	5	1	0	436	693	27·27?	176	135
d Buxton (Portobello Bar) . . . . .	F. Langley, Esq., C.E. . . . .	8	1	0	1600	1471	57·92	247	187
d Buxton (Stanley Moor) . . . . .	F. Langley, Esq., C.E. . . . .	8	1	0	1340	1385	54·54	239	179
d Buxton (Burbage Edge) . . . . .	F. Langley, Esq., C.E. . . . .	8	1	0	1400	1389	54·68	240	178
d Buxton (Devonshire Hospital) . . . . .	Messrs. W. Pilkington & Son	5	1	0	988	1193	46·95	219	179
d Holmesfield (Barbrook Res.) . . . . .	Gilbert Frith Esq., C.E. . . . .	8	1	0	1080	823	32·38	198	156
w Froggatt Edge (Stoke Flat Filters) J. Gratton Bown, Esq. . . . .	5	1	0	960	1129	44·46	..	..	..
d Bamford (Engineer's Office) 60 S. B. Winsor, Esq., C.E. . . . .	8	2	0	510	1053	41·46	252	176	
Bamford Filters . . . . .	No. 70 S. B. Winsor, Esq., C.E. . . . .	8	1	0	656	1034	40·71	246	176
d Hope (Killhill Bridge) . . . . .	No. 56 D. W. Chadwick, Esq. . . . .	5	1	0	555	1112	43·78	220	175
Bamford (Yorkshire Br. Weir) 59 S. B. Winsor, Esq., C.E. . . . .	5	1	0	540	1064	41·90	..	..	..
Derwent Vicarage . . . . .	No. 67 S. B. Winsor, Esq., C.E. . . . .	8	1	0	675	1206	47·49	214	181
Derwent (Lockerbrook Plant.) 68 S. B. Winsor, Esq., C.E. . . . .	5	1	0	755	1296	51·04	..	..	..
Derwent Dam . . . . .	No. 26 S. B. Winsor, Esq., C.E. . . . .	8	1	0	790	1232	48·51	232	183
Woodland Dale (Woodlnds, S) 48 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1044	1072	42·19	..	..	..
Woodland Dale (Woodlnds, N) 47 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1063	1217	47·92	..	..	..
Hayfield (Ashop Head) No. 43 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1650	1207	47·50	..	..	..
Derwent Dale (Shire Owlers) 69 S. B. Winsor, Esq., C.E. . . . .	5	1	0	825	1256	49·45	..	..	..
Derwent Dale (Birchinlee) No. 23 S. B. Winsor, Esq., C.E. . . . .	8	1	0	870	1362	53·63	228	181	
Westend Bridge . . . . .	No. 66 S. B. Winsor, Esq., C.E. . . . .	5	1	0	878	1317	51·84	..	..
Lady Clough Moor . . . . .	No. 41 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1720	1207	47·50	..	..
Coldharbour Moor (Summit) 39 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1670	1234	48·60	..	..	..
Derwent Dale (Howden Dam) 17 S. B. Winsor, Esq., C.E. . . . .	8	1	0	829	1296	51·01	227	183	
Derwent Dale (Ridge Farm) 13 S. B. Winsor, Esq., C.E. . . . .	8	1	0	1175	1177	46·34	..	..	..
Alport Moor (Glethering Cl.) 40 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1640	1259	49·55	..	..	..
Westend Moor (Blacklow Cote) 15 S. B. Winsor, Esq., C.E. . . . .	5	1	0	970	1376	54·17	..	..	..
Westend Moor . . . . .	No. 10 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1560	1247	49·11	..	..
Alport Moor . . . . .	No. 38 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1790	1278	50·30	..	..
Broadhead Clough . . . . .	No. 63 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1005	1445	56·91	..	..
Derwent Dale (Slippery Stones) 62 S. B. Winsor, Esq., C.E. . . . .	5	1	0	908	1322	52·05	..	..	..
Ridgewalk Moor . . . . .	No. 9 S. B. Winsor, Esq., C.E. . . . .	5	1	0	1650	1223	48·16	..	..
7.—TRENT—Erewash. 50 sq. mi.									
d Codnor (Cross Hill) . . . . .	A. F. Pine, Esq. . . . .	5	1	0	372	814	32·04	185	142
d Codnor Park . . . . .	Midland Railway Co. . . . .	5	1	0	243	886	34·89	209	142
d Butterley Park . . . . .	G. F. Wright, Esq. . . . .	5	1	2	413	805	31·69	..	..
8.—OUSE—Don. 148 sq. mi.									
d Grassmoor Colliery . . . . .	Mr. J. Norman . . . . .	5	19	10	370	601	23·65	..	..
Chesterfield (Central Station) . . . . .	Great Central Rly. Co. . . . .	9	3	6	250	760	29·91	148	..
d Chesterfield (Sewage Works) . . . . .	Mr. W. Tomlinson . . . . .	5	2	0	222	795	31·28	147	122
d Chesterfield (Linacre Res.) . . . . .	Chesterfield Water Board . . . . .	8	1	0	460	958	37·72	188	149
d Chesterfield (Linacre Res.) . . . . .	Chesterfield Water Board . . . . .	5	1	0	490	910	35·83	188	148
d Chesterfield (Tapton Grove) . . . . .	Mr. W. R. Bloxham . . . . .	5	4	3	400	772	30·38	151	124
d Totley Hall . . . . .	W. A. Milner, Esq. . . . .	5	1	0	700	1041	41·00	199	164
Eckington (Can. ms End. Sch.) . . . . .	A. W. H. Hill, Esq. . . . .	5	1	0	200	814	32·03	..	..
d Eckington (Mosbrough C.E. Sch.) . . . . .	W. H. Holmes, Esq. . . . .	5	1	0	330	790	31·09	174	130
Killamarsh (Norwood) . . . . .	Great Central Rly. Co. . . . .	9	3	6	226	765	30·11	186	..

## DIVISION VIII.—NORTH-WESTERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
CHESHIRE. (Area, 1027 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
1.—MERSEY, UPPER. 269 sq. mi.									
D Langley (Bottoms Res.)	E. Hamson, Esq., C.E.	5	1	0	664	1092	43·00	196	169
D Macclesfield (Leadbeaters Res.)	E. Hamson, Esq., C.E.	5	1	0	608	900	35·42	206	162
D Macclesfield (West Park)	Mr. S. H. Moss	5	1	0	501	916	36·08	200	170
D Macclesfield	Great Central Rly Co.	9	3	6	539	736	28·97	208	..
d Rainow (The Clough)	Miss Anna Neave	5	1	0	815	913	35·93	..	..
D Knutsford (Hazlefield)	H. P. Ashworth, Esq.	..	..	..	..	793	31·21	..	..
D Wilmslow (Parksyde)	J. H. Neave, Esq.	8	1	0	255	839	33·03	201	153
D Wilmslow (Dean Row)	J. H. Cooke, Esq.	5	1	0	292	889	34·99	204	154
D Kettleshulme (Glebe House)	A. Y. Barker, Esq.	5	1	6	850	1067	42·01	197	162
D Whaley Bridge	Great Central Rly. Co.	9	3	6	602	1103	43·43	222	..
D Poynton (Waterloo)	C. F. Butterworth, Esq.	5	1	0	397	907	35·73	205	164
D Disley (Lyme Park)	T. Molyneux, Esq., C.E.	5	1	0	674	838	33·00	207	167
D Bramhall (Bramhall Lane)	S. O'Dwyer, Esq.	5	1	0	256	847	33·34	157	132
D Runcorn (Weston Point)	Col. J. A. Saner, C.E.	8	1	4	17	803	31·61	189	151
D Thelwall (The Clough)	E. W. Reynolds, Esq.	5	1	0	95	814	32·06	200	153
d Altrincham (Hale)	F. C. Lamb, Esq., Jr.	5	0	11	122	852	33·53	..	..
d Altrincham (Norman's Place)	Miss G. A. Griffiths	5	8	0	150	944	37·16	..	..
d Altrincham (Barrington House)	C. E. Newton, Esq., C.E.	8	2	6	103	856	33·69	..	..
d Cheadle (Adswold)	R. W. Wright, Esq.	5	0	6	186	857	33·72	..	..
D Northenden (Wythenshawe Hall)	T. E. Tatton, Esq.	5	1	0	114	801	31·52	194	147
M Northenden (Wythenshawe Hall)	T. E. Tatton, Esq.	8	1	6	114	797	31·37	..	..
D Marple Top Lock	Great Central Rly. Co.	9	3	6	523	859	33·83	180	..
D Carrington Vicarage	Rev. J. S. Addison	5	2	0	55	753	29·66	195	143
D Godley Reservoir	L. Holme Lewis, Esq., C.E.	12	2	0	500	890	35·05	..	..
D Newton	Great Central Rly. Co.	9	3	6	396	823	32·40	187	..
D Mottram Station	Great Central Rly. Co.	9	3	6	452	925	36·40	183	..
D Broadbottom (Harewood Lodge)	Col. W. Sidebottom	5	1	0	440	948	37·31	185	168
D Dukinfield (Higher Reservoir)	G. H. Raddin, Esq., C.E.	8	1	6	495	755	29·73	213	152
D Dukinfield (Lower Reservoir)	G. H. Raddin, Esq., C.E.	5	1	0	435	857	33·76	213	157
D Arnfield Reservoir	L. Holme Lewis, Esq., C.E.	12	2	0	550	1052	41·43	..	..
D Rhodes Wood Reservoir	L. Holme Lewis, Esq., C.E.	12	2	0	520	1175	46·28	..	..
D Torside Reservoir	L. Holme Lewis, Esq., C.E.	12	2	0	680	1255	49·41	..	..
D Stalybridge (Market Ground Yd.)	G. H. Raddin, Esq., C.E.	5	1	0	373	977	38·47	197	150
D Stalybridge (Brushes Filter Ho.)	G. H. Raddin, Esq., C.E.	5	1	6	616	1076	42·37	207	167
D Stalybridge (Brushes Filter Ho.)	G. H. Raddin, Esq., C.E.	6	3	0	615	1054	41·48	207	166
D Swineshaw Moor (Lees Hill)	G. H. Raddin, Esq., C.E.	5	1	0	1108	1061	41·78	..	..
D Woodhead Reservoir	L. Holme Lewis, Esq., C.E.	12	2	0	660	1429	56·25	..	..
2.—MERSEY—Weaver. 489 sq. mi.									
D Nantwich (Dorfold Hall)	Col. J. A. Saner, C.E.	8	1	0	190	755	29·74	204	152
D Nantwich (Reaseheath Hall)	Col. J. A. Saner, C.E.	8	1	0	130	737	29·02	211	152
D Crewe (Weston Lane)	W. H. Williams, Esq.	12	4	0	186	821	32·33	..	..
D Crewe (Isolation Hospital)	L. St. G. Wilkinson, Esq., C.E.	5	1	0	172	730	28·75	178	143
D Sandbach (Malkins Bank)	Messrs. Brunner, Mond & Co.	5	3	8	138	635	24·99	181	133
D Congleton (Buglawton Vicarage)	Col. J. A. Saner, C.E.	8	5	0	347	821	32·31	230	152
D Bosley Reservoir	Great Central Rly. Co.	9	3	6	590	917	36·12	200	..
D Bosley Minns	Great Central Rly. Co.	9	3	6	1210	774	30·49?	177	..
D Tarporley (Tirley Garth Gdns.)	Mr. J. B. Allan	5	3	6	450	761	29·98	200	146
D Middlewich	Messrs. Brunner, Mond & Co.	5	3	10	138	696	27·41	181	141
D Middlewich (Bostock Hall)	Capt. W. H. France-Hayhurst	5	2	0	157	766	30·16	..	139
D Norley (Jew.sh School)	H. P. Landon, Esq.	5	0	10	260	830	32·66	186	150
D Chelford (Astle Hall)	Sir G. Dixon, Bart.	5	1	0	250	797	31·36	169	149
M Chelford (Astle Hall)	Sir G. Dixon, Bart.	8	1	0	250	795	31·30	..	..
D Northwich	Great Central Rly. Co.	9	3	6	76	670	26·39	154	..
D Northwich (Hunts Lock)	Col. J. A. Saner, C.E.	8	1	0	47	774	30·47	206	149
D Northwich (Barnton)	D. W. Horner, Esq.	..	..	..	..	761	29·95	196	139
D Northwich (Winnington)	Messrs. Brunner, Mond & Co.	5	1	0	64	754	29·68	196	141
D Northwich (Lostock Gralam)	Messrs. Brunner, Mond & Co.	5	3	6	75	810	31·89	205	144
3.—MERSEY, LOWER & C. 142 sq. mi.									
D Ince Hall	Mrs. Park-Yates	5	1	0	95	838	32·99	207	154
D Hooton Water Works	A. J. Robinson, Esq.	5	1	0	97	758	29·86	192	143

## DIVISION VIII.—NORTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
CHESHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—MERSEY, LOWER & C.—(con.).									
D Eastham (Mill Hey) .....	Roger P. Sing, Esq. ....	5	1	7	125	922	36·29	200	147
D Eastham House .....	Sir J. Herbert Vernon, Bart.	5	1	0	100	814	32·03	205	152
D Wirral W. W. (Prenon) .....	A. J. Robinson, Esq. ....	5	1	0	91	679	26·72	174	122
D Rock Ferry (Elmhurst) .....	Miss Shepherd .....	8	6	0	100	794	31·27	169	129
D Birkenhead (Bidston Observ'y.)	W. E. Plummer, Esq. ....	8	1	0	189	660	25·97	178	132
D Hoylake (District Council Office)	R. W. Fraser, Esq. ....	5	1	0	29	710	27·97	172	140
D New Brighton (Marine Park) ..	Dr. T. W. N. Barlow .....	5	1	0	35	764	30·07	186	129
4.—DEE. 127 sq. mi.									
D Malpas (Chorlton Hall) .....	E. Radclyffe Crump, Esq.	5	1	0	210	711	27·99	188	144
D Eaton Hall Gardens .....	Mr. N. F. Barnes .....	5	3	6	72	664	26·15	170	124
D Eccleston .....	E. Wells, Esq. ....	5	1	1	94	697	27·42	166	135
D Rowton (Holly Bank) .....	R. J. Salmon, Esq. ....	5	1	5	123	663	26·09	162	122
D Chester (Abbot's Park) .....	J. H. Howell, Esq. ....	5	1	1	63	692	27·26	177	142
D Chester (Boughton) .....	Rev. Canon T. Urmson .....	5	1	0	58	654	25·76	181	134
D Chester (Sewage Works) .....	F. W. Davis, Esq. ....	5	1	0	34	611	24·06	164	120
D Chester (Water Works) .....	C. Wilfrid Bennett, Esq. ...	5	0	10	85	669	26·36	181	132
D Chester (Water Works) .....	C. Wilfrid Bennett, Esq. ...	8	6	0	89	650	25·60	179	133
D Chester (Northgate Station) ...	Great Central Rly. Co. ...	9	3	6	84	669	26·34	155	..
D Capenhurst Hall .....	R. T. Richardson, Esq. ...	5	5	10	130	810	31·90	189	145
D Neston (Vine House) .....	H. F. Russell, Esq. ....	5	1	0	111	659	25·95	188	129
D Heswall (Gayton Cottage) .....	L. N. Brooke, Esq. ....	5	1	0	29	647	25·48	..	..
D West Kirby (Hilbre House) ..	Egerton Macdona, Esq. ...	5	0	9	25	711	27·98	..	..
D West Kirby (Princes Av.) .....	Miss G. S. Kirkby .....	5	1	0	80	707	27·84	183	135
D West Kirby (St Andrew's Vic.)	Rev. E. F. Robson .....	5	0	9	30	657	25·88	177	130
SOUTH LANCASHIRE. (Area, 687 sq. mi.)									
1.—ALT & C. 103 sq. mi.									
D Great Crosby (Farnley) .....	J. Appleby, Esq. ....	5	1	0	53	737	29·03	173	127
D Blundellsands (Myra) .....	H. Montgomery, Esq. ....	5	1	0	35	742	29·20	194	139
D Ormskirk (Bickerstaffe P. Stn.)	C. Burton Ede, Esq., C.E. ...	5	1	2	128	841	33·09	214	162
D Ormskirk (Springfield P. Stn.)	C. Burton Ede, Esq., C.E. ...	5	0	11	70	847	33·33	212	164
D Downholland (Barton Moss) ...	J. Baxendell, Esq. ....	5	1	0	15	786	30·93	..	..
2.—MERSEY, LOWER. 240 sq. mi.									
D Garston .....	J. A. Brodie, Esq., C.E. ....	10	1	10	84	956	37·64	198	157
D Garston (Grassendale Park) ...	Miss E. C. Abraham .....	5	1	0	35	791	31·14	186	139
D Aigburth (Holmfield) .....	Miss Maxwell .....	5	1	0	100	815	32·10	195	144
D Aigburth (Beech Lawn) .....	T. H. Edwards, Esq. ....	8	1	0	150	789	31·05	188	140
D Woolton (Roseleigh Gardens) ..	Mr. J. Stoney .....	8	1	0	184	872	34·34	187	167
D Warrington (Central Station) ..	Great Central Rly. Co. ...	9	3	6	59	758	29·85	162	..
D Liverpool (Monument Place) ...	J. A. Brodie, Esq., C.E. ...	5	1	3	126	779	30·66	187	128
D Liverpool (Monument Place) (R)	J. A. Brodie, Esq., C.E. ...	10	4	6	129	754	29·67	190	129
D Liverpool (Smithdown Road) ...	J. A. Brodie, Esq., C.E. ...	10	0	9	135	871	34·27	202	148
D Liverpool (Rathbone Road) ...	J. A. Brodie, Esq., C.E. ...	10	1	0	199	961	37·84	194	143
D Liverpool (Lark Lane) .....	J. A. Brodie, Esq., C.E. ...	10	10	8	101	883	34·77	193	141
D Liverpool (Newsham Park) ...	J. A. Brodie, Esq., C.E. ...	10	1	0	140	903	35·54	197	145
D Liverpool (Huskisson Station) ..	Great Central Rly. Co. ...	9	3	6	42	747	29·42	191	..
D Liverpool (Breeze Lane) .....	J. A. Brodie, Esq., C.E. ...	5	0	9	135	882	34·74	203	140
D St. Helen's (Eccleston Hill) ...	A. W. Bradley, Esq. ....	8	3	0	268	851	33·51	194	147
D St. Helen's (Victoria Park) ...	F. Hauxwell, Esq. ....	8	1	5	160	881	34·70	209	149
D Earlestown (Newton Cemetery)	T. E. Clough, Esq. ....	5	1	0	75	823	32·40	..	119
D Leigh (Sewage Wks) .....	D. Ledson, Esq. ....	5	1	3	67	825	32·46	172	149
D Leigh (Leesrigg) .....	Maj. T. Hunter, V.D., C.E.	5	1	0	71	794	31·26	193	151
3.—MERSEY—Irwell. 299 sq. mi.									
D Manchester (Whalley Range) ...	F. Edwards, Esq. ....	5	1	0	90	850	33·48	188	156
D Manchester (Hullard Park) ...	E. E. Worrall, Esq., C.E. ....	8	1	1	100	897	35·33	170	149
D Urmston (Sew. Wks., Davyhulme)	G. F. Walter, Esq. ....	8	2	2	72	845	33·27	193	143

## DIVISION VIII.—NORTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
SOUTH LANCASHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—MERSEY—Irwell—(con.).									
D Manchester (Godlee Observ'y) . . . . .	W. C. Jenkins, Esq. . . . .	8	1	6	140	846	33·30	196	147
Manchester (Piccadilly) . . . . .	Great Central Rly. Co. . . . .	9	40	0	194	837	32·94	198	..
Manchester (Fairfield) . . . . .	Great Central Rly. Co. . . . .	9	6	0	312	917	36·09	212	..
D Manchester (Oldham Road) . . . . .	Dr. R. Veitch Clark . . . . .	5	1	0	191	945	37·21	197	156
D Manchester (Whitworth Park) . . . . .	Manchester University . . . . .	8	1	5	125	840	33·07	201	146
D Ashton-und.-Lyne (Knott H. Res.) . . . . .	G. H. Raddin, Esq., C.E. . . . .	8	1	0	605	1058	41·64	203	161
D Prestwich Sewage Works . . . . .	M. A. Piercy, Esq., C.E. . . . .	8	1	0	136	948	37·34	190	162
Prestwich Reservoir . . . . .	L. Holme Lewis, Esq., C.E. . . . .	12	2	0	357	922	36·30	..	..
D Prestwich (Heaton Park) . . . . .	Manchester Corporation . . . . .	8	1	0	312	996	39·23	199	157
D Oldham Gas Works . . . . .	Ernest Parry, Esq., C.E. . . . .	5	3	8	621	1143	44·98	204	163
Oldham (Honeywell Lane) . . . . .	Great Central Rly. Co. . . . .	8	3	6	553	1037	40·81	196	..
Oldham (Brushes Clough) <i>old g.</i> . . . .	C. J. Batley, Esq., C.E. . . . .	5	4	0	930	1147	45·15	210	166
Oldham (Brushes Clough) <i>new g.</i> . . . .	C. J. Batley, Esq., C.E. . . . .	5	5	0	955	1154	45·45	208	165
D Bolton (Queen's Park) . . . . .	T. Midgley, Esq. . . . .	5	1	0	342	1184	46·63	210	168
D Bolton (Heaton Reservoir) . . . . .	J. K. Swales, Esq., C.E. . . . .	5	1	0	500	1233	48·55	235	176
D Bolton (Bloomfield, Heaton) . . . . .	Mrs. F. Taylor, J.P. . . . .	5	1	0	530	1137	44·77	227	175
D Bolton (Smithills Hall) . . . . .	Col. R. H. Ainsworth . . . . .	8	1	2	510	1264	49·75	..	160
Bolton (Smithills Moor) . . . . .	Col. R. H. Ainsworth . . . . .	8	1	2	1375	1301	51·22	..	..
D Bury (Parsons Lane) . . . . .	R. B. Rigby, Esq. . . . .	8	9	6	316	1145	45·09	211	173
Bury (Bridge Hall) . . . . .	Miss Wrigley . . . . .	8	1	0	..	1088	42·85	182	168
D New Hey (Sewage Works) . . . . .	Mr. J. B. Ogden . . . . .	5	1	0	514	1085	42·71	183	147
Milnrow (Butterworth Hall) . . . . .	C. J. Batley, Esq., C.E. . . . .	5	1	0	512	1159	45·62	207	162
Milnrow (Piethorne, Kitcliffe) . . . . .	C. J. Batley, Esq., C.E. . . . .	5	4	6	769	1116	43·92	212	156
D Milnrow (Piethorne, Coldgreave) . . . . .	C. J. Batley, Esq., C.E. . . . .	5	4	6	894	1075	42·34	212	161
Milnrow (Piethorne, Norman Hill) . . . . .	C. J. Batley, Esq., C.E. . . . .	5	4	6	1076	1002	39·44	211	151
Milnrow (Piethorne, Rooden Res.) . . . . .	C. J. Batley, Esq., C.E. . . . .	5	4	6	1131	967	38·08	212	154
D Rochdale (Roch Mills Sew. Wks) . . . . .	S. H. Morgan, Esq. . . . .	8	1	1	363	1120	44·09	217	170
D Rochdale (Broadfield Pk. Obsy.) . . . . .	Dr. A. G. Anderson . . . . .	8	0	6	472	1111	43·73	218	170
D Rochdale (Fieldhead Yard) . . . . .	S. H. Morgan, Esq. . . . .	8	12	0	484	1030	40·56	185	153
D Rochdale (Ashworth Moor Res.) . . . . .	J. S. Diggle, Esq., C.E. . . . .	5	1	2	956	1124	44·26	200	166
D Bury (Gin Hall) . . . . .	No. 1 J. Woodhead Smith, Esq., C.E. . . . .	8	1	0	475	1243	48·92	208	173
D Bury (Gin Hall) . . . . .	No. 2 J. Woodhead Smith, Esq., C.E. . . . .	8	1	0	475	1271	50·04	208	174
D Belmont (Springs Reservoir) . . . . .	J. K. Swales, Esq., C.E. . . . .	5	1	0	800	1390	54·72	230	179
M Belmont (Hordern) . . . . .	J. K. Swales, Esq., C.E. . . . .	5	1	0	1160	1445	56·90	..	..
M Belmont (Longworth) . . . . .	J. K. Swales, Esq., C.E. . . . .	5	1	0	770	1473	58·00	..	..
D Rochdale (Hamer Pasture Res.) . . . . .	H. A. Braddock, Esq. . . . .	5	1	0	760	1242	48·89	208	174
D Rochdale (Naden Filters) . . . . .	J. S. Diggle, Esq., C.E. . . . .	5	1	8	761	1210	47·63	199	165
M Norden (Higher Red Lumb) . . . . .	J. S. Diggle, Esq., C.E. . . . .	5	1	2	1125	1209	47·59	..	..
w Norden (Far Knowl Farm) . . . . .	J. S. Diggle, Esq., C.E. . . . .	5	0	10	..	1294	50·94	..	..
w Rochdale (Naden Dean) <i>old g.</i> . . . .	J. S. Diggle, Esq., C.E. . . . .	5	1	4	948	1043	41·05	..	..
w Rochdale (Naden Dean) <i>new g.</i> . . . .	J. S. Diggle, Esq., C.E. . . . .	5	1	4	948	1143	45·02	..	..
M Ramsbottom (Killgate Brook) . . . . .	J. S. Diggle, Esq., C.E. . . . .	5	1	0	977	1230	48·43	..	..
M Ramsbottom (Cheesden Barn) . . . . .	J. S. Diggle, Esq., C.E. . . . .	5	1	0	997	1159	45·61	..	..
D Edenfield (Scout Moor Res.) No. 1 . . . . .	J. Woodhead Smith, Esq., C.E. . . . .	8	1	0	1275	970	38·19	223	166
D Edenfield (Scout Moor Res.) No. 2 . . . . .	J. Woodhead Smith, Esq., C.E. . . . .	8	1	0	1275	1114	43·85	223	173
D Waterfoot (Cragg Reservoir) . . . . .	W. H. Newton, Esq., C.E. . . . .	5	1	0	1425	1339	52·71	235	182
D Waterfoot (Cowpe Reservoir) . . . . .	W. H. Newton, Esq., C.E. . . . .	5	1	0	1026	1338	52·67	235	181
D Rochdale (Spring Mill Whitworth) . . . . .	H. A. Braddock, Esq. . . . .	5	1	7	720	1376	54·19	206	180
D Rochdale (Cowm, Whitworth) . . . . .	H. A. Braddock, Esq. . . . .	5	1	7	762	1421	55·94	208	188
D Entwistle Reservoir . . . . .	J. K. Swales, Esq., C.E. . . . .	5	1	0	700	1400	55·11	216	184
M Belmont (Slater Lane) . . . . .	J. K. Swales, Esq., C.E. . . . .	5	1	0	985	1383	54·46	..	..
Littleborough (Hollingworth L.) . . . . .	Rochdale Canal Co.* . . . .	8	1	0	600	905	35·65	..	..
Littleborough (Windy Bank) . . . . .	Rochdale Canal Co. . . . .	8	2	0	605	1018	40·08	..	..
Littleborough (Blackstone Edge) . . . . .	Rochdale Canal Co. . . . .	8	2	0	1225	878	34·57	..	..
Littleborough (Canal Summit) . . . . .	Rochdale Canal Co. . . . .	8	2	0	700	982	38·66	..	..
Littleborough (Chelburn) . . . . .	Rochdale Canal Co. . . . .	8	2	0	800	1050	41·35	..	..
Littleborough (Byron Edge Drain) . . . . .	Rochdale Canal Co. . . . .	8	1	5	1250	937	36·90	..	..
Littleborough (Lenches) . . . . .	Rochdale Canal Co. . . . .	8	2	0	806	951	37·46	..	..
Walsden (Calf Lee) . . . . .	Rochdale Canal Co. . . . .	10	1	6	960	1015	39·98	..	..
Walsden (Warland Drain) . . . . .	Rochdale Canal Co. . . . .	8	1	5	1250	968	38·11	..	..
Walsden (Whiteholme Drain) . . . . .	Rochdale Canal Co. . . . .	8	1	5	1250	1083	42·65	..	..
Walsden (Rishworth Drain) . . . . .	Rochdale Canal Co. . . . .	8	1	5	1200	919	36·17	..	..
d Helmshore (Clough House) . . . . .	A. C. Cullen, Esq. . . . .	8	1	6	650	1281	50·43	..	..

\* Returns supplied by W. A. M'Grath, Esq., M.B.E.

## DIVISION VIII.—NORTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
SOUTH LANCASHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—MERSEY—Irwell—(con.).									
d Haslingden(Holden Wood) No.1	J. WoodheadSmith, Esq., CE	8	1	0	670	1465	57·67	205	185
d Haslingden(Holden Wood) No.2	J. WoodheadSmith, Esq., CE	8	1	0	670	1444	56·86	205	184
d Haslingden (Calf Hey) . . . No.1	J. WoodheadSmith, Esq., CE	8	1	0	800	1506	59·28	205	183
d Haslingden (Calf Hey) . . . No.2	J. WoodheadSmith, Esq., CE	8	1	0	800	1405	55·30	205	185
d Bacup (Sheephouse Res.) . . . . .	W. H. Newton, Esq., C.E.	5	1	0	1007	1082	42·61	229	181
d Rawtenstall Cemetery . . . . .	J. Johnson, Esq. . . . .	8	1	0	572	1255	49·41	..	163
d Rawtenstall(Cloughbottom)No1	J. WoodheadSmith, Esq., CE	8	1	0	1025	1335	52·56	227	194
d Rawtenstall(Cloughbottom)No2	J. WoodheadSmith, Esq., CE	8	1	0	1025	1283	50·50	227	188
d Rawtenstall (Hapton Res.)No.1	J. WoodheadSmith, Esq., CE	8	1	0	930	1352	53·24	230	192
d Rawtenstall (Hapton Res.)No.2	J. WoodheadSmith, Esq., CE	8	1	0	930	1445	56·89	230	192
4.—MERSEY, UPPER. 45 sq. mi.									
d Didsbury (Linden Road) . . . . .	L. G. King, Esq. . . . .	8	1	6	110	830	32·67	191	151
d West Didsbury (Town Hall) . . . . .	Manchester Corporation..	8	4	0	121	771	30·37	165	136
d Stockport (Heaton Mersey) . . . . .	W. B. Leigh, Esq. . . . .	5	1	0	218	823	32·41	200	151
d Chorlton-cum-HardySew.Works	G. F. Walter, Esq. . . . .	8	4	0	78	821	32·31	204	155
d Chorlton-cum-Hardy . . . . .	J. H. Casartelli, Esq. . . . .	5	2	0	75	811	31·91	175	142
d Fallowfield (Wilbraham Rd.) . . . . .	Master H. G. Ellinger . . . . .	5	1	0	108	865	34·05	186	149
d Fallowfield (Platt Field Park) . . . . .	Manchester Corporation . . . . .	8	3	3	124	793	31·22	202	144
d Denton Reservoir . . . . .	L. Holme Lewis, Esq., C.E.	12	2	0	324	773	30·44	..	..
d Gorton Reservoir . . . . .	L. Holme Lewis, Esq., C.E.	12	2	0	263	817	32·17	..	..
d Ashton-u-Lyne(HenriettaStYd)	G. H. Raddin, Esq., C.E. . . . .	7	1	0	394	948	37·33	213	162
d Ashton-u-Lyne (Waterhouses) . . . . .	Great Central Rly. Co. . . . .	9	3	6	345	783	30·82	208	..
d Lower Swineshaw Reservoir . . . . .	G. H. Raddin, Esq., C.E. . . . .	8	1	6	886	1151	45·31	223	173
d Swineshaw Moor . . . . .	G. H. Raddin, Esq., C.E. . . . .	5	1	0	1340	1248	49·12	..	..
d Mossley (Manor House)Yard) . . . . .	G. H. Raddin, Esq., C.E. . . . .	5	1	0	636	1132	44·58	202	160
CENTRAL LANCASHIRE. (Area, 536 sq. mi.)									
1.—RIBBLE & C. 326 sq. mi.									
d Rivington (Higher Hill) . . . . .	Col. J. R. Davidson, C.E. . . . .	8	1	4	733	1074	42·29	..	..
d Haslingden(MitchellsHo.Res.) . . . . .	A. J. Harrison, Esq. . . . .	5	1	6	990	1270	50·00	205	200
d Darwen (Sunnyhurst Hey Res.) . . . . .	E. Marsden, Esq., C.E. . . . .	8	1	8	915	1245	49·01	222	175
d Darwen (Earnsdale Reservoir) . . . . .	E. Marsden, Esq., C.E. . . . .	8	1	8	705	1264	49·75	222	175
d Darwen (Bold Venture Park) . . . . .	Dr. F. G. Haworth . . . . .	8	1	1	722	1390	54·72	225	179
d Darwen (Hoddlesden) . . . . .	No. 1 A. T. Gooseman, Esq., C.E.	8	1	6	680	1271	50·02	211	174
d Darwen (Hoddlesden) . . . . .	No. 2 A. T. Gooseman, Esq., C.E.	8	1	0	675	1266	49·83	211	175
d Darwen (Daisy Green) . . . . .	No. 1 A. T. Gooseman, Esq., C.E.	8	1	6	969	1505	59·25	210	184
d Darwen (Daisy Green) . . . . .	No. 2 A. T. Gooseman, Esq., C.E.	8	1	0	969	1474	58·04	210	180
d Darwen (Pickup Bank) . . . . .	No. 1 A. T. Gooseman, Esq., C.E.	8	1	6	720	1151	45·30	211	173
d Darwen (Pickup Bank) . . . . .	No. 2 A. T. Gooseman, Esq., C.E.	8	1	0	720	1141	44·91	211	173
d Brindle (Whiteholme) . . . . .	Mrs. Victor H. Gatty. . . . .	5	1	8	315	963	37·91	167	153
d Blackburn (Guide Reservoir) . . . . .	A. T. Gooseman, Esq., C.E.	8	1	6	610	1121	44·14	205	168
d Blackburn (Witton) . . . . .	A. T. Gooseman, Esq., C.E.	8	1	6	315	1159	45·62	201	166
d Blackburn Fever Hospital. . . . .	A. T. Gooseman, Esq., C.E.	6	1	6	570	997	39·25	219	173
d Blackburn (Pumping Station) . . . . .	A. T. Gooseman, Esq., C.E.	8	1	6	600	1165	45·86	216	174
d Accrington (Milnshaw Park) . . . . .	Mr. J. W. Terry . . . . .	5	1	6	464	1041	41·00	193	159
d Hutton(Lancs.C.C.Hortic.Stat.)	J. Gillett, Esq. . . . .	5	1	0	82	979	38·53	201	154
d Lytham (Warton Hall) . . . . .	W. Gordon Shorrocks, Esq. . . . .	5	1	0	20	924	36·37	..	..
d Higher Walton(Bannister Hall)	A. A. Gatty, Esq. . . . .	5	0	7	75	963	37·93	..	..
d Preston (Corporation Offices) . . . . .	J. H. Smethurst, Esq., C.E.	8	18	7	148	1041	41·00	214	163
d Samlesbury Sewage Works . . . . .	A. T. Gooseman, Esq., C.E.	8	1	6	240	1040	40·94	200	165
d Rishton Reservoir . . . . .	Leeds & LiverpoolCanalCo.	10	2	0	467	784	30·88	..	..
d Causeway Side (Burnley W.W.)	S. Rawlinson, Esq. . . . .	8	2	0	1116	1273	50·11	..	..
d Shedding (Burnley W. W.) . . . . .	S. Rawlinson, Esq. . . . .	8	2	0	960	1213	47·76	..	..
d CantCloughS.Side(BurnleyWW)	S. Rawlinson, Esq. . . . .	8	2	0	900	1207	47·51	236	172
d CantCloughN.Side(BurnleyWW)	S. Rawlinson, Esq. . . . .	8	2	0	900	1128	44·41	235	167
d RamsCloughHead(BurnleyWW)	S. Rawlinson, Esq. . . . .	8	2	0	1260	1169	46·04	..	..
d Huncoat (Burnley Road Res.) . . . . .	A. J. Harrison, Esq. . . . .	9	1	6	620	1185	46·67	205	162
d Wilpshire (Brooklyn Road) . . . . .	H. W. Apperley, Esq. . . . .	5	1	0	408	1144	45·03	214	167
d Great Harwood(ParsonageRes.)	A. T. Gooseman, Esq., C.E.	8	1	0	631	1172	46·13	200	185
d Great Harwood (Dean Clough) . . . . .	A. J. Harrison, Esq. . . . .	12	1	6	540	1262	49·69	221	177
d Burnley (Queen's Park) . . . . .	Dr. T. Holt . . . . .	8	1	0	459	1114	43·87	226	169

## DIVISION VIII.—NORTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with .01 in. or more.	Days with .04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
CENTRAL LANCASHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
1.—RIBBLE & C.—(con.).									
Burnley (Yorkshire Street) . . . . .	S. Rawlinson, Esq. . . . .	8	30	0	420	968	38.11	222	165
Burnley (Swinden) <i>Upper g.</i> . . . . .	S. Rawlinson, Esq. . . . .	8	12	0	820	1229	48.39	238	180
Burnley (Swinden) <i>Lower g.</i> . . . . .	S. Rawlinson, Esq. . . . .	8	2	0	745	1256	49.46	238	188
Burnley (Extwistle Moor Top) . . . . .	S. Rawlinson, Esq. . . . .	8	2	0	1310	1280	50.40	..	..
D Burnley (Gawthorpe Hall) . . . . .	Lord Shuttleworth . . . . .	8	0	9	316	1102	43.40	204	172
D Burnley (Huntroyde) . . . . .	N. G. Howsin, Esq. . . . .	5	1	0	423	1145	45.10	211	178
Alston Reservoir . . . . .	J. H. Smethurst, Esq., C.E. . . . .	8	1	2	320	1079	42.49	..	..
D Nelson (Coldwell Res.) . . . . .	No. 1 Smith Whitehead, Esq., C.E. . . . .	5	1	0	950	1095	43.10	213	170
D Nelson (Coldwell Res.) . . . . .	No. 2 Smith Whitehead, Esq., C.E. . . . .	5	1	0	960	1212	47.73	216	179
D Nelson (Victoria Park) . . . . .	Smith Whitehead, Esq., C.E. . . . .	5	1	0	375	1134	44.63	217	162
D Stonyhurst College . . . . .	Rev. A. L. Cortie, S. J. . . . .	8	1	10	377	1196	47.09	212	172
Stonyhurst College . . . . .	(R) Rev. A. L. Cortie, S. J. . . . .	11	1	0	377	1173	46.16	220	172
M Stonyhurst College . . . . .	<i>Check g.</i> Rev. A. L. Cortie, S. J. . . . .	11	1	0	376	1190	46.86	..	..
M Knowle Green (Preston W. W.) . . . . .	J. H. Smethurst, Esq., C.E. . . . .	8	1	2	400	1083	42.65	..	..
M Spade Mill (Preston W. W.) . . . . .	J. H. Smethurst, Esq., C.E. . . . .	8	1	2	400	1049	41.30	..	..
M Jeffrey Hill (Preston W. W.) . . . . .	J. H. Smethurst, Esq., C.E. . . . .	8	1	2	900	1172	46.13	..	..
D Sabden (Churn Clough Res.) . . . . .	R. Ratcliffe, Esq., C.E. . . . .	5	1	0	790	1185	46.65	240	177
w Sabden (Stainscomb) . . . . .	R. Ratcliffe, Esq., C.E. . . . .	5	1	0	1025	1185	46.67	..	..
w Sabden (Craggs Dole) . . . . .	R. Ratcliffe, Esq., C.E. . . . .	8	1	0	1050	1263	49.74	..	..
w Newchurch (Cock Dole) . . . . .	R. Ratcliffe, Esq., C.E. . . . .	5	1	0	1090	1266	49.83	..	..
D Barley (Ogden Reservoir) . . . . .	Smith Whitehead, Esq., C.E. . . . .	8	2	0	950	1243	48.95	224	174
D Colne (The Rectory) . . . . .	Rev. Dr. S. P. Duval . . . . .	5	1	4	538	1160	45.67	223	170
D Colne (Cemetery Grounds) . . (R)	T. H. Hartley, Esq. . . . .	8	2	11	619	918	36.14	198	146
Barrowford Reservoir . . . . .	Leeds & Liverpool Canal Co. . . . .	8	1	0	473	1087	42.79	..	..
Foulridge (Upper Reservoir) . . . . .	Leeds & Liverpool Canal Co. . . . .	8	1	0	582	1077	42.39	..	..
Clitheroe (Downham Hall) . . . . .	R. C. Assheton, Esq. . . . .	10	1	6	464	1075	42.34	..	..
2.—RIBBLE—Douglas. 156 sq. mi.									
D Wigan WW (Billinge Higher End) . . . . .	R. B. Donald, Esq., C.E. . . . .	12	3	6	374	858	33.79	182	153
D Orrell (Upholland Gram. Sch.) . . . . .	C. H. Cox, Esq. . . . .	5	1	0	320	949	37.37	203	155
D Wigan W. W. (Worthington) . . . . .	R. B. Donald, Esq., C.E. . . . .	8	1	6	225	1009	39.72	198	159
D Horwich (Lower Rivington) . . . . .	Col. J. R. Davidson, C.E. . . . .	8	1	0	440	1173	46.16	218	168
Horwich (Lower Knoll) . . . . .	Col. J. R. Davidson, C.E. . . . .	8	1	4	742	1186	46.71	..	..
Rivington (Brown Hill) . . . . .	Col. J. R. Davidson, C.E. . . . .	8	1	4	843	1133	44.61	..	..
D Rivington (Stoneshouse) No. 1	Col. J. R. Davidson, C.E. . . . .	8	1	4	623	1083	42.65	223	167
Rivington (Stoneshouse) No. 2	Col. J. R. Davidson, C.E. . . . .	8	1	4	623	1061	41.79	..	..
Rivington (Hurst Hill) . . . . .	Col. J. R. Davidson, C.E. . . . .	8	1	10	1029	1156	45.50	..	..
Rivington (Great Hill) . . . . .	Col. J. R. Davidson, C.E. . . . .	8	1	8	1240	1220	48.03	..	..
Rivington (Coppice Stile) . . . . .	Col. J. R. Davidson, C.E. . . . .	8	1	8	879	1029	40.53	..	..
Rivington (Gamekeeper's) . . . . .	Col. J. R. Davidson, C.E. . . . .	8	0	8	850	1217	47.93	..	..
D Leyland (Worden Hall) . . . . .	H. Nowell flarington, Esq. . . . .	5	1	0	125	964	37.95	219	159
M Leyland (Worden Hall) . . . . .	H. Nowell flarington, Esq. . . . .	5	1	0	125	938	36.93	..	..
D Bamber Bridge (Cuerden Hall) . . . . .	R. A. Tatton, Esq. . . . .	5	1	0	230	989	38.95	184	155
3.—COAST STREAMS. 52 sq. mi.									
D Birkdale (Westcliffe Road) . . . . .	Percy W. Hoyle, Esq. . . . .	5	0	6	35	820	32.28	197	141
M Birkdale . . . . .	J. Baxendell, Esq. . . . .	5	1	0	27	857	33.74	..	..
D Southport (Hesketh Park) . . . . .	J. Baxendell, Esq. . . . .	5	1	0	38	884	34.82	200	143
D Southport (Hesketh Park) . . . . .	J. Baxendell, Esq. . . . .	8	1	0	38	892	35.11	200	146
D Southport (Hesketh Park) . . (R)	J. Baxendell, Esq. . . . .	11	1	6	39	884	34.82	200	145
D Southport (Hesketh Park) . . . . .	J. Baxendell, Esq. . . . .	5	16	0	66	820	32.27	185	137
Southport (Lord Street Station)	Great Central Rly. Co. . . . .	9	3	6	21	770	30.33	152	..
4.—OUSE—Aire. 2 sq. mi.									
D Worthdale (Watersheddies Res.) . . . . .	M. R. Barnett, Esq., C.E. . . . .	5	1	0	1115	1192	46.93	214	172
Foulridge (Canal Office) . . . . .	Leeds & Liverpool Canal Co. . . . .	8	1	0	497	1114	43.86	..	..
NORTH LANCASHIRE. (Area, 609 sq. mi.)									
1.—DUDDON & C. 77 sq. mi.									
D Barrow-in-Furness (Gas Works) Claude	Diamond, Esq. . . . .	11	3	0	17	910	35.81	185	139
D Barrow-in-Furness (Sewage Wks) W. C.	Persey, Esq., C.E. . . . .	5	1	0	21	955	37.60	192	153
D Little Urswick (North View) . . . . .	J. Dobson, Esq. . . . .	5	1	6	130	1114	43.85	203	153

## DIVISION VIII.—NORTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
NORTH LANCASHIRE—(con.).		in.	ft.	in.	ft.	mm.	in.		
1. DUDDON & C.—(con.).									
D Ulpha .....	Claude Diamond, Esq. ....	11	1	6	251	1403	55·23	233	184
D Duddon Valley (Seathwaite Vic) .....	Rev. F. K. Berry .....	5	1	0	348	1814	71·43	229	187
Duddon Val. (Seathwaite Tarn) .....	Claude Diamond, Esq. ....	11	1	6	1221	2175	85·61	..	..
2.—LEVEN & C. 135 sq. mi.									
D Cartmel (Carke) .....	R. Heathcote, Esq. ....	5	1	0	76	1070	42·14	190	155
D Cartmel (Holker Hall) .....	Lord Richard Cavendish ..	5	0	9	85	1189	46·80	225	169
D Ulverston (Poaka Beck) .....	Claude Diamond, Esq. ....	11	1	6	512	1254	49·37	203	172
D Grange-ovr-Sands (Newton R.) .....	T. Huddleston, Esq. ....	10	1	0	586	1264	49·75	226	163
D Rusland Hall .....	Mrs. Archibald .....	5	14	0	45	1071	42·15	210	157
D Coniston Park .....	Miss C. Marshall .....	5	1	2	305	1806	71·10	175	..
D Hawkshead (Tower Bank) .....	Miss Alcock-Beck .....	5	2	0	342	1620	63·78	214	174
D Hawkshead School .....	J. Lowe Handley, Esq. ....	5	0	7	214	1734	68·27	..	..
M Hawkshead (Black Fell) .....	Miss C. Marshall .....	5	1	6	1055	1770	69·68	..	..
D Ambleside (Skelwith Fold) .....	Miss C. Marshall .....	5	1	0	333	1966	77·41	208	185
M Ambleside (Skelwith Fold) .....	Miss C. Marshall .....	5	1	0	333	1909	75·15	..	..
3.—KENT & C. 45 sq. mi.									
D Heysham Harbour .....	Midland Railway Co. ....	5	1	6	27	967	38·09	180	147
D Morecambe .....	T. B. Lamb, Esq. ....	8	1	0	24	927	36·50	199	156
D Yealand Conyers (Beechfield) .....	Mrs. Roper .....	5	1	0	250	1025	40·34	202	156
D Yealand Conyers (Morecambe Lo.) .....	J. Rawlinson Ford, Esq. ....	5	1	0	278	1141	44·90	197	164
D Silverdale (Bleasdale House) .....	R. S. Raisbeck, Esq. ....	12	1	0	150	1109	43·65	..	178
D Grange-over-Sands (Eden Mount) .....	Miss K. F. Brothers .....	5	1	6	280	1086	42·77	215	158
D Grange-over-Sands (Nutwood) .....	Miss S. M. Arkwright .....	5	1	0	140	1102	43·40	199	156
D Grange-over-Sands (Holmcroft) .....	Robert Rhodes, Esq. ....	5	2	4	300	1237	48·70	211	164
D Lindale (Ellerhow) .....	H. T. Gnosspelius, Esq. ....	5	1	2	360	1324	52·14	192	160
D Cartmel Fell (The Schoolhouse) .....	R. J. Craggill, Esq. ....	5	5	0	220	1339	52·70	206	170
4.—LUNE. 135 sq. mi.									
D Hampson-in-Ellel .....	W. G. Welch, Esq. ....	5	1	0	145	1086	42·76	198	155
D Lancaster (Bairrig Gardens) .....	H. L. Storey, Esq. ....	5	1	3	200	1130	44·50	208	161
D Quernmore (Brow Top) .....	F. Hill, Esq., C.E. ....	8	1	0	552	1277	50·26	191	173
D Bowland Forest (Higher Salter) .....	J. T. Sanderson, Esq. ....	5	1	0	1014	1243	48·93	..	..
D Bowland Forest (Whiteray) .....	J. T. Sanderson, Esq. ....	5	1	0	1139	1670	65·74	..	..
D Bowland Forest (Lower Salter) .....	J. T. Sanderson, Esq. ....	5	1	0	575	1496	58·91	..	..
D Lancaster (Strathspey) .....	A. B. S. Welch, Esq. ....	5	1	0	75	1054	41·49	210	161
D Lancaster (Blea Tarn Res.) .....	F. Hill, Esq., C.E. ....	8	1	0	330	1048	41·27	207	160
D Lancaster (Greg Observatory) .....	Neville Holden, Esq. ....	8	1	0	312	1152	45·37	213	165
D Lancaster (Lune Aqueduct) .....	J. H. Thurston, Esq., C.E. ....	8	3	0	74	1033	40·65	190	153
D Caton (Escowbeck) .....	Neville Holden, Esq. ....	..	..	..	158	1160	45·68	..	..
D Caton (Schoolhouse) .....	W. Shaw, Esq. ....	5	1	0	170	1121	44·14	..	..
D Wennington (Tatham Rectory) .....	Rev. A. S. Roberts .....	5	1	3	150	1017	40·02	169	147
D Leck Vicarage .....	Rev. J. Turner .....	5	1	1	400	991	39·02	214	179
5.—WYRE & C. 213 sq. mi.									
D St. Anne's-on-Sea .....	W. E. Procter, Esq. ....	5	1	0	25	873	34·39	168	149
D St. Anne's-on-Sea (Lawrence Ho.) .....	C. G. D. Hoare, Esq. ....	5	1	0	25	900	35·43	187	154
D Weeton Reservoir .....	No. 1 J. Cook, Esq., C.E. ....	5	1	0	133	1042	41·04	183	157
D Weeton Reservoir .....	No. 2 J. Cook, Esq., C.E. ....	5	1	0	150	861	33·91	174	146
D Weeton Reservoir .....	No. 3 J. Cook, Esq., C.E. ....	5	1	0	108	982	38·65	176	155
D Blackpool (Met. Observatory) .....	E. W. Rees Jones, Esq., M.D. ....	5	1	0	67	968	38·12	194	151
D Barton (Newsham House) .....	W. B. S. Smith, Esq. ....	5	1	0	101	1049	41·31	200	165
D Kirkham (Elswick Lodge) .....	L. G. King, Esq. ....	5	1	4	52	1013	39·88	205	164
D St. Michael's-on-Wyre (Rose Cot.) .....	J. Moss, Esq. ....	5	1	0	27	1009	39·73	199	162
D St. Michael's-on-Wyre Vicarage .....	Ven. Archdeacon Hornby ..	5	1	0	26	1019	40·11	199	160
D Fleetwood .....	(R) E. Frobisher, Esq. ....	8	1	8	29	900	35·45	198	150
M Garstang (Holme Ho., Bleasdale) .....	A. Wilson, Esq. ....	5	1	0	650	1432	56·39	..	..
M Garstang (Fairsnape Fell) .....	A. Wilson, Esq. ....	5	1	0	1630	1897	74·67	..	..
D Garstang (Barnacre Reservoir) .....	J. Cook, Esq., C.E. ....	5	1	0	616	1255	49·42	213	175
D Garstang (Grizedale Reservoir) .....	J. Cook, Esq., C.E. ....	5	1	0	517	1203	47·38	210	170
D Garstang (Calder Intake) .....	J. Cook, Esq., C.E. ....	5	1	0	632	1259	49·56	..	..
D Garstang (Grizedale Intake) .....	J. Cook, Esq., C.E. ....	5	1	0	644	1239	48·77	..	..

## DIVISION VIII.—NORTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.  1922	Day with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.			
NORTH LANCASHIRE—(con.).		in.	ft.	in. ft.	mm.	in.	
5.—WYRE & C.—(con.).							
D Forton (Low Abbey) . . . . .	Stephen Simpson, Esq. . . . .	5	1	6 80	1080	42·53	195 154
D Wyresdale (Abbeystead Res.) . . . . .	F. Hill, Esq., C.E. . . . .	8	1	0 366	1415	55·70	209 184
D Wyresdale (Abbeystead Gdns) . . . . .	Mr. M. Campbell . . . . .	8	1	3 440	1410	55·50	206 166
M Quernmore (Old Gauge Basin) . . . . .	F. Hill, Esq., C.E. . . . .	8	1	0 963	1252	49·29	.. ..
M Wyresdale (Wardstone) . . . . .	F. Hill, Esq., C.E. . . . .	8	1	0 1440	1589	62·54	.. ..
6.—INSULAR. 4 sq. mi.							

## DIVISION IX.—YORKSHIRE.

WEST RIDING. (Area, 2791 sq. mi.)

<b>1.—LUNE. 178 sq. mi.</b>								
D Austwick (Leigh House) . . . . .	R. Stockdale, Esq. . . . .	5	1	0 500	1120	44·11	198	161
D Bentham (Felstead) . . . . .	A. W. Wilson, Esq. . . . .	5	1	0 350	1017	40·02	189	140
D High Bentham (Inglefield) . . . . .	Mr. Geoffrey Holmes . . . . .	5	1	0 412	999	39·35	197	160
D Ingleton (Kingsdale Head) . . . . .	Mr. R. Ireton . . . . .	5	1	0 994	1846	72·67	193	186
D Sedbergh (Brigg Flats) . . . . .	The Misses Wilson . . . . .	5	1	0 305	1445	56·90	228	181
D Sedbergh (Akay) . . . . .	C. E. Taylor, Esq. . . . .	5	1	0 400	1547	60·90	216	177
D Sedbergh (Bynac) . . . . .	Mrs. B. Wilson . . . . .	5	1	0 450	1424	56·08	220	179
D Sedbergh (Havera Bank) . . . . .	Albert Wilson, Esq. . . . .	5	1	0 485	1484	58·41	231	183
Sedbergh (Ashbeck Head) . . . . .	Albert Wilson, Esq. . . . .	5	1	0 1395	1729	68·07	..	..
Sedbergh (Dummacks) . . . . .	Albert Wilson, Esq. . . . .	5	1	0 2060	2400	94·49	..	..
<b>2.—RIBBLE. 225 sq. mi.</b>								
D Colne (Laneshaw Reservoir) . . . . .	J. F. Bedford, Esq., C.E. . . . .	5	1	0 842	927	36·50	198	158
D Barnoldswick (Rainhall Road) . . . . .	Asa Burniston, Esq. . . . .	5	1	2 549	971	38·24	197	157
Barnoldswick (Greenberfield L.) . . . . .	Leeds & L'pool Canal Co. . . . .	8	1	0 488	1044	41·11	..	..
Slaidburn (Knowlmer Manor) . . . . .	W. Peel, Esq. . . . .	5	1	0 417	1243	48·95	..	..
D Slaidburn (Thorneyholme) . . . . .	R. A. Tatton, Esq. . . . .	5	2	0 380	1449	57·03	177	164
M Slaidburn (Hareden Brook) . . . . .	J. H. Smethurst, Esq., C.E. . . . .	8	1	2 540	1779	70·02	..	..
M Slaidburn (Langden Brook) . . . . .	J. H. Smethurst, Esq., C.E. . . . .	8	1	2 556	1780	70·07	..	..
Slaidburn (Dunsop House) . . . . .	A. T. Gooseman, Esq., C.E. . . . .	8	1	6 450	1655	65·14	203	185
M Slaidburn (Middle Knoll) . . . . .	A. T. Gooseman, Esq., C.E. . . . .	8	2	6 1298	1310	51·57	..	..
Slaidburn (Brennand) . . . . .	A. T. Gooseman, Esq., C.E. . . . .	8	1	0 820	1834	72·19	200	182
Slaidburn (Croasdale House) . . . . .	A. T. Gooseman, Esq., C.E. . . . .	8	1	6 600	1461	57·54	..	160
Slaidburn (Croasdale Valley) . . . . .	A. T. Gooseman, Esq., C.E. . . . .	8	1	6 720	1575	62·02	..	161
Slaidburn (Whitendale) . . . . .	A. T. Gooseman, Esq., C.E. . . . .	8	1	0 830	1782	70·15	198	180
M Slaidburn (Cabin Hill) . . . . .	A. T. Gooseman, Esq., C.E. . . . .	8	3	1 1559	1655	65·14	..	..
M Slaidburn (Baxton Fell) . . . . .	A. T. Gooseman, Esq., C.E. . . . .	8	2	6 1540	1427	56·16	..	..
M Slaidburn (Saddle Hill) . . . . .	A. T. Gooseman, Esq., C.E. . . . .	5	2	6 1475	1377	54·23	..	..
D Settle (Gas Works) . . . . .	J. W. Shepherd, Esq. . . . .	8	1	0 450	1164	45·83	206	180
d Settle (Giggleswick School) . . . . .	A. Russell, Esq. . . . .	8	1	0 500	1069	42·08	218	169
d Horton-in-Ribblesdale . . . . .	Nathaniel Hunt, Esq. . . . .	5	1	0 800	1291	50·82	..	..
<b>3.—MERSEY—Irwell. 2 sq. mi.</b>								
<b>4.—MERSEY, UPPER. 35 sq. mi.</b>								
Greenfield (Upperwood Moor) . . . . .	G. H. Raddin, Esq., C.E. . . . .	5	1	0 1518	1290	50·78	..	..
D Greenfield (Chew Mount) . . . . .	G. H. Raddin, Esq., C.E. . . . .	5	1	0 1578	1456	57·32	216	189
Greenfield (Chew Reservoir) . . . . .	G. H. Raddin, Esq., C.E. . . . .	5	1	0 1648	1395	54·94	..	..
D Greenfield (Yeoman Hey) . . . . .	G. H. Raddin, Esq., C.E. . . . .	5	1	0 759	1553	61·15	211	192
Greenfield (Ashway Moss) . . . . .	G. H. Raddin, Esq., C.E. . . . .	5	1	0 1581	943	37·13	..	..
Greenfield (Birchen Clough) . . . . .	G. H. Raddin, Esq., C.E. . . . .	5	1	0 1018	1471	57·93	..	..
M Saddleworth Station . . . . .	E. H. d'E. Darby, Esq., C.E. . . . .	5	4	0 630	1155	45·49	..	..
Oldham (Strinesdale) . . . . .	C. J. Batley, Esq., C.E. . . . .	5	4	0 815	1026	40·40	209	163
D Standedge (Cas Shaw Broadh'd) . . . . .	C. J. Batley, Esq., C.E. . . . .	8	4	6 875	1200	47·25	225	173
Standedge (Cas Shaw Cudworth) . . . . .	C. J. Batley, Esq., C.E. . . . .	5	4	6 1410	959	37·76	224	168
M Standedge (Redbrook Res.) . . . . .	E. H. d'E. Darby, Esq., C.E. . . . .	8	1	0 1150	1247	49·08	..	..
Denshaw (Ox Hey) . . . . .	C. J. Batley, Esq., C.E. . . . .	8	4	6 1030	1149	45·24	216	165
D Denshaw (New Year's Bridge) . . . . .	C. J. Batley, Esq., C.E. . . . .	8	4	0 1012	1073	42·24	216	169
Denshaw (Ready Con Dean) . . . . .	C. J. Batley, Esq., C.E. . . . .	8	4	0 1414	1091	42·94	216	164

## DIVISION IX.—YORKSHIRE—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922				
WEST RIDING—(con.).		in.	ft.	in.	ft.	mm.	in.		
5.—TRENT—Derwent. 7 sq. mi.									
Derwent Dale (Abbey Brook) 65 S. B. Winsor, Esq., C.E. . .		5	1	0	825	1205	47·44	..	..
Derwent Dale (Howden Cl'gh) 64 S. B. Winsor, Esq., C.E. . .		5	1	0	1030	1173	46·17	..	..
Derwent Dale (Howden Ho.) 19 S. B. Winsor, Esq., C.E. . .		8	1	0	890	1166	45·90	..	..
Derwent Dale (Sandy Lee) No. 7 S. B. Winsor, Esq., C.E. . .		5	1	0	1340	1243	48·93	..	..
6.—TRENT—Left Bank Tributaries. 143 sq. mi.									
d Lindrick Common (Woodside) . J. F. Eardley, Esq. ....		5	1	0	250	801	31·55	..	130
d Woodsetts Grange (Old Vicarage) H. P. Marsh, Esq. ....		5	1	0	245	779	30·65	202	139
d Doncaster (Carr House Hosp.) . Dr. D. L. Anderson ....		5	1	1	56	723	28·46	175	133
7.—OUSE—Don. 564 sq. mi.									
d Sheffield (Stumperlow Hall) . 1 J. Dixon, Esq. ....		5	1	0	730	1032	40·62	208	157
d Sheffield (Stumperlow Hall) . 2 J. Dixon, Esq. ....		5	1	0	770	1052	41·42	211	156
d Sheffield W.W. (Redmires Res.) L. S. M. Marsh, Esq., C.E. . .		10	5	0	1110	1104	43·45	217	171
d Sheffield W.W. (Redmires Res.) L. S. M. Marsh, Esq., C.E. . .		8	4	0	1110	1084	42·69	..	..
d Sheffield W.W. (Rivelin) . . . (r) L. S. M. Marsh, Esq., C.E. . .		10	4	0	564	993	39·08	210	152
d Sheffield W.W. (Rivelin) . . . . L. S. M. Marsh, Esq., C.E. . .		8	4	0	564	1006	39·59	..	..
d Sheffield W.W. (Crookes) . . . (r) L. S. M. Marsh, Esq., C.E. . .		10	2	0	629	891	35·07	194	148
d Sheffield W.W. (Crookes) . . . . L. S. M. Marsh, Esq., C.E. . .		8	2	0	629	894	35·19	..	..
d Sheffield (Weston Park) . . . . E. Howarth, Esq. ....		8	1	0	430	904	35·60	209	155
d Darnall (High Hazels Museum) . E. Howarth, Esq. ....		8	1	0	285	778	30·64	199	129
d Sheffield (Victoria Station) . . . Great Central Rly Co. . . .		9	3	6	188	725	28·55	174	..
d Loxley Valley (Broadcar) . . . . L. S. M. Marsh, Esq., C.E. . .		5	1	0	1004	1211	47·66	..	..
d Loxley V. (Oaks Fm. Damflask) L. S. M. Marsh, Esq., C.E. . .		5	1	0	650	983	38·71	..	..
d Loxley V. (Loftshaw, Strines) . . L. S. M. Marsh, Esq., C.E. . .		5	1	0	1011	1163	45·79	..	..
d Loxley V. (Dale Dike Res.) . . (r) L. S. M. Marsh, Esq., C.E. . .		10	3	0	715	1095	43·11	223	169
d Loxley V. (Dale Dike Res.) . . . L. S. M. Marsh, Esq., C.E. . .		8	3	0	715	1095	43·11	..	..
d Loxley V. (Thornseat) . . . . . L. S. M. Marsh, Esq., C.E. . .		5	1	0	1326	1147	45·15	..	..
d Loxley V. (Rocher Flat) . . . . L. S. M. Marsh, Esq., C.E. . .		5	1	0	1106	1005	39·58	..	..
d Loxley V. (Emlin Moor) . . . . L. S. M. Marsh, Esq., C.E. . .		5	1	0	998	1192	46·93	..	..
d Rotherham (Ulley Res.) . . . (2) Vincent Turner, Esq., C.E. . .		5	1	0	175	693	27·28	175	127
d Rotherham (Ulley Res.) . . . (1) Vincent Turner, Esq., C.E. . .		5	1	0	184	655	25·77	175	125
d Rotherham (Ulley Res.) . . . (3) Vincent Turner, Esq., C.E. . .		5	1	0	132	692	27·23	175	124
d Sheffield (Tinsley Locks) . . . . Great Central Rly. Co. . . .		9	..	..	117	626	24·66	175	..
d Wincobank (Sewage Works) (r) J. Haworth, Esq. ....		8	2	0	99	666	26·22	175	129
d Rotherham (Sitwell Vale) . . . . Mr. G. Howard . . . . .		5	1	0	300	742	29·22	181	138
d Rotherham (Moorgate Grange) R. Dyson, Esq. ....		5	1	0	275	674	26·53	180	125
d Rotherham (Kimberw'rth Cem.) Vincent Turner, Esq., C.E. . .		5	1	0	245	703	27·66	195	136
d Rotherham (Aldwarke Sew. Wk.) James H. Kershaw, Esq. . .		5	1	4	71	705	27·76	186	147
d Rotherham (Thrybergh) . . . . F. O. Kirby, Esq., C.E. . .		8	1	0	184	694	27·32	171	123
d Chapeltown (Potter Hill) . . . . Mr. C. W. Frost . . . . .		8	5	0	583	803	31·63	179	134
d Conisborough (Firsby Res.) . . . F. O. Kirby, Esq., C.E. . .		8	1	4	189	706	27·78	169	113
d Wentworth Woodhouse . . . . . Mr. A. Third . . . . .		5	0	10	360	781	30·74	..	126
d Mexborough . . . . . G. Fenwick Carter, Esq., C.E. . .		5	1	6	77	657	25·85	202	128
d Wortley . . . . . Great Central Rly. Co. . . . .		9	3	6	548	878	34·58	184	..
d Wortley (Service Reservoir) . . J. R. Fox, Esq., C.E. . . .		5	1	0	700	866	34·09	205	151
d Elsecar . . . . . Great Central Rly. Co. . . . .		9	3	6	181	725	28·56	198	..
d Midhope Moor (Barnside) . . . . J. R. Fox, Esq., C.E. . . .		5	1	0	1000	1128	44·40	202	170
d Little Don Val. (Underbank Rs.) L. S. M. Marsh, Esq., C.E. . .		8	1	6	604	910	35·81	228	168
d Little Don Val. (Brockholes) . . L. S. M. Marsh, Esq., C.E. . .		5	1	6	934	971	38·23	..	..
d Little Don Val. (Sheep House) . . L. S. M. Marsh, Esq., C.E. . .		5	1	6	974	970	38·19	..	..
d Little Don Val. (Bridge Lane) . . L. S. M. Marsh, Esq., C.E. . .		8	1	0	761	1001	39·43	221	162
d Langsett Moor (Midhope) . . . . J. R. Fox, Esq., C.E. . . .		5	1	0	830	1029	40·52	215	157
d Langsett Moor (Up. Midhope) . . L. S. M. Marsh, Esq., C.E. . .		8	1	6	925	1036	40·77	223	163
d Langsett Moor (Mickleden) . . . L. S. M. Marsh, Esq., C.E. . .		5	1	6	1217	1283	50·51	..	..
d Langsett Moor (Catclough) . . . L. S. M. Marsh, Esq., C.E. . .		8	1	6	1516	1263	49·71	..	..
d Langsett Moor (Fiddlers Green) L. S. M. Marsh, Esq., C.E. . .		8	1	6	1493	1312	51·65	..	..
d Langsett Moor (Border Hill) . . . L. S. M. Marsh, Esq., C.E. . .		5	1	6	1148	1241	48·85	..	..
d Langsett Moor (Swinden Lodge) L. S. M. Marsh, Esq., C.E. . .		8	1	6	1037	1176	46·31	203	169
d Langsett Moor (Flouch Road) . . L. S. M. Marsh, Esq., C.E. . .		8	1	0	960	1132	44·55	225	167
d Wath-upon-Dearne (Chapel St.) Dr. T. Crowley . . . . .		8	2	2	188	667	26·28	186	124
d Bolton-upon-Dearne . . . . . T. Washington, Esq. . . . .		5	1	0	130	655	25·79	182	121
d Worsborough . . . . . Great Central Rly. Co. . . . .		9	3	6	225	810	31·88	194	..

## DIVISION IX.—YORKSHIRE—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height above Ground	Sea Level.	1922			
WEST RIDING—(con.).		in.	ft. in.	ft.	mm.	in.		
7.—OUSE—Don—(con.).								
D Doncaster (Littlemoor Terrace)	Edgar Smith, Esq.,	5	1 8	50	778	30·63	175	125
Doncaster	Great Central Rly. Co.	9	3 6	32	671	26·43	156	
D Doncaster (Pumping Station)	F. O. Kirby, Esq., C.E.	5	1 6	30	663	26·11	169	133
D Doncaster (Avenue Road)	M. H. Stiles, Esq.	5	4 0	62	768	30·25	177	136
Dunford Bridge (Windleden)	H. Dearden, Esq., C.E.	12	2 2	1100	1292	50·85		
Dunford Bridge (Dearden Res.)	H. Dearden, Esq., C.E.	12	1 6	1244	1292	50·85		
Dunford Bridge Station	Great Central Rly. Co.	9	3 6	954	1157	45·57	184	
D Dunford Bridge Reservoir	H. Dearden, Esq., C.E.	12	2 0	1111	1353	53·27	207	176
Dunford Bridge (Harden Res.)	J. R. Fox, Esq., C.E.				1352	53·24		
Dunford Bridge (Snailsden Rs.)	J. R. Fox, Esq., C.E.				1347	53·04		
Penistone	Great Central Rly. Co.	9	3 6	717	760	29·92	166	
Penistone (Hazlehead)	Great Central Rly. Co.	9	3 9	868	1146	45·12	188	
d Penistone (Ingbyrthworth Res.)	J. R. Fox, Esq., C.E.	8	1 0	853	915	36·01	211	148
D Barnsley (Jordan Hill)	J. R. Fox, Esq., C.E.	8	1 0	460	768	30·24	209	131
Barnsley	Great Central Rly. Co.	9	3 6	317	657	25·88	154	
D Cawthorne (Cannon Hall)	Capt. J. H. Pardoe	5	0 11	418	889	35·01	177	143
D Brodsworth Hall Gardens	Mr. F. W. Lerner	5	1 6	175	709	27·93	154	123
Barnsley (Burntwood Hall)	J. Dymond, Esq.	5	1 0	378	717	28·25	185	123
D Kirk Bramwith	H. A. Brundell, Esq., C.E.	5	1 0	17	710	27·97	187	143
D Badsworth (Rogerthorpe Man.)	Lt.-Col. W. J. F. Ramsden	8	1 2	150	687	27·03	177	132
D Ackworth School	E. Priestman, Esq.	8	1 0	100	726	28·59	174	122
D Ackworth (Hillthorpe)	Mrs. F. Hatchard	5	1 3	175	662	26·06	164	119
D Goole	F. Hinchliffe, Esq.	5	2 0	18	679	26·74	163	127
8.—OUSE—Aire—Calder. 361 sq. mi.								
D Holmbridge (Yateholme Res.)	J. C. Barrowclough, Esq., C.E.	5	1 0	1009	1340	52·74	217	180
D Holmbridge (Yateholme Farm)	J. C. Barrowclough, Esq., C.E.	5	1 0	861	1531	60·27	217	187
Holmbridge (Holme Styes Res.)	Messrs. Mallinson & Son, CE	5	2 0	830	1298	51·10		
Holmbridge (Boshaw WhamsR.)	Messrs. Mallinson & Son, CE	5	1 0	930	1095	43·10		
Holmbridge (Bilberry Res.)	Messrs. Mallinson & Son, CE	5	1 0	970	1379	54·30		
Meltham (Harden Moss)	J. W. Armitage, Esq., C.E.	8	1 0	1212	1188	46·77		
Meltham (Harden Moss) <i>new g.</i>	J. W. Armitage, Esq., C.E.	8	1 0	1212	1199	47·19		
Wessenden Head	J. W. Armitage, Esq., C.E.	8	1 0	1270	1061	41·76		
Wessenden Head <i>new g.</i>	J. W. Armitage, Esq., C.E.	8	1 0	1200	1247	49·10		
Wessenden (Hollin Bank Moss)	J. W. Armitage, Esq., C.E.	8	1 0	1280	1105	43·52		
Wessenden (Old Reservoir)	J. W. Armitage, Esq., C.E.	8	1 0	940	1199	47·20		
Wessenden (Butterley Moss)	J. W. Armitage, Esq., C.E.	8	1 0	1110	1228	48·35		
Wessenden (Bobus)	J. W. Armitage, Esq., C.E.	8	1 0	1200	1083	42·65		
Meltham (Brow Grains)	J. W. Armitage, Esq., C.E.	8	1 0	900	1186	46·69		
Meltham (Royd Edge)	C. L. Brook, Esq.	8	1 0	585	1330	52·35		
D Meltham (Harewood Lodge)	C. L. Brook, Esq.	8	1 0	514	1245	49·02	220	166
Meltham Grange	J. W. Armitage, Esq., C.E.	8	1 0	850	1070	42·11		
Marsden	E. H. d'E. Darby Esq., C.E.	8	2 4	692	1399	55·07		
Marsden (Deer Hill)	J. W. Armitage, Esq., C.E.	8	1 0	1149	1149	45·25		
Marsden (Deer Hill) <i>new g.</i>	J. W. Armitage, Esq., C.E.	8	1 0	1149	1237	48·69		
D Slaithwaite (Blackmoorfoot)	J. W. Armitage, Esq., C.E.	8	1 0	800	1093	43·03	242	174
D Slaithwaite (Inglewood)	J. Woodhead, Esq.	5	1 0	546	1227	48·29	231	168
D Huddersfield (Carr End, Dalton)	Mr. T. Hey	8	1 0	350	945	37·21	201	157
Huddersfield (Bank Field, Golcar)	Miss Sykes	5	1 0	400	1126	44·33	211	155
D Huddersfield (Ravensknowle)	C. Mosley, Esq.	8	0 11	328	887	34·92	192	143
D Huddersfield (Oakes)	(No. 1) S. Morris Bower, Esq.	5	1 0	772	1002	39·46	212	162
W Huddersfield (Oakes)	(No. 2) S. Morris Bower, Esq.	4	1 0	772	989	38·93		
M Huddersfield (Oakes)	(No. 3) S. Morris Bower, Esq.	4	1 0	772	994	39·12		
D Kirkheaton (Kirk Vale)	Miss A. Robson	8	1 0	220	852	33·54	195	143
D Rishworth Mr (G. Walden Edge)	C. Clemesha Smith, Esq., C.E.	5	0 10	1135	1293	50·90	215	175
W Rishworth (Stott Hall)	C. Clemesha Smith, Esq., C.E.	5	1 0	935	1192	46·92		
D Rishworth (Ringstone Res.)	C. Clemesha Smith, Esq., C.E.	5	1 0	990	1193	46·99	213	176
W Rishworth Moor (Greystones)	C. Clemesha Smith, Esq., C.E.	5	1 0	1175	1245	49·01		
W Soyland Moor (Summit)	C. Clemesha Smith, Esq., C.E.	5	1 0	1290	1169	46·03		
D Soyland Moor (Baitings Gate)	C. Clemesha Smith, Esq., C.E.	5	1 0	935	1358	53·48	224	179
W Soyland Moor (Manshead)	C. Clemesha Smith, Esq., C.E.	5	1 0	1240	1172	46·15		

## DIVISION IX.—YORKSHIRE—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
				in.	ft.	mm.	in.		
WEST RIDING—(con.).									
8.—OUSE—Aire—Calder—(con.).									
D Horbury (Addingford Hos.)	J. H. Horsfall, Esq.	8	2	0	200	773	30.45	151	123
D Horbury (Highfields)	J. H. Green, Esq.	5	1	0	226	790	31.11	..	..
D Mirfield (Cote Wall)	F. P. Mitchell, Esq.	8	1	0	200	1053	41.47	186	155
D Wakefield (Northgate)	W. J. Read, Esq.	8	1	0	174	697	27.42	170	131
D Wakefield (Clarence Park)	C. Clemesha Smith, Esq., C.E.	5	1	0	124	736	28.96	181	137
D Wakefield (Fieldhead Res.)	C. Clemesha Smith, Esq., C.E.	5	1	0	250	667	26.26	153	118
D Sowerby Br. (Haugh End) No. 4	J. Selwyn Rawson, Esq.	5	0	8	450	1183	46.56	209	175
D Walsden (Ramsden Reservoir)	H. A. Braddock, Esq., C.E.	8	1	0	993	1353	53.26	216	184
D Walsden (Ramsden Hill)	H. A. Braddock, Esq., C.E.	5	1	0	1326	1306	51.40	..	..
D Cragg (Withens Clough Res.)	J. W. Rawden, Esq.	8	1	6	968	1087	42.78	168	163
D Todmorden (Fielden Hospital)	Mr. F. Rogers	5	1	0	650	1041	40.98	186	172
D Todmorden (Sourhall Hospital)	Mr. F. Rogers	5	1	0	1020	1421	55.93	233	187
D Halifax (Public Library)	E. Green, Esq.	8	1	0	625	964	37.95	190	146
D Batley (Staincliffe Reservoir)	J. C. Barrowclough, Esq., C.E.	5	1	0	492	746	29.37	170	133
D Batley (Woodwell Depôt)	H. L. Hall, Esq.	8	1	0	301	831	32.72?	..	..
D Ardsley Reservoir	No. 1 C. Clemesha Smith, Esq., C.E.	5	1	2	395	729	28.72	184	136
D Ardsley Reservoir	No. 2 C. Clemesha Smith, Esq., C.E.	5	1	2	326	747	29.41	184	138
D Ardsley (Jaw Hill Filters)	C. Clemesha Smith, Esq., C.E.	5	1	0	315	725	28.53	173	137
D Castleford School	S. Gee, Esq.	5	1	2	100	695	27.36	..	..
M Halifax W.W. (Albert)	E. P. Brook, Esq., C.E.	5	1	0	795	998	39.30	..	..
M Halifax W.W. (Gibbet)	E. P. Brook, Esq., C.E.	5	3	9	568	963	37.90	..	..
M Halifax W.W. (Ramsden Wood)	E. P. Brook, Esq., C.E.	8	1	2	816	836	32.92	..	..
D Hebden Bridge (Falling Royd)	A. R. Crossley, Esq.	4	1	0	479	1220	48.02	210	179
D Hebden Bridge (Burnside)	J. Hoyle, Esq.	5	1	0	825	1181	46.49	220	181
M Halifax W.W. (Castle Carr Lo.)	E. P. Brook, Esq., C.E.	5	0	6	1060	1052	41.40	..	..
M Halifax W.W. (Midgley Moor)	E. P. Brook, Esq., C.E.	8	0	9	1350	1145	45.08	..	..
M Halifax W.W. (Warley Moor)	E. P. Brook, Esq., C.E.	8	1	2	1325	1067	42.00	..	..
M Halifax W.W. (Ogden)	E. P. Brook, Esq., C.E.	5	0	10	990	1073	42.24	..	..
M Halifax W.W. (Ovenden Moor)	E. P. Brook, Esq., C.E.	8	1	9	1375	1027	40.44	..	..
M Halifax W.W. (Widdop)	E. P. Brook, Esq., C.E.	5	1	3	1050	1257	49.47	..	..
M Hal. W.W. (Walshaw Dean Lo.)	E. P. Brook, Esq., C.E.	5	1	0	1040	1137	44.78	..	..
M Halifax W.W. (Walshaw Dean)	E. P. Brook, Esq., C.E.	8	1	0	1380	1236	48.65	..	..
9.—OUSE—Aire. 504 sq. mi.									
Pudsey (Fulneck)	Miss E. C. Lawford	5	1	0	490	872	34.34	..	..
D Garforth (Manor Farm)	Dr. A. G. Ruston	8	1	2	194	728	28.65	186	131
Bradford (Grange Rd., Horton)	Mr. A. E. Chilton	5	3	0	450	944	37.17	206	155
Bradford (Brayshaw Reservoir)	L. Mitchell, Esq., C.E.	5	1	0	982	962	37.89	200	156
D Bradford (Lister Park)	H. Lander, Esq.	8	1	0	439	900	35.45	193	151
Bradford (Thornton Moor Filters)	L. Mitchell, Esq., C.E.	5	1	0	1218	1112	43.79	234	171
Bradford (Stubden Res.) No. 8A.	L. Mitchell, Esq., C.E.	8	1	0	1075	1344	52.90	235	189
Bradford (Stubden Res.) No. 8B.	L. Mitchell, Esq., C.E.	8	1	0	1075	1259	49.58	235	186
Bradford (Stubden Res.) No. 8.	L. Mitchell, Esq., C.E.	5	1	0	1071	1204	47.41	235	187
M Bradford (Nan Scar, Oxenhope)	L. Mitchell, Esq., C.E.	5	1	0	1101	1271	50.05	..	..
M Bradford (Stairs Top, Oxenhope)	L. Mitchell, Esq., C.E.	5	1	0	1401	1182	46.54	..	..
Bradford (Leeming Reservoir)	L. Mitchell, Esq., C.E.	5	1	0	850	862	33.95?	228	160
Bradford (Doe Park Reservoir)	L. Mitchell, Esq., C.E.	8	1	0	810	1151	45.33	235	172
Bradford (Doe Park Reservoir)	L. Mitchell, Esq., C.E.	5	1	0	811	1111	43.72	235	165
M Bradford (Leeshaw Res.)	L. Mitchell, Esq., C.E.	5	1	0	875	1277	50.29	..	..
Bradford (Chellow Dean Res.)	L. Mitchell, Esq., C.E.	5	1	0	645	999	39.32	198	156
Bradford (Chellow Heights Res.)	L. Mitchell, Esq., C.E.	5	1	0	848	979	38.54	210	165
Bradford (Hewenden Res.)	6A L. Mitchell, Esq., C.E.	5	1	0	700	1079	42.47	234	168
Bradford (Hewenden Res.)	6L. Mitchell, Esq., C.E.	5	1	0	701	1055	41.54	234	168
Bradford (Heaton Reservoir)	5A L. Mitchell, Esq., C.E.	8	1	0	530	928	36.55	203	164
Bradford (Heaton Reservoir)	5L. Mitchell, Esq., C.E.	5	1	0	531	921	36.27	203	164
Leeds (Wortley Reservoir)	C. G. Henzell, Esq., C.E.	8	0	9	307	748	29.44	210	146
Leeds (Knoctrop)	C. G. Henzell, Esq., C.E.	8	0	9	72	657	25.88	160	112
Leeds (Great George Street)	C. G. Henzell, Esq., C.E.	5	0	9	180	732	28.83	195	141
D Leeds (Museum)	H. Crowther, Esq.	8	46	0	177	710	27.94	183	135
D Leeds (Kingfisher)	Greevz Fysher, Esq.	5	14	0	247	770	30.33	170	128
Leeds (Woodhouse Moor)	C. G. Henzell, Esq., C.E.	8	0	9	307	720	28.35	170	131
D Seacroft (Leeds City Hospital)	A. E. Pearson, Esq.	8	1	0	236	880	34.66	216	151
Leeds (Weetwood Res.) No. 2.	C. G. Henzell, Esq., C.E.	8	0	9	328	774	30.48	205	145
Leeds (Weetwood Garth)	Mrs. B. K. Gott	5	0	6	300	764	30.07	..	..

## DIVISION IX.—YORKSHIRE—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
WEST RIDING—(con.).		in.	ft.	in.	ft.	mm.	in.		
9.—OUSE—Aire—(con.).									
d Leeds (Gledhow Grove) . . . . .	F. J. Kitson, Esq. . . . .	5	2	6	285	782	30·77	177	143
d Leeds (Harrogate Road) . . . . .	Greevz Fysher, Esq. . . . .	5	4	0	404	774	30·48	188	132
d Leeds (Allerton Hill) . . . . .	T. Harding Churton, Esq. . . . .	5	0	7	418	738	29·07	..	..
d Shipley (Cragg End) . . . . .	Leeds & Liv'pool Canal Co. . . . .	8	1	0	304	874	34·40	..	..
d Shipley (Glenholme) . . . . .	M. E. Burton, Esq. . . . .	5	0	9	370	895	35·22	189	153
d Haworth (Harbour Lodge) . . . . .	M. R. Barnett, Esq., C.E. . . . .	8	1	0	1187	1440	56·69	215	180
d Haworth (Lower Laithe Res.) . . . . .	M. R. Barnett, Esq., C.E. . . . .	5	0	10	772	1230	48·41	224	168
d Oakworth (Oldfield Filters) . . . . .	M. R. Barnett, Esq., C.E. . . . .	5	1	0	1008	1219	47·98	211	171
d Bingley (Sewage Works) . . . . .	J. Slater, Esq. . . . .	5	1	1	227	898	35·34	196	146
d Bingley (Gilstead Filters) . . . . .	L. Mitchell, Esq., C.E. . . . .	5	1	0	572	843	33·17	192	149
d Baildon . . . . .	C. E. Bean, Esq. . . . .	8	1	0	365	801	31·52	192	141
d Adel (Lawns Wood Cemetery) . . . . .	L. Hodgson, Esq. . . . .	5	1	0	475	967	38·06	228	175
d Keighley (The Knowle) . . . . .	P. Clough, Esq. . . . .	5	1	0	385	1032	40·64	192	170
d Keighley (Victoria Park) . . . . .	Mr. R. Butterfield . . . . .	5	1	0	304	963	37·91	204	156
d Bingley (East Morton) . . . . .	J. Rhodes, Esq. . . . .	5	2	0	530	820	32·29	205	148
d Baildon (Weecher Res.) . . . . .	C. E. Bean, Esq. . . . .	5	0	6	825	853	33·60	..	..
d Bingley (Sunnydale Reservoir) . . . . .	L. Mitchell, Esq., C.E. . . . .	5	1	0	825	885	34·84	208	156
d Salterforth (Barnoldswick W.W.) . . . . .	J. W. Thompson, Esq. . . . .	8	1	4	832	1240	48·83	206	163
d Kelbrook (Higher Burnt Hill Fm.) . . . . .	J. E. Aldersley, Esq. . . . .	5	1	0	1050	1146	45·12	202	167
d Earby (Sewage Works) . . . . .	J. E. Aldersley, Esq. . . . .	5	1	0	425	1047	41·21	208	154
d Silsden (Bolton Road) . . . . .	A. Elder, Esq. . . . .	5	1	0	432	797	31·38	177	142
m Silsden (Gill Grange) . . . . .	L. Mitchell, Esq., C.E. . . . .	5	1	0	883	858	33·79	..	..
d Silsden Reservoir . . . . .	L. Mitchell, Esq., C.E. . . . .	5	1	0	560	813	32·01	180	137
d Silsden (Cringles Res. Site) . . . . .	L. Mitchell, Esq., C.E. . . . .	5	1	0	760	893	35·15	180	149
d Elslack (Moorside Farm) . . . . .	J. W. Thompson, Esq. . . . .	5	0	7	835	1124	44·26	207	172
d Carleton (Beech Hill) . . . . .	W. Cyril Empson, Esq. . . . .	8	5	3	425	995	39·16	..	..
d Skipton (Sewage Works) . . . . .	F. Morrison, Esq. . . . .	8	1	0	318	861	33·91	200	156
d Skipton (Town Hall) . . . . .	(R) A. E. W. Aldridge, Esq. . . . .	6	1	6	367	931	36·64	195	151
d Skipton (Hawthorne Cottage) . . . . .	Leeds & Liv'pool Canal Co. . . . .	8	1	0	380	858	33·79	..	..
d Gargrave (Banks Hill Bank N.W.) . . . . .	Leeds & Liv'pool Canal Co. . . . .	8	1	0	545	1115	43·91	..	..
d Gargrave (Ray Bridge Hill) . . . . .	Leeds & Liv'pool Canal Co. . . . .	8	0	10	459	841	33·09	..	..
d Rylstone Rectory . . . . .	Rev. C. H. Lowe . . . . .	5	0	7	708	1019	40·12	221	162
d Winterburn (Long Hill) . . . . .	Leeds & Liv'pool Canal Co. . . . .	8	0	9	705	1011	39·82	..	..
d Winterburn (Brown Hill) . . . . .	Leeds & Liv'pool Canal Co. . . . .	8	1	0	961	1073	42·26	..	..
d Malham Tarn . . . . .	Mr. John Winskill . . . . .	8	1	0	1292	1456	57·31	239	199
d Malham Tarn . . . . .	Mr. John Winskill . . . . .	5	1	0	1292	1459	57·43	239	199
10.—OUSE—Wharfe. 408 sq. mi.									
d Aberford (Lotherton Hall) . . . . .	(R) Mrs. Trench Gascoigne . . . . .	8	1	0	200	704	27·73	155	126
d Saxton Vicarage . . . . .	Rev. C. D. Ash . . . . .	5	2	0	95	773	30·43	181	144
d Bolton Percy (Bolton Lodge) . . . . .	(R) Col. T. H. Morris, C.B.E. . . . .	8	1	0	30	804	31·66	..	..
d Appleton Roebuck School . . . . .	W. Clayton, Esq. . . . .	5	1	6	29	802	31·59	140	..
d Adel (Eccup, East) . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	375	815	32·08	207	149
d Harewood (Arthington) . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	139	1081	42·57	174	152
d Harewood House . . . . .	Countess of Harewood . . . . .	5	0	10	300	855	33·68	178	145
d Otley (Sewage Works) . . . . .	C. F. Hodgson, Esq., C.E. . . . .	5	1	0	172	767	30·21	151	128
d Ilkley (Silverwell Cottage) . . . . .	J. M. Gameson, Esq., C.E. . . . .	5	1	0	900	1046	41·17	222	167
d Ilkley (Beechwood Grove) . . . . .	P. G. Marshall, Esq. . . . .	5	11	0	400	929	36·58	210	156
d Ilkley (Spence's Garden) . . . . .	J. M. Gameson, Esq., C.E. . . . .	5	1	0	314	947	37·30	211	156
d Leathley (Lindley Wood, S.) . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	312	913	35·94	217	155
d Ilkley (March Gill Reservoir) . . . . .	C. F. Hodgson, Esq., C.E. . . . .	5	1	0	655	952	37·47	210	161
d York (Chalfonts) . . . . .	Miss Rowntree . . . . .	5	1	0	70	822	32·37	209	140
d York (Cherry Hill) . . . . .	Messrs. H. Richardson & Co. . . . .	5	1	6	50	698	27·48	156	121
d York (Museum Gardens) . . . . .	W. Watson, Esq. . . . .	8	1	4	57	661	26·04	185	131
d York (The Retreat) . . . . .	Dr. H. J. Mackenzie . . . . .	5	1	0	68	673	26·49	185	124
d York (Acomb Landing) . . . . .	W. H. Humphreys, Esq. . . . .	5	1	0	40	678	26·71	158	130
m Skipton (Counter Hill) . . . . .	L. Mitchell, Esq., C.E. . . . .	5	1	0	951	905	35·64	..	..
d Skipton (Chelker Reservoir) . . . . .	L. Mitchell, Esq., C.E. . . . .	5	1	0	730	988	38·89	..	..
d Fewston (Timble Ings) . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	912	931	36·66	225	163
d Fewston (Timble) . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	720	923	36·36	203	159
d Fewston (Swinsty, East) . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	460	945	37·21	209	147
d Fewston, North . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	525	946	37·26	195	150
d Fewston (Blubberhouses) . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	575	1017	40·02	203	158

## DIVISION IX.—YORKSHIRE—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
WEST RIDING—(con.).		in.	ft.	in.	ft.	mm.	in.		
10.—OUSE—Wharfe—(con.).									
Bolton Abbey Estate Office	A. Downs, Esq.	5	1	2	368	980	38·58	199	..
Barden Reservoir	L. Mitchell, Esq., C.E.	8	1	0	746	1076	42·36	227	157
Barden Reservoir	L. Mitchell, Esq., C.E.	5	1	0	746	1061	41·76	222	157
Upper Barden Reservoir	L. Mitchell, Esq., C.E.	5	1	0	1250	973	38·31	236	158
Thruscross (Lane Head)	C. G. Henzell, Esq., C.E.	8	0	9	950	826	32·51	207	157
M Burnsall (Thorpe Fell)	L. Mitchell, Esq., C.E.	5	1	0	1661	1006	39·59	..	..
M Burnsall (Sandbed Beck)	L. Mitchell, Esq., C.E.	5	1	0	676	954	37·57	..	..
D Burnsall Rectory	Rev. Canon W. J. Stavert	8	4	8	503	1054	41·50	219	167
Grimwith Reservoir	L. Mitchell, Esq., C.E.	8	1	0	890	1146	45·11	226	171
Grimwith Reservoir	L. Mitchell, Esq., C.E.	5	1	0	893	1119	44·07	226	171
M Grimwith (Trunla Hill)	L. Mitchell, Esq., C.E.	5	1	0	1201	971	38·23	..	..
D Buckden	G. E. Clayton, Esq.	5	3	0	800	1361	53·59	184	166
d Oughtershaw Hall	Miss Woodd	5	1	6	1175	1745	68·69	..	182
11.—OUSE—Nidd. 254 sq. mi.									
Spofforth (Sewage Works)	C. E. Rivers, Esq., C.E.	5	1	0	184	855	33·65	195	..
d Wetherby (Ribston Hall)	Mr. W. Simpson	5	1	2	130	926	36·44	..	109
M Harrogate W.W. (Ling Cottage)	A. S. West, Esq., C.E.	5	1	0	740	855	33·65	..	..
M Harrogate W.W. (Broad Dubb)	A. S. West, Esq., C.E.	5	1	0	725	863	33·99	..	..
M Harrogate W.W. (Cobblers Cott.)	A. S. West, Esq., C.E.	8	1	0	730	870	34·26	..	..
Harrogate W.W. (Ten Acres Res.)	A. S. West, Esq., C.E.	8	1	6	620	909	35·77	198	150
D Harrogate W.W. (Scargill Res.)	A. S. West, Esq., C.E.	8	1	0	646	929	36·56	199	153
Harrogate W.W. (Beaver Dyke R.)	A. S. West, Esq., C.E.	8	0	11	575	896	35·29	199	150
M Harrogate W.W. (John o' Gaunts)	A. S. West, Esq., C.E.	8	1	0	600	861	33·88	..	..
M Harrogate W.W. (Long Stoop)	A. S. West, Esq., C.E.	5	1	0	700	867	34·15	..	..
M Harrogate W.W. (Knab's Moor)	A. S. West, Esq., C.E.	5	1	0	700	851	33·51	..	..
D Harrogate (Harlow Moor Obsy.)	C. E. Rivers, Esq., C.E.	5	1	0	480	897	35·31	203	150
D Harrogate (Harlow Hill Res.)	A. S. West, Esq., C.E.	8	1	0	589	857	33·74	172	128
D Harrogate (Irongate Bridge Res.)	A. S. West, Esq., C.E.	8	1	6	455	945	37·21	172	137
D Knaresborough (The Abbey)	Rev. Canon J. T. Hartley	5	1	0	140	838	32·99	189	143
Knaresborough (Water Tower)	A. S. West, Esq., C.E.	8	1	0	240	857	33·75	169	126
D Knaresborough (Grammar Sch.)	A. S. Robinson, Esq.	5	1	0	230	850	33·47	189	135
Harrogate (Bilton Sewage Works)	C. E. Rivers, Esq., C.E.	5	1	0	208	892	35·11	187	..
D Birstwith Hall	F. A. Aykroyd, Esq.	8	0	10	375	1081	42·55	201	159
D Birstwith (Swarcliffe)	Capt. C. S. Greenwood	5	1	0	510	1002	39·44	172	155
D Greenhow Hill (Kell House)	Harold Bruff, Esq., C.E.	5	1	0	1302	1214	47·79	219	170
Ramskill (Holme Ho. Gouthwaite)	L. Mitchell, Esq., C.E.	5	1	0	464	1033	40·68	197	163
Ramskill (Raygill House)	L. Mitchell, Esq., C.E.	5	1	0	925	1113	43·81	155	143
Nidderdale (High Riggs)	L. Mitchell, Esq., C.E.	5	1	0	1010	1082	42·61	..	145
M Nidderdale (East Gill Head)	L. Mitchell, Esq., C.E.	5	1	0	1710	1503	59·18	..	..
M Nidderdale (Rain Stang)	L. Mitchell, Esq., C.E.	5	1	0	1470	1190	46·86	..	..
Nidderdale (New Houses)	L. Mitchell, Esq., C.E.	5	1	0	755	1174	46·21	187	177
Nidderdale (West Houses)	L. Mitchell, Esq., C.E.	5	1	0	1150	1415	55·72	203	197
12.—OUSE—Ure. 110 sq. mi.									
Dallow Moor (Harper Hill)	C. G. Henzell, Esq., C.E.	8	0	9	858	901	35·47	196	166
D Ripon (Studley Royal Gardens)	Marquis of Ripon	5	1	6	271	849	33·43	196	140
D Ripon (The Red House)	F. D. Wise, Esq., C.E.	5	1	0	120	822	32·36	173	141
Kirkby Malzeard (Drovers' Inn)	C. G. Henzell, Esq., C.E.	8	0	9	576	1090	42·90	225	170
Kirkby Malzeard (Hawsett)	C. G. Henzell, Esq., C.E.	8	0	9	820	1016	40·00	206	171
Kirkby Malzeard (Hambleton H.)	C. G. Henzell, Esq., C.E.	8	0	9	1106	1117	43·96	..	..
Kirkby Malzeard (Bagwith Brae)	C. G. Henzell, Esq., C.E.	5	0	9	703	903	35·55	213	144
Kirkby M. (Stone & Ears Wham)	C. G. Henzell, Esq., C.E.	8	0	9	1118	1072	42·20	..	..
EAST RIDING. (Area, 1176 sq. mi.)									
1.—OUSE—Left Bank Tributaries. 82 sq. mi.									
D York (Heslington)	Hn. L. de Yarburgh-Bateson	8	0	7	35	725	28·56	186	140
D York (Dunnington Hall)	Miss Hildyard	8	1	2	110	684	26·93	194	130
2.—OUSE—Derwent. 248 sq. mi.									
D Warter	Mrs. J. Coxon	5	1	10	230	728	28·66	182	142
D Burythorpe Rectory	Rev. William Robinson	5	1	0	240	661	26·01	186	130
D Birdsall Gardens	Mr. J. Anderson	5	1	0	303	815	32·09	185	134

## DIVISION IX.—YORKSHIRE—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
EAST RIDING—(con.).		in.	ft.	in.	ft.	mm.	in.		
2.—OUSE—Derwent—(con.).									
d Rillington (Scampston Hall) . . . . .	W. H. St. Quintin, Esq. . . . .	5	1	6	100	722	28·44	198	150
d Ganton (Dawney Lodge) . . . . .	H. D. Birdsall, Esq. . . . .	5	1	0	185	741	29·18	195	140
d Ganton (Ganton Hall) . . . . .	Harold Wrigley, Esq. . . . .	5	2	0	250	742	29·20	217	140
d Hunmanby (Holly Bank) . . . . .	Miss Ackland . . . . .	5	1	2	225	697	27·45	..	..
3.—HUMBER—Left Bank Tributaries. 675 sq. mi.									
d Patrington (Spurn Head) . . . . .	Air Ministry . . . . .	8	1	0	19	421	16·56	173	105
d Patrington . . . . .	Miss H. Kirman . . . . .	5	2	6	46	591	23·26	159	127
d Hull (Pearson Park) . . . . .	H. B. Witty, Esq. . . . .	5	0	8	8	699	27·53	213	129
d Hull (Springhead) . . . . .	C. B. Newton, Esq., C.E. . . . .	5	1	0	16	707	27·82	209	134
d Roos (Northend) . . . . .	Miss F. Brown . . . . .	..	0	8	56	663	26·10	182	135
d Newport (Co. School) . . . . .	A. Y. Jordan, Esq. . . . .	5	0	8	9	599	23·58	185	130
d Cottingham (Water Works) . . . . .	C. B. Newton, Esq., C.E. . . . .	5	1	0	26	676	26·62	176	131
d North Cave (The Croft) . . . . .	Major W. H. Carver . . . . .	8	1	6	35	715	28·14	..	..
d Holme-on-Spalding-Moor . . . . .	C. J. Pybus, Esq. . . . .	8	1	0	32	659	25·95	160	131
Beverley (E. Riding Mental Hosp.) . . . . .	Dr. E. S. Simpson . . . . .	5	1	0	175	644	25·37	207	139
Beverley (New Walk) . . . . .	W. Evans, Esq., C.E. . . . .	5	3	0	38	723	28·47	207	128
Beverley (Hull Bridge) . . . . .	W. Evans, Esq., C.E. . . . .	5	2	0	11	644	25·35	178	131
d Market Weighton (Dalton Holme) . . . . .	Mr. J. P. Jobling . . . . .	8	6	0	120	742	29·23	187	141
d Brandesburton (Hempholm Lk.) . . . . .	W. Evans, Esq., C.E. . . . .	5	2	6	11	649	25·56	172	..
d Lowthorpe (The Elms) . . . . .	F. K. Hawes, Esq. . . . .	5	1	0	63	668	26·29	185	135
4.—EAST COAST STREAMS. 171 sq. mi.									
d Hornsea (Promenade) . . . . .	F. Lord, Esq. . . . .	8	1	0	40	676	26·60	165	124
d Bridlington . . . . .	S. R. Crofts, Esq. . . . .	5	1	0	60	770	30·30	216	144
d Bridlington (Grammar School) . . . . .	G. T. Reeve, Esq. . . . .	8	1	0	57	727	28·63	185	145
d Wold Newton Hall . . . . .	Major Ralph E. Stuart . . . . .	5	1	6	175	769	30·26	162	139
d Ganton (Willerby Wold) . . . . .	Major W. F. Wormald . . . . .	5	0	9	565	766	30·16	192	132
d Filey Vicarage . . . . .	Rev. Canon A. N. Cooper . . . . .	8	1	0	95	703	27·66	216	140
NORTH RIDING. (Area, 2155 sq. mi.)									
1.—OUSE—Ure. 273 sq. mi.									
d Masham Moor (Roundhill Res.) . . . . .	A. S. West, Esq., C.E. . . . .	8	1	0	743	1148	45·18	230	182
d Masham Moor (Somerside) . . . . .	C. G. Henzell, Esq., C.E. . . . .	5	0	9	928	1123	44·22	224	184
d Masham Moor (High Sour Mire) . . . . .	C. G. Henzell, Esq., C.E. . . . .	5	0	9	884	837	32·97	..	..
d Masham Moor (Leighton Res.) . . . . .	C. G. Henzell, Esq., C.E. . . . .	5	0	9	634	1022	40·22	221	166
d Masham Moor (Towler Hill) . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	820	1060	41·73	221	169
d Masham Moor (Breary Bank) . . . . .	C. G. Henzell, Esq., C.E. . . . .	5	0	9	600	1060	41·74	221	166
d Masham Moor (Healey Pasture) . . . . .	C. G. Henzell, Esq., C.E. . . . .	8	0	9	620	1043	41·08	221	167
d Masham Moor (Low Houses) . . . . .	C. G. Henzell, Esq., C.E. . . . .	5	0	9	693	1090	42·91	240	177
d Clifton Castle Gardens . . . . .	Lady Cowell . . . . .	5	1	0	360	840	33·07	182	132
d Middleham (Cotescue) . . . . .	A. Rowntree, Esq. . . . .	5	1	0	600	804	31·64	..	..
d Middleham (Castle Hill) . . . . .	Col. P. H. Hammond, C.B. . . . .	5	1	0	470	909	35·79	191	150
d Middleham (The Deanery) . . . . .	Rev. H. G. Topham . . . . .	5	1	0	450	894	35·20	175	145
d West Witton (Ivy House) . . . . .	J. B. Espiner, Esq. . . . .	5	1	0	606	1005	39·56	221	163
d Leyburn (Bolton Hall) . . . . .	Mr. F. Scrivener . . . . .	8	1	0	420	1025	40·35	209	151
d Askrigg (Worton) . . . . .	Rev. W. M. Atkinson . . . . .	5	1	0	700	951	37·46	202	158
d Hawes (The Stone House) . . . . .	H. Arden Crallan, Esq. . . . .	5	1	6	845	1238	48·74	190	179
2.—OUSE—Swale. 569 sq. mi.									
d Sessay Rectory . . . . .	Rev. F. Payne Gallwey . . . . .	5	1	0	113	675	26·59	149	130
d Dalton Parsonage . . . . .	Rev. G. H. Chilman . . . . .	5	1	0	79	663	26·09	171	128
d Carlton Husthwaite . . . . .	W. R. Bagley, Esq. . . . .	5	1	0	190	717	28·24	198	139
d Coxwold (The Old Hall) . . . . .	H. Geipel, Esq. . . . .	5	1	6	260	742	29·23	147	134
d Baldersby (Baldersby Park) . . . . .	Mr. J. E. Hathaway . . . . .	10	1	6	100	738	29·04	210	128
d Burniston (Camp Hill) . . . . .	Capt. F. H. Reynard . . . . .	8	3	6	152	674	26·55	..	..
d Thirsk (Spital Hill) . . . . .	Mrs. R. E. Gill . . . . .	5	1	0	191	637	25·08	196	140
d Thirsk (Sowerby) . . . . .	William Brown, Esq. . . . .	5	1	0	110	684	26·92	..	..
d Thirsk (Brynkellhow) . . . . .	A. B. Hall, Esq. . . . .	8	1	0	115	684	26·92	184	127
d Thirsk (The Hall) . . . . .	J. Bell, Esq. . . . .	5	1	10	121	641	25·25	170	129
d Thirsk (Stoneybrough) . . . . .	T. J. Foggitt, Esq. . . . .	5	1	2	122	694	27·33	178	138

## DIVISION IX.—YORKSHIRE—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam.	Height Ground	above Sea Level.					
NORTH RIDING.—(con.)		in.	ft.	in.	ft.	mm.	in.		
2.—OUSE—Swale—(con.).									
M Felixkirk (Thirlby)	A. J. Walker, Esq.	5	1	0	339	741	29·16	..	..
D Felixkirk (Mount St. John)	A. J. Walker, Esq.	5	1	0	523	701	27·58	196	139
D Felixkirk (Mount St. John)	A. J. Walker, Esq.	5	1	10	542	717	28·21	187	139
D Felixkirk (Mount St. John)	A. J. Walker, Esq.	5	1	0	541	724	28·52	191	140
D Felixkirk (Mount St. John)	A. J. Walker, Esq.	5	1	10	542	695	27·35	..	..
M Felixkirk (Mount St. John)	A. J. Walker, Esq.	5	1	0	541	711	28·01	..	..
D Boltby (Ravensthorpe Manor)	F. E. Walker, Esq.	5	1	7	661	755	29·74	182	141
M Boltby, East	A. J. Walker, Esq.	5	1	0	460	787	30·97	..	..
M Boltby (Cliff Head)	No. 2 A. J. Walker, Esq.	5	1	4	772	737	29·00	..	..
M Boltby (High Paradise)	A. J. Walker, Esq.	5	1	3	1144	915	36·04	..	..
Bedale (The Hermitage)	C. Clarke, Esq.	5	0	10	465	699	27·50	163	115
Bedale (Thorp Perrow)	Mr. W. Pattison	8	1	6	140	694	27·31	199	138
D Maunby Hall	Major A. Hill-Walker, V.C.	5	1	0	90	738	29·04	151	134
D Bedale (Park House)	Miss M. Greenwood	5	1	1	180	741	29·16	149	137
D Thornton-le-Moor (Pasture Ho.)	G. H. Croft, Esq.	5	1	0	225	631	24·83	183	126
D Borrowby (Leake Vicarage)	Rev. G. W. Kendall	5	1	0	215	661	26·04	164	132
Kepwick Vicarage	Rev. T. E. Parkinson	5	1	0	530	581	22·87	..	..
Scruton Hall	Rev. A. T. Coore	5	1	0	110	716	28·19	181	127
M Swaledale (Gunnorside Lodge)	W. M. Christy, Esq.	5	1	0	950	1187	46·73	..	..
D Northallerton (Brompton)	J. P. Yeoman, Esq.	5	3	0	165	699	27·52	208	136
D Reeth (Arkleside)	T. R. Blumer, Esq.	5	1	0	700	939	36·95	186	159
D Osmotherley	T. Yeoman, Esq.	8	0	8	660	740	29·13	161	133
D East Harlsey (Harlsey Hall)	W. W. Constantine, Esq.	5	1	0	370	697	27·44	154	130
Richmond (Marske Hall)	R. A. Tatton, Esq.	5	1	0	525	944	37·17	210	163
D Rounton Grange	Sir Hugh Bell, Bt.	8	1	0	249	691	27·23	199	149
D West Rounton Rectory	Rev. G. Bird	5	0	11	200	640	25·18	154	124
D Reeth (Arkengarthdale)	Samuel Gott, Esq.	5	1	0	940	1083	42·65	201	172
Middleton Tyas	J. F. B. Baker, Esq.	5	0	10	380	761	29·95	..	..
3.—OUSE—Left Bank Tributaries. 153 sq. mi.									
Haxby (Moorlands)	E. G. Tew, Esq.	5	1	0	58	794	31·26	..	..
d Sutton-on-Forest (Sutton Hall)	Mrs. Grey	5	1	0	150	701	27·58	..	116
Crayke Rectory	Rev. T. Catton	5	1	0	200	658	25·90	..	..
4.—OUSE—Derwent. 509 sq. mi.									
Welburn	John D. Atkin, Esq.	5	1	0	300	762	29·99	169	126
D Malton (Broughton Rise)	C. C. Laverack, Esq.	5	1	0	164	707	27·83	178	130
D Hovingham Hall	Sir W. H. A. Worsley, Bt.	5	0	9	119	776	30·56	186	129
D Ampleforth College	Rev. H. de Normanville, OSB	8	1	0	350	696	27·41	188	130
D Helmsley (Duncombe Pk. Gdns.)	Mr. D. Williams	5	3	0	176	844	33·22	156	141
D Pickering (Hungate Hall)	Dr. J. L. Kirk	5	1	0	90	758	29·86	238	149
D Seamer (Irton Pump Station)	H. Richardson, Esq., C.E.	8	1	0	94	778	30·63	214	144
D Scarborough (Osgodby)	H. Richardson, Esq., C.E.	8	1	0	166	791	31·15	165	155
D East Ayton (Derwent House)	A. H. Robinson, Esq.	5	1	0	110	753	29·64	193	152
D Scawton Rectory	Rev. C. H. Rowntree	5	1	0	606	855	33·66	196	155
D Cold Kirby (The School)	Miss D. M. Hartley	5	1	0	763	877	34·53	218	158
D Old Byland (Board Inn)	Herbert Nicholson, Esq.	5	1	0	722	883	34·76	178	152
D Kirkby Moorside (Ravenswyke)	Harrison Holt, Esq.	5	1	0	220	723	28·45	147	131
d Thornton Dale (High Dalby Ho.)	J. A. Coulson, Esq.	5	1	0	325	817	32·16	..	..
Kirkby Moorside (Hutton-le-Hole)	F. M. Curtis, Esq.	5	1	0	350	757	29·80	..	..
D Hawnby Rectory	Rev. W. Hughes	5	1	0	497	946	37·25	167	164
D Bilsdale Priory	Rev. J. Powell Parry	5	1	0	638	925	36·42	215	161
5.—ESK & C. 278 sq. mi.									
D Scarborough	D. Quaife, Esq.	5	1	0	118	599	23·60	176	131
D Scarborough (Scalby)	Mrs. J. W. Rowntree	5	0	11	131	852	33·56	179	165
D Scarborough (Scalby St. Philips)	Rev. W. E. Stewart	5	1	0	130	635	25·02	181	130
Goathland (Thwaitefield)	L. G. Rowland, Esq.	5	0	6	485	780	30·72	..	..
D Glaisdale (The Gables Gardens)	Mr. H. Hope	5	0	9	400	1058	41·65	186	148
Sleights (The Hall)	P. M. Horsfall, Esq.	5	1	0	220	869	34·21	..	..
D Danby (The School House)	J. W. Lynas, Esq.	5	1	0	500	967	38·08	168	152
D Danby Lodge	Mr. C. Hardy	5	3	0	500	977	38·45	166	153

## DIVISION IX.—YORKSHIRE—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam. in.	Height ft.	above Ground in. Sea Level. ft.					
NORTH RIDING—(con.).		in.	ft.	in.	ft.	mm.	in.		
5.—ESK & C.—(con.).									
D Whitby (Park Hall, Aislaby) ..	Rev. J. H. Richardson ...	5	1	0	500	833	32·78	204	150
D Whitby .....	D. S. Ramsdale, Esq. ....	8	1	0	116	672	26·47	192	130
D Whitby (Mulgrave Castle) .....	Mr. J. Corbett .....	5	1	0	410	790	31·10	214	147
D Guisborough (Lockwood Res.) ..	W. M. I'Anson, Esq., C.E..	8	1	0	632	850	33·47	178	138
M Guisborough (Lockwood Res.) ..	W. M. I'Anson, Esq., C.E..	8	1	0	632	868	34·19	..	..
D Saltburn (Skelton Castle) .....	Lt.-Col. W. H. A. Wharton	5	0	9	272	781	30·75	212	154
6.—TEES. 373 sq. mi.									
D Ingleby Manor .....	Lord De L'Isle & Dudley ..	5	0	11	460	869	34·23	201	153
D Ingleby Greenhow Vicarage ...	Rev. M. A. Horsfall .....	5	1	6	420	944	37·15	182	152
D Kildale Hall .....	Major R. B. Turton .....	5	1	2	600	1030	40·55	244	163
D Croft (Dalton-on-Tees) .....	Mr. W. Wrather .....	8	2	0	170	643	25·32	152	116
D Marton-in-Cleveland (Southcroft)	R. Theodore Wilson, Esq. ...	5	0	9	100	592	23·32	145	117
D Middlesbrough (Albert Park) ..	J. R. F. Readman, Esq. ...	8	1	0	30	602	23·71	175	121
M Baldersdale (Blackton Res.) ...	Hugh Wilson, Esq. ....	5	1	0	937	1095	43·10	..	..
M Baldersdale (Balderhead) .....	Hugh Wilson, Esq. ....	5	1	0	1360	1156	45·50	..	..
D Baldersdale (Hury Reservoir) ..	Hugh Wilson, Esq. ....	5	1	0	866	899	35·40	210	162
D Lunedale (Lunehead) .....	Hugh Wilson, Esq. ....	5	1	0	1450	1389	54·70	..	..
M Lunedale (Selset) .....	Hugh Wilson, Esq. ....	5	1	0	924	1090	42·90	..	..
D Lunedale (Grassholme Res.) ...	Hugh Wilson, Esq. ....	5	1	0	936	1032	40·62	201	173
M Mickleton (Lime Kiln Pasture) ..	Mr. J. Harvey .....	8	1	0	1175	775	30·50?	..	..

## DIVISION X.—NORTHERN COUNTIES.

## DURHAM. (Area, 1011 sq. mi.)

1.—TEES & C. 396 sq. mi.										
D	Darlington (North Villa)	Dr. C. A. Lower	5	1	3	100	677	26·64	184	131
D	Darlington (Public Park)	"Darlington Times"	5	1	0	150	682	26·86	185	..
D	Darlington (Hummersknott)	Mr. John Short	5	1	0	200	666	26·21	144	121
d	Piercebridge (Carlbury Hall)	J. H. Pease, Esq.	5	1	0	222	692	27·26	..	..
	Barnard Castle (Bowes Mus.)	S. E. Harrison, Esq.	5	1	0	500	848	33·39	208	188
D	Barnard Castle (County School)	C. W. Watson, Esq.	5	1	6	540	842	33·16	196	153
d	Winston-on-Tees	E. Hardy, Esq.	5	1	0	380	700	27·56	..	111
D	Stockton (Ropner Park)	W. A. Jenkins, Esq.	5	1	9	61	618	24·34	150	119
D	Hurworth Burn (Crookfoot Res.)	A. W. Branson, Esq., C.E.	10	1	6	293	677	26·67	206	129
D	West Hartlepool (Lymn Street)	H. Lamb, Esq.	5	63	0	84	495	19·47	172	113
d	West Hartlepool (WaterWorks)	A. W. Branson, Esq., C.E.	10	1	0	35	590	23·22	..	..
D	Hurworth Burn Reservoir	A. W. Branson, Esq., C.E.	10	1	0	357	692	27·25	197	128
D	Hartlepool (Hart Reservoir)	A. W. Branson, Esq., C.E.	10	1	0	172	544	21·43	173	115
D	Shotton Pumping Station	A. B. E. Blackburn, Esq. C.E.	8	1	0	422	815	32·09	198	135
D	Seaham (Dalton Pumping Sta.)	A. B. E. Blackburn, Esq. C.E.	8	1	0	345	742	29·23	181	134
2.—WEAR. 464 sq. mi.										
D	Bishop Auckland (N. Bondgate)	J. Kilburn, Esq.	5	1	0	316	720	28·36	206	126
d	Stanhope (Parson Byers Quarry)	Messrs. Bell, Bros., Ltd.	5	6	8	846	777	30·59	..	126
	Burnhope (Grass Meres)	Durham Co. Water Bd.	..	1	3	1850	1250	49·20	..	..
	Burnhope (Lodgegill Mine)	Durham Co. Water Bd.	..	1	3	1950	1384	54·50	..	..
	Burnhope Bridge	Durham Co. Water Bd.	..	1	0	1200	1156	45·52	..	..
	Wellshope (Wellheads Hush)	Durham Co. Water Bd.	..	1	3	1690	1166	45·90	..	..
D	Durham Observatory	F. Sargent, Esq.	8	0	10	336	683	26·88	201	127
D	Ushaw (St. Cuthbert's College)	Rev. J. R. Adamson	5	0	9	594	758	29·84	184	131
	Pitlington (Elemore Hall)	Miss Baker Baker	8	0	6	323	959	37·76	..	..
D	Weardale W.W. (Tunstall Res.)	H. Robinson, Esq., C.E.	8	1	2	724	865	34·06	174	153
	Weardale W.W. (Waskerley 6)	H. Robinson, Esq., C.E.	8	4	2	1229	752	29·62	..	..
	Weardale W.W. (Waskerley 3)	H. Robinson, Esq., C.E.	8	4	6	1433	822	32·36	..	..
	Weardale W.W. (Waskerley 4)	H. Robinson, Esq., C.E.	8	4	7	1321	741	29·19	..	..
	Weardale W.W. (Waskerley 5)	H. Robinson, Esq., C.E.	8	4	2	1244	799	31·45	..	..
D	Weardale W.W. (Waskerley)	H. Robinson, Esq., C.E.	8	0	11	1179	856	33·69	212	163
	Weardale W.W. (Waskerley 2)	H. Robinson, Esq., C.E.	8	4	5	1367	826	32·52	..	..
	Weardale W.W. (Waskerley 1)	H. Robinson, Esq., C.E.	8	4	4	1317	801	31·55	..	..
D	Chester-le-Street (Biddick Hall 1)	Mr. J. Fletcher	5	1	0	150	774	30·46	204	146
	Chester-le-Street (Biddick Hall 2)	Mr. J. Fletcher	5	1	0	150	776	30·54	204	146

## DIVISION X.—NORTHERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
DURHAM—(con.).		in.	ft.	in.	ft.	mm.	in.		
2.—WEAR—(con.).									
D Ryhope Pumping Station . . . . .	A.B.E.Blackburn,Esq.,C.E.	8	1	1	228	667	26·28	195	129
D Sunderland(W.HendonH.)No.5.	Mrs.W. A. Mounsey . . . . .	5	1	0	130	714	28·11	200	138
D Sunderland (Mowbray Park) . . .	H. Renney, Esq., M.D. . . . .	5	3	0	105	722	28·44	194	125
D Sunderland (Cedars End) . . . . .	W. F. Vint, Esq. . . . .	5	1	0	115	652	25·66	182	122
D Sunderland(SouthwickCemet'y)	Mr. J. R. Hodgson . . . . .	8	1	0	171	849	33·42	165	140
3.—TYNE, LOWER. 151 sq. mi.									
D Weardale W.W.(Smiddy Shaw)	H. Robinson, Esq., C.E. . . . .	8	1	3	1128	906	35·66	223	174
D Consett Park Farm . . . . .	J. D. Brown, Esq. . . . .	5	4	3	641	818	32·19	165	135
D Chopwellwood (Armstrong Coll.)	T. E. Anderson, Esq. . . . .	8	1	0	446	763	30·05	196	130
D Sunderland (Cleaddon Pump.Stn.)	A.B.E.Blackburn,Esq.,C.E.	8	1	0	216	652	25·66	177	119
D Ryton-on-Tyne (Balgonie Ho.)	J. W. Smith, Esq., M.D. . . . .	5	1	3	258	736	28·99	186	137
D South Shields (Bent's Park) . . .	Dr. W. Campbell Lyons . . .	5	1	0	36	638	25·11	189	118
NORTHUMBERLAND. (Area, 2015 sq. mi.)									
1.—EDEN. 20 sq. mi.									
2.—SOUTH TYNE. 232 sq. mi.									
d Allenheads . . . . .	J. W. Metcalfe, Esq. . . . .	8	1	0	1353	1104	43·48	..	..
D Bardon Mill (Allans Green) . . .	Mrs. Lowes. . . . .	5	1	0	1000	960	37·81	216	152
3.—TYNE, LOWER. 227 sq. mi.									
D Corbridge (Howden Dene) . . . .	T. D. Straker-Smith, Esq. . . .	5	0	8	200	693	27·28	192	136
d Hexham (Beaufront Castle) . . .	The Lady Rayleigh . . . . .	8	1	0	400	714	28·12	..	112
d Newcastle . . . . .	"Newcastle Chronicle" . . . .	..	..	..	..	730	28·75	..	..
d Newcastle (Lit. and Phil. Soc.)	H. Richardson, Esq. . . . .	8	55	0	160	785	30·90	..	..
d Newcastle (Leazes Park) . . . . .	W. J. Steele, Esq. . . . .	5	1	0	255	668	26·29	..	103
D Newcastle (Town Moor) . . . . .	D. C. Baldie, Esq. . . . .	5	2	0	201	762	29·99	196	139
D Newcastle (Wellburn, Jesmond)	J. H. Holmes, Esq., C.E. . . .	5	1	6	163	680	26·78	190	126
d Wallsend (Carville School) . . . .	G. R. Pattison, Esq. . . . .	5	1	3	100	587	23·11	..	..
D Tynemouth (Tyne Pier Works)	R. F. Hindmarsh, Esq., C.E. . .	5	1	8	65	783	30·84	189	126
D Tynemouth (Coastguard Stat.)	Air Ministry . . . . .	8	1	0	118	640	25·22	182	117
D Whittle Dean(NewcastleW.W.)	A. Hardcastle, Esq., C.E. . . .	5	0	6	380	697	27·46	209	139
D WhittleDeanFilters(N'stleW.W)	A. Hardcastle, Esq., C.E. . . .	5	1	1	353	713	28·08	198	132
4.—NORTH TYNE. 433 sq. mi.									
N.Tyne(G.Crag) (N'castleW.W)	A. Hardcastle, Esq., C.E. . . .	5	1	0	896	701	27·60	..	..
Hallington Vill. (N'castleW.W)	A. Hardcastle, Esq., C.E. . . .	5	1	0	467	737	29·03	..	..
Hallington Res.(N'castle W.W)	A. Hardcastle, Esq., C.E. . . .	5	1	0	470	719	28·32	198	144
Hallington(Fawcett)(Newc.WW)	A. Hardcastle, Esq., C.E. . . .	5	1	2	537	688	27·10	..	..
Hallington(Cheviot)(Newc.WW)	A. Hardcastle, Esq., C.E. . . .	5	1	2	576	677	26·65	..	..
D Camphill (Newcastle W.W.) . . .	A. Hardcastle, Esq., C.E. . . .	5	1	0	650	717	28·24	..	..
D Colt Crag (Newcastle W.W.) . . .	A. Hardcastle, Esq., C.E. . . .	5	1	0	654	719	28·29	198	157
D Falstone Rectory. . . . .	Rev. A. J. Dexter. . . . .	5	1	0	485	861	33·90	220	160
D Bellingham (High Green Man.)	Capt.SirC.Morrison-Bell,Bt.	5	1	0	849	835	32·89	228	166
D Redewater (Catcleugh) . . . . .	A. Hardcastle, Esq., C.E. . . .	5	1	0	819	982	38·66	233	172
5.—COQUET & C. 840 sq. mi.									
D Whittington (Newcastle W.W.)	A. Hardcastle, Esq., C.E. . . .	8	0	9	528	695	27·35	..	..
D Burnside (Newcastle W.W.) . . .	A. Hardcastle, Esq., C.E. . . .	5	0	9	419	687	27·05	..	..
D RyalCottage(Newcastle W.W.)	A. Hardcastle, Esq., C.E. . . .	10	0	9	463	697	27·46	..	..
D Morpeth (Bothalhaugh Garden)	Hon. Rev. W. C. Ellis . . . .	5	1	10	35	684	26·94	208	139
D Morpeth (Bothalhaugh Garden)	Hon. Rev. W. C. Ellis . . . .	5	1	10	35	682	26·85	..	..
D Morpeth (Bothalhaugh Lawn)	Hon. Rev. W. C. Ellis . . . .	5	1	10	137	680	26·76	208	139
D Morpeth (Bothalhaugh Lawn)	Hon. Rev. W. C. Ellis . . . .	5	1	10	130	687	27·04	..	..
D Morpeth (Ashington) . . . . .	J. Gray, Esq. . . . .	5	1	0	110	655	25·79	190	125
D Morpeth (Cockle Park) . . . . .	M. R. Pitman, Esq. . . . .	8	1	0	325	705	27·77	187	135
D Font Res. (Tynemouth W. W.)	J. W. McKerrow, Esq. . . . .	10	1	0	614	831	32·73	221	162
D Rothbury (Brinkburn Priory)	Mrs. Hugh Fenwick . . . . .	8	1	0	257	700	27·56	..	..
D Acklington (Broomhill Colliery)	A. M. Morison, Esq. . . . .	5	7	6	92	654	25·76	..	..
D Rothbury (Cragside) . . . . .	Miss L. Hudson . . . . .	8	1	3	405	812	31·97	209	149
D Beal (Lowlyna) . . . . .	H. L. Pattinson, Esq. . . . .	5	1	10	200	643	25·33	..	..

## DIVISION X.—NORTHERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
NORTHUMBERLAND—(con.).		in.	ft.	in.	ft.	mm.	in.		
<b>6.—TWEED. 262 sq. mi.</b>									
D Glanton (Glanton Pyke Gdns.)	Mr. J. Henderson	8	4	2	521	769	30·27	199	154
D Ilderton (Lilburn Tower)	A. B. Collingwood, Esq.	10	6	0	300	713	28·06	181	130
D Ilderton (Lilburn Tower Grdns.)	Mr. W. Lovett	5	1	0	240	773	30·42	185	134
Wooler (St. Ninians)	Dr. R. Walker	8	0	10	176	800	31·51	..	..
Wooler (Victoria House)	Miss E. M. Dodds	5	1	0	176	672	26·45	..	143
D Doddington Vicarage	Rev. J. G. Shotton	8	1	4	140	702	27·63	177	124
Mindrum (Thornington House)	Leonard Briggs, Esq.	5	..	..	..	686	27·00	..	..
Ford Castle Gardens	Mr. J. Jackson	5	3	0	220	591	23·25	..	..
<b>7.—INSULAR. 1 sq. mi.</b>									
CUMBERLAND. (Area, 1516 sq. mi.)									
<b>1.—EDEN &amp; SOLWAY. 887 sq. mi.</b>									
Ullswater (Hallsteads)	Miss C. Marshall	5	2	0	497	1288	50·71	200	..
Watermillock (Mell Fell House)	Mrs. Spring-Rice	5	1	6	980	1241	48·85	190	162
D Penrith (Briar Cottage)	H. Lester, Esq.	5	1	0	575	818	32·22	174	143
D Penrith (Sandath)	Major G. Varty-Smith	5	1	0	570	868	34·19	205	154
D Penrith (Benson House)	A. B. Sinclair, Esq.	5	1	0	480	917	36·12	205	148
D Penrith (Newton Rigg)	John Procter, Esq.	8	1	0	559	915	36·04	214	162
Penrith (Greystoke Castle)	J. Smith Hill, Esq.	5	1	3	650	1006	39·59	..	..
D Penrith (Ennism)	Mrs. Hamlet Riley	5	1	0	660	971	38·24	195	161
Flimby	Wilfred Irwin, Esq.	5	3	0	50	1028	40·48	..	..
D Uldale (Chapel House Res.)	J. Strong, Esq.	8	1	0	620	1057	41·63	227	182
D Penrith (Nunwick Hall)	Mrs. Heywood Thompson	5	1	0	298	783	30·84	189	151
D Mealsgate (Quarry Hill)	J. Ferguson, Esq.	8	0	9	487	814	32·04	226	154
D Renwick (Ravenwood)	W. Salkeld, Esq.	5	4	0	750	946	37·23	214	178
D Wigton (Brookfield)	F. C. Ransom, Esq.	5	5	0	124	750	29·52	186	143
D Wigton (Dacre House)	J. H. Walker, Esq.	5	4	6	134	777	30·59	202	152
D Wreay Vicarage	Rev. Canon A. R. Hall	5	2	0	310	753	29·63	200	154
D Geltsdale	H. C. Marks, Esq., C.E.	5	1	2	778	893	35·15	242	172
D Carlisle (Spital Cemetery)	J. T. Charlton, Esq.	8	1	6	114	725	28·55	209	151
Carlisle (Denton Holme)	W. Eggleston, Esq.	5	2	0	57	618	24·33	..	..
D Carlisle (Scaleby Hall)	Sir R. A. Allison	5	1	0	112	734	28·90	197	150
Longtown (Arthuret Rectory)	Rev. I. C. Graham	5	1	0	55	806	31·73	197	159
D Penton (Warwickland School)	W. Roden, Esq.	5	0	6	360	845	33·26	197	158
<b>2.—DERWENT. 257 sq. mi.</b>									
M Sprinkling Tarn	Air Ministry	5	1	6	1985	3341	131·52	..	..
M Styehad Tarn	Air Ministry	5	1	0	1472	3476	136·85	..	..
M The Sty B	Air Ministry	4	0	6	1077	4051	159·50	..	..
M The Sty B	Seathwaite g. Air Ministry	5	1	6	1070	4389	172·80	..	..
M The Sty C	Air Ministry	4	1	0	1077	4239	166·87	..	..
M The Sty D	Air Ministry	4	1	0	1077	3429	135·00	..	..
M Borrowdale (Seathwaite)	Air Ministry	4	0	6	422	3081	121·20	..	..
Borrowdale (Seathwaite)	Air Ministry	5	1	0	423	2572	101·25	..	..
Borrowdale (Seathwaite) Field	Miss C. Marshall	5	1	0	423	2927	115·25	..	..
M Ullscarf	L. Holme Lewis, Esq., C.E.	7	1	3	2100	2461	96·90	..	..
M Helvellyn (Birkside)	L. Holme Lewis, Esq., C.E.	7	1	3	1900	1486	58·50	..	..
M Wythburn	L. Holme Lewis, Esq., C.E.	7	1	3	610	2177	85·70	..	..
Armboth Fells (The Pewitts)	L. Holme Lewis, Esq., C.E.	7	1	3	1650	1697	66·80	..	..
Helvellyn (Whiteside)	L. Holme Lewis, Esq., C.E.	7	1	3	2100	1791	70·50	..	..
D Buttermere (Hassness)	S. O. Hanlon, Esq.	5	1	0	350	2484	97·79	239	206
Thirlmere (Dale Head Hall)	L. Holme Lewis, Esq., C.E.	7	1	3	620	1900	74·80	..	..
D Keswick (Derwent Island)	John Marshall, Esq.	5	0	7	280	1347	53·03	231	180
D Keswick (Derwent Island)	John Marshall, Esq.	5	0	6	290	1280	50·39	231	180
D Keswick (The Bank)	Mr. W. E. Campbell	5	1	3	265	1285	50·57	224	172
D Keswick (High Hill)	H. Swinburn, Esq.	5	1	0	254	1247	49·11	228	172
D Keswick (Crosthwaite School)	H. Swinburn, Esq.	5	1	0	254	1238	48·74	229	171
D Keswick (Mirehouse)	Miss Spedding	5	1	6	280	1125	44·31	225	170
Lorton (Whinfell Hall)	Mr. J. W. Hardcoty	5	0	1	255	1169	46·03	196	162
D Workington (Stainburn Res.)	H. Bowman Williams, Esq.	5	1	0	180	921	36·27	206	146
D Cockermouth (Derwent Lodge)	Wilfred Irwin, Esq.	5	4	6	200	866	34·08	210	149
D Threlkeld (Blencathra Sanat.)	Dr. W. Goodchild	5	1	0	885	1496	58·91	217	185
Camerton Vicarage	Rev. E. C. Bennett	5	1	0	200	852	33·54	..	..

## DIVISION X.—NORTHERN COUNTIES.—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height above Ground	Sea Level.	1922			
CUMBERLAND—(con.).		in.	ft.	in.	ft.	mm.	in.	
2.—DERWENT—(con.).								
D Bassenthwaite Vicarage .....	Rev. M. H. Banister .....	5	1	0	350	1090	42·90	237 180
Bassenthwaite (Higham) .....	G. F. Fisher, Esq.....	5	0	9	500	1058	41·66	229 175
3.—WEST COAST STREAMS. 235 sq. mi.								
Ravenglass (The Grove).....	Sweton Fraser, Esq.....	5	2	8	70	1076	42·35	195 163
D Eskdale Green (Gatehouse) ..	Mr. J. W. Rainbow .....	5	1	0	215	1338	52·68	216 172
Beckfoot .....	Miss C. Marshall .....	5	1	0	180	1395	54·93	193 ..
d Seascale (Whinthwaite) .....	Dr. R. Hellon .....	5	1	0	52	1021	40·21	.. ..
D Calder Bdge (Ponsonby Old Par.)	G. L. McKelvie, Esq.....	5	1	6	300	1122	44·16	184 162
Braystones .....	H. H. Watson, Esq.....	10	3	6	36	1022	40·22	.. ..
D Egremont (The Grange) .....	J. Sherwen, Esq.....	8	1	0	350	1383	54·44	224 170
M Egremont (Lank Rigg) .....	J. Sherwen, Esq.....	5	1	0	1750	1819	71·60	.. ..
d St. Bees (Bickerley House) ..	(R) Lt. Col. G. Dixon .....	8	1	6	60	1062	41·80	.. ..
D Whitehaven (Scragill Reservoir)	E. E. Stiven, Esq., C.E....	8	1	0	188	1111	43·76	221 179
D Whitehaven (Irish Street) .....	Dr. Eldon Pratt .....	5	1	1	21	1110	43·69	207 157
D Workington (Winscales House)	Miss Trench .....	5	1	6	440	935	36·83	217 161
4.—DUDDON & C. 50 sq. mi.								
D Silecroft (Old Chappels) .....	G. H. Holt, Esq. ....	5	1	0	200	1365	53·75	195 164
5.—SOUTH TYNE. 87 sq. mi.								
WESTMORLAND. (Area, 783 sq. mi.).								
1.—EDEN. 373 sq. mi.								
D Kirkby Stephen (Redman Ho.) ..	Mrs. T. Mason .....	5	1	0	574	1036	40·79	175 155
Mosedale (Mosedale Cottage) ..	L. Holme Lewis, Esq., C.E. ....	5	1	0	1442	2168	85·36	.. ..
Wet Sleddale (Mirethwaite) ..	L. Holme Lewis, Esq., C.E. ....	5	1	0	989	1658	65·28	.. ..
Blea Water .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	1477	2424	95·44	.. ..
Mardale (Grove Brae) .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	800	2230	87·78	.. ..
Swindale Head .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	1029	1741	68·56	.. ..
Grizedale (Ruthwaite Lodge) ..	Miss C. Marshall .....	8	1	6	1750	2420	85·28	.. ..
Shap (Force Beck) .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	1062	1111	43·76	.. ..
Shap (Thornship Gill) .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	865	1164	45·83	.. ..
Shap (Tailbert Head) .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	1103	1399	55·06	.. ..
Shap (Kirk Bank) .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	911	1175	46·25	.. ..
D Stainmore (Rampson) .....	Capt. T. W. Bracken .....	5	1	9	981	912	35·90	241 171
Hawes Water (Naddle House) ..	L. Holme Lewis, Esq., C.E. ....	5	1	0	830	1549	60·97	.. ..
Hawes Water (Measand) .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	831	1916	75·42	.. ..
Measand Beck (Keasgill) .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	1877	1681	66·20	.. ..
Patterdale Hall .....	Miss C. Marshall .....	5	1	3	490	2122	83·55	222 ..
Cawdale Beck (Howe Grain) ..	L. Holme Lewis, Esq., C.E. ....	5	1	0	1638	1362	53·62	.. ..
Heltondale (Kidmoor) .....	L. Holme Lewis, Esq., C.E. ....	5	1	0	988	1289	50·74	.. ..
Patterdale (Greenside Mine) ..	Matthew Place, Esq.....	7	1	6	1000	2083	82·00	220 203
D Appleby (Castle Bank) .....	C. R. Rivington, Esq. ....	5	4	0	440	925	36·41	222 163
Ullswater (Sharrow Bay) .....	Mr. G. Robinson .....	5	0	7	600	1204	47·40	.. ..
D Penrith (Morland) .....	F. R. Markham, Esq.....	5	1	0	456	943	37·13	199 153
Penrith (Brougham Gardens) ..	Mr. J. H. Lane .....	5	5	0	470	765	30·10	177 151
2.—LEVEN. 60 sq. mi.								
D Bowness (Dawstone) .....	A. M. Synge, Esq. ....	5	1	2	550	1225	48·21	231 174
D Bowness (Fellside) .....	T. D. Lingard, Esq. ....	5	0	6	310	1582	62·28	196 168
Bowness (Fallbarrow) .....	Miss C. Marshall .....	8	1	0	155	1543	60·75	201 ..
D Windermere (Hammar Bank) ..	Mrs. H. Coutts .....	5	1	0	200	1577	62·07	227 177
D Windermere (Holehird) .....	W. G. Groves, Esq.....	5	1	0	483	1715	67·50	254 188
Windermere (Brockhole) .....	W. Gaddum, Esq.....	5	1	6	175	1590	62·59	223 176
D Ambleside (Wansfell) .....	Miss Wrigley .....	8	1	0	150	1754	69·04	208 178
Ambleside (Skelwith Bridge) ..	Miss C. Marshall .....	5	1	9	190	2471	97·30	204 ..
M Little Langdale (Fell Foot) ..	Miss C. Marshall .....	5	2	2	380	2425	95·46	.. ..
D Ambleside (White Craggs) ..	C. H. Hough, Esq.....	5	1	7	200	1781	70·13	209 179
D Ambleside (Market Square) ..	G. A. Johnston, Esq., M.D. ....	5	1	0	180	1878	73·92	217 182
D Ambleside (Brent Knoll) .....	A. E. Huddleston, Esq....	5	1	0	175	1843	72·58	215 193
Ambleside (Lesketh How) .....	Miss Benson .....	5	2	6	175	1929	75·94	230 ..

## DIVISION X.—NORTHERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.				
WESTMORLAND—(con.).		in.	ft.	in.	ft.	mm.	in.	
2.—LEVEN—(con.).								
	Elterwater (Eltermere) .....	5	1	0	205	2146	84·50	220 ..
	Rydal (The Stepping Stones) ..	5	1	0	190	1955	76·95	239 192
M	Rydal (The Stepping Stones)...	5	1	3	190	1908	75·13	.. ..
D	Rydal .....	5	1	0	390	2032	79·99	253 199
D	Rydal (High Close) .....	8	0	9	553	2013	79·25	219 184
D	Rydal (The Hall) .....	5	0	6	354	2059	81·07	252 203
d	Dungeon Ghyll .....	5	1	0	310	2531	99·65	216 191
M	Dungeon Ghyll .....	5	1	0	311	2525	99·42	.. ..
M	Mickleden .....	5	1	6	490	3354	132·06	.. ..
D	Grasmere (The Wray) .....	5	1	0	221	2179	85·79	246 191
3.—KENT. 188 sq. mi.								
	Burton (Under Fell) .....	5	0	9	225	1114	43·86	216 ..
D	Heversham (Plumtree Hall) ...	5	0	8	115	1180	46·45	225 166
D	Heversham (Leasgill) .....	5	0	8	120	1097	43·20	190 159
d	Old Hutton (Middleshaw) .....	8	3	5	369	1194	47·01	.. 162
d	Killington Reservoir .....	8	2	8	674	1224	48·18	.. 144
D	Kendal (Crosthwaite Vicarage)...	5	1	0	165	1350	53·14	196 164
D	Kendal (Vicarage Terrace) ....	8	3	3	150	1231	48·45	215 177
D	Kendal (Holmcroft) .....	5	1	3	150	1304	51·35	201 168
M	Kendal (Greenside) .....	5	1	0	380	1337	52·64	.. ..
	Kendal (Hylands) .....	5	1	1	375	1299	51·16	189 157
D	Kendal (Oak Bank) .....	5	1	0	220	1277	50·26	198 172
	Kendal (Ellergreen) .....	5	1	6	270	1516	59·70	218 178
D	Staveley (Middle Reston) .....	5	0	9	440	1528	60·16	231 180
	Staveley (Potter Fell) .....	5	1	6	800	2014	79·30	.. 134
M	Long Sleddale (Low House) ....	5	1	0	550	1782	70·15	.. ..
	Long Sleddale (High House) ..	5	1	0	520	1707	67·22	.. ..
D	Kentmere (Mags Howe) .....	5	1	0	750	1826	71·89	224 193
D	Kentmere Head Reservoir ....	5	1	6	920	2323	91·47	186 172
4.—LUNE. 122 sq. mi.								
	Kirkby Lonsdale .....	7	0	8	215	1205	47·42	.. ..
D	Kirkby Lonsdale (Casterton Sch)	8	1	6	360	1062	41·82	166 140
D	Barbon Manor .....	5	1	3	650	1237	48·69	179 170
D	Barbon .....	5	1	0	310	1225	48·23	183 166
D	Orton .....	5	1	0	770	1432	56·39	238 176
5.—TEES. 40 sq. mi.								

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

## MONMOUTH. (Area, 534 sq. mi.).

<b>1.—RHYMNEY. 39 sq. mi.</b>								
<b>D</b> Rumney (Witla Court) .....	Mr. H. H. Merrett .....	5	1	0	177	1059	41·69	176 146
<b>2.—EBBW. 88 sq. mi.</b>								
<b>d</b> Rogerstone (Brynheddyd) .....	Lt.Col. Blethyn T. Rees, C.E.	5	0	8	333	855	33·64	.. 135
<b>D</b> Rogerstone (Rhiwderin) .....	L. Forestier-Walker, Esq., MP	5	1	3	259	975	38·38	180 150
<b>D</b> Abertillery (The Park) .....	S. E. Thomas, Esq. ....	5	1	0	700	1437	56·57	211 165
<b>D</b> Tredegar Laboratory .....	W. Morgan, Esq. ....	5	2	0	950	1308	51·49	191 164
<b>D</b> Tredegar (Redesdale) .....	D. W. Davies, Esq. ....	5	1	6	963	1164	45·82	198 166
<b>D</b> Tredegar (The Bungalow) .....	S. L. Filer, Esq. ....	5	1	6	1028	1114	43·87	188 164
<b>D</b> Ebbw Vale (Iron Works) .....	J. H. Williams, Esq., V.C.	8	1	0	902	1430	56·29	217 170
<b>D</b> Nant-y-bwch (ShonSheffrey's W)	D. W. Davies, Esq.....	5	1	5	1204	1307	51·47	203 173
<b>3.—USK &amp; C. 290 sq. mi.</b>								
<b>D</b> Goldcliff (Porton) .....	Lt.Col. Blethyn T. Rees, C.E.	5	1	3	27	685	26·99?	143 115
<b>D</b> Newport (Alexandra Dock) ....	T. W. R. Pearson, Esq. ...	5	8	0	39	850	33·46	167 128
<b>d</b> Portskewett (Sudbrook) .....	H.V. Woodward, Esq., C.E..	8	0	10	22	849	33·41	.. 120
<b>d</b> Newport (Balmoral Road) ....	W. Y. Hobkirk, Esq.....	5	1	0	27	967	38·08	.. ..
<b>D</b> Newport W.W. (Friar St. Yard) ..	Newport Corporation .....	5	6	0	32	1030	40·55	173 144
<b>D</b> NewportWW (Ynis-y-fro Res.) ..	Newport Corporation .....	5	1	0	136	1139	44·85	209 157
<b>D</b> Newportww (Pant-y-reos Res.) ..	Newport Corporation .....	5	1	0	435	1023	40·29	211 148
<b>D</b> Newport W.W. (Llanvaches) ..	Newport Corporation .....	5	0	10	456	1080	42·52	208 155

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
MONMOUTH—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—USK & C.—(con.).									
d Newport W.W. (Nantypriidd) ..	Newport Corporation .....	5	1	0	500	1170	46·06	200	160
d Chepstow (Itton Court) .....	Col. E. C. Curre .....	5	1	0	390	992	39·07	177	153
d Caerleon (Cwm-y-Wiwer) .....	Lt. Col. Blethyn T. Rees, C.E. ..	5	1	0	112	961	37·85	184	138
d Newport W.W. (Newchurch) ..	Newport Corporation .....	5	1	0	550	1199	47·22	200	159
d Usk (Castle Parade House) ....	J. Maitland Watkins, Esq. ....	5	1	0	75	970	38·20	165	132
d Abersychan (Snatchwood Pk.) ..	Godfrey E. Jones, Esq. ....	8	1	0	529	1469	57·83	212	171
d Abersychan (Glansychan) .....	G. W. James, Esq. ....	5	1	0	699	1434	56·47	231	173
d Goytre (Goytre Hall) .....	Mrs. Lionel Whitehead. ....	9	1	2	300	1225	48·23	191	161
d Blaenavon (Estate Office) .....	E. J. John, Esq. ....	8	4	0	1150	1289	50·76	..	161
d Abergavenny (Ty Clyd) .....	F. D. Llewelyn, Esq. ....	5	1	0	290	1153	45·38	194	144
d Abergavenny (Mansel Place) .....	C. Webb, Esq. ....	8	7	2	224	1026	40·41	172	..
d Abergavenny (Larchfield) .....	Dr. N. R. Phillips .....	5	1	0	240	945	37·21	188	141
d Abergavenny (The Chain) .....	W. Baker-Gabb, Esq. ....	5	1	0	310	963	37·92	191	133
d Grwyne Fawr (Coed Dias) .....	W. Baker-Gabb, Esq. ....	5	1	0	900	1124	44·24	216	165
4.—WYE. 117 sq. mi.									
Chepstow (The Cedars) .....	J. E. G. Lawrence, Esq. ....	5	2	0	150	961	37·85	156	142
d Monmouth (The Elms) .....	Mrs. Hall .....	5	1	1	91	774	30·47	..	..
d Monmouth (Pentwyn) .....	Rev. Canon J. T. Harding. ....	9	1	0	191	838	32·99	179	141
d Llanvihangel Crucorney Depôt.	J. F. Jupp, Esq., C.E. ....	5	1	0	501	973	38·32	181	157
GLAMORGAN. (Area, 808 sq. mi.)									
1.—LOUGHOR. 55 sq. mi.									
d Gorseinon (Penllergaer) .....	Sir J. T. D. Llewelyn, Bt. ....	5	3	0	240	1194	47·01	192	164
d Felindre (Blaenant Dhu) .....	G. R. Collinson, Esq., C.E. ....	5	1	3	348	1387	54·60	213	176
d Felindre (Lower Lliw Res.) .....	G. R. Collinson, Esq., C.E. ....	8	1	3	427	1333	52·50	211	172
d Felindre (Upper Lliw Res.) .....	G. R. Collinson, Esq., C.E. ....	8	1	3	600	1575	62·01	230	174
2.—GOWER PENINSULA. 62 sq. mi.									
Mumbles .....	Mr. J. Barnes .....	5	1	0	20	1052	41·40	..	..
d Penmaen (Cefn Mor) .....	Mrs. Bostock .....	5	1	5	300	1048	41·26	171	155
d Sketty (Rhydyrhelyg) .....	E. H. Perkins, Esq. ....	5	1	0	124	1225	48·22	203	164
d Sketty (Killay House) .....	M. Williams, Esq. ....	5	0	6	265	1193	46·96	194	162
3.—TAWE. 47 sq. mi.									
d Swansea (Victoria Park) .....	Mr. D. Bliss .....	8	1	0	26	1151	45·31	214	169
d Morriston (Pentrepeth House) ..	M. W. Williams, Esq. ....	5	1	0	236	992	39·04?	193	..
d Clydach (Wernfadog) .....	Mrs. Player .....	8	4	2	..	1095	43·10	193	149
d Pontardawe (Plas Cilybebyll) ..	J. H. B. Lloyd, Esq. ....	5	4	0	500	1499	59·03	..	..
d Ystalyfera (Wern House) .....	J. Williams, Esq. ....	5	1	6	240	1666	65·59	214	178
4.—NEATH. 82 sq. mi.									
d Briton Ferry (Brynsiriol) .....	H. A. Clarke, Esq., C.E. ....	5	1	0	33	1164	45·81	176	151
d Briton Ferry (Cefn Court) .....	H. A. Clarke, Esq., C.E. ....	5	1	0	503	1193	46·99	181	164
d Neath (Cimla Reservoir) .....	H. A. Clarke, Esq., C.E. ....	5	1	0	364	1163	45·79	193	162
d Neath (Gnoll Reservoir) .....	H. A. Clarke, Esq., C.E. ....	5	1	0	204	1332	52·43	199	174
d Neath (Maesmelyn) .....	Major E. Ll. Green .....	5	1	6	115	1144	45·05	193	160
d Neath (Glynfeln) .....	T. Gibbins, Esq. ....	5	1	4	180	1394	54·88	169	164
5.—OGMORE & C. 350 sq. mi.									
Cowbridge (Fonmon Castle) .....	Mrs. Oliver Jones .....	8	1	2	130	870	34·26	158	140
d Barry W.W. (Biglis) .....	T. E. Franklin, Esq., C.E. ....	5	1	0	20	936	36·84	188	144
d Barry W.W. (Merthyr Dyfan R.) ..	T. E. Franklin, Esq., C.E. ....	5	1	0	300	952	37·47	..	..
d Barry W.W. (Pencoedtre Res.) ..	T. E. Franklin, Esq., C.E. ....	5	1	0	200	784	30·88	..	..
d Barry W.W. (Dinas Powis Res.) ..	T. E. Franklin, Esq., C.E. ....	5	1	0	165	916	36·08	..	..
d Lower Penarth .....	E. I. Evans, Esq., C.E. ....	5	1	0	67	811	31·93	160	128
d Penarth .....	E. I. Evans, Esq., C.E. ....	5	5	0	160	960	37·80	176	145
d Cardiff (Cogan Pumping Statn.) ..	C. H. Priestley, Esq., C.E. ....	5	1	0	121	775	30·51?	164	139
d Cardiff (Ely Pumping Station) ..	C. H. Priestley, Esq., C.E. ....	5	1	0	53	1127	44·35	230	151
d Fairwater (Glan Ely Hosp.) .....	Medical Superintendent. ....	8	0	11	122	1115	43·89	164	134
d Cardiff (St. Fagans Castle) .....	Capt. H. A. Pettigrew .....	5	0	11	100	1278	50·33	185	152
Cowbridge (Ash Hall) .....	E. Tudor Owen, Esq. ....	8	3	6	315	1242	48·88	195	..
d Merthyr Mawr .....	Lt.-Col. J. D. Nicholl .....	8	0	10	70	1058	41·64	173	155

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam. in.	Height ft.	above Ground in. Sea Level. ft.					
GLAMORGAN—(con.).									
5.—OGMORE & C.—(con.).									
D Bridgend (Highmead).....	H. J. Randall, Esq. ....	5	1	0	80	1211	47·66	201	159
D Port Talbot (Twyn-yr-hydd)...	G. Lipscomb, Esq. ....	5	1	3	180	1074	42·27	202	156
D Pontycymer (Garw Sec. Sch.)...	J. J. Morgan, Esq. ....	5	1	0	600	1809	71·24	203	186
D Glyncoirwg Colliery .....	Mr. C. Stephens .....	5	4	6	725	2193	86·34	189	176
6.—TAFF. 157 sq. mi.									
D Cardiff (Trade Street Depôt) ..	C. H. Priestley, Esq., C.E. ....	5	1	0	45	1016	39·99	179	137
D Llandaff (West Hill) .....	J. E. Gladstone, Esq. ....	5	1	0	110	1121	44·14	205	146
D Rhubina Reservoir .....	C. H. Priestley, Esq., C.E. ....	5	1	0	336	1272	50·08	195	159
D Pontypridd (Maesderwen) .....	T. Bowen, Esq. ....	5	6	0	425	1436	56·54	190	153
D Pontypridd (Lan Wood Res.) ..	T. W. Coates, Esq., C.E. ....	5	1	6	300	1462	57·56	192	154
D Ystradyfodwg (Tyntyla Hos.) ..	J. D. Jenkins, Esq., M.D. ....	5	1	0	590	1180	46·47	166	128
D Treharris Service Reservoir ..	T. F. Harvey, Esq., C.E. ....	5	1	0	765	1321	52·01	185	160
D Mountain Ash (Maesydderwen) ..	Lt.-Col. M. Morgan .....	5	1	0	483	1400	55·13	191	148
D Mountain Ash (Darranlas Res.) ..	W. G. Thomas, Esq., C.E. ....	5	0	11	540	1469	57·84	203	161
D Treherbert (Tyn-y-waun) .....	O. Thomas, Esq. ....	5	1	0	801	2295	90·37	215	183
D Treherbert (Tyn-y-waun) .....	O. Thomas, Esq. ....	5	1	0	801	2275	89·58	..	..
D Cwmaman Collieries .....	R. R. Davies, Esq. ....	5	2	2	930	1809	71·22	200	176
D Rhondda (Pont Lluest Wen R.) ..	3 T. W. Coates, Esq., C.E. ....	5	1	6	1100	2006	78·97	200	184
D Rhondda (Pont Lluest Wen R.) ..	2 T. W. Coates, Esq., C.E. ....	5	1	6	1250	2191	86·25	202	182
D Rhondda W.W. (Llyn Fawr Res.) ..	Mr. J. B. Hughes .....	8	1	0	1220	2237	88·06	218	182
D Merthyr Tydfil (Penbryn Filters) ..	T. F. Harvey, Esq., C.E. ....	5	1	0	936	1324	52·13	217	179
D Merthyr Tydfil (Penbryn Filters) ..	T. F. Harvey, Esq., C.E. ....	5	1	0	936	1311	51·63	..	..
D Dowlais (Gwerllwyn) .....	R. C. Harrison, Esq. ....	5	1	6	1071	1096	43·14	195	157
7.—RHYMNEY. 55 sq. mi.									
D Cardiff (Roath Park) .....	Mr. A. A. Pettigrew .....	5	1	0	49	1111	43·75	194	147
D Cardiff (Penylan) .....	A. E. Brain, Esq. ....	5	1	0	203	1046	41·17	178	145
D Cardiff (Heath Filters) .....	C. H. Priestley, Esq., C.E. ....	5	1	0	132	1103	43·42	175	147
D Llanishen Reservoir .....	C. H. Priestley, Esq., C.E. ....	5	1	0	155	986	38·83	189	144
D Lisvane Reservoir .....	C. H. Priestley, Esq., C.E. ....	5	1	0	150	926	36·44	189	148
D Caerphilly (Deneholme) .....	J. Prosser-Jones, Esq., C.E. ....	5	1	0	400	1380	54·34	..	..
D Caerphilly (Secondary School) ..	W. G. Rees, Esq. ....	5	0	6	300	1157	45·57	..	..
D Rhymer Bridge Reservoir ..	E. Watkins Edwards, Esq., C.E. ....	8	1	3	1098	1413	55·61	188	176
CARMARTHEN. (Area, 918 sq. mi.)									
1.—TEIFI. 87 sq. mi.									
2.—TOWY & C. 715 sq. mi.									
D Carmarthen (The Friary) .....	Dr. L. M. Bowen-Jones ...	5	1	5	62	1209	47·59	223	165
D Llandilo (Golden Grove Gdns.) ..	Mr. W. Robinson .....	6	1	6	125	1415	55·71	183	169
D Llandilo (Dynevor Castle) .....	Lord Dynevour .....	8	1	0	202	247	49·09	220	180
D Llandilo (Bryneithen) .....	F. L. Puxley, Esq. ....	5	1	0	300	1285	50·61	203	182
D Llyn-y-fan Fach (Waen Sychlwch) ..	R. C. Jones, Esq. ....	5	1	0	1647	2153	84·78	..	..
D Llyn-y-fan Fach (Llethr-y-Llyn) ..	R. C. Jones, Esq. ....	5	1	0	1665	1657	65·22	..	..
D Llyn-y-fan Fach (Afon Sychlwch) ..	R. C. Jones, Esq. ....	5	1	0	1371	2271	89·40	..	..
D Llyn-y-fan Fach (Nant Côch) ..	R. C. Jones, Esq. ....	5	1	0	1172	1942	76·44	..	..
D Llandilo (Cwmifor School) .....	T. I. Griffiths, Esq. ....	5	1	6	210	1183	46·59	224	169
D Llandeusan (Pontcrynfe) .....	J. Thomas, Esq. ....	5	1	0	323	1328	52·28	207	175
D Llandoverly (Nantyrhogfaen) ..	D. T. M. Jones, Esq. ....	5	1	0	249	1224	48·20	212	181
D Llanwrda (Dolaucothy) .....	Lady Hills-Johnes .....	5	2	6	498	1529	60·21	250	200
3.—LOUGHOR & C. 104 sq. mi.									
D Llanelly (Old Market Yard) .....	G. Watkeys, Esq., C.E. ....	5	12	0	35	1248	49·15	198	164
D Llanelly (Filter Beds) .....	G. Watkeys, Esq., C.E. ....	5	1	0	237	1175	46·27	195	168
D Llanelly (Cwmlliedi W.W.) .....	G. Watkeys, Esq., C.E. ....	5	2	3	240	1215	47·85	227	174
D Llanelly (Upper Lliedi Res.) .....	G. Watkeys, Esq., C.E. ....	5	3	0	290	1503	59·16	217	180
D Llanelly (Cynheidre) .....	G. Watkeys, Esq., C.E. ....	5	1	6	505	1417	55·77	189	172
D Ammanford (Wernoleu) .....	E. Hewlett, Esq. ....	5	0	6	225	1340	52·74	207	176
4.—TAFE. 7 sq. mi.									
5.—USK. 5 sq. mi.									
6.—WYE.									

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in or more.	Days with ·04 in or more.
		Diam.	Height Ground	ft. above Sea Level.	1922				
PEMBROKE. (Area, 617 sq. mi.).		in.	ft.	in.	ft.	mm.	in.		
1.—TEIFI. 37 sq. mi.									
d Boncath (Ffynone).....	Mrs. Spence-Colly .....	5	1	0	300	1407	55·39	189	169
2.—NEVERN & C. 91 sq. mi.									
d Boncath (Blaenffos School)....	W. T. Williams, Esq.....	5	1	0	500	1483	58·39	..	..
3.—WEST COAST STREAMS. 82 sq. mi.									
St. Davids .....	P. O. Bulbrook, Esq.....	5	1	0	124	909	35·79	166	..
4.—CLEDDAU & C. 407 sq. mi.									
Pembroke (Stackpole Court) ..	Mr. C. McInroy .....	6	1	6	60	1061	41·77	201	161
d Tenby .....	Miss D. Truscott .....	8	0	10	87	1063	41·86	206	162
d St. Ann's Head .....	Air Ministry.....	8	0	10	150	819	32·26	188	136
d Pembroke Dock (County School)	J. H. Garnett, Esq.....	5	1	0	85	1206	47·48	199	162
d Pembroke Dock (Admiralty R.)	W. T. Coldicott, Esq.....	8	1	0	90	1059	41·70	178	148
d Saundersfoot (Hean Castle)....	Lord Merthyr.....	5	1	0	206	1051	41·37	177	152
d Crunwre (N.P. School).....	H. J. Parr, Esq.....	5	1	0	410	1487	58·55	..	..
d Haverfordwest (Picton Castle)	Sir C. E. G. Philipps, Bt... 5	0	10	138	1220	48·03	202	..	..
d Haverfordwest (Portfield) ....	J. W. Phillips, Esq. ....	5	1	0	250	1192	46·92	209	165
d Haverfordwest (Grammar Sch.)	J. W. Phillips, Esq. ....	5	1	0	95	1301	51·22	188	163
Penffordd Council School ....	T. H. Davies, Esq.....	5	1	1	310	1136	44·71	..	..
d Mynachlogddu Council School..	W. Phillips, Esq.....	5	1	3	620	1640	64·57	202	168
d Fishguard (Langton, Dwrbach)	J. C. Yorke, Esq. ....	5	1	0	320	1318	51·88	207	167
CARDIGAN. (Area, 688 sq. mi.).									
1.—DOVEY. 20 sq. mi.									
2.—YSTWYTH & C. 347 sq. mi.									
d Strata Florida (Hafod).....	T. J. Waddingham, Esq. .	5	1	0	580	1326	52·19	227	188
d Devil's Bridge.....	T. Richards, Esq.....	5	1	0	825	1387	54·61	223	171
Capel Bangor (Penllwyn).....	W. E. Whitehouse, Esq....	5	1	0	145	967	38·07	..	..
Ponterwyd .....	W. E. Whitehouse, Esq....	5	1	0	767	1573	61·93	..	..
d Aberystwyth (Castle Grounds)	Dr. A. Thomas.....	8	2	6	59	803	31·61	197	145
d Aberystwyth (North Parade) ..	Dr. A. Thomas .....	8	2	6	18	841	33·12	197	151
d Aberystwyth (Gogerddan) ....	Mr. F. J. Reeves.....	5	1	1	83	1108	43·61	..	..
Talybont.....	W. E. Whitehouse, Esq... 5	1	0	199	1115	43·91	..	..	..
d Ynys-las (Sandling) .....	Wyndham Deedes, Esq.... 5	1	6	15	853	33·57	179	135	..
3.—TEIFI. 260 sq. mi.									
d Cardigan (County School).....	Dr. D. Rees.....	5	1	6	72	1044	41·09	195	157
d Lampeter (Falcondale).....	Mr. W. Taylor .....	5	1	0	498	1228	48·36	208	173
4.—TOWY. 46 sq. mi.									
d Abergwesyn (Nantneuadd) ....	Mr. W. Roberts .....	5	1	0	1290	1605	63·20	..	170
M Tregaron (Maes-y-bettws) ....	Air Ministry.....	5	1	0	910	1787	70·35	..	..
M Strata Florida (Towy-fechan)..	Air Ministry.....	5	1	0	1330	1836	72·30	..	..
5.—WYE. 15 sq. mi.									
M Birmingham W.W. (Llyn Gynon)	F. W. Macaulay, Esq., C.E. 5	1	0	1500	1687	66·40	..	..	..
M Birmingham W.W. (Bwlchyrhendre)	F. W. Macaulay, Esq., C.E. 5	1	0	1585	1666	65·58	..	..	..
M Birmingham W.W. (Claerddu) ..	F. W. Macaulay, Esq., C.E. 5	1	0	1470	1795	70·66	..	..	..
M Birmingham W.W. (Gwngu) ...	F. W. Macaulay, Esq., C.E. 5	1	0	1490	1550	61·04	..	..	..
d Birmingham W.W. (Abergwngu)	F. W. Macaulay, Esq., C.E. 5	1	0	1150	1674	65·90	..	184	..
M Plynlimon .....	Air Ministry .....	5	1	0	1630	1567	61·70?	..	..
BRECON. (Area, 733 sq. mi.)									
1.—TOWY. 17 sq. mi.									
2.—TAW. 41 sq. mi.									
d Ystradgynlais (Ynyscedwyn Ho.)	Capt. H. A. B. Griffith... 5	0	9	223	1459	57·43	189	173	..
d Swansea W.W. (Nantyrwydd) No1	G. R. Collinson, Esq., C.E.. 5	1	0	916	1962	77·24	209	187	..
d Swansea W.W. (Nantyrwydd) No2	G. R. Collinson, Esq., C.E.. 5	0	10	909	2057	80·97	209	189	..

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
BRECON—(con.).		in.	ft. in.	ft.	mm.	in.			
<b>3.—NEATH. 48 sq. mi.</b>									
Glyn Neath (P. Neath Vaughan)	Messrs. Curtis & Harvey, Ltd.	5	1	5	297	1420	55·91	217	168
Ystradfellte Reservoir	D. M. Davies, Esq., C.E.	5	1	0	1147	1974	77·71	221	189
<b>4.—TAFF. 48 sq. mi.</b>									
D Aberdare (Nanthir Reservoir)	O. Williams, Esq., C.E.	5	1	0	860	1430	56·31	208	169
D Penderyn Reservoir	W. G. Thomas, Esq., C.E.	5	1	0	717	1384	54·48	219	188
D Taff Fechan (Pontsticill) No. 12	T. F. Harvey, Esq., C.E.	5	1	0	1031	1288	50·71	197	168
M Taff Fechan (Pontsticill) No. 12A	T. F. Harvey, Esq., C.E.	5	1	0	1031	1323	52·10	..	..
M Taff Fechan (Pontsticill West)	14T. F. Harvey, Esq., C.E.	5	1	0	1254	1204	47·40	..	..
D Cardiff W.W. (Llwynon Res.)	C. H. Priestley, Esq., C.E.	5	1	0	854	1375	54·14	206	168
Cardiff W.W. (Troedyrhiw)	C. H. Priestley, Esq., C.E.	5	1	0	860	1560	61·42	..	..
D Cardiff W.W. (Pont-ar-daf)	C. H. Priestley, Esq., C.E.	5	1	0	850	1364	53·69	205	172
Cardiff W.W. (Garw-nant)	C. H. Priestley, Esq., C.E.	5	1	0	1100	1457	57·38	..	..
Cardiff W.W. (Nant-Gwineu)	C. H. Priestley, Esq., C.E.	5	1	0	1275	1344	52·93	..	..
Cardiff W.W. (Nant-y-gou-garn)	C. H. Priestley, Esq., C.E.	5	1	0	..	1625	63·99	..	..
D Taff Fechan (Pentwyn Res.)	T. F. Harvey, Esq., C.E.	5	1	0	1120	1660	65·36	229	187
M Taff Fechan (Pentwyn Res.)	T. F. Harvey, Esq., C.E.	5	1	0	1120	1634	64·33	..	..
Cardiff W.W. (Nant Goch)	C. H. Priestley, Esq., C.E.	5	1	0	..	1386	54·57	..	..
Cardiff W.W. (Nant Ddu)	C. H. Priestley, Esq., C.E.	5	1	0	1560	1821	71·69	..	..
Cardiff W.W. (Storey Arms) No. 4	C. H. Priestley, Esq., C.E.	5	1	0	1430	1656	65·21	..	..
Cardiff W.W. (Tyle Brith) No. 1	C. H. Priestley, Esq., C.E.	5	1	0	2350	1744	68·67	..	..
D Cardiff W.W. (Cantref R.) No. 2	C. H. Priestley, Esq., C.E.	5	1	0	1120	1729	68·08	215	189
D Cardiff W.W. (Beacons Res.) No. 6	C. H. Priestley, Esq., C.E.	5	1	0	1340	2059	81·05	216	188
Cardiff W.W. (Nant Penig) No. 3	C. H. Priestley, Esq., C.E.	5	1	0	2000	2432	95·75	..	..
D Taff Fechan (Neuadd Rs.) No. 1	T. F. Harvey, Esq., C.E.	5	1	0	1462	1775	69·87	235	189
M Taff Fechan (Neuadd Rs.) No. 1	T. F. Harvey, Esq., C.E.	5	1	0	1462	1660	65·36	..	..
D Taff Fechan (Neuadd Rs.) No. 4	T. F. Harvey, Esq., C.E.	5	1	0	1487	2089	82·23	234	195
D Taff Fechan (Neuadd Rs.) No. 4A	T. F. Harvey, Esq., C.E.	5	1	0	1487	2085	82·09	234	194
M Taff Fechan (Neuadd Rs.) No. 2	T. F. Harvey, Esq., C.E.	5	1	0	1993	1598	62·92	..	..
M Taff Fechan (Neuadd Rs.) No. 5	T. F. Harvey, Esq., C.E.	5	1	0	1515	2077	81·78	..	..
M Taff Fechan (Neuadd Rs.) No. 10	T. F. Harvey, Esq., C.E.	5	1	0	1700	1787	70·36	..	..
D Taff Fechan (Neuadd Rs.) No. 11	T. F. Harvey, Esq., C.E.	5	1	0	1524	1570	61·81	235	179
M Taff Fechan (Neuadd Rs.) No. 7	T. F. Harvey, Esq., C.E.	5	1	0	2017	1833	72·16	..	..
M Taff Fechan (Neuadd Rs.) No. 8	T. F. Harvey, Esq., C.E.	5	1	0	1723	1989	78·29	..	..
M Taff Fechan (Neuadd Rs.) No. 3	T. F. Harvey, Esq., C.E.	5	1	0	1843	1731	68·17	..	..
M Taff Fechan (Neuadd Rs.) No. 3A	T. F. Harvey, Esq., C.E.	5	1	0	1843	1559	61·39	..	..
M Taff Fechan (Neuadd Rs.) No. 9	T. F. Harvey, Esq., C.E.	5	1	0	1997	1213	47·77	..	..
M Taff Fechan (Neuadd Rs.) No. 6	T. F. Harvey, Esq., C.E.	5	1	0	2099	2230	87·80	..	..
<b>5.—RHYMNEY. 2 sq. mi.</b>									
<b>6.—EBBW. 7 sq. mi.</b>									
D Ebbw Vale W.W. (Llangunider) 1	P. I. Davies, Esq., C.E.	5	1	0	1413	1385	54·51	209	171
Ebbw V.W.W. (Llangunider) W3	P. I. Davies, Esq., C.E.	5	1	0	1468	1591	62·65	210	175
Ebbw V.W.W. (Llangunider) NW2	P. I. Davies, Esq., C.E.	5	1	0	1471	1555	61·20	210	175
Ebbw Vale W.W. (Carno, S.)	P. I. Davies, Esq., C.E.	5	1	0	1236	1573	61·92	228	189
Ebbw Vale W.W. (Carno, E.)	P. I. Davies, Esq., C.E.	5	1	0	1391	1485	58·46	..	..
Ebbw Vale W.W. (Carno, W.)	P. I. Davies, Esq., C.E.	5	1	0	1412	1615	63·57	228	188
Ebbw Vale W.W. (Carno, N.)	P. I. Davies, Esq., C.E.	5	1	0	1533	1502	59·14	228	186
<b>7.—USK. 299 sq. mi.</b>									
Torpantau (Darenfawr)	Newport Corporation	5	1	0	1172	1821	71·70	..	..
Torpantau (Ynysposte)	Newport Corporation	5	1	0	741	1696	66·76	..	..
Torpantau (Blaen-caer-fanell)	Newport Corporation	5	1	0	1584	1932	76·06	..	..
Talybont (Pentir-rhiw)	Newport Corporation	5	1	0	587	1416	55·74	195	164
Talybont (Pwll Ifor)	Newport Corporation	5	1	0	1224	1670	65·75	..	..
D Crickhowell (Gwernvale)	E. Pirie Gordon, Esq., C.E.	5	1	0	393	1089	42·87	213	160
M Swansea W.W. (Cray Rs.) No. 2	G. R. Collinson, Esq., C.E.	5	1	0	1020	2276	89·60	..	..
D Swansea W.W. (Cray Rs.) No. 1	G. R. Collinson, Esq., C.E.	5	1	0	1044	1854	73·00	222	202
M Cray Station	Mr. J. Jones	5	1	0	930	1615	63·60	..	..
M Talybont (Cwy Parc)	Col. H. R. Jones-Williams	5	1	6	480	1255	49·40	..	..
Llanfrynach (Ty-mawr)	Miss D. de Winton	5	1	0	450	1127	44·37	190	147
M Crickhowell (Cwmdu Rectory)	Rev. W. A. Davies	5	1	0	430	983	38·70	..	..
M Crickhowell (Tal-y-maes)	Air Ministry	5	1	0	1250	1231	48·45?	..	..

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
BRECON—(con.).		in.	ft.	in.	ft.	mm.	in.	
7.—USK—(con.).								
d Trecastle (Blaenau-hydfwr) . . . . .	Air Ministry . . . . .	5	1	0	1070	1635	64·37	..
d Brecon (Tairbull School) . . . . .	I. L. Price, Esq. . . . .	5	1	0	660	1234	48·58	196
Brecon (Ffrwdgrech) . . . . .	Capt. J. D. D. Evans . . . . .	8	1	1	570	1150	45·28	177
d Black Mountains(Blaen-y-cwm) J. F. Jupp, Esq., C.E. . . . .		5	1	0	1423	1395	54·94	224
d Black Mountains(Blaen-y-cwm) J. F. Jupp, Esq., C.E. . . . .		5	1	0	1289	1315	51·79	211
d Black Mountains (Waun Fach) J. F. Jupp, Esq., C.E. . . . .		5	1	0	2650	1153	45·41	..
Black Mts. (Cwm Grigus Uchaf) J. F. Jupp, Esq., C.E. . . . .		5	1	0	1980	1214	47·79	..
d Black M. (DamSiteGrwyneFawr) J. F. Jupp, Esq., C.E. . . . .		5	1	0	1620	1503	59·17	226
d Black Mountains (AberClyd) . . . . .	J. F. Jupp, Esq., C.E. . . . .	5	1	0	1880	1263	49·73	222
Black Mts. (Pen-y-Manllwyn) . . . . .	J. F. Jupp, Esq., C.E. . . . .	5	1	0	2512	1093	43·01	..
Black Mts. (Taren-yr-Esgob) . . . . .	J. F. Jupp, Esq., C.E. . . . .	5	1	0	2039	1080	42·52	..
Black Mts. (Twyn Tal-y-Cefn) . . . . .	J. F. Jupp, Esq., C.E. . . . .	5	1	0	2130	1035	40·73	..
Black Mts. (BlaenGrwyneFawr) J. F. Jupp, Esq., C.E. . . . .		5	1	0	2150	1045	41·14	..
m Upper Chapel (Tymawr) . . . . .	Mrs. Probert . . . . .	5	1	0	945	1181	46·50	..
8.—WYE. 271 sq. mi.								
d Cathedine Rectory . . . . .	Air Ministry . . . . .	5	1	6	650	777	30·59	182
d Talgarth (Dan-y-garth) . . . . .	F. Morgan, Esq. . . . .	5	4	0	404	699	27·54	..
d Talgarth (Pontiwal Sanatorium) Dr. H. E. Watson . . . . .		5	1	0	500	779	30·65	198
d Llanwrtyd Wells (Brynonen) . . . . .	Rhys D. Jones, Esq. . . . .	5	1	0	702	1336	52·59	217
d Builth Wells (Tyn-y-berllan) . . . . .	Dr. W. Black Jones . . . . .	5	1	0	425	928	36·54	190
m Abergwesyn (Trallwn) . . . . .	Air Ministry . . . . .	5	1	0	1000	1713	67·45	..
m Newbridge (Pengraig) . . . . .	Air Ministry . . . . .	5	1	0	960	1333	52·50	..
d Newbridge (Llysdinam) . . . . .	Col. C. Venables Llewelyn . . . . .	5	1	3	646	1076	42·35	210
m Birm'gh'm W.W. (Cors-yr-hwch) F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1775	2247	88·45	..
m Birm'gh'm W.W. (EsgairCeiliog) F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1560	1907	75·06	..
m Birm'gh'm W.W. (Llyn-Carw) . F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1775	1988	78·27	..
m Birm'gh'm W.W. (Nant-y-car) . F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1545	1834	72·21	..
m Birm'gh'm W.W. (Tyn-y-pant) . F.W. Macaulay, Esq., C.E. . . . .		5	1	0	1320	1500	59·07	..
m Birm'gh'm W.W. (EsgairGarthen) F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1590	1840	72·44	..
d Birm'gh'm W.W. (Elan Village) . F. W. Macaulay, Esq., C.E. . . . .		5	1	0	700	1329	52·31	210
RADNOR. (Area, 474 sq. mi.)								
1.—WYE. 424 sq. mi.								
d Glasbury-on-Wye (Hampton Sc.) Rev. D. C. Lloyd . . . . .		5	1	0	274	741	29·19	179
d Builth (Cefndyrys) . . . . .	Capt. E. A. Thomas . . . . .	5	0	10	740	1140	44·88	166
Builth Rd. (St. John's Vicarage) Rev. J. L. Bryans . . . . .		5	1	0	550	1065	41·93	213
New Radnor . . . . .	John Langston, Esq. . . . .	5	1	4	720	1128	44·40	213
d Llandrindod Wells (Kimberley) W.B. deWinton, Esq., C.I.E. . . . .		5	1	0	699	950	37·41	200
d Presteign (St. Davids) . . . . .	Dr. N. Y. Lower . . . . .	5	1	0	500	877	34·53	189
d Presteign (Norton Manor Gdns.) Mr. J. Septon . . . . .		8	0	9	600	926	36·47	149
d Birmingham WW (Tyrmynydd) F.W. Macaulay, Esq., C.E. . . . .		5	1	0	832	1443	56·83	212
d Birmingham W W (Nantgwillt) F. W. Macaulay, Esq., C.E. . . . .		5	1	0	845	1496	58·89	212
m Birmingham W. W. (Dwfnant) . F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1050	1563	61·53	..
m Birm'gham WW (EsgairGader) 2F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1500	1678	66·07	..
m Birmingham W.W. (Tynlidiart) F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1006	1549	60·98	..
d Birmingham W.W. (Claerwen) F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1250	1739	68·45	..
d Birmingham W.W. (Tynant) . . F.W. Macaulay, Esq., C.E. . . . .		5	1	0	1020	1612	63·45	209
Rhayader (East Street) . . . . .	F.W. Macaulay, Esq., C.E. . . . .	5	1	0	700	1240	48·83	..
d Rhayader (Penralley) . . . . .	E. D. Prothero, Esq. . . . .	5	1	0	758	1178	46·38	227
m Bir'gham WW (Cerrigllwydion) . F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1710	1843	72·55	..
m Birm'gham WW (Pen-y-gareg) 1F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1500	1299	51·13	..
m Birm'gham WW (Pen-y-gareg) 2F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1540	1503	59·16	..
m Birmingham W.W. (Calettwr) . F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1490	1945	76·58	..
m Birmingham W.W. (Figin) No. 2F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1700	2052	80·79	..
m Birmingham WW (Aberhenllan) F. W. Macaulay, Esq., C.E. . . . .		5	1	0	1070	1650	64·95	..
m Llanbister (Llananno) . . . . .	Air Ministry . . . . .	5	1	0	900	1133	44·60	..
2.—SEVERN—Right Bank Tributaries. 50 sq. mi.								
Knighton (Upper Woodhouse) . . . S. Wilson, Esq. . . . .		5	1	0	850	940	37·00	..

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
MONTGOMERY. (Area, 797 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
1.—DOVEY. 120 sq. mi.									
d Machynlleth (The Plas)	Mr. A. Gribble	5	1	0	41	1424	56·06	207	175
2.—YSTWYTH. 7 sq. mi.									
3.—WYE. 37 sq. mi.									
d Llangurig (Dernol)	Air Ministry	5	1	0	870	1308	51·50	210	181
4.—SEVERN—Right Bank Tributaries. 154 sq. mi.									
d Llandinam (Plas Dinam)	Mr. D. Bowen	5	3	0	503	871	34·29	179	159
d Dolfor (Gilfach)	S. Wilson, Esq.	5	1	0	1050	1008	39·70	..	..
d Bishops Castle (Bishops Moat)	S. Wilson, Esq.	5	1	0	1130	839	33·03	..	..
d Newtown (Penarth Weir)	H. C. Jones, Esq., C.E.	8	1	0	321	831	32·73	178	146
d Welshpool (Edderton Hall)	Miss A. M. Howell Evans	5	1	0	500	703	27·68	196	141
5.—SEVERN—Left Bank Tributaries. 479 sq. mi.									
d Carno (Council School)	S. Wilson, Esq.	5	1	0	600	1141	44·90	..	..
d Berriew (Brithdir Hall)	F. E. Marston, Esq.	5	2	0	350	752	29·61	182	133
d Welshpool (County School)	John Ward, Esq.	5	1	0	263	777	30·59	187	148
d Welshpool (Fron Llwyd)	Major G. B. D. Harrison	5	1	3	500	768	30·25	213	152
d Garthbibio (Bwlch Tomlyd)	Air Ministry	5	1	0	1370	1836	72·30	..	..
d Llandysilio Rectory	Rev. H. G. Dickinson	5	1	0	225	648	25·51	156	127
d Lake Vyrnwy	E. J. Bradley, Esq.	5	0	7	770	1504	59·23	192	169
d Lake Vyrnwy (Bryn Gwyn)	J. R. Davidson, Esq., C.E.	8	1	0	1311	1435	56·48	..	..
d Lake Vyrnwy (Bank Cynon Isaf)	J. R. Davidson, Esq., C.E.	8	1	0	750	1413	55·62	202	163
d Lake Vyrnwy (Ty Uchaf)	J. R. Davidson, Esq., C.E.	8	1	0	860	1427	56·19	..	..
d Lake Vyrnwy (Heol-y-ffridd) 1.	J. R. Davidson, Esq., C.E.	8	1	0	913	1785	70·26	..	..
d Lake Vyrnwy (Heol-y-ffridd) 2.	J. R. Davidson, Esq., C.E.	8	1	0	830	1678	66·05	..	..
d Lake Vyrnwy (Tyn-y-ffridd)	J. R. Davidson, Esq., C.E.	8	1	0	1010	1344	52·92	..	..
d Lake Vyrnwy (Lluestwen)	J. R. Davidson, Esq., C.E.	8	1	0	1667	1685	66·32	..	..
d Lake Vyrnwy (Llwynrhiw)	J. R. Davidson, Esq., C.E.	8	1	0	1428	1995	78·54	..	..
d Lake Vyrnwy (Craig-y-Gribbin)	J. R. Davidson, Esq., C.E.	8	1	0	1422	1538	60·24	..	..
d Lake Vyrnwy (Eunant Bridge)	J. R. Davidson, Esq., C.E.	8	1	0	830	2089	82·23	..	..
d Lake Vyrnwy (Carreg Goch)	J. R. Davidson, Esq., C.E.	8	1	0	1750	1807	71·14	..	..
d Lake Vyrnwy (Fawnog)	J. R. Davidson, Esq., C.E.	8	1	0	1315	1354	53·30	..	..
FLINT. (Area, 256 sq. mi.)									
1.—DEE. 198 sq. mi.									
d Hanmer (Gredington)	Lord Kenyon, K.C.V.O.	5	0	10	300	724	28·51	190	152
d Overton (Fairleigh)	B. J. E. Wright, Esq.	5	1	8	220	726	28·58	193	134
d Buckley	W. Simmons, Esq.	5	1	0	553	745	29·32	..	..
d Cilcain	W. Simmons, Esq.	5	1	0	790	634	24·97	201	137
d Hawarden	Great Central Rly Co.	9	3	6	35	605	23·81	167	..
d Hawarden (County School)	A. Lyon, Esq.	5	0	11	260	681	26·81	184	132
d Northop (Soughton Hall)	Lord Justice Bankes	5	1	0	418	817	32·18	173	141
d Cilcain (Cilcen Hall)	W. B. Yates, Esq.	..	..	..	650	776	30·55	..	..
d Hawarden Bridge	R. Hawkshaw, Esq.	8	1	3	22	665	26·16	166	128
d Shotwick Aerodrome	Air Ministry	8	1	9	18	633	24·91	171	121
d Mostyn Vicarage	Rev. W. Vaughan-Jones	5	1	0	100	785	30·91	202	130
2.—CLWYD. 51 sq. mi.									
d Bodfari (Nantlys)	D. F. Pennant, Esq.	5	1	0	178	688	27·10	174	133
d Bodfari (Cae Gwyn)	Mrs. Morgan	5	1	0	542	678	26·69	188	142
d St. Asaph (St. Beuno's College)	Rev. L. Cardwell, S.J.	8	1	0	480	725	28·53	194	141
d Dyserth Castle	J. B. Price, Esq.	5	0	6	350	599	23·60	..	..
d Rhyl (Sewage Works)	A. A. Goodall, Esq.	8	1	0	31	617	24·30	186	124
3.—SEVERN—Left Bank Tributaries. 7 sq. mi.									
DENBIGH. (Area, 668 sq. mi.)									
1.—DEE. 270 sq. mi.									
d Glyn Ceiriog (Pentre Gwyn)	A. M. Ker, Esq.	5	1	0	850	996	39·20	..	..
d Glyn Ceiriog (Glas Aber)	A. M. Ker, Esq.	5	1	0	1030	1232	48·60	..	..

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
DENBIGH—(con.).		in.	ft.	in.	ft.	mm.	in.		
1.—DEE—(con.).									
M Glyn Ceiriog (Blaen Cwm).....	A. M. Ker, Esq.....	5	1	0	1570	1770	69·68	..	..
M Glyn Ceiriog (Rhyd Wilym)....	A. M. Ker, Esq.....	5	1	0	1590	1667	65·62	..	..
M Glyn Ceiriog (Cerrigduon).....	A. M. Ker, Esq.....	5	1	0	1525	1291	50·82	..	..
D Chirk Castle Gardens .....	Lord Howard de Walden ..	5	1	2	630	914	36·00	181	149
D Ruabon (Whitehurst) .....	Mr. James Vert .....	5	1	1	327	845	33·27	192	145
D Ruabon (Trevor Hall).....	E. Lloyd Edwards, Esq....	5	1	0	500	827	32·54	163	145
Wrexham (Ty Mawr Reservoir).....	F. Storr, Esq., C.E. ....	5	0	9	805	798	31·40	186	140
Wrexham (Pack Saddle Res.) ..	F. Storr, Esq., C.E. ....	5	0	9	370	797	31·38	201	148
Wrexham (Cae Llwyd Res.) ...	F. Storr, Esq., C.E. ....	8	0	9	918	894	35·18	186	153
Wrexham (Cae Llwyd Res.)....	F. Storr, Esq., C.E. ....	5	0	9	918	799	31·44	186	140
D Wrexham (Plas Power Coll.)...W. W. Potts, Esq. ....		5	22	0	517	719	28·31	174	137
D Brymbo (Pentre Broughtn Sch.) D. E. Rees, Esq. ....		5	1	0	680	783	30·83	171	149
D R. Alwen (Hafod-llan-isaf) No.1 R. F. Baker, Esq., C.E....		5	1	0	1215	923	36·32	217	163
D R. Alwen (Hafod-llan-isaf) No.2 R. F. Baker, Esq., C.E....		5	1	0	1172	1093	43·03	218	169
D R. Alwen (Hafod-llan-isaf) No.3 R. F. Baker, Esq., C.E....		5	1	0	1169	1083	42·65	217	164
d Pentre Voelas (Nant Heilyn) ..	R. F. Baker, Esq., C.E....	5	1	0	1225	1375	54·13	..	..
D R. Brenig (Hafod-yr-Onen) ..	R. F. Baker, Esq., C.E....	5	1	0	1175	1079	42·47	187	164
M Nantglyn (Pant-y-maen) .....	R. F. Baker, Esq., C.E. ....	8	1	0	1320	1313	51·71	..	..
M Llyn Bran .....	R. F. Baker, Esq., C.E....	8	1	0	1428	1489	58·63	..	..
2.—CLWYD & C. 267 sq. mi.									
Pentre Celyn Council School ..	John W. Jones, Esq. ....	5	1	0	330	770	30·32	176	145
D Gyffylliog (Fachlwyd Hall) ..	Eliott S. Currey, Esq. ....	5	1	0	640	975	38·39	214	167
Gyffylliog (Brynhyfryd).....	E. Stanton Roberts, Esq....	5	1	0	560	1004	39·51	212	157
Ruthin (Bodangharad) .....	F. S. Smith, Esq. ....	5	0	11	635	834	32·85	202	148
D Llangynhafal (Plâs Drâw) ..	Major R. Bromhead .....	5	1	0	419	808	31·80	217	158
Gwytherin Council School .....	D. Jones, Esq. ....	5	1	1	730	1314	51·73	184	..
D Denbigh (Mental Hospital) ..	W. Barker, Esq. ....	5	1	0	316	849	33·44	185	148
D Llangerniew (Hafodunos).....	Col. T. Gee .....	5	2	6	500	1232	48·51	179	172
D Denbigh (Garn) .....	W. D. W. Griffith, Esq. ..	5	1	0	447	925	36·41	210	153
M Llanefydd (Rhyl W.W., S.)....	L. G. Hall, Esq., C.E. ....	5	1	0	600	857	33·73	..	..
M Llanefydd (Rhyl W.W., E.) ..	L. G. Hall, Esq., C.E. ....	5	1	0	570	546	21·51	..	..
M Llanefydd (Rhyl W.W., W.) ..	L. G. Hall, Esq., C.E. ....	5	1	0	580	638	25·13	..	..
D Llanefydd (Plas Uchaf Res.) ..	L. G. Hall, Esq., C.E. ....	5	1	0	485	752	29·61	202	143
D Llanefydd (Glascoed Res.) ..	L. G. Hall, Esq., C.E. ....	5	1	0	360	726	28·58	207	133
D Llanrhaiadr (Plas Llangwylfan) J. R. Lloyd, Esq.....		5	1	0	470	651	25·63	175	135
D Trefnant (Maes Elwy).....	Mrs. R. F. Birch .....	5	1	6	195	721	28·38	159	122
St. Asaph (Wygfair).....	(R) Col. H. R. L. Howard, D.S.O.	8	2	6	250	769	30·29	..	..
D Abergele (Sea Road) .....	Sydney Wilson, Esq. ....	5	1	0	30	701	27·62	179	128
D Colwyn Bay (Council Offices) ..	W. J. Dunning, Esq., C.E..	8	1	0	83	781	30·75	154	145
3.—CONWAY. 84 sq. mi.									
D Pentre Foelas (Voelas Hall) ..	Mr. T. Dickie .....	5	1	3	640	1409	55·46	207	168
d Bettws-y-Coed (Coedfa).....	Lt. Col. S. H. N. Johnstone	5	0	9	..	1496	58·90	..	..
4.—SEVERN—Left Bank Tributaries. 47 sq. mi.									
Llanrhaiadr-yn-Mochnant .....	David F. Jones, Esq. ....	5	1	0	400	1077	42·41	210	160
D Llansilin (Penygwely Res.) ....	G. W. Lacey, Esq., C.E. ..	5	1	0	1094	892	35·12	202	154
MERIONETH. (Area, 661 sq. mi.)									
1.—DEE. 218 sq. mi.									
Bala (Bryl Aran).....	Mrs. Burton .....	8	1	0	600	1549	61·00	223	199
Llanderfel (Palé Gardens) .....	Mr. E. J. Edwards .....	8	1	0	606	1395	54·91	220	185
D Corwen (Rûg Gardens) .....	Col. Vaughan Wynn.....	8	1	2	500	911	35·87	173	145
2.—CLWYD. 7 sq. mi.									
3.—GLASLYN. 92 sq. mi.									
D Penrhyndeudraeth (HafodCaemaen) G. H. C. Haigh, Esq. ..		5	1	0	100	1268	49·92	227	186
D Tan-y-bwlch (The Gardens) ....	Mr. J. Roberts .....	5	1	0	50	1503	59·19	230	188
Tan-y-bwlch (Dol-y-Moch) ....	Mrs. Howland Jackson ..	5	0	6	55	1640	64·56	223	182
D Festiniog (Hafod Fawr).....	Office of Woods .....	8	1	0	900	1856	73·08	212	206
d Blaenau Festiniog (Oakley Q.) ..	R. H. Jones, Esq.....	5	10	0	1100	2015	79·32	..	..
D Blaenau Festiniog (Llechwedd Q.) Messrs. J. W. Greaves & Sons		5	1	0	700	2626	103·40	244	201

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
MERIONETH—(con.).		in.	ft.	in.	ft.	mm.	in.		
4.—MAWDDACH & C. 262 sq. mi.									
D Towyn (Ynys-y-Maengwyn) ...	Roger Corbett, Esq. ....	5	1	0	14	1108	43·61	193	168
D Towyn (Bronffynnon) .....	Dr. T. Henry Jones.....	5	1	0	180	1126	44·32	220	163
D Towyn (Peniarth).....	Mrs. Wynne .....	8	1	0	25	1283	50·50	194	182
D Dolgelly (Dol'rhyd) .....	Col. P. H. Enthoven, D.L. ...	5	0	9	100	1452	57·16	244	173
D Dolgelly (Bryntirion) .....	E. P. Beale, Esq. ....	5	0	10	50	1440	56·69	205	186
D Trawsfynydd Camp.....	E. Jones, Esq.....	5	1	0	800	1680	66·14	211	188
5.—DOVEY. 82 sq. mi.									
D Aberdovey (Plas Penhelig) ....	J. M. Howell, Esq., D.L. ...	5	1	0	120	1022	40·25	182	145
D Pennal (Talgarth Hall) .....	Mrs. F. Gott.....	5	0	5	125	1496	58·91	173	..
D Dinas Mawddwy (Dol. Hall) ...	Sydney Wilson, Esq. ....	5	1	0	250	1719	67·68	..	..
6.—SEVERN—Left Bank Tributaries.									
CARNARVON. (Area, 572 sq. mi.)									
1.—BARDSEY ISLAND.									
2.—CONWAY & C. 146 sq. mi.									
M Lake Cowlyd (Llethyr Gwyn) cC. F. Farrington, Esq., C.E.		5	1	0	1700	2204	86·76	..	..
M Lake Colwyd (Gors-y-Llithrig) dC. F. Farrington, Esq., C.E.		5	1	0	1900	2112	83·15	..	..
M Lake Cowlyd (Ffrith Fawr) ... bC. F. Farrington, Esq., C.E.		5	1	0	1700	2100	82·66	..	..
M L. Cowlyd (Ffrith Carreg Wen) aC. F. Farrington, Esq., C.E.		5	1	0	1168	2158	84·96	..	..
Trefriw Wells .....	C. P. Adamson, Esq. ....	5	1	0	25	1307	51·45	168	147
D Lake Eigiau (Dam Site) .....	H. J. Jack, Esq. ....	5	1	5	1245	2260	88·98	218	199
w Llanbedr-y-Cennin (Plasdulyn) W. T. Ward, Esq., C.E....		8	1	0	509	1245	49·00	..	..
w Llanbedr-y-Cennin (Llyndulyn) W. T. Ward, Esq., C.E....		8	1	6	1632	1634	64·32	..	..
Deganwy (Y Berlfa) .....	(R) Willoughby Gardner, Esq..	5	1	0	35	736	28·96	..	..
d Llandudno (Glanwydden School) Thomas Roberts, Esq. ....		5	1	0	28	609	23·96	..	..
D Llandudno .....	W. Little, Esq. ....	5	1	0	22	620	24·41	182	128
3.—MENAI STRAITS, 221 sq. mi.									
D Madryn Castle (Farm School) ... J. Hines, Esq. ....		5	1	0	285	892	35·13	209	162
D Llanaelhaiarn (Council Sch.) ... J. Hughes, Esq. ....		5	0	8	600	1278	50·32	..	..
D Pen-y-groes (Nebo School) ... Elias Thomas, Esq. ....		5	1	0	700	2300	90·54	229	186
D Llanllfyni (Bryn Aerau School) Llewelyn Parry, Esq. ....		5	1	0	150	1162	45·74	..	..
D Nantlle (Dorothea Quarries) ... W. J. Griffith, Esq. ....		8	50	0	400	1617	63·64	..	..
D Llandwrog (Glynllivon Park) ... Hon. F. G. Wynn .....		5	1	0	100	1088	42·83	..	..
D Llandwrog (Glynllivon Nursery) Hon. F. G. Wynn .....		5	1	0	200	1163	45·80	..	..
D Llandwrog (Glynllivon Garden) Hon. F. G. Wynn .....		5	1	0	100	1157	45·54	..	..
D Llandwrog (Glynllivon Fort) ... Hon. F. G. Wynn .....		5	1	0	200	1142	44·95	..	..
D Bettws Garmon .....	Rev. T. C. V. Bastow .....	5	0	7	414	1579	62·18	212	174
D Bettws Garmon .....	Rev. T. C. V. Bastow .....	8	0	11	414	1597	62·86	213	174
D Carnarvon (Belan Fort) ... Hon. F. G. Wynn .....		5	1	0	15	865	34·05	..	..
D Lake Ogwen .....	R. Hughes, Esq. ....	5	1	0	1006	2458	96·77	..	..
D Llanbeblig (Cefn Rhos) ... Col. M. F. Preece .....		8	..	..	..	877	34·53	..	..
D Bryn Bras (Castle Gardens) ... Mr. W. Owen .....		5	1	6	550	1193	46·98	198	172
D Llanberis (Llandinorwig School) John Roberts, Esq. ....		5	1	0	850	1430	56·30	..	..
D Penisarwaen (Meillionydd) ... J. Rees Foster, Esq. ....		5	1	0	420	1194	47·01	205	177
D Bethesda (St. Ann's Vicarage) ... Rev. W. Morgan .....		5	1	6	500	1427	56·18	225	179
D Bethesda (Penrhyn Quarries) ... W. D. Hobson, Esq. ....		8	1	0	528	1553	61·14	228	185
D Bethesda .....	"North Wales Chronicle" ..	..	..	..	..	1507	59·31	..	..
D Bangor (Penrhyn Castle Gdns.) Mr. J. Kneller .....		5	1	0	150	906	35·68	201	156
D Bangor (Town Hall) ... J. Gill, Esq. ....		10	1	0	51	1018	40·09	183	157
D Llanfairfechan .....	Mr. W. Timmins .....	5	1	0	103	865	34·06	186	141
w Penmaenmawr (Mountain Res.) R. J. Hughes, Esq. ....		5	1	6	1200	1169	46·03	..	..
D Penmaenmawr (Council Offices) R. J. Hughes, Esq. ....		5	1	6	100	801	31·55	168	126
4.—ERCH & C. 155 sq. mi.									
D Abersoch .....	Sir W. H. Winterbotham..	8	1	0	100	1075	42·32	185	169
D Bryncroes (Schoolhouse) ... E. R. Williams, Esq. ....		5	0	11	320	1017	40·06	169	139
D Pwllheli (Bodfean Hall) ... Hon. F. G. Wynn .....		5	1	0	200	1104	43·46	..	..
D Pwllheli (Bodfean Hall Gdns.) Hon. F. G. Wynn .....		5	1	0	200	1061	41·76	..	..
d Fourcrosses (Council School) ... Morris Williams, Esq. ....		5	1	3	200	1296	51·03	..	..

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
CARNARVON—(con.).		in.	ft.	in.	ft.	mm.	in.		
5.—GLASLYN. 50 sq. mi.									
D Portmadoc (Wern)	R. M. Greaves, Esq.	5	1	0	90	1373	54·06	216	186
Beddgelert (Council School)	David Jones, Esq.	5	1	0	133	2345	92·34	..	153
Snowdon (Wenallt)	No. 6 H. J. Jack, Esq.	5	1	2	1050	3873	152·47	..	..
D Snowdon (Cwm Dyli)	No. 11 H. J. Jack, Esq.	5	1	0	310	3416	134·49	204	180
Snowdon (Cwm Dyli, Old Rd.)	14 H. J. Jack, Esq.	5	0	10	325	3319	130·67	..	..
M Snowdon (Delta)	No. 7 H. J. Jack, Esq.	5	1	0	1435	4406	173·45	..	..
M Snowdon (Glaslyn)	No. 3 H. J. Jack, Esq.	5	0	8	2050	3515	138·37	..	..
M Snowdon (Teyrn)	No. 1 H. J. Jack, Esq.	5	1	0	1080	3973	156·43	..	..
d Snowdon (Llydaw Intake)	10 H. J. Jack, Esq.	5	1	0	1480	3709	146·01	..	..
d Snowdon (L. Llydaw Copper M.)	9 H. J. Jack, Esq.	5	1	5	1480	3888	153·07	..	..
M Snowdon (Llyn Llydaw)	No. 5 H. J. Jack, Esq.	5	1	0	1470	3481	137·03	..	..
M Snowdon (Crib Goch)	No. 8 H. J. Jack, Esq.	5	1	3	2340	3847	151·47	..	..
ANGLESEY. (Area, 275 sq. mi.)									
Llandwyn Island	Hon. F. G. Wynn	5	1	0	40	500	19·70	..	..
D Llangadwaladr (Bodorgan)	Mr. W. Pilgrim	5	1	0	100	917	36·12	201	156
Llanfaelog	H. S. Lowe, Esq.	5	1	0	50	769	30·27	..	..
Beaumaris (Fryars)	Mrs. Burton	10	2	0	20	931	36·66	..	..
D Llangwilog (Trescawen)	Mrs. Pritchard-Rayner	5	1	0	239	985	38·76	175	156
D Bodedern (Presaddfed)	Lt.-Col. W. A. Fox-Pitt	5	1	0	155	933	36·74	200	155
D Holyhead (Salt Island)	Old Air Ministry	8	1	0	27	855	33·67	197	134
D Holyhead (Salt Island)	New Air Ministry	8	1	0	26	774	30·47	185	129
D Llanerchymedd Llwydiarth Esqb.	Miss Prichard	5	1	6	175	907	35·72	218	167
D Penrhoslligwy School	T. Rowlands, Esq.	5	1	0	140	968	38·10	195	152
D Lligwy	Lord Boston	5	1	0	170	795	31·32	200	136
Amlwch (Dyffryn Adda)	Major T. Fanning Evans	5	1	2	178	830	32·66	212	..
ISLE OF MAN. (Area, 227 sq. mi.)									
Castletown (Langness)	Board of Northern Lights	8	1	0	75	659	25·94	167	..
Santon Vicarage	Rev. R. Jones	5	0	10	245	919	36·16	196	..
D Douglas (Borough Cemetery)	R. Clarke, Esq.	8	1	0	284	1048	41·27	209	169
D Douglas (Clype Res., Onchan)	H. A. Bridge, Esq.	8	1	0	440	1066	41·97	210	161
Baldwin Reservoir	H. A. Bridge, Esq.	8	0	8	480	1274	50·14	210	177
Maughold Head	Board of Northern Lights	..	..	..	..	543	21·37	147	..
D Ramsey (Town Hall)	G. W. Kewin, Esq.	8	15	0	18	1103	43·43	184	138
D Ramsey (North Promenade)	G. W. Kewin, Esq.	5	2	0	5	1126	44·34	208	161
CHANNEL ISLANDS. (Area, 76 sq. mi.)									
JERSEY. 45 sq. mi.									
D Pontac (St. Edmunds)	Dr. E. G. Barnes	5	1	6	30	832	32·76	195	140
D Samarès (Constantia Lodge)	Vivian J. Bailhache, Esq.	5	2	6	50	818	32·22	183	134
D St. Brelade (La Sergenté)	J. E. Le Boutillier, Esq.	5	1	4	194	809	31·87	179	141
D St. Aubins (Belle Vue)	C. J. Sumner, Esq.	5	1	4	220	901	35·49	197	148
D St. Saviours (Beauvoir)	G. T. Robin, Esq.	5	0	10	200	902	35·50	189	149
D St. Helier (Upr. King's Cliffe)	Col. R. K. Teversham	5	1	6	190	929	36·56	177	143
d Grouville (Gouray Lodge)	Dr. E. G. Barnes	5	1	3	101	925	36·41	..	132
D St. Lawrence (Little Grove)	R. E. B. Voisin, Esq.	5	1	0	60	910	35·82	186	141
D St. Lawrence (Braeside Cottage)	P. A. Gore, Esq.	5	1	0	75	883	34·76	189	150
D Millbrook (St. Helier W.W.)	A. J. Jenkins, Esq., C.E.	5	0	11	53	857	33·75	177	137
St. Ouen's Manor	R. Malet de Carteret, Esq.	5	2	6	270	875	34·46	179	142
D Trinity Rectory	Rev. S. T. Gruchy	5	2	6	375	874	34·41	204	144

## DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922				
CHANNEL ISLANDS—(con.).		in.	ft.	in.	ft.	mm.	in.		
<b>GUERNSEY. 25 sq. mi.</b>									
d St. Peter in the Wood (Hawthorns)	L. J. Nicolle, Esq. ....	5	1	0	100	667	26·25	181	141
d St. Martin's (Les Blanchés)	B. T. Rowswell, Esq. ....	5	1	0	310	821	32·33	186	150
d St. Martin's Rectory	Rev. R. Coulthard ....	5	1	0	310	831	32·70	191	146
d St. Martin's (Hautnez)	A. A. Allain, Esq., C.E. ....	5	0	8	336	858	33·79	190	150
St. Martin's (Kragga Karna)	J. H. Welch, Esq. ....	5	1	6	..	926	36·45	192	159
d Fort Road (La Cotte)	Major S. Carey Curtis ....	5	1	0	285	816	32·13	178	140
d Villiaze	A. A. Allain, Esq., C.E. ....	5	0	6	302	840	33·07	174	145
d St. Andrew (Les Vauxbelets)	Rev. Bro. Lewis ....	5	1	0	200	839	33·02	177	144
d St. Peter Port (Grange Road)	H. Vere Miles, Esq. ....	5	1	0	174	920	36·23	195	148
d St. Peter Port (Queens Road)	A. A. Allain, Esq., C.E. ....	5	0	6	220	945	37·19	197	155
d St. Peter Port (Market Street)	B. T. Rowswell, Esq. ....	5	52	8	100	909	35·79	180	153
d Rohais (Colborne Villa)	Major J. Miles ....	5	1	0	120	879	34·60	197	150
d St. George (Castel)	J. V. Ninnim, Esq. ....	5	1	0	120	907	35·72	181	145
d Menheniot Vineries	Major H. Roper ....	5	1	0	100	903	35·54	170	150
d St. Sampsons (Lowlands)	Major J. Miles ....	5	on roof	..	..	693	27·30	181	136
d Fort Doyle (Platte Fougère)	Major J. Miles ....	..	on roof	..	..	578	22·77?	148	129
<b>SARK. 2 sq. mi.</b>									
d Pointe Robert	B. T. Rowswell, Esq. ....	5	1	0	215	783	30·84	180	142
<b>HERM. 1 sq. mi.</b>									
<b>ALDERNEY. 3 sq. mi.</b>									
d St. Anne's Rectory	B. T. Rowswell, Esq. ....	5	1	0	205	883	34·78	169	135

## SCOTLAND.

## DIVISION XII.—SOUTHERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height above Ground		Sea Level.	1922			
WIGTOWN. (Area, 488 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
<b>1.—LOCH RYAN. 46 sq. mi.</b>									
Loch Ryan Lighthouse	Board of Northern Lights	..	..	..	46	823	32·40	157	..
<b>2.—WESTERN GALLOWAY. 44 sq. mi.</b>									
Mull of Galloway	Board of Northern Lights	..	..	..	327	696	27·39	125	..
d Logan House	K. McDouall, Esq.	8	1	0	80	951	37·42	234	169
Killantringan Lighthouse	Board of Northern Lights	..	..	..	162	780	30·72	128	..
Corsewall	Board of Northern Lights	..	3	4	112	1031	40·61	194	..
<b>3.—LUCE BAY. 186 sq. mi.</b>									
d Port William (Monreith)	Major R. F. Brebner	5	0	5	145	978	38·52	223	169
d Stoneykirk (Ardwell House)	Sir M. McT. Stewart, Bt.	8	3	0	65	948	37·34	222	176
d Glenluce (Crews)	Peter Taylor, Esq.	5	1	9	218	1149	45·22	235	191
<b>4.—GREE &amp; WIGTOWN BAY. 212 sq. mi.</b>									
d Whithorn (Glasserton)	Adm. Johnston Stewart, C.B.	5	1	0	225	941	37·06	211	160
d Kirkcowan (Craighlaw)	R. M. Reid, Esq.	5	0	9	300	1224	48·20	210	193
KIRKCUDBRIGHT. (Area, 902 sq. mi.)									
<b>1.—DOON. 16 sq. mi.</b>									
<b>2.—GREE &amp; WIGTOWN BAY. 222 sq. mi.</b>									
d Borgue (Senwick House)	Lewis D. Wigan, Esq.	8	1	2	150	858	33·78	211	162
d Borgue (Knockbrenn)	J. Douglas Brown, Esq.	5	1	0	15	916	36·08	200	157
d Palnure (Bargaly)	Mrs. Colvin Stewart	8	3	5	60	1244	48·97	220	192
<b>3.—DEE. 377 sq. mi.</b>									
Little Ross Lighthouse	Board of Northern Lights	..	3	3	175	638	25·12	110	..
New Galloway (Glenlee Park)	Mr. C. Jamieson	5	0	0	224	1307	51·46	177	169
d Dalry (Glendaroch)	Miss M. Barbour	5	0	11	192	1191	46·87	225	176
d Dalry (Garroch)	Arthur Young, Esq.	8	1	3	250	1376	54·18	186	179
d Dalry (Forest Lodge)	Sir John Wood, Bart., M.P.	5	1	0	500	1516	59·67	204	185
d Carsphairn (Shiel)	Mr. S. Wilson	5	1	0	850	1693	66·65	241	209
d Carsphairn (Knockgray)	Miss Clark Kennedy	8	1	0	641	1321	52·02	228	195
<b>4.—URR &amp; C. 196 sq. mi.</b>									
Auchencairn (Torr House)	W. Ovens, Esq.	5	0	8	50	1116	43·93	..	..
d Dalbeattie (Southwick House)	Sir M. McT. Stewart, Bart.	5	1	0	75	994	39·14	210	162
d Dalbeattie (Kirkennan)	Wellwood Maxwell, Esq.	5	0	9	30	1089	42·89	207	173
d Dalbeattie (Drumstinchall)	Mrs. R. F. Hanbury	8	0	11	400	1074	42·28	185	178
d Dalbeattie (Richorn Wood)	Mrs. McNae	5	1	0	54	990	38·98	180	152
d Kirkpatrick Durham (Glenlair)	A. L. Hannay, Esq.	5	0	9	250	1015	39·94	164	153
d Corsoch (Monybuie)	Mrs. Stirton	5	1	0	580	1177	46·36	198	154
<b>5.—NITH &amp; C. 91 sq. mi.</b>									
d Dumfries (Cargen)	Col. R. F. Dudgeon	5	0	10	80	1027	40·42	203	167
d Dumfries (Crichton Roy. Inst.)	Mr. E. Joss	5	1	0	273	1084	42·66	236	..
d Dumfries (Lincluden House)	Miss P. A. Young, M.B.E.	5	1	0	60	931	36·67	210	170
d Dumfries (Jardington)	J. Rutherford, Esq.	5	1	0	50	932	36·69	222	169
DUMFRIES. (Area, 1074 sq. mi.)									
<b>1.—CLYDE—Right Bank Tributaries. 5 sq. mi.</b>									
<b>2.—URR. 6 sq. mi.</b>									
<b>3.—NITH &amp; C. 421 sq. mi.</b>									
d Ruthwell (Comlongan Castle)	Earl of Mansfield	5	1	0	74	681	26·82	175	139
d Dumfries (Crichton Roy. Inst.)	Mr. E. Joss	5	1	0	140	808	31·80	190	145
d Moniaive (Glencrosh)	Miss Macmillan	5	2	0	400	1001	42·95	196	173
d Moniaive (Maxwelton House)	Sir Claude V. E. Laurie, Bt.	5	1	3	400	1007	39·65	..	151
d Durrisdeer (Drumlanrig Gdns.)	Duke of Buccleuch, K.T.	5	0	9	191	1047	41·23	..	167

## DIVISION XII.—SOUTHERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.					
DUMFRIES—(con.).		in.	ft.	in.	ft.	mm.	in.		
4.—ANNAN. 367 sq. mi.									
Dalton (Whitecroft)	W. Maitland-Heriot, Esq.	5	0	6	240	985	38·80	238	176
D Dalton (Kirkwood)	Arthur J. Steel, Esq.	5	0	8	245	1179	46·41	230	184
Ecclefechan (Burnfoot)	Major H. C. Irving	5	0	11	160	972	38·28	..	..
D Lockerbie (Castle Milk)	Mr. J. T. Jeffrey	5	1	6	199	906	35·68	166	148
M Lockerbie (Thornbank)	W. Murdoch, Esq.	10	3	0	259	917	36·10	..	..
D Lochmaben (Esthwaite)	W. J. Halliday, Esq.	5	1	0	166	992	39·07	198	165
D Amisfield (Glenae)	H. Sharpe Gordon, Esq. OBE.	5	0	11	300	903	35·56	188	154
Moffat (Craigielands)	Mr. Luke Fraser	5	1	6	300	1230	48·42	..	..
5.—ESK. 275 sq. mi.									
M Canonbie (Byreburnfoot)	Mr. David Crabbe	3	0	9	160	1029	40·50	..	..
D Canonbie (Irvine House)	J. H. Milne Home, Esq.	5	0	9	200	1118	44·00	202	170
D Langholm (Broomholm)	W. C. Everley Taylor, Esq.	5	1	0	266	1217	47·92	198	172
D Langholm (Drove Road)	Mrs. Jackson	5	0	9	270	1284	50·56	209	177
D Langholm (Craig)	J. Little, Esq.	5	1	0	450	1197	47·14	195	165
D Langholm (Ewes)	Mrs. Lyall	5	1	0	445	1269	49·95	..	..
D Eskdalemuir Observatory	Air Ministry	8	1	0	794	1280	50·40	226	171
ROXBURGH. (Area, 666 sq. mi.)									
1.—NORTH TYNE. 6 sq. mi.									
2.—TWEED, LOWER—Right Bank Tributaries. 57 sq. mi.									
D Kelso (Lempitlaw)	J. Stirling, Esq.	5	1	0	635	656	25·82	179	135
D Kelso (Springwood Seed Ground)	Messrs. Laing & Mather	5	1	0	200	604	23·77	178	136
3.—TWEED—Teviot & c. 431 sq. mi.									
D Hawick (Wolfelee)	R. M. Hudson, Esq.	5	0	10	537	845	33·28	218	152
D Hawick (Bransholme)	J. G. Winning, Esq.	5	0	6	457	775	30·50	201	151
Robarton Manse	Rev. A. E. McInnes	5	1	0	730	751	29·58	..	..
D Denholm (Spital Tower)	T. G. Leadbetter, Esq.	5	0	9	410	712	28·02	205	149
D Jedburgh (Jedneuk)	T. Yool, Esq.	5	1	0	271	565	22·26	221	132
D Ancrum (Monteviot)	Bertram Talbot, Esq.	5	2	6	170	634	24·96	200	149
D St. Boswells (The Fens)	J. J. Fairbairn, Esq.	5	1	6	260	548	21·58	173	126
St. Boswells (Monksford)	Lt.-Col. A. Mitchell	5	0	11	320	593	23·34	..	..
Old Melrose Gardens	Mr. S. Brooker	5	1	0	400	653	25·72	121	103
D Kelso (Springwood Park)	Mr. W. Chaplin	5	1	0	130	559	21·99	182	124
4.—TWEED—Ettrick & c. 10 sq. mi.									
D Melrose (Asylum) gauge A	T. C. Mitchell, Esq.	5	0	6	480	708	27·87	208	141
D Melrose (Asylum) gauge B	T. C. Mitchell, Esq.	5	1	0	480	677	26·64	208	141
5.—TWEED—Gala. 6 sq. mi.									
6.—TWEED—Leader & c. 25 sq. mi.									
D Melrose (Drygrange)	A. T. Roberts, Esq.	5	1	0	360	612	24·09	208	135
7.—TWEED, LOWER—Left Bank Tributaries. 25 sq. mi.									
D Kelso (Broomlands)	J. C. Scott, Esq.	5	1	0	193	566	22·29	202	133
8.—ESK. 106 sq. mi.									

## DIVISION XIII.—SOUTH-EASTERN COUNTIES.

SELKIRK. (Area, 268 sq. mi.)											
1.—TWEED—Teviot & c. 34 sq. mi.											
D	Selkirk (Whitmuir Hall)	.....Mrs. Dunlop	.....	5	1	0	800	734	28·91	180	158
2.—TWEED—Ettrick & c. 192 sq. mi.											
D	Ettrick Manse	.....Rev. A. Horn	.....	5	1	0	796	1265	49·80	228	180
M	Edinburgh W.W. (Meggat Hd.)	1 Messrs. Leslie & Reid, C.E.	.....	5	1	3	1496	1123	44·21	..	..
	Selkirk (Lindean Reservoir)	...S. Pittillo, Esq.	.....	5	1	0	900	727	28·64	..	..

## DIVISION XIII.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922				
SELKIRK—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—TWEED, UPPER—Right Bank Tributaries. 17 sq. mi.									
4.—TWEED, UPPER—Left Bank Tributaries. 19 sq. mi.									
D Caddonfoot (Fairnilee) . . . . .	Alex. F. Roberts, Esq. . . . .	5	1	0	450	705	27·76	186	134
D Galashiels (The Peel Clovenfords) . . . . .	W. R. Ovens, Esq. . . . .	6	1	6	500	809	31·85	..	..
5.—TWEED—Gala. 6 sq. mi.									
D Galashiels (Stantling Craigs) . . . . .	Mr. J. Murray . . . . .	12	1	3	800	770	30·31	..	..
PEEBLES. (Area, 348 sq. mi.)									
1.—TWEED, UPPER—Right Bank Tributaries. 127 sq. mi.									
M Edin.W.W. (Ravensraig) . . . . .	3 Messrs. Leslie & Reid, C.E. . . . .	5	1	3	2258	1965	77·35	..	..
M Edin.W.W. (Gameshope Loch) . . . . .	4 Messrs. Leslie & Reid, C.E. . . . .	5	1	3	1860	1739	68·47	..	..
M Edin.W.W. (Loch Craig Head) . . . . .	2 Messrs. Leslie & Reid, C.E. . . . .	5	1	0	2627	1225	48·22	..	..
M Edin.W.W. (Gameshope Farm) . . . . .	5a Messrs. Leslie & Reid, C.E. . . . .	5	1	3	1538	1480	58·26	..	..
M Edin.W.W. (Talla Linns Foot) . . . . .	6 Messrs. Leslie & Reid, C.E. . . . .	8	1	3	966	1356	53·40	..	..
D Edin.W.W. (Quarter Hill) No. 7a . . . . .	Messrs. Leslie & Reid, C.E. . . . .	5	1	3	1196	1058	41·66	232	184
M Edin.W.W. (Quarter Hill) No. 7 . . . . .	Messrs. Leslie & Reid, C.E. . . . .	8	1	3	1196	1102	43·40	..	..
D Edin.W.W. (Victoria Lodge) . . . . .	8 Messrs. Leslie & Reid, C.E. . . . .	5	1	3	904	1169	46·04	229	180
M Edin.W.W. (Victoria Lodge) . . . . .	8a Messrs. Leslie & Reid, C.E. . . . .	8	1	3	904	1135	44·68	..	..
2.—TWEED, UPPER—Left Bank Tributaries. 192 sq. mi.									
D Stobo Castle . . . . .	Major J. Ainslie . . . . .	5	1	0	594	865	34·05	214	165
D Dolphinton (Castlecraig) . . . . .	James Mann, Esq. . . . .	5	0	10	820	820	32·28	228	182
D West Linton (Woodlea Cottage) . . . . .	Messrs. Leslie & Reid, C.E. . . . .	5	1	0	801	740	29·14	238	172
D West Linton (Taieri) . . . . .	W. Mackie, Esq. . . . .	5	1	0	769	785	30·90	265	165
3.—ESK. 23 sq. mi.									
D Eddlestone (Portmore Res.) . . . . .	Messrs. Leslie & Reid, C.E. . . . .	11	1	0	1000	741	29·19	234	166
M Eddlestone (Portmore Res.) . . . . .	Messrs. Leslie & Reid, C.E. . . . .	11	1	0	1007	733	28·87	..	..
M Penicuik (N. Esk Reservoir) . . . . .	Mr. W. Tod . . . . .	11	0	6	1150	912	35·90	..	..
4.—CLYDE—Right Bank Tributaries. 6 sq. mi.									
BERWICK. (Area, 457 sq. mi.)									
1.—TWEED—Gala. 6 sq. mi.									
2.—TWEED—Leader. 92 sq. mi.									
D Earlston (Cowdenknowes) . . . . .	Mr. T. J. Fleming . . . . .	5	1	2	320	675	26·57	174	135
D Lauder (Burncastle) . . . . .	J. G. S. Turnbull, Esq. . . . .	5	1	0	900	745	29·35	..	..
M Earnsclough Burn (Blythe Rig) . . . . .	J. G. S. Turnbull, Esq. . . . .	5	1	0	1200	941	37·06	..	..
3.—TWEED, LOWER—Left Bank Tributaries. 115 sq. mi.									
D Coldstream (Lochton) . . . . .	J. Aitchison, Esq. . . . .	5	1	0	151	574	22·59	..	..
D Coldstream (The Hirsell) . . . . .	Mr. D. Black . . . . .	5	1	4	130	601	23·64	186	133
D Swinton House . . . . .	Snowdon Rev. A. E. Swinton . . . . .	5	1	2	200	631	24·85	201	137
D Swinton House . . . . .	Rev. A. E. Swinton . . . . .	5	0	10	200	613	24·12	..	..
4.—TWEED—Whiteadder. 164 sq. mi.									
D Marchmont House . . . . .	Mr. P. Ross . . . . .	5	1	0	498	795	31·28	201	153
D Duns Castle . . . . .	Mr. J. Vallance . . . . .	5	1	0	500	707	27·82	196	141
D Duns (Manderston) . . . . .	Mr. F. K. Marshall . . . . .	5	1	6	356	745	29·32	176	141
D West Foulden . . . . .	J. Hewat Craw, Esq. . . . .	5	1	0	250	539	21·23	..	..
5.—EAST COAST STREAMS. 80 sq. mi.									
D St. Abb's Head . . . . .	Board of Northern Lights . . . . .	8	4	3	224	585	23·01	153	..
HADDINGTON. (Area, 267 sq. mi.)									
1.—TWEED—Leader. 1 sq. mi.									
2.—TWEED—Whiteadder. 35 sq. mi.									

## DIVISION XIII.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
HADDINGTON—(con.).		in.	ft.	in.	ft.	mm.	in.		
<b>3.—EAST COAST STREAMS. 69 sq. mi.</b>									
Garvald (Donolly Reservoir) ..	J. C. Miller, Esq., C.E. . . .	5	1	0	550	885	34·84	..	..
Garvald (Thorter Reservoir) ...	J. C. Miller, Esq., C.E. . . .	5	1	0	715	527	20·76 ?	..	..
Barnsness Lighthouse .....	Board of Northern Lights . . .	..	..	..	120	465	18·32	131	..
<b>4.—TYNE &amp; C. 114 sq. mi.</b>									
LammermuirH.(StobshiellRes.)A.J. Ross, Esq., C.E. ....		5	2	0	998	667	26·28	..	..
LammermuirH.(StobshiellRes.)B.J. Ross, Esq., C.E. ....		5	2	0	950	775	30·50	..	..
d Prestonkirk (Ninewar) .....	W. S. Curr, Esq. ....	5	1	6	111	500	19·70	166	103
d Prestonkirk (Knowes) .....	Mr. J. Rattray. ....	5	1	0	78	564	22·21	170	128
d Prestonkirk (Smeaton) .....	Sir A. Buchan-Hepburn ..	7	7	10	100	549	21·63	158	128
<b>5.—FIRTH OF FORTH. 48 sq. mi.</b>									
d North Berwick Reservoir .....	J. C. Miller, Esq., C.E. . . .	5	1	6	150	534	21·04	166	135
<b>6.—INSULAR.</b>									
MIDLOTHIAN. (Area, 369 sq. mi.)									
<b>1.—TWEED—Gala. 68 sq. mi.</b>									
Stow (Cragdale) .....	J. Pringle, Esq. ....	5	0	6	642	822	32·36	..	..
<b>2.—TYNE. 28 sq. mi.</b>									
d Oxenfoord Castle Gardens .....	Mr. A. C. Scott .....	5	1	2	452	629	24·78	180	130
<b>3.—FIRTH OF FORTH. 3 sq. mi.</b>									
<b>4.—ESK. 116 sq. mi.</b>									
M Moorfoot Hills (Bowbate) .....	Messrs. Leslie & Reid, C.E. .	11	0	6	1260	1063	41·87	..	..
d Moorfoot Hills (Gladhouse Res.)	Messrs. Leslie & Reid, C.E. .	5	0	8	915	780	30·70	235	171
d Moorfoot Hills (Gladhouse Res.)	Messrs. Leslie & Reid, C.E. .	8	1	0	915	752	29·60	..	..
d Moorfoot Hills (Rosebery) .....	Messrs. Leslie & Reid, C.E. .	4	0	9	750	705	27·75	219	152
M Moorfoot Hills (Rosebery) .....	Messrs. Leslie & Reid, C.E. .	11	0	9	750	645	25·40	..	..
d Moorfoot Hills (Edgelaw) .....	Messrs. Leslie & Reid, C.E. .	4	0	10	654	681	26·80	219	153
d Moorfoot Hills (Edgelaw) .....	Messrs. Leslie & Reid, C.E. .	11	0	10	654	639	25·15	..	..
d Penicuik (Brunstane Cottage) ..	Messrs. Leslie & Reid, C.E. .	5	1	0	800	814	32·06	207	162
d Gorebridge (Deanbank) .....	A. Wilson Spalding, Esq. . .	5	1	0	500	661	26·02	238	145
M Pentland Hills (Harehill) .....	Messrs. Leslie & Reid, C.E. .	11	1	7	1297	819	32·23	..	..
d Pentland Hills (Martyrs Cross)	Messrs. Leslie & Reid, C.E. .	5	1	0	750	767	30·20	239	159
d Pentland Hills (Loganlea) .....	Messrs. Leslie & Reid, C.E. .	5	1	0	811	718	28·27	198	142
M Pentland Hills (Loganlea) .....	Messrs. Leslie & Reid, C.E. .	8	1	4	813	718	28·28	..	..
d Pentland Hills (Glencorse Fil.)	Messrs. Leslie & Reid, C.E. .	5	1	0	638	724	28·52	201	147
M Pentland Hills (Glencorse Fil.)	Messrs. Leslie & Reid, C.E. .	11	1	0	638	737	29·02	..	..
d Pentland Hills (Glen Cottage) ..	Messrs. Leslie & Reid, C.E. .	5	1	2	739	753	29·64	202	152
M Pentland Hills (Glen Cottage) ..	Messrs. Leslie & Reid, C.E. .	8	1	2	738	751	29·58	..	..
d Milton Bridge (Bush) .....	J. S. Abernethy, Esq. ....	5	1	0	600	704	27·70	205	148
d Newbattle (Public School) .....	W. Fowler, Esq. ....	5	4	3	300	498	19·62	151	114
d Musselburgh (Pinkieburn) .....	Mr. G. Wright .....	5	1	2	50	518	20·40	..	132
<b>5.—ALMOND &amp; C. 153 sq. mi.</b>									
d Pentland Hills (Crosswood) .....	Messrs. Leslie & Reid, C.E. .	5	1	0	950	870	34·25	195	174
d Pentland Hills (Crosswood) .....	Messrs. Leslie & Reid, C.E. .	8	1	0	950	879	34·60	..	..
d Pentland Hills (Harperrig) .....	Messrs. Leslie & Reid, C.E. .	5	1	0	900	880	34·66	225	166
M Pentland Hills (Harperrig) .....	Messrs. Leslie & Reid, C.E. .	8	1	0	900	883	34·76	..	..
d Pentland Hills (Morton) .....	Messrs. Leslie & Reid, C.E. .	5	1	0	749	859	33·81	253	166
d West Calder (Addiewell) .....	Scottish Oils, Ltd. ....	12	24	3	620	745	29·33	185	148
d Balerno (Cockburn Hill) .....	R. Cross, Esq. ....	5	1	0	767	769	30·26	173	152
d Pentland Hills (Harlaw Res.) ..	Messrs. Leslie & Reid, C.E. .	5	1	0	800	633	24·92	192	110
M Pentland Hills (Harlaw Res.) ..	Messrs. Leslie & Reid, C.E. .	11	0	9	800	698	27·47	..	..
M Pentland Hills (Bonally Res.) ..	Messrs. Leslie & Reid, C.E. .	11	0	6	1112	734	28·90	..	..
d Pentland Hills (ClubbiedeanRs.)	Messrs. Leslie & Reid, C.E. .	4	0	6	773	655	25·79	193	130
M Pentland Hills (ClubbiedeanRs.)	Messrs. Leslie & Reid, C.E. .	11	0	9	773	630	24·80	..	..
d Pentland Hills (Swanston) .....	Messrs. Leslie & Reid, C.E. .	5	0	6	550	680	26·78	184	138
M Pentland Hills (Swanston) .....	Messrs. Leslie & Reid, C.E. .	..	0	6	550	707	27·84	..	..
d Pentland Hills (Fairmilehead) ..	Messrs. Leslie & Reid, C.E. .	5	1	0	590	637	25·08	152	127

## DIVISION XIII.—SOUTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
MIDLOTHIAN—(con.).		in.	ft. in.	ft.	mm.	in.		
5.—ALMOND & C.—(con.).								
D Pentland Hills (Firhill Tank) . . . . .	Messrs. Leslie & Reid, C.E.	5	0 6	412	605	23·82	187	132
D Liberton (Alnwick Hill) . . . . .	Messrs. Leslie & Reid, C.E.	5	1 0	407	559	22·00	170	115
M Liberton (Alnwick Hill) . . . . .	Messrs. Leslie & Reid, C.E.	8	1 0	407	549	21·60	..	..
D Liberton (College Garden) . . . . .	A. McCallum, Esq. . . . .	5	1 0	190	565	22·25	165	121
D Liberton (The Inch) . . . . . (R)	Gen. R. Gordon Gilmour, C.B.	8	2 9	60	483	19·01	177	114
D Edinburgh (Royal Observatory) Prof. R. A. Sampson, F.R.S.		8	1 0	442	540	21·25	175	115
D Edinburgh (Napier Road) . . . . .	A. Harrison, Esq. . . . .	5	1 2	300	538	21·18	169	121
D Edinburgh (The Academy) . . . . .	M. McC. Fairgrieve, Esq. . . . .	5	1 0	68	516	20·32	164	116
D Edinburgh (Univ. Engin. Lab.) . . . . .	Prof. T. Hudson Beare . . . . .	5	1 0	227	548	21·57	175	126
M Edinburgh (Univ. Engin. Lab.) . . . . .	Prof. T. Hudson Beare . . . . .	5	1 0	227	543	21·39	..	..
D Edinburgh (Geo. Watson's Coll.) J. G. Kerr, Esq. . . . .		5	1 1	215	483	19·01	176	112
D Edinburgh (St. Roque) . . . . .	H. B. Waugh, Esq. . . . .	5	0 10	270	571	22·49	188	127
D Edinburgh (City Observatory) . . . . .	Sir W. Peck . . . . .	8	1 0	348	490	19·30	167	106
M Edinburgh (Charlotte Square) . . . . .	Messrs. Leslie & Reid, C.E.	11	1 6	190	524	20·62	..	..
M Edinburgh (Charlotte Square) . . . . .	Messrs. Leslie & Reid, C.E.	12	63 0	300	413	16·25	..	..
D Davidson's Mains (Broomfield) J. I. Balfour-Melville, Esq.		5	0 10	42	523	20·57	167	127
6.—CLYDE—Right Bank Tributaries. 1 sq. mi.								
LINLITHGOW. (Area, 120 sq. mi.)								
1.—ALMOND & C. 60 sq. mi.								
M Uphall . . . . . No. 7.	Messrs. Leslie & Reid, C.E.	8	1 4	790	717	28·25	..	..
M Uphall . . . . . No. 8.	Messrs. Leslie & Reid, C.E.	8	1 4	577	667	26·26	..	..
M Uphall . . . . . No. 6.	Messrs. Leslie & Reid, C.E.	8	1 4	680	683	26·88	..	..
M Uphall . . . . . No. 3.	Messrs. Leslie & Reid, C.E.	8	1 2	711	717	28·24	..	..
D Uphall (Beecraigs) . . . . .	Messrs. Leslie & Reid, C.E.	..	..	531	720	28·35	167	142
D Uphall (Bangour Asylum) . . . . .	Col. J. Keay . . . . .	5	1 0	587	650	25·60	208	141
D Uphall . . . . .	Scottish Oils, Ltd. . . . .	8	0 10	380	653	25·70	..	..
D Dalmeny House . . . . .	Mr. D. T. Johnston . . . . .	5	1 0	55	565	22·26	188	132
2.—FORTH—Right Bank Tributaries. 59 sq. mi.								
D Bathgate (Filters) . . . . . No. 1.	A. L. Reid, Esq. . . . .	5	0 9	640	705	27·75	186	144
M Bathgate (Petershill Res.) No. 2.	A. L. Reid, Esq. . . . .	5	0 9	710	655	25·80	..	..
M Bathgate (Bellencriff R.) No. 3.	A. L. Reid, Esq. . . . .	5	0 9	792	632	24·88	..	..
M Torphichen (Lochcote) . . . . .	R. Treig Sheehan, Esq. . . . .	5	0 4	550	744	29·30	..	..
M Carribber Reservoir . . . . .	R. Treig Sheehan, Esq. . . . .	5	0 4	400	637	25·09	..	..
D Linlithgow (Grange) . . . . .	H. M. Cadell, Esq. . . . .	5	0 9	430	610	24·03	186	131
D Linlithgow (Preston House) . . . . .	Mr. C. Blair . . . . .	5	1 0	380	701	27·61	175	142
D Linlithgow Academy . . . . .	J. Beveridge, Esq. . . . .	5	1 0	170	701	27·62	210	144
M Linlithgow Academy . . . . .	J. Beveridge, Esq. . . . .	5	1 0	170	718	28·27	..	..
Bo'ness (Neidpath Cottage) . . . . .	Mr. J. Grant . . . . .	5	2 0	200	589	23·19	..	..
3.—CLYDE—Right Bank Tributaries. 1 sq. mi.								

## DIVISION XIV.—SOUTH-WESTERN COUNTIES.

LANARK. (Area, 881 sq. mi.)

<b>1.—TWEED, UPPER—Left Bank Tributaries. 20 sq. mi.</b>								
D Biggar . . . . . J. Eunson, Esq. . . . .		8	1 0	691	742	29·20	215	153
<b>2.—ALMOND. 14 sq. mi.</b>								
<b>3.—FORTH—Right Bank Tributaries. 9 sq. mi.</b>								
M Airdrie (Forrestburn Reservoir) J. Frew, Esq. . . . .		4	0 8	722	800	31·50	..	..
<b>4.—CLYDE—Right Bank Tributaries. 378 sq. mi.</b>								
M Coulter Reservoir . . . . . No. 2. W. Ross, Esq., C.E. . . . .		11	1 0	..	1317	51·86	..	..
M Coulter Reservoir . . . . . No. 1. W. Ross, Esq., C.E. . . . .		11	1 0	..	1272	50·08	..	..

## DIVISION XIV.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height above Ground	Sea Level.	1922			
LANARK—(con.).		in	ft.	in.	ft.	mm.	in.	
4.—CLYDE—Right Bank Tributaries—(con.).								
Lamington (Cowgill Reservoir) . . . . .	J. Chisholm, Esq., C.E. . . . .	5	1	0	970	921	36·25	..
m Biggar (Shieldhill) . . . . .	Miss Dunlop . . . . .	5	1	2	850	693	27·29	..
d Biggar (Shieldhill) . . . . .	Miss Dunlop . . . . .	5	on	roof	850	619	24·37	216
d Cleghorn Gardens . . . . .	Mrs. Elliott Lockhart . . . . .	5	0	6	720	768	30·25	..
Carlukie (Coldstream Reservoir) . . . . .	W. Ross, Esq., C.E. . . . .	11	1	0	800	766	30·15	..
Wishaw (Orchardlea) . . . . .	T. Swinnerton, Esq. . . . .	6	1	6	450	724	28·50	..
Glasgow (Tollcross Park) . . . . .	J. Whitton, Esq. . . . .	5	0	6	85	805	31·68	..
Glasgow Green . . . . .	J. Whitton, Esq. . . . .	5	0	6	35	732	28·83	..
Glasgow (Alexandra Park) . . . . .	J. Whitton, Esq. . . . .	5	0	6	141	799	31·47	..
Glasgow (Botanic Gardens) . . . . .	J. Whitton, Esq. . . . .	5	0	6	110	791	31·13	..
Glasgow (Kelvingrove Park) . . . . .	J. Whitton, Esq. . . . .	5	0	6	48	784	30·86	..
Glasgow (Victoria Park) . . . . .	J. Whitton, Esq. . . . .	5	0	6	30	816	32·14	..
Glasgow (Ruchill Park) . . . . .	J. Whitton, Esq. . . . .	5	0	6	222	776	30·56	..
Glasgow (Springburn Park) . . . . .	J. Whitton, Esq. . . . .	5	0	6	352	835	32·87	..
d Airdrie (Broomknoll Street) . . . . .	J. Chisholm, Esq., C.E. . . . .	5	1	0	402	859	33·80	223
d Airdrie (Hillend Reservoir) . . . . .	Mr. W. A. Ritchie . . . . .	5	3	6	620	861	33·90	201
Clarkston (Roughrigg Res.) . . . . .	J. Chisholm, Esq., C.E. . . . .	5	1	0	661	820	32·30	..
d Gartcosh (Gartloch Hospital) . . . . .	Mr. James McEwen . . . . .	5	1	1	291	875	34·45	234
5.—CLYDE—Left Bank Tributaries. 448 sq. mi.								
d Leadhills . . . . .	J. McFarlane, Esq. . . . .	5	1	1	1310	1968	77·48	240
Strathaven (Glengavel Res.) . . . . .	J. McMillan, Esq., C.E. . . . .	5	1	0	880	1038	40·86	205
d Strathaven (Dungavel) . . . . .	A. K. Foulis, Esq. . . . .	5	1	0	789	1169	46·01	220
Strathaven (Dunside Res.) . . . . .	J. McMillan, Esq., C.E. . . . .	5	0	10	1010	1125	44·29	198
Strathaven (Kype Reservoir) . . . . .	W. H. Purdie, Esq., C.E. . . . .	11	3	0	941	975	38·40	..
d Coalburn (Acretophead) . . . . .	W. G. Gemmill, Esq. . . . .	5	0	10	729	876	34·50	200
Lesmahagow (Auchtyfardle) . . . . .	Major T. E. Lander . . . . .	5	1	0	578	774	30·46	..
d Strathaven (East Overton Ho.) . . . . .	H. Lee Dykes, Esq. . . . .	5	1	0	700	911	35·86	193
d Stonehouse Sanatorium . . . . .	James Watson, Esq. . . . .	5	1	0	526	806	31·75	209
Stonehouse (Glassford Filters) . . . . .	J. McMillan, Esq., C.E. . . . .	5	0	9	775	858	33·77	209
d Hamilton W. W. (Townhill) . . . . .	W. H. Purdie, Esq., C.E. . . . .	7	1	0	436	779	30·65	..
d Hamilton (St. James's Manse) . . . . .	Rev. J. A. Lees . . . . .	5	1	0	200	747	29·43	207
d Busby (Thornton Hall) . . . . .	A. H. Bishop, Esq. . . . .	5	1	0	441	725	28·55	215
d Carmunnock (Carnbooth) . . . . .	R. Robertson, Esq., C.E. . . . .	5	1	0	365	869	34·20	230
Cambuslang (Greenlees Filters) . . . . .	J. McMillan, Esq., C.E. . . . .	5	1	0	322	808	31·81	208
Glasgow (Bellahouston Park) . . . . .	J. Whitton, Esq. . . . .	5	0	6	160	763	30·06	..
Glasgow (Elder Park) . . . . .	J. Whitton, Esq. . . . .	5	0	6	40	841	33·12	..
6.—IRVINE. 2 sq. mi.								
7.—AYR. 1 sq. mi.								
8.—NITH. 2 sq. mi.								
9.—ANNAN. 7 sq. mi.								
AYR. (Area, 1135 sq. mi.)								
1.—CLYDE—Left Bank Tributaries. 20 sq. mi.								
d Gtengarnock (Chemical Works) . . . . .	A. Shanks, Esq. . . . .	8	1	0	110	1331	52·39	229
2.—FIRTH OF CLYDE. 60 sq. mi.								
d Skelmorlie (West Park) . . . . .	J. Wilkinson, Esq. . . . .	5	1	6	150	1238	48·75	198
Shaws W.W. (Kelly Dam) . . . . .	J. Macalister, Esq., C.E. . . . .	6	1	0	640	1374	54·10	..
Shaws W.W. (Knockencorsan) . . . . .	J. Macalister, Esq., C.E. . . . .	6	1	0	1040	1257	49·50	..
3.—IRVINE & C. 283 sq. mi.								
Troon (Collenan Res.) . . . . .	Adam Simpson, Esq., C.E. . . . .	11	0	10	203	724	28·50	..
d Irvine (Gailies) . . . . .	H. W. Aitken, Esq. . . . .	5	1	0	12	911	35·86	191
d Kilmarnock (Agricultural Coll.) . . . . .	Prof. R. A. Berry . . . . .	8	1	2	80	942	37·10	199
Kilmarnock (North Craig Res.) . . . . .	R. Blackwood, Esq. . . . .	12	1	0	319	1039	40·90	..
d Stevenston (Greenhead Filters) . . . . .	Gilbert Christie, Esq., C.E. . . . .	5	1	0	186	949	37·37	217
d Dalry (Blair Gardens) . . . . .	Mr. J. Fairley . . . . .	5	1	0	155	1161	45·72	195
d Dalry (Munnock Reservoir) . . . . .	Gilbert Christie, Esq., C.E. . . . .	5	1	0	325	1181	46·51	202

## DIVISION XIV.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
AYR.—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—IRVINE & C.—(con.).									
D Dalry (Caaf Reservoir) .....	Gilbert Christie, Esq., C.E.	5	1	3	515	1237	48·70	202	171
D Dalry W. W. (Filters) .....	Mr. W. Wightman	5	1	0	320	997	39·24	209	178
M Dalry W. W. (Thirdpart) .....	Mr. W. Wightman	5	1	0	560	1255	49·43	..	..
D Dalry (Camphill Reservoir) ...	James Lee, Esq., C.E.	12	1	6	611	1471	57·90	..	..
D Beith (Filter Station) .....	W. C. Dale, Esq.	5	6	0	124	1010	39·76	189	162
4.—AYR. 222 sq. mi.									
Ayr Cemetery .....	J. Young, Esq., C.E.	5	1	0	40	793	31·23	181	146
D Muirkirk (Kannshill) .....	Dugald Baird, Esq.	5	2	0	750	1079	42·50	228	194
5.—DOON. 119 sq. mi.									
Loch Finlas .....	J. Young, Esq., C.E.	5	1	0	849	1260	49·61	..	..
M Maybole (Knockdon Farm) ...	T. Cross, Esq.	5	1	6	352	879	34·61	..	..
D Patna (Kerse Filters) .....	W. Gray, Esq., C.E.	11	1	0	743	1106	43·55	241	191
D Ayr (Doonholm) .....	J. Kennedy, Esq.	5	1	0	90	915	36·02	215	164
6.—CULZEAN BAY & C. 32 sq. mi.									
D Turnberry (Hotel) .....	J. H. Thomas, Esq.	5	1	0	97	677	26·67	160	133
D Maybole (Culzean Castle Gdns)	Mr. A. T. Harrison	8	2	10	138	840	33·07	187	151
7.—GIRVAN. 105 sq. mi.									
Girvan (Glendoune Gardens) ...	Mr. J. Simons	5	1	0	100	1009	39·71	169	..
D Girvan (Sunnyside, Golf Course)	D. Macdonald, Esq.	5	1	0	27	869	34·20	191	155
Loch Bradan .....	Adam Simpson, Esq., C.E.	11	1	0	991	1275	50·18	..	..
8.—STINCHAR & C. 155 sq. mi.									
D Colmonell (Knockdolian) .....	Mr. A. Ogg	5	1	0	170	1055	41·55	224	177
D Girvan (Pinmore) .....	W. McConnell, Esq.	5	0	5	207	1118	44·00	242	182
9.—LOCH RYAN. 12 sq. mi.									
10.—LUCE BAY. 15 sq. mi.									
Ballantrae (Lagafater Lodge) ..	Cedric R. Boulton, Esq.	5	0	11	792	1636	64·42	232	..
11.—CREE. 40 sq. mi.									
12.—DEE. 9 sq. mi.									
13.—NITH. 62 sq. mi.									
D Glen Afton (Ayr Sanatorium) ...	Dr. E. E. Prest	5	1	0	850	1141	44·92	236	184
D New Cumnock (Power Station)	James Jack, Esq.	5	1	0	764	1184	46·63	198	168
14.—INSULAR. 1 sq. mi.									
Ailsa Craig .....	Board of Northern Lights	3	5	0	..	649	25·56	193	..
RENFREW (Area, 241 sq. mi.)									
1.—CLYDE—Right Bank Tributaries. 3 sq. mi.									
2.—CLYDE—Left Bank Tributaries. 194 sq. mi.									
Gorbals Dist. W. W. (Nether Cairn)	J. R. Sutherland, Esq., C.E.	12	0	5	700	1236	48·65	..	..
Gorbals Dist. W. W. (Middleton) ...	J. R. Sutherland, Esq., C.E.	12	0	5	550	1097	43·20	..	..
Gorbals Dist. W. W. (Ryat Lynn) ...	J. R. Sutherland, Esq., C.E.	8	0	5	310	1017	40·05	..	..
Gorbals Dist. W. W. (Waulk Glen) ...	J. R. Sutherland, Esq., C.E.	12	0	5	280	997	39·25	..	..
Paisley W. W. (Muirhead) .....	James Lee, Esq., C.E.	12	1	0	482	1268	49·93	..	..
Paisley W. W. (Springside) .....	James Lee, Esq., C.E.	12	1	0	532	1445	56·88	..	..
D Lochwinnoch (Garthland) .....	H. Macdowell Esq.	5	0	11	150	1571	61·85	215	186
Paisley W. W. (Back Thornley Muir)	James Lee, Esq., C.E.	12	1	0	646	1191	46·90	..	..
Paisley W. W. (Stanely) .....	James Lee, Esq., C.E.	12	1	0	190	993	39·10	..	..
D Howwood (Midtown House) ...	Andrew McNab, Esq.	5	1	6	231	1331	52·39	218	178
Pollokshaws (Rouken Glen) .....	J. Whitton, Esq.	5	0	6	156	968	38·10	..	..
D Pollokshaws (Pollok House) ...	Sir J. Stirling Maxwell, Bt.	5	1	0	50	759	29·90	199	149
D Glasgow (Queen's Park) .....	J. Whitton, Esq.	8	0	9	145	710	27·96	203	143
Glasgow (Maxwell Park) .....	J. Whitton, Esq.	5	0	6	69	699	27·51	..	..
D Kilbarchan (Milliken Park) ...	M. Douglas Anderson, Esq.	5	1	6	75	1106	43·56	200	172

## DIVISION XIV.—SOUTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.	1922				
RENFREW—(con.).		in.	ft.	in.	ft.	mm.	in.		
2.—CLYDE— Left Bank Tributaries.—(con.)									
D Kilbarchan (Glentyan) . . . (R.) R. H. Hunter, Esq. . . . .		8	3	9	285	1223	48·14	230	170
D Paisley(The Coats Observatory) . Observatory Committee . .		8	1	0	107	946	37·25	216	153
D Houston Manse . . . . . Rev. George Muir . . . . .		5	1	0	103	1073	42·27	209	159
Shaws W.W. (Duchall Moor) . . . J. Macalister, Esq., C.E. . .		6	1	0	1150	1445	56·90	..	..
Shaws W.W. (Creuch Hill) . . . J. Macalister, Esq., C.E. . .		6	1	0	1350	1549	61·00	..	..
Shaws W.W. (Green Water) . . . J. Macalister, Esq., C.E. . .		6	1	0	788	1547	60·90	..	..
D Renfrew Aerodrome . . . . . Air Ministry . . . . .		8	1	0	37	815	32·09	203	147
Kilmacollm W.W. . . . . R. Blackwood, Esq. . . . .		5	1	0	600	1695	66·73	202	..
D Kilmacollm Village . . . . . R. Blackwood, Esq. . . . .		5	1	0	300	1277	50·26	212	179
Bishopton (Dargavel) . . . . . Miss M. A. Maxwell . . . . .		5	1	0	33	995	39·17	..	..
D Bishopton (Formakin) . . . . . J. A. Holms, Esq. . . . .		5	0	9	..	1112	43·77	187	171
D Shaws W.W. (Gryfe Reservoir) J. Macalister, Esq., C.E. . .		5	1	0	640	1521	59·87	227	174
D Shaws W.W. (Mansfield) . . . . J. Macalister, Esq., C.E. . .		5	1	0	573	1530	60·23	227	174
Shaws W.W. (Darnaduff Moor) . J. Macalister, Esq., C.E. . .		5	1	0	850	1391	54·76	..	..
Bishopton (Ingliston) . . . . . D. Cross, Esq. . . . .		5	1	0	195	1028	40·46	..	..
3.—FIRTH OF CLYDE. 34 sq. mi.									
Shaws W.W. (Largs Road) . . . . J. Macalister, Esq., C.E. . .		5	1	0	910	1407	55·38	..	..
Inverkip (Daff Burn Reservoir) Alex. Duthie, Esq. . . . .		8	0	10	506	1402	55·20	..	..
Dougliehill Filters (Pt. Glas. W.W.) James Murray, Esq. . . . .		5	1	6	540	1267	49·90	..	..
Parkhill Filters (Pt. Glas. W.W.) . James Murray, Esq. . . . .		5	1	6	275	1168	46·00	..	..
D Shaws W.W. (Compens. Res.) . . J. Macalister, Esq., C.E. . .		5	1	0	600	1527	60·11	249	184
D Shaws W.W. (Loch Thom) . . . . J. Macalister, Esq., C.E. . .		5	1	0	643	1561	61·44	249	185
Shaws W.W. (Shielhill) . . . . . J. Macalister, Esq., C.E. . .		6	1	0	962	1600	63·00	..	..
D Shaws W.W. (New Yett's Dam) J. Macalister, Esq., C.E. . .		5	1	0	800	1484	58·42	275	195
Shaws W.W. (Spango Burn) . . . J. Macalister, Esq., C.E. . .		6	1	0	757	1481	58·30	..	..
D Shaws W.W. (Hole Glen) . . . . J. Macalister, Esq., C.E. . .		5	1	0	603	1532	60·32	274	191
M Langbank (East Bank Gardens) T. Cross, Esq. . . . .		5	2	6	250	1084	42·66	..	..
D Greenock (Prospect Hill) . . . . J. Macalister, Esq., C.E. . .		5	1	0	200	1436	56·53	240	176
D Gourock (Coves Reservoir) . . . Alex. Duthie, Esq. . . . .		5	1	0	221	1194	47·02	178	166
4.—IRVINE. 10 sq. mi.									

## DIVISION XV.—WEST MIDLAND COUNTIES.

DUMBARTON. (Area, 270 sq. mi.).

**1.—FORTH—Right Bank Tributaries. 10 sq. mi.****2.—FIRTH OF CLYDE & COWAL. 52 sq. mi.**

D Cardross (Kilmahew) . . . . . Capt. Claud A. Allan . . . . .	5	1	0	180	975	38·37	228	160
D Helensburgh (Ferniegair) . . . . J. N. Stirling, Esq., C.E. . .	8	1	0	22	1250	49·21	226	186
D Helensburgh (Valve House) . . . . J. N. Stirling, Esq., C.E. . .	5	1	0	293	1310	51·57	227	185
Garlochhead (Aikenshaw) . . . . . W. S. Turnbull, Esq. . . . .	6	1	0	32	1395	54·90	..	..
D Arrochar (Glen Loin) . . . . . Mrs. Little . . . . .	5	1	0	17	1624	63·95	272	201

**3.—CLYDE—Leven. 149 sq. mi.**

D Dumbarton (Leven Shipyard) . . Messrs. W. Denny & Bros. . .	5	1	0	11	1015	39·95	201	153
M Kilpatrick H. (Burncrooks Res.) 3T. L. Rae, Esq., C.E. . . . .	5	1	0	959	1402	55·20	..	..
M Kilpatrick H. (Burncrooks Res.) 2T. L. Rae, Esq., C.E. . . . .	5	1	0	920	1393	54·84	..	..
M Kilpatrick H. (Burncrooks Res.) 1T. L. Rae, Esq., C.E. . . . .	5	1	0	835	1399	55·09	..	..
D Renton (Carman Filters) . . . . . Mr. Chas. Brown . . . . .	8	4	0	292	1105	43·49	216	163
Loch Lomond . . . . . J. Whitton, Esq. . . . .	..	..	..	..	1019	40·10	..	..
D Glen Finlas Reservoir. . . . . No. 7 George Beaton, Esq. . . . .	12	1	6	820	2169	85·39	228	192
M Glen Finlas Reservoir. . . . . No. 1 George Beaton, Esq. . . . .	5	1	1	782	1840	72·44	..	..
M Glen Finlas Reservoir. . . . . No. 2 George Beaton, Esq. . . . .	5	1	6	1194	1834	72·19	..	..
M Glen Finlas Reservoir. . . . . No. 3 George Beaton, Esq. . . . .	5	1	5	1627	2005	78·95	..	..
M Glen Finlas Reservoir. . . . . No. 4 George Beaton, Esq. . . . .	5	2	0	2040	2000	78·73	..	..
M Glen Finlas Reservoir. . . . . No. 5 George Beaton, Esq. . . . .	5	0	9	1635	1777	69·96	..	..
M Glen Finlas Reservoir. . . . . No. 6 George Beaton, Esq. . . . .	5	0	9	1172	1696	66·77	..	..

**4.—CLYDE—Right Bank Tributaries. 59 sq. mi.**

D Drumchapel (Wasdale) . . . . . F. C. Thomson Esq. . . . .	5	1	0	49	898	35·37	223	157
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## DIVISION XV.—WEST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
DUMBARTON—(con.).		in.	ft.	in.	ft.	mm.	in.		
4. CLYDE.—Right Bank Tributaries—(con.).									
D Milngavie (Dougalston) . . . . .	Major R. M. Ker . . . . .	5	1	0	150	979	38·53	210	160
D Duntocher (Cochno Filters) . . . . .	T. L. Rae, Esq., C.E. . . . .	5	1	0	400	1009	39·73	196	163
Kilpatrick Hills (Greenside Res.) . . . . .	T. L. Rae, Esq., C.E. . . . .	5	1	0	876	1136	44·74	..	..
Kilpatrick Hills (Loch Cochno) . . . . .	T. L. Rae, Esq., C.E. . . . .	5	1	0	909	1154	45·42	..	..
Kilpatrick Hills (Jaw Reservoir) . . . . .	T. L. Rae, Esq., C.E. . . . .	5	1	0	912	1169	46·04	..	..
STIRLING. (Area, 463 sq. mi.)									
1.—FORTH—Right Bank Tributaries. 263 sq. mi.									
d Linlithgow (Muiravonside Ho) . . . . .	Mr. C. Leeder . . . . .	5	0	5	175	833	32·80	..	114
d Polmont (Vellore) . . . . .	R. M. W. Brown, Esq. . . . .	8	0	8	320	709	27·90	209	146
d Falkirk (Inglewood, Laurieston) . . . . .	W. Ballantine, Esq. . . . .	5	1	3	133	753	29·66	..	135
d Falkirk (Westbank) . . . . .	Garden A. Nimmo, Esq. . . . .	5	1	6	75	764	30·09	190	144
d Falkirk (Westbank) . . . . .	Lawn A. Nimmo, Esq. . . . .	5	1	6	105	742	29·23	..	..
d Falkirk (Burgh Chambers) . . . . .	W. Gibson, Esq. . . . .	5	1	0	107	727	28·64	166	136
Falkirk (Kerse) . . . . .	C. Brown, Esq. . . . .	8	1	0	18	724	28·50	..	..
d Grangemouth . . . . .	D. A. Donald, Esq., C.E. . . . .	5	1	0	15	715	28·14	177	136
Little Denny Reservoir . . . . .	C. Massie, Esq. . . . .	8	1	0	326	1008	39·69	..	..
Little Denny Filters . . . . .	C. Massie, Esq. . . . .	8	1	0	268	930	36·61	..	..
Kilsyth (Faughlin Res.) . . . . .	C. Massie, Esq. . . . .	8	1	0	707	1285	50·59	..	..
Denny (Buckieburn Reservoir) . . . . .	C. Massie, Esq. . . . .	..	..	..	..	1212	47·73	..	..
Denny (Buckieburn Filters) . . . . .	C. Massie, Esq. . . . .	..	..	..	..	1131	44·52	..	..
Earlsburn Reservoir . . . . .	C. Massie, Esq. . . . .	8	1	0	1202	1313	51·70	..	..
d Stirling (North Third Res.) . . . . .	D. A. Donald, Esq., C.E. . . . .	8	1	0	560	1107	43·60	201	167
d Stirling (Touch Res.) . . . . .	No. 3 A. H. Goudie, Esq. . . . .	8	1	0	759	1155	45·49	199	166
d Stirling (Touch Res.) . . . . .	No. 2 A. H. Goudie, Esq. . . . .	8	1	0	707	1118	44·00	199	165
d Stirling (Touch Res.) . . . . .	No. 1A. H. Goudie, Esq. . . . .	8	1	0	455	1135	44·69	199	160
d Stirling (Sauchie House) . . . . .	J. Fyfe, Esq., C.S.I. . . . .	5	1	0	151	786	30·96	181	142
Stirling (Victoria Place) . . . . .	Dr. R. Kidston, F.R.S. . . . .	5	2	10	100	818	32·21	..	..
Gargunnoch House . . . . .	Mr. D. McNeill . . . . .	5	1	6	85	771	30·37	..	..
Duchray Valley (Ben Lomond) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	0	6	1800	2071	81·55	..	..
d Duchray Valley (Glen Dhu) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	1	0	500	1990	78·35	..	184
d Duchray Valley (Comer) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	1	0	600	2148	84·55	..	187
Duchray Valley (Achaidd Burn) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	1	0	1200	2372	93·40	..	..
Duchray Val. (Hd. of Main Stream) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	1	0	950	2203	86·75	..	..
2.—FORTH—Teith. 5 sq. mi.									
d Stronachlachlar (Invergyle) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	1	0	376	1864	73·40	..	186
3.—FORTH—Left Bank Tributaries. 15 sq. mi.									
Bridge of Allan (The Lea) . . . . .	Laurence Pullar, Esq. . . . .	5	1	0	50	843	33·21	231	164
4.—CLYDE—Leven. 128 sq. mi.									
Strathblane (Blane field) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	1	0	250	1198	47·15	..	..
d Killearn (Achnagowan) . . . . .	Miss A. L. Guthrie-Smith . . . . .	5	0	10	332	1361	53·59?	183	168
Loch Arklet (Corrie Archon) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	0	6	870	1905	75·00	..	..
Loch Arklet (Corrie Arklet) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	0	6	950	2068	81·40	..	..
5.—CLYDE—Right Bank Tributaries. 52 sq. mi.									
Strathblane (Mugdock Res.) . . . . .	J. R. Sutherland, Esq., C.E. . . . .	8	0	6	320	1015	39·95	..	..
Strathblane (Craigbarnet) . . . . .	Capt. Miller Stirling, R.N. . . . .	5	0	6	300	1212	47·70	..	..
d Kilsyth (Innsbridge) . . . . .	J. I. Little, Esq. . . . .	5	11	0	202	1082	42·60	174	156
Kilsyth (Corrie Reservoir) . . . . .	W. Miller, Esq. . . . .	10	2	0	1010	1132	44·56	..	..
BUTE. (Area, 218 sq. mi.)									
1.—ISLE OF BUTE. 50 sq. mi.									
d Rothesay (Arden Craig) . . . . .	J. J. Davidson, Esq. . . . .	5	1	0	201	1349	53·13	267	199
d Rothesay (Arden Craig) . . . . .	J. J. Davidson, Esq. . . . .	5	1	0	200	1349	53·09	268	200
Port Bannatyne (Ettrickdale) . . . . .	Lt.-Col. M. R. Gray Buchanan . . . . .	5	1	0	190	1255	49·40	246	193
2.—CUMBRAES. 4 sq. mi.									
d Millport (Marine Biog. Stat.) . . . . .	R. Elmhirst, Esq. . . . .	5	1	0	16	986	38·83	240	178

## DIVISION XV.—WEST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with .01 in. or more.	Days with .04 in. or more.	
		Diam.	Height above Ground	Sea Level.	1922				
BUTE—(con.).		in.	ft.	in.	ft.	mm.	in.		
<b>3.—ARRAN. 164 sq. mi.</b>									
Pladda .....	Board of Northern Lights ..	..	..	..	130	1021	40.20	166	..
Holy Island (Pillar Rock) .....	Board of Northern Lights ..	3	0	3	46	1157	45.54	..	..
d Shiskine (Shedog) .....	Dr. T. Rutherford .....	5	1	0	107	1173	46.18	160	155
d Dougarie Lodge .....	David Reside, Esq. ....	5	1	0	10	1133	44.61	221	175
<b>ARGYLL. (Area, 3181 sq. mi.)</b>									
<b>1.—TAY—Tummel. 36 sq. mi.</b>									
<b>2.—SOUND OF ARISAIG, SOUND OF MULL &amp; C. 317 sq. mi.</b>									
d Morvern (Ardtornish) .....	G. Craig Sellar, Esq. ....	5	1	0	48	1987	78.21	248	220
d Morvern (Drimnin) .....	Mrs. Gordon .....	5	1	0	225	1481	58.29	241	198
d Loch Sunart (Glenborrodale) ..	T. J. A. Armstrong, Esq. ....	5	0	2	60	1675	65.96	..	190
Ardnamurchan .....	Board of Northern Lights ..	8	4	3	180	1022	40.22	..	..
<b>3.—LOCH LINNHE—Right Bank Tributaries. 139 sq. mi.</b>									
d Morvern (Kingairloch) .....	G. Herbert Strutt, Esq. ....	5	1	0	40	2629	103.49	236	214
Corran Lighthouse .....	Board of Northern Lights ..	3	1	6	38	2009	79.09	214	..
d Ardgor House .....	Capt. Maclean of Ardgor ..	5	0	10	60	2327	91.61	266	221
<b>4.—LOCH LINNHE—Left Bank Tributaries. 165 sq. mi.</b>									
d Duror (Achara) .....	Mr. W. D. Stewart .....	5	1	2	45	1744	68.67	241	201
Duror (The Rectory) .....	Rev. E. J. Benwell .....	5	1	0	120	1871	73.66	248	200
Glenleven(BlackwaterHouse) ..	4 British Aluminium Co. Ltd. ..	8	1	0	1069	2174	85.58	..	..
d Glenleven(BlackwaterDam,S.) ..	2 British Aluminium Co. Ltd. ..	8	1	0	1072	2261	89.00	274	217
Glenleven(BlackwaterDam,S.) ..	1 British Aluminium Co. Ltd. ..	6	1	6	1072	2156	84.38	..	..
d Glenleven (Kinlochleven) No. 1 ..	British Aluminium Co. Ltd. ..	8	1	0	140	2200	86.61	253	221
<b>5.—LOCH ETIVE. 197 sq. mi.</b>									
d Connel Ferry (Ach-na-cloich) ..	W. D. Fordyce, Esq. ....	5	1	0	20	1561	61.44	228	216
d Glen Etive .....	W. D. Fordyce, Esq. ....	5	1	0	200	1964	77.32	..	208
<b>6.—LOCH ETIVE—Loch Awe. 319 sq. mi.</b>									
d Loch Awe (Ford) .....	H. Cameron, Esq. ....	8	1	0	149	1780	70.07	233	215
d Loch Awe (Dalavich) .....	H. Cameron, Esq. ....	8	1	0	260	1999	78.71	255	214
d Dalmally (Manse of Glenorchy) ..	Rev. Farquhar MacRae ..	5	1	0	150	1942	76.44	241	214
<b>7.—FIRTH OF LORNE. 112 sq. mi.</b>									
d Kilmelfort (Arduaine) .....	J. A. Campbell, Esq. ....	5	0	10	23	1567	61.70	211	205
Oban(Gleann-a-BhearraidhRes.) ..	D. Galloway, Esq. ....	8	1	6	370	1488	58.59	..	..
d Oban .....	D. Galloway, Esq. ....	8	1	0	21	1343	52.88	244	197
<b>8.—SOUND OF JURA. 163 sq. mi.</b>									
d Lochgilphead (Poltalloch) .....	Mr. D. S. Melville .....	5	1	2	135	1515	59.64	264	220
<b>9.—KINTYRE, WEST. 146 sq. mi.</b>									
Mull of Kintyre .....	Board of Northern Lights ..	..	..	..	279	874	34.40	196	..
d Muasdale (Killeen Manse) .....	Rev. D. J. Macdonald .....	5	1	0	10	1045	41.15	231	177
d Largie Castle .....	Mrs. McCreton Macdonald ..	5	1	1	160	1166	45.89	217	183
d Carse .....	J. Birkmyre, Esq. ....	6	1	6	20	1041	41.00	279	199
<b>10.—KINTYRE, EAST. 177 sq. mi.</b>									
d Campbeltown (South Park) .....	J. A. Gardiner, Esq. ....	8	0	10	20	1553	61.13	223	181
Campbeltown (Devaar) .....	Board of Northern Lights ..	..	3	4	120	1158	45.59	201	..
d Skipness Castle .....	R. F. Graham, Esq. ....	5	1	1	14	1133	44.61	222	182
<b>11.—LOCH FYNE. 264 sq. mi.</b>									
Otter Ferry (Ballimore) .....	Lt. Col. MacRae-Gilstrap ..	5	0	7	50	1351	53.18	..	..
d Ardrishaig (Canal Office) .....	E. A. Bly, Esq. ....	5	1	6	48	1522	59.91	226	204
d Loch Fyne (Castle Lachlan) ..	Mr. R. Pearson .....	5	1	0	42	1955	76.98	241	207
Crarae (Kennels) .....	Mr. W. T. Rae .....	5	1	0	20	1864	73.38	..	..
d Strachur Park .....	Lady G. Campbell .....	5	1	0	25	1663	65.46	232	204
d Loch Fyne (Brenchoillie) .....	A. E. Lewis, Esq. ....	5	1	0	240	1834	72.21	..	169
d Inveraray Castle Gardens .....	A. E. Lewis, Esq. ....	5	1	0	40	2044	80.46	245	225
d Ardkinglas .....	Mr. J. Payne .....	8	1	6	37	1850	72.82	209	198

## DIVISION XV.—WEST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam.	Height Ground	above Sea Level.					
		in.	ft.	in.	ft.	mm.	in.		
ARGYLL—(con.).									
12.—FIRTH OF CLYDE & COWAL. 242 sq. mi.									
D Toward (Knockdow Gardens) ..	Sir Norman Lamont, Bt. ...	5	1	6	101	1472	57·96	227	193
D Innellan (Lilybank) .....	P. H. Coats, Esq. ....	5	1	6	50	1420	55·92	232	196
D Tighnabruaich (Wellpark) ....	R. Paton, Esq. ....	12	0	7	50	1583	62·34	185	177
D Dunoon (Reservoir) .....	W. Rodger, Esq., C.E. ...	12	3	6	245	1871	73·65	219	194
D Dunoon (Redhurst) .....	Dr. J. Banks .....	5	1	0	60	1900	74·82	224	200
D Holy Loch (Ardnadam) .....	Rev. J. Cairns Mitchell ...	5	1	0	40	1755	69·08	228	201
D Loch Eck (Benmore) .....	Mr. R. R. Greenlaw .....	5	1	3	40	2111	83·11	202	194
D Lochgoilhead (Ardgoil) .....	J. Whitton, Esq. ....	5	0	6	20	2137	84·14	..	..
13.—CLYDE—Leven. 4 sq. mi.									
14.—INSULAR. 900 sq. mi.									
D Islay (Ardbeg) .....	Colin E. Hay, Esq. ....	5	7	0	46	1093	43·03	212	174
D Islay (Rhinn) .....	Board of Northern Lights ..	7	3	6	150	962	37·87	222	..
D Islay (Lochindaul) .....	Board of Northern Lights ..	3	0	6	52	1074	42·29	..	..
D Islay (McArthur's Head) .....	Board of Northern Lights ..	3	0	4	128	1338	52·69	..	..
D Islay (Eallabus) .....	James MacKillop, Esq. ...	5	1	0	68	1315	51·77	251	216
D Islay (Rhuvaal) .....	Board of Northern Lights ..	3	1	3	147	1029	40·52	200	..
D Jura (Ardfin) .....	Colin Campbell, Esq. ....	5	1	0	160	1402	55·20	236	184
Fladda Lighthouse .....	Board of Northern Lights ..	3	1	0	42	1113	43·84	212	..
Lismore (Mousedale) .....	Board of Northern Lights ..	7	3	10	105	1079	42·50	192	..
D Eriska .....	Mr. J. M. Webster .....	5	1	6	30	1448	57·01	210	191
D Mull (Iona Manse) .....	Rev. A. Macmillan .....	5	1	2	45	1244	48·97	239	217
D Mull (Bunessan) .....	Duncan Cameron, Esq. ...	5	1	0	50	1433	56·41	244	210
D Mull (Ulva) .....	F. W. Clark, Esq. ....	5	1	0	30	1589	62·55	261	210
D Mull (Knock) .....	Duncan Cameron, Esq. ...	5	1	0	50	2323	91·46	207	197
D Mull (Glencannel) .....	Duncan Cameron, Esq. ....	5	1	0	140	2907	114·47	261	227
D Mull (Gruline) .....	J. W. Melles, Esq. ....	8	1	0	101	1993	78·47	268	221
D Mull (Quinish) .....	J. N. Forsyth, Esq. ....	5	1	3	35	1521	59·87	253	208
Mull (Glengorm Castle) .....	Miss M. Lithgow .....	5	1	0	365	1247	49·10	..	..
Mull, Sound of .....	Board of Northern Lights ..	3	1	4	55	1482	58·35	206	..

## DIVISION XVI.—EAST MIDLAND COUNTIES.

## CLACKMANNAN. (Area 55 sq. mi.)

**1.—FORTH, LOWER—Left Bank Tributaries. 55 sq. mi.**

Alloa House Gardens .....	Earl of Mar & Kellie, K.T.	5	3	0	40	615	24·23	..	..
Alloa W.W. (Gartmorn Res.) ..	Andrew Mackie, Esq., C.E.	11	1	0	172	688	27·10	..	..
D Tillicoultry (Westbourne) ..	Mrs. Willison .....	5	1	0	66	756	29·75	196	149
D Tillicoultry Public School ....	R. D. Christie, Esq. ....	5	1	0	71	802	31·59	200	148
D Dollar (Wellhall, Dollarbeg) ...	James Bleloch, Esq. ....	5	0	9	265	880	34·64	233	157

## KINROSS. (Area, 87 sq. mi.)

**1.—FORTH, LOWER—Left Bank Tributaries. 15 sq. mi.**

Dollar (Blairingone Manse) ...	Rev. J. F. Cameron .....	5	1	6	296	907	35·70	220	168
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**2.—LEVEN & C. 67 sq. mi.**

D Keltly (Blairadam Wood) .....	C. A. Alexander, Esq. ....	5	1	0	670	769	30·28	..	..
D Loch Leven Sluice .....	Mr. David Hay .....	8	0	9	306	761	29·94	186	148
D Milnathort (Ledlanet) .....	Sir J. C. Calder, C.B.E. ....	5	1	0	600	964	37·97	191	163

**3.—EDEN. 2 sq. mi.****4.—TAY—Earn. 3 sq. mi.**

## FIFE. (Area, 505 sq. mi.)

**1.—FORTH, LOWER—Left Bank Tributaries. 66 sq. mi.**

D Rosyth (H. M. Dockyard) ....	The Supt. Engineer .....	8	1	0	53	567	22·34	178	119
D Kincardine (Tulliallan) .....	J. C. Wilson, Esq. ....	5	1	0	80	725	28·54	160	141
Culross (Luscar House) .....	No.1 Lt.-Col. A. Mitchell .....	5	0	10	430	691	27·22	..	..
Culross (Luscar House) .....	No.2 Lt.-Col. A. Mitchell .....	5	0	10	430	692	27·23	..	..
Carnock (Craigluscar Res.) ....	R. Muir Morton, Esq. ....	12	0	4	280	857	33·75	..	..

## DIVISION XVI.—EAST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
FIFE—(con.).		in.	ft. in.	ft.	mm.	in.		
<b>2.—LEVEN &amp; C. 208 sq. mi.</b>								
Dunfermline (Fordell House) ..	Earl of Buckinghamshire..	5	1 0	250	697	27·44	164	..
d Kirkcaldy (Munro Street) .....	F. Braid, Esq. ....	5	1 0	67	624	24·57	181	131
d Cowdenbeath (Stenhouse St.) ..	C. A. Alexander, Esq. ....	5	1 0	474	805	31·68	..	..
d Cleish Hills (Deanhead Farm) ..	C. A. Alexander, Esq. ....	5	1 0	725	745	29·33	161	123
m Cleish Hills (Craiggaveral) .....	C. A. Alexander, Esq. ....	5	1 0	760	873	34·36	..	..
m Cleish Hills (Roscobie Res.) ...	C. A. Alexander, Esq. ....	5	1 0	660	843	33·18	..	..
m Cleish Hills (Lochglow Res.) ...	C. A. Alexander, Esq. ....	5	1 0	900	692	27·23	..	..
d Leven (The Rectory) .....	Rev. F. C. Newbery .....	5	1 0	25	571	22·49	154	130
d Leslie (Lothrie Reservoir) .....	R. Ritchie, Esq. ....	5	0 6	702	812	31·96	219	153
d Elie (The Castle) .....	Miss E. E. Scott Moncrieff	5	0 5	9	588	23·16	179	122
d Elie (The Terrace) .....	C. D. Broadfoot, Esq. ....	5	1 0	32	595	23·42	186	126
d Colinsburgh (Cairnie House) ...	Maj. R. A. Anstruther, D.S.O.	5	3 6	125	535	25·02	193	135
d Colinsburgh (Balcarres) .....	Mr. W. H. Adams .....	5	1 0	300	669	26·35	183	138
d Carnbee (Ovenstone W.W.) .....	A. P. Watson, Esq. ....	5	1 0	168	595	23·41	..	106
<b>3.—EDEN &amp; C. 205 sq. mi.</b>								
d Ceres (Castlebank) .....	Mr. Alex. Smith .....	5	2 0	280	699	27·50	161	134
d Cameron Water Works .....	W. Watson, Esq., C.E. ....	5	1 0	478	720	28·33	173	144
d Cupar (Rankeillour) .....	Mr. J. McLaren .....	5	1 0	240	579	22·78	..	..
d Cupar (Rankeillour) .....	Major J. Kerr .....	5	1 0	240	625	24·62	188	135
d Cupar (Fife & Kinross Asylum) ..	Dr. J. H. Skeen .....	5	1 0	210	614	24·19	191	133
d St. Andrews (Water Works) .....	W. Watson, Esq., C.E. ....	5	1 0	217	646	25·42	182	131
d St. Andrews (Queen's Gardens) ..	Miss I. J. R. Macadam .....	5	1 0	55	644	25·36	165	124
d St. Andrews .....	W. Watson, Esq., C.E. ....	5	1 0	20	621	24·43	189	122
d Kilmany (Lochmalony) .....	W. Marshall, Esq. ....	5	0 6	260	635	24·98	..	..
d Leuchars .....	Air Ministry .....	8	1 0	36	586	23·07	181	122
<b>4.—FIRTH OF TAY. 25 sq. mi.</b>								
d Newport (Tayfield) .....	W. Berry, Esq. ....	5	0 7	100	609	23·98	157	130
d Tayport (Lighthouse) .....	J. H. Thompson, Esq., C.E.	5	1 0	27	609	23·99	195	131
<b>5.—TAY—Earn. 1 sq. mi.</b>								
<b>6.—INSULAR.</b>								
d Inchkeith .....	Air Ministry .....	8	1 0	190	459	18·07	166	112
d Isle of May .....	Board of Northern Lights..	6	3 0	..	521	20·53	136	..
PERTH. (Area, 2535 sq. mi.)								
<b>1.—FORTH—Right Bank Tributaries. 17 sq. mi.</b>								
d Gartmore House Gardens .....	Mr. H. B. Matheson .....	5	0 6	160	1347	53·01	231	174
d Gartmore House Gardens .....	Mr. H. B. Matheson .....	5	1 0	160	1297	51·07	231	171
<b>2.—FORTH, UPPER—Left Bank Tributaries. 64 sq. mi.</b>								
d Aberfoyle (The Inn) .....	J. R. Sutherland, Esq., C.E.	8	0 6	60	1364	53·70	..	184
d Loch Dhu .....	J. R. Sutherland, Esq., C.E.	8	0 6	325	1923	75·70	..	196
d Ledard .....	J. R. Sutherland, Esq., C.E.	8	0 6	1500	1676	66·00	..	..
<b>3.—FORTH—Teith. 221 sq. mi.</b>								
Loch Drunkie .....	J. R. Sutherland, Esq., C.E.	8	0 6	420	1527	60·10	..	..
d Invertrossachs .....	Sir James R. Wilson, Bt. ...	5	1 0	350	1411	55·56	223	181
Ben Venue (Glasaholile) .....	J. R. Sutherland, Esq., C.E.	8	1 0	1150	1824	71·80	..	..
d Loch Vennachar .....	J. R. Sutherland, Esq., C.E.	8	0 6	275	1391	54·75	..	178
d Bridge of Turk .....	J. R. Sutherland, Esq., C.E.	8	0 6	275	1476	58·10	..	181
Loch Katrine (Tunnel Hill Top) ..	J. R. Sutherland, Esq., C.E.	8	0 6	830	1824	71·80	..	..
Ben Ledi .....	J. R. Sutherland, Esq., C.E.	8	0 6	1400	1604	63·15	..	..
d Achnahard .....	J. R. Sutherland, Esq., C.E.	8	1 0	474	1530	60·25	..	186
Callander (Leny House) .....	Capt. M. Murray Buchanan	5	0 6	340	1319	51·95	..	..
Strone Bridge .....	J. R. Sutherland, Esq., C.E.	8	1 0	380	1657	65·25	..	..
Glen Meann .....	J. R. Sutherland, Esq., C.E.	8	1 0	800	1735	68·30	..	..
Glen Finglas .....	J. R. Sutherland, Esq., C.E.	8	1 0	1200	1800	70·85	..	..
d Glengyle .....	J. R. Sutherland, Esq., C.E.	8	0 6	380	2065	81·30	..	192
Upper Glengyle .....	J. R. Sutherland, Esq., C.E.	8	1 0	750	2272	89·45	..	..
Alit a' Choin .....	J. R. Sutherland, Esq., C.E.	8	1 0	1250	1976	77·80	..	..

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.		
		Diam.	Height Ground	above Sea Level.					
PERTH—(con.).		in.	ft.	in.	ft.	mm.	in.		
<b>3.—FORTH—Teith—(con.).</b>									
Balquhiddel (Blaircreach) .....	J. Carnegie, Esq. ....	5	1	0	460	2134	84·03	..	..
Balquhiddel (Stronvar) .....	J. Carnegie, Esq. ....	5	1	0	422	1546	60·85	..	..
<b>4.—FORTH, LOWER—Left Bank Tributaries. 107 sq. mi.</b>									
Dunblane .....	W. L. Gibson, Esq., C.E. ....	5	1	0	250	885	34·84	183	160
Dunblane (Kippendavie) .....	Mr. F. Barnes .....	8	2	9	300	956	37·63	..	..
d Glendevon (Glenquey Res.) ...	H. F. Hodge, Esq., C.E. ....	11	0	11	945	1280	50·40	..	165
Glendevon .....	No. 2 H. F. Hodge, Esq., C.E. ....	8	1	0	1333	1809	71·24	..	..
Glendevon .....	No. 8 H. F. Hodge, Esq., C.E. ....	8	1	0	1172	1110	43·69	..	..
d Glendevon (Tormaukin) .....	Mr. W. Phillips .....	5	1	6	750	1248	49·15	..	170
M Glendevon (Tormaukin) .....	Mr. W. Phillips .....	8	1	0	770	1238	48·73	..	..
d Glendevon (Frandy) .....	H. F. Hodge, Esq., C.E. ....	8	1	0	911	1392	54·80	227	172
Glendevon (Glensherup) .....	R. Muir Morton, Esq. ....	12	0	4	945	1507	59·33	..	..
Glendevon .....	No. 1 H. F. Hodge, Esq., C.E. ....	8	1	0	1202	1290	50·80	..	..
Glendevon .....	No. 9 H. F. Hodge, Esq., C.E. ....	8	1	0	1067	1360	53·55	..	..
d Glendevon (Backhill) .....	H. F. Hodge, Esq., C.E. ....	8	1	0	1067	1380	54·32	238	176
Glendevon .....	No. 10 H. F. Hodge, Esq., C.E. ....	8	1	0	1408	1081	42·57	..	..
<b>5.—LEVEN. 1 sq. mi.</b>									
<b>6.—EDEN. 4 sq. mi.</b>									
<b>7.—TAY—Earn. 376 sq. mi.</b>									
d Gleneagles House .....	Mr. P. Douglas .....	8	1	0	447	895	35·24	205	153
Slateford Burn (Shire End) ...	Messrs. Leslie & Reid, C.E. ....	8	1	0	930	954	37·55	..	..
Slateford Burn (Whitehill) ..	Messrs. Leslie & Reid, C.E. ....	8	1	0	810	941	37·03	..	..
Upper Farg (Plains) .....	Messrs. Leslie & Reid, C.E. ....	8	1	0	900	796	31·35	..	..
Upper Farg (Heatherieleys Q'ry)	Messrs. Leslie & Reid, C.E. ....	8	1	0	715	767	30·18	..	..
Upper Farg (Main Bank) .....	Messrs. Leslie & Reid, C.E. ....	5	1	0	..	607	23·91	..	..
d Dunning (Kippen House) .....	Lady Wilson .....	5	1	0	450	931	36·64	..	133
Auchterarder (Belhie) .....	Miss D. Cairns .....	5	0	10	100	694	27·32	167	140
Bridge of Earn (Ballendrick) ..	Capt. O. A. Taylor .....	5	1	2	30	646	25·42	193	137
d Lochearnhead (Edinchip) .....	Sir Malcolm MacGregor, Bt. ....	5	1	0	513	1532	60·33	234	192
d Crieff (Bargary Hill) .....	Mrs. Wilkie Brown .....	5	1	0	297	767	30·18	197	142
d Crieff (Strathearn Hydro.) ....	Dr. G. Meikle .....	5	1	0	478	840	33·06	208	156
<b>8.—TAY—Almond &amp; c. 149 sq. mi.</b>									
d Perth (Moulin Almond) .....	Col. D. M. Smythe .....	5	1	0	140	779	30·67	173	146
Glenalmond (Fendoch) .....	T. W. Marshall, Esq. ....	5	1	4	760	1025	40·37	..	..
Logiealmond Lodge .....	Earl of Mansfield .....	5	0	11	1020	1066	41·98	..	..
<b>9.—TAY—Strathday below Dunkeld. 33 sq. mi.</b>									
Murthly (Douglasfield) .....	W. A. Rae, Esq. ....	5	0	6	237	777	30·59	..	..
d Murthly (Glendelvine) .....	A. P. Lyle, Esq. ....	5	0	9	240	679	26·73	186	141
d Dunkeld (Snaigow) .....	W. H. Cox, Esq. ....	5	1	0	370	773	30·43	183	141
<b>10.—TAY—Bran. 81 sq. mi.</b>									
<b>11. TAY—Strathday above Dunkeld. 95 sq. mi.</b>									
d Aberfeldy (Dall Avon) .....	Dr. N. D. Mackay .....	5	1	0	320	864	34·00	216	147
d Grandtully (Dunros) .....	H. W. Johnston, Esq. ....	5	1	0	400	831	32·71	214	152
<b>12.—TAY—Loch Tay. 241 sq. mi.</b>									
Killin (The Manse) .....	Rev. G. W. Mackay .....	5	1	0	400	1401	55·15	183	173
Kenmore (The Manse) .....	Rev. W. A. Gillies .....	5	1	0	450	1003	39·49	209	164
<b>13.—TAY—Lyon. 142 sq. mi.</b>									
d Glenlyon (Meggernie Castle) ...	Mr. J. Currie .....	5	1	0	700	1445			

## DIVISION XVI.—EAST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
PERTH—(con.).		in.	ft.	in.	ft.	mm.	in.		
14.—TAY—Tummel—(con.).									
D Pitlochry (Dunfallandy) . . . . .	D. Stewart-Fergusson, Esq.	5	1	10	405	807	31·76	185	169
D Pitlochry (Manse of Foss) . . . . .	Rev. R. J. Davidson . . . . .	8	1	0	530	917	36·12	230	153
D Pitlochry (Bonskeid) . . . . .	Dr. G. F. Barbour . . . . .	5	1	0	540	816	32·11	210	151
D Fincastle House . . . . .	Mrs. Barbour . . . . .	5	1	0	980	906	35·68	182	148
D Trinafour (Druimchruaidh) . . . . .	A. D. Cameron, Esq. . . . .	5	1	0	850	1136	44·73	218	169
D Blair Atholl . . . . .	George Forrest, Esq. . . . .	5	1	0	420	756	29·78	219	150
D Blair Atholl (Blair Castle Grdns) . . . . .	Mr. J. Dickson . . . . .	5	1	0	500	772	30·40	210	156
D Glen Tilt (Marble Lodge) . . . . .	Mr. J. Stewart . . . . .	5	1	0	1000	870	34·25	..	..
D Glen Garry (Dalnaspidal Lodge) . . . . .	Mr. J. Macbeth . . . . .	5	1	0	1414	1611	63·42	225	201
D Glen Bruar (Bruar Lodge) No. 1 . . . . .	Mr. A. McLauchlan . . . . .	5	1	0	1600	1059	41·71	219	180
D Glen Bruar (Bruar Lodge) No. 2 . . . . .	Mr. A. McLauchlan . . . . .	5	1	0	1600	1125	44·27	219	182
D Glen Garry (Sronphadrick Lo.) . . . . .	Mr. W. MacPherson . . . . .	5	1	0	1525	1430	56·30	..	..
D Glen Tilt (Fealar Lodge) . . . . .	Mr. D. M. McDougall . . . . .	5	1	0	1760	964	37·97	265	207
15.—TAY—Isla. 232 sq. mi.									
D Coupar Angus (Public School) . . . . .	A. Reid, Esq. . . . .	5	2	2	183	631	24·84	168	125
D Blairgowrie (Kinloch Manse) . . . . .	Ian Milne, Esq. . . . .	5	1	0	280	683	26·90	206	127
D Kirkmichael (Ballintuim Ho.) . . . . .	Miss M. A. Macdonald . . . . .	5	1	4	700	963	37·90	231	152
16.—TAY—Left Bank Tributaries. 51 sq. mi.									
D Perth (Wellshill Cemetery) . . . . .	J. Ritchie, Esq., jun. . . . .	5	1	0	77	695	27·36	157	142
D Kinfauns (Balthayock) . . . . .	R. Wylie Hill, Esq. . . . .	5	4	6	323	738	29·07	155	120
D Scone Palace . . . . .	Earl of Mansfield . . . . .	5	0	11	91	701	27·58	188	141
17.—FIRTH OF TAY. 45 sq. mi.									
18.—SPEY—Right Bank Tributaries. 1 sq. mi.									
19.—LOCH LINNHE—Left Bank Tributaries. 2 sq. mi.									
20.—CLYDE—Leven. 38 sq. mi.									
FORFAR. (Area, 875 sq. mi.)									
1.—TAY—Isla. 211 sq. mi.									
D Kettins School . . . . .	W. Andrew, Esq. . . . .	5	1	0	218	688	27·08	186	121
D Glamis Castle . . . . .	Mr. D. McInnes . . . . .	5	0	9	250	683	26·87	..	101
D Forfar (Lillyfield) . . . . .	D. M. Mackie, Esq. . . . .	5	0	5	225	655	25·80	161	125
D Forfar (Orchardbank Sew. Farm) . . . . .	A. Watterston, Esq., C.E. . . . .	4	1	0	214	579	22·80	..	..
D Kirriemuir (Lintrathen) . . . . .	G. Baxter, Esq., C.E. . . . .	8	1	0	700	742	29·21	190	134
D Kirriemuir (Lintrathen) . . . . .	G. Baxter, Esq., C.E. . . . .	8	1	0	700	721	28·40	..	..
D Kirriemuir (Balnakeilly) . . . . .	G. Baxter, Esq., C.E. . . . .	8	1	0	700	734	28·90	..	..
D Kirriemuir (Creich Hill, S.) . . . . .	G. Baxter, Esq., C.E. . . . .	8	1	0	1482	655	25·80	..	..
D Kirriemuir (Creich Hill, Top) . . . . .	G. Baxter, Esq., C.E. . . . .	8	1	0	1500	620	24·40	..	..
D Kirriemuir (Creich Hill, N.) . . . . .	G. Baxter, Esq., C.E. . . . .	8	1	0	1491	724	28·50	..	..
2.—FIRTH OF TAY. 80 sq. mi.									
D Buddonness (Low Light) . . . . .	J. H. Thompson, Esq., C.E. . . . .	5	1	0	27	672	26·47	175	130
D Dundee (Harbour) . . . . .	J. H. Thompson, Esq., C.E. . . . .	5	0	11	14	581	22·87	181	141
D Dundee (Eastern Necropolis) . . . . .	A. Macrae, Esq. . . . .	3	1	0	199	634	24·95	..	166
D Dundee (Eastern Necropolis) . . . . .	A. Macrae, Esq. . . . .	5	1	0	199	639	25·17	201	135
D Dundee (Dens Works) . . . . .	Messrs. Baxter, Bros., Ltd. . . . .	5	on roof	119		607	23·89	200	129
D Dundee (Camperdown Works) . . . . .	Messrs. Cox, Bros., Ltd. . . . .	5	1	2	290	682	26·84	198	128
D Dundee (Inniscarra) . . . . .	H. G. Walker, Esq. . . . .	5	1	0	130	571	22·50	..	..
D Dundee (Balruddery) . . . . .	J. Martin White, Esq. . . . .	5	1	0	266	596	23·45	..	100
D Dundee (Kirkton of Mains) . . . . .	A. Duncan, Esq. . . . .	8	1	0	244	658	25·90	202	138
3.—SOUTH ESK & C. 371 sq. mi.									
D Carnoustie . . . . .	D. Maxwell, Esq., C.E. . . . .	8	1	0	39	620	24·40	193	130
D Craigton . . . . .	G. Baxter, Esq., C.E. . . . .	8	3	0	484	738	29·05	178	143
D Craigton . . . . .	G. Baxter, Esq., C.E. . . . .	8	3	0	484	720	28·36	..	..
D Craigton (Hillhead) . . . . .	G. Baxter, Esq., C.E. . . . .	8	3	0	570	775	30·52	..	..
D Crombie Reservoir . . . . .	G. Baxter, Esq., C.E. . . . .	8	3	0	522	848	33·37	..	..
D Monikie (Fallaws) . . . . .	G. Baxter, Esq., C.E. . . . .	8	3	0	585	767	30·20	..	..
D Arbroath (W. Cemetery) . . . . .	J. W. Robertson, Esq. . . . .	8	1	0	93	593	23·33	181	118
D Arbroath (Muirheads Res.) . . . . .	D. H. Shaw, Esq. . . . .	5	1	0	251	646	25·44	..	..

## DIVISION XVI.—EAST MIDLAND COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922			
FORFAR—(con.).		in.	ft.	in.	ft.	mm.	in.	
3.—SOUTH ESK & C.—(con.).								
Forfar (Pitscandly House) . . . . .	W. T. Farquhar, Esq. . . . .	5	1	9	300	621	24·43	..
Montroseness . . . . .	Board of Northern Lights . . . . .	3	1	0	124	485	19·09	150
D Montrose . . . . .	S. L. Christie, Esq., C.E. . . . .	5	1	0	16	574	22·59	175
D Montrose (West-End Park) . . . . .	S. L. Christie, Esq., C.E. . . . .	5	1	0	12	624	24·56	161
D Forfar W.W. (Den of Ogil) . . . . .	A. Watterston, Esq., C.E. 12 x 4 . . . . .	0	3	633	865	34·04	191	149
D Glenogil Waterworks . . . . .	D. H. Shaw, Esq. . . . .	5	1	0	770	922	36·29	188
M Glenogil Waterworks . . . . .	D. H. Shaw, Esq. . . . .	5	1	0	770	905	35·63	..
d Glen Prosen (Pearsie House) . . . . .	G. M. Wedderburn, Esq. . . . .	5	1	0	600	901	35·49	211
D Glen Prosen (Lednathie) . . . . .	J. S. Darling, Esq. . . . .	5	1	0	720	1083	42·64	..
d Glen Prosen (Balnaboth Gdns.) . . . . .	Mrs. Ogilvie . . . . .	5	1	0	975	1237	48·71	..
4.—NORTH ESK & C. 213 sq. mi.								
Brechin (Trinity) . . . . .	Miss E. A. Stevenson . . . . .	8	1	0	295	718	28·27	..
D Montrose (Sunnyside Asylum) . . . . .	C. K. Alexander, Esq. . . . .	5	1	0	200	618	24·33	176
D Montrose (Kinnaber W.W.) . . . . .	S. L. Christie, Esq., C.E. . . . .	5	1	0	38	576	22·66	170
Brechin (Stracathro Gardens) . . . . .	Mr. A. Dunlop . . . . .	5	1	0	200	741	29·17	..

## DIVISION XVII.—NORTH-EASTERN COUNTIES.

## KINCARDINE. (Area, 382 sq. mi.)

<b>1.—NORTH ESK &amp; C. 99 sq. mi.</b>								
D Marykirk (Balmakewan) . . . . .	W. Low, Esq. . . . .	5	1	1	120	679	26·75	167
D Fettercairn (Police Station) . . . . .	Mr. J. F. Brown . . . . .	5	1	0	235	801	31·54	181
<b>2.—BERVIE, COWIE, &amp; C. 139 sq. mi.</b>								
D Stonehaven (Mains of Cowie) . . . . .	John Hart, Esq. . . . .	5	1	0	93	725	28·55	249
<b>3.—DEE. 144 sq. mi.</b>								
Drumoak (Durriss House) . . . . .	(R) Mr. A. Reid . . . . .	3	3	6	200	923	36·32	..
D Banchoory (Invercannie) . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	205	782	30·77	213
Crathes (Pinewood) . . . . .	James Smith, Esq. . . . .	5	1	0	145	827	32·57	..
D Crathes (Schoolhouse) . . . . .	W. S. Kemp, Esq. . . . .	5	1	0	269	832	32·75	226
<b>ABERDEEN. (Area, 1974 sq. mi.)</b>								
<b>1.—DEE. 672 sq. mi.</b>								
D Glen Muick . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	1370	1042	41·03	234
d Glen Tanner (Aitnach) . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	1260	954	37·55	..
D Braemar (Bank) . . . . .	A. M. Shirran, Esq. . . . .	5	1	0	1120	852	33·55	191
D Braemar (Derry Lodge) . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	1400	895	35·23	229
D Balmoral Castle Gardens . . . . .	Mr. R. F. Chalmers . . . . .	5	1	0	927	683	26·87	235
d Abergeldie Castle Gardens . . . . .	Mr. J. Durran . . . . .	5	1	0	850	710	27·96	..
D Ballater (Irrigation Farm) . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	637	800	31·51	209
M Bienn Bhreac . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	2700	1283	50·53	..
D Aboyne . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	412	779	30·69	149
D Dess House . . . . .	Lt.-Col. D. F. Davidson . . . . .	5	1	8	480	805	31·69	173
D Glen Gairn (GairnShielLodge) . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	1100	838	33·00	212
D Glen Gairn (Corndavon) . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	1500	811	31·92	234
D Torphins (School House) . . . . .	Dr. George Davidson . . . . .	5	1	6	480	806	31·74	170
M Lumphanan . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	490	845	33·28	..
D Drumoak (Drum Castle) . . . . .	Mrs. Irvine . . . . .	5	0	8	320	796	31·35	206
D Logie Coldstone School . . . . .	J. B. Anderson, Esq. . . . .	5	1	0	608	793	31·20	242
D Aberdeen (Mannofield Res.) . . . . .	George Mitchell, Esq., C.E. . . . .	5	1	0	171	792	31·18	242
D Aberdeen (Cranford House) . . . . .	Mr. W. C. Smith . . . . .	5	1	0	120	881	34·69	227
Aberdeen (Cornhill Road) . . . . .	J. B. Innes, Esq. . . . .	5	1	0	150	724	28·52	198
<b>2.—DON. 512 sq. mi.</b>								
D Aberdeen (King's College) . . . . .	Air Ministry . . . . .	8	1	0	44	771	30·36	205
Strathdon (Estates Office) . . . . .	C. Christie, Esq. . . . .	5	1	2	990	823	32·42	199
D Dyce (Craibstone House) . . . . .	Prof. J. Hendrick . . . . .	5	1	0	276	898	35·35	219
D Dyce (Parkhill House) . . . . .	J. E. Crombie, Esq. . . . .	8	0	11	170	842	33·13	209
M New Machar (Straloch) . . . . .	Mrs. Irvine . . . . .	..	4	0	320	734	28·89	..
D Inverurie (Westfield) . . . . .	James Skinner, Esq. . . . .	5	1	0	207	718	28·26	220

## DIVISION XVII.—NORTH-EASTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922				
ABERDEEN—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—YTHAM & C. 285 sq. mi.									
D Ellon (Esslemont House) . . . . .	Col. J. Wolrige-Gordon, CMG	5	1	6	100	802	31·56	227	152
D Haddo House . . . . .	Earl of Haddo . . . . .	5	0	6	186	793	31·22	207	148
D Fyvie Castle . . . . .	Col. C. R. Burn, M.P. . . . .	5	0	6	200	824	32·43	184	158
4.—UGIE & C. 257 sq. mi.									
Buchanness . . . . .	Board of Northern Lights . . . . .	3	3	0	130	600	23·63	157	..
D New Deer School House . . . . .	J. A. Thomson, Esq. . . . .	5	1	0	397	845	33·27	189	155
Peterhead (Stock Bridge) . . . . .	J. Robertson, Esq. . . . .	5	1	1	150	735	28·94	206	..
D Peterhead (Mains of Buthlaw) . . . . .	W. Johnston, Esq. . . . .	5	1	6	120	815	32·08	221	158
D Peterhead (Forehill Works) . . . . .	J. Dickie, Esq., C.E. . . . .	5	0	7	133	816	32·14	214	166
D Brucklay Castle . . . . .	A. Dingwall Fordyce, Esq. MP	8	1	0	300	861	33·88	191	165
Kinnairdhead . . . . .	Board of Northern Lights . . . . .	3	2	6	120	613	24·15	..	..
5.—DEVERON & C. 248 sq. mi.									
D Drumblade Public School . . . . .	G. Harper, Esq. . . . .	5	1	0	485	885	34·86	251	170
Huntly (Union Bank) . . . . .	Alex. Smith, Esq. . . . .	5	1	0	405	848	33·37	..	..
Huntley . . . . .	R. Wilson, Esq. . . . .	5	1	0	405	840	33·07	..	..
Huntly (Cruchie) . . . . .	Miss A. Joss . . . . .	5	4	0	400	865	34·06	230	177
BANFF. (Area, 630 sq. mi.)									
1.—YTHAM. 1 sq. mi.									
2.—DEVERON & C. 344 sq. mi.									
D Drummur Castle . . . . .	late T. Gordon Duff, Esq. . . . .	5	1	0	605	1019	40·10	241	188
D Keith Station . . . . .	Mr. A. Kennedy . . . . .	5	1	0	364	938	36·93	209	169
D Turriff (Forglen Gardens) . . . . .	Mr. G. Stuart . . . . .	5	1	0	220	885	34·83	228	167
Cairnfield (Pathhead) . . . . .	W. Hendry, Esq. . . . .	5	1	4	438	672	26·45	..	..
Buckie (Roughonnie) . . . . .	W. Hendry, Esq. . . . .	5	1	4	334	696	27·40	..	..
Buckie (West Church Street) . . . . .	W. Hendry, Esq. . . . .	5	1	4	76	663	26·09	..	..
D Banff (Duff House) . . . . .	A. J. Leigh, Esq. . . . .	5	1	0	7	716	28·17	227	152
Cullen House Gardens . . . . .	Mr. F. Low . . . . .	5	1	0	100	721	28·40	..	..
3.—SPEY—Right Bank Tributaries. 285 sq. mi.									
Ballindalloch . . . . .	C. Mackenzie, Esq. . . . .	..	..	..	..	860	33·85	..	..
D Dufftown (Fife Street) . . . . .	Miss B. Walker . . . . .	5	2	0	579	902	35·51	220	160
D Aberlour Orphanage . . . . .	J. G. White, Esq. . . . .	5	1	0	350	819	32·25	200	153
MORAY. (Area, 477 sq. mi.)									
1.—DEVERON & C. 7 sq. mi.									
2.—SPEY—Right Bank Tributaries. 35 sq. mi.									
D Aberlour (Wester Elchies) . . . . .	Mr. A. Ross . . . . .	5	1	0	550	828	32·61	194	152
D Gordon Castle . . . . .	Mr. C. Webster . . . . .	5	1	0	104	740	29·14	211	152
3.—SPEY—Left Bank Tributaries. 133 sq. mi.									
D Grantown-on-Spey . . . . .	W. Duncan, Esq. . . . .	5	1	1	700	776	30·56	202	159
D Knockando (Schoolhouse) . . . . .	Charles Watt, Esq. . . . .	5	1	0	600	723	28·47	227	143
4.—LOSSIE & C. 154 sq. mi.									
D Lhanbryde (Blackhills House) . . . . .	T. N. Christie, Esq. . . . .	5	3	6	310	783	30·83	224	159
D Duffus House . . . . .	Mr. W. Ogg . . . . .	5	1	0	55	608	23·94	176	143
5.—FINDHORN & C. 148 sq. mi.									
D Darnaway Castle Gardens . . . . .	Earl of Moray . . . . .	5	1	6	200	694	27·32	157	137
D Brodie (Earlsmill House) . . . . .	William Fenwick, Esq. . . . .	5	0	10	135	674	26·55	196	142
Forres (Knockonnie) . . . . .	W. Fraser, Esq. . . . .	5	1	0	93	671	26·42	..	..
M Forres (Cluny Hill Hydro.) . . . . .	H. W. Leask, Esq. . . . .	5	1	0	..	643	25·30	..	..
NAIRN. (Area, 163 sq. mi.)									
1.—FINDHORN & C. 102 sq. mi.									
D Ardlach (Glenferness) . . . . .	Mr. A. McKenzie . . . . .	8	1	6	750	932	36·68	196	182
2.—NAIRN & C. 61 sq. mi.									
D Cawdor Castle . . . . .	(R) Mr. D. Chapman . . . . .	8	4	3	225	678	26·69	155	122
D Nairn (Balblair) . . . . .	Major H. C. H. Allanby . . . . .	5	1	0	94	601	23·66	226	136
D Nairn (Achareidh) . . . . .	H. A. Clarke, Esq. . . . .	8	1	0	59	601	23·65	247	142
D Nairn (Delnies) . . . . .	Air Ministry . . . . .	8	1	9	42	590	23·24	228	142

## DIVISION XVIII.—NORTH-WESTERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		am.	Height Ground.	above Sea Level.		1922			
INVERNESS. (Area, 4146 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
<b>1.—TAY—Tummel. 28 sq. mi.</b>									
D Loch Ericht (Ben Alder Lodge)	Mr. F. Macintosh	5	1	0	1175	1538	60·55	252	218
<b>2.—SPEY—Right Bank Tributaries. 437 sq. mi.</b>									
D Dalwhinnie (Drumochter Lo.)	Mr. D. Kennedy	5	1	0	1375	1617	63·67	239	208
D Glen Tromie (Gaick Lodge)	Mr. C. Chisholm	5	1	0	1500	1242	48·89	266	205
D Nethy Bridge (U.F. Manse)	Rev. A. Sutherland	5	1	0	750	649	25·57	179	136
D Aviemore (Rothiemurchus)	W. Dempster, Esq.	5	1	0	706	777	30·57	265	177
<b>3.—SPEY—Left Bank Tributaries. 257 sq. mi.</b>									
D Cluny Castle	Mr. A. Macdonald	5	0	10	900	948	37·34	249	187
M Loch Spey	British Aluminium Co. Ltd.	5	..	..	1164	1653	65·10	..	..
D Glen Spey (Mealgarve)	British Aluminium Co. Ltd.	8	..	..	1135	1221	48·09	256	216
D Kingussie	A. D. Dallas, Esq.	8	1	0	840	777	30·61	226	165
D Alvie Gardens	Mr. J. G. Fraser	5	1	3	800	764	30·07	221	158
D Alvie Manse	Rev. Dugald Maclean	5	1	0	760	733	28·86	..	..
D Carr Bridge (Crannich)	Mrs. A. Doak	5	1	0	850	722	28·41	233	151
D Grantown (Muckerach Lodge)	Mr. James Fraser	5	1	6	750	771	30·37	214	161
<b>4.—FINDHORN. 164 sq. mi.</b>									
<b>5.—NAIRN &amp; C. 131 sq. mi.</b>									
Gollanfield House	The MacKinnon of MacKinnon	5	0	8	80	606	23·87	..	173
<b>6.—NESS—Right Bank Tributaries. 252 sq. mi.</b>									
D Fort Augustus (St. Benedict's)	The Procurator	5	1	0	68	1061	41·78	235	194
Loch Ness (Killin, Whitebridge)	British Aluminium Co. Ltd.	8	1	0	1200	1321	52·00	..	..
D Loch Ness (Garthbeg)	British Aluminium Co. Ltd.	8	1	0	645	980	38·60	236	169
Loch Ness (Foyers)	British Aluminium Co. Ltd.	8	1	0	52	973	38·29	198	139
Loch Ness (Aberchelder)	British Aluminium Co. Ltd.	8	1	0	700	930	36·62	..	..
<b>7.—NESS—Garry &amp; c. 185 sq. mi.</b>									
M Loch Quoich (Loan)	Col. D. W. Cameron	5	1	0	650	3331	131·15	..	..
D Loch Quoich (Kinlochquoich)	Col. D. W. Cameron	5	1	0	560	2496	98·27	217	211
D Loch Quoich (Glenquoich)	Mr. C. Macrae	5	1	2	569	2571	101·24	..	234
D Invergarry Gardens	Mr. Donald Stewart	5	1	0	130	1601	63·04	212	200
<b>8.—NESS—Moriston. 120 sq. mi.</b>									
<b>9.—NESS—Enrick. 131 sq. mi.</b>									
Inverness (Ruigh Ard Asylum)	Dr. F. C. Mackenzie	5	0	11	330	717	28·24	215	143
<b>10.—BEAULY. 341 sq. mi.</b>									
<b>11.—CROMARTY FIRTH. 13 sq. mi.</b>									
<b>12.—SOUND OF SLEAT. 259 sq. mi.</b>									
D Loch Nevis (Inverie Gardens)	Mr. J. Huggins	5	0	6	15	2063	81·21	264	236
D Glenelg Manse	Rev. A. Mactaggart	5	1	0	85	1193	46·99	235	206
<b>13.—SOUND OF ARISAIG. 126 sq. mi.</b>									
D Moidart (Kinlochmoidart)	J. C. Stewart, Esq.	5	1	0	13	1822	71·74	263	234
D Moidart (Roshven)	Mrs. Wm. Blackburn	5	1	0	40	1712	67·40	276	222
D Arisaig (Faire-na-Sguir)	Miss C. C. Astley	5	1	0	30	1380	54·34	268	214
D Arisaig House	Mr. W. Grant	5	1	0	45	1531	60·29	246	229

## DIVISION XVIII.—NORTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
INVERNESS—(con.).		in.	ft.	in.	ft.	mm.	in.		
<b>14.—LOCH LINNHE—Right Bank Tributaries. 48 sq. mi.</b>									
D Loch Eil (Achdaluie) .....	Col. D. W. Cameron .....	5	1	0	100	1437	56·57	194	191
<b>15.—LOCHY—Right Bank Tributaries. 143 sq. mi.</b>									
D Loch Arkaig (Achnacarry) .....	Col. D. W. Cameron .....	5	1	0	128	2137	84·14	259	221
D Clunes .....	Col. D. W. Cameron .....	5	1	0	128	1763	69·43	229	193
Loch Arkaig (Glen Dessary) ...	Col. D. W. Cameron .....	5	1	0	300	2651	104·36	..	..
<b>16.—LOCHY—Left Bank Tributaries. 362 sq. mi.</b>									
Loch Ossian (Strathossian Ho.) ..	British Aluminium Co. Ltd. ....	8	..	..	1180	1638	64·48	..	..
M Ben Alder (Loch a' Bhealaich) ..	Mr. F. Macintosh .....	5	1	0	2300	3261	128·40	..	..
M Ben Alder (Lochan Sgoir) .....	Mr. F. Macintosh .....	5	1	0	2250	3284	129·30	..	..
Loch Treig (Fersit) .....	British Aluminium Co. Ltd. ....	8	..	..	850	1519	59·80	..	..
M Loch Pattaig .....	Sir J. F. Ramsden, Bt. ....	5	0	8	1442	1736	68·35	..	..
Glen Spean (Craigbeg) .....	British Aluminium Co. Ltd. ....	8	..	..	860	1190	46·84	..	..
M Loch Laggan (Ardverikie) .....	Sir J. F. Ramsden, Bt. ....	5	0	6	830	1534	60·40	..	..
<b>17.—LOCH LINNHE—Left Bank Tributaries. 120 sq. mi.</b>									
D North Ballachulish (Alltshellach) ..	B. Chinnery-Haldane, Esq. ....	5	2	1	80	1877	73·89	262	224
D Glenleven (Blackwater Dam, N) ..	British Aluminium Co. Ltd. ....	8	1	0	1072	2154	84·80	273	225
Kinlochleven (Kinlochmore Lo.) ..	Brian Bibby, Esq. ....	5	1	0	115	2324	91·50	247	227
Glenleven (Invercam) ..	No. 6 British Aluminium Co. Ltd. ..	8	1	6	1070	1680	66·13	..	..
Glenleven (Cirain) .....	No. 3 British Aluminium Co. Ltd. ..	8	1	6	1200	1888	74·32	..	..
Glenleven (Loch Eilde Mòr) ..	British Aluminium Co. Ltd. ....	8	1	6	1130	2457	96·73	..	..
Glenleven (Loch Eilde Beg) ..	British Aluminium Co. Ltd. ....	8	1	6	1125	2508	98·73	..	..
Glenleven (Corrour) .....	No. 5 British Aluminium Co. Ltd. ..	8	1	6	1260	1710	67·32	..	..
D Fort William (Atholl Bank) ...	W. T. Kilgour, Esq. ....	5	1	0	171	1862	73·29	258	207
<b>18.—INSULAR, INNER HEBRIDES. 786 sq. mi.</b>									
Hyskier .....	Board of Northern Lights ..	..	..	..	..	1108	43·63	206	..
Skye (Oronsay) .....	Board of Northern Lights ..	..	0	6	58	1211	47·67	211	..
D Skye (Duisdale House) .....	R. A. Noël Paton, Esq. ....	5	3	0	80	1990	78·33	237	231
D Skye (Kyleakin, Dunringell) ..	Maj. A. D. Mackinnon, C.M.G. ....	5	2	1	80	1628	64·10	271	217
Skye (Kyleakin Lighthouse) ..	Board of Northern Lights ..	5	4	6	53	1301	51·21	199	..
D Skye (Scalpay Island) .....	Mr. D. Gunn .....	5	1	0	4	1866	73·47	272	233
D Skye (Portree) .....	D. Dewar, Esq. ....	5	1	0	65	1795	70·67	274	235
D Skye (Dunvegan) .....	Mrs. Mackenzie .....	5	3	0	47	1548	60·95	267	221
Rona .....	Board of Northern Lights ..	3	1	3	212	711	28·01	234	..
<b>19.—INSULAR, OUTER HEBRIDES. 243 sq. mi.</b>									
Barra (Barrahead) .....	Board of Northern Lights ..	7	3	0	683	759	29·88	..	..
D Barra (Castle Bay) .....	Air Ministry .....	8	1	0	38	807	31·76	265	185
South Uist (Ushenish) .....	Board of Northern Lights ..	3	1	0	178	718	28·27	198	..
North Uist (Monach) .....	Board of Northern Lights ..	8	5	6	20	967	38·05	241	..
Harris (Island Glass) .....	Board of Northern Lights ..	7	4	2	130	1025	40·35	225	..
ROSS & CROMARTY. (Area 3237 sq. mi.)									
<b>1.—NESS—Moriston. 35 sq. mi.</b>									
<b>2.—BEAULY. 109 sq. mi.</b>									
<b>3.—MORAY FIRTH COAST STREAMS. 64 sq. mi.</b>									
D Fortrose .....	A. Thom, Esq. ....	5	1	0	69	473	18·64	196	121
<b>4.—CROMARTY FIRTH. 714 sq. mi.</b>									
D Achnasheen (Ledgowan) .....	Mr. J. W. Macrae .....	5	1	0	500	1696	66·76	254	216
D Strathpeffer .....	W. P. Hutton, Esq. ....	8	1	0	125	691	27·23	196	142
Cromarty House .....	Brig.-Gen. W. C. Ross, C.B. ....	5	1	0	60	585	23·01	221	142
Cromarty .....	Board of Northern Lights ..	3	1	0	28	483	19·02	185	..
D Invergordon (The Ord) .....	W. G. Paterson, Esq. ....	5	1	1	50	535	21·08	179	119
D Alness (Ardross Castle) .....	Mr. W. L. Minty .....	5	1	0	450	907	35·69	232	160
<b>5.—DORNOCH FIRTH. 355 sq. mi.</b>									
Tarbetness .....	Board of Northern Lights ..	8	4	0	175	481	18·92	..	..

## DIVISION XVIII.—NORTH-WESTERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
ROSS & CROMARTY—(con.).		in.	ft.	in.	ft.	mm.	in.		
6.—ENARD BAY. 78 sq. mi.									
d Inverpolly Lodge	W. J. Milne, Esq.	5	4	0	25	1029	40·51	..	203
7.—LOCH BROOM & C. 367 sq. mi.									
Braemore (Loch a' Bhraoin)	R. Matheson, Esq.	8	0	9	822	1762	69·38	..	..
8.—LOCH EWE, LOCH TORRIDON & C. 423 sq. mi.									
d Loch Torridon (Bendamph)	Earl of Lovelace	5	1	0	20	2079	81·84	249	244
d Poolewe (Inverewe Gardens)	Mr. J. M. Grant	5	0	6	20	1274	50·14	248	210
Rudh Ré Lighthouse	Board of Northern Lights.	..	..	..	..	940	37·01	241	..
9.—LOCH CARRON, LOCH ALSH & C. 401 sq. mi.									
d Glen Shiel (Shiel House)	Mr. Colin Campbell	5	1	6	30	1771	69·73	..	..
d Loch Carron (Plockton)	Mrs. Anstruther Mackay	5	1	0	8	1312	51·67	229	193
d Loch Carron (Dunhulladale)	Mrs. G. J. Campbell	5	1	0	9	1816	71·51	279	239
d Applecross Gardens	Mr. D. McCowan	5	1	0	70	1532	60·32	..	..
10.—INSULAR, OUTER HEBRIDES. 691 sq. mi.									
Stornoway Lighthouse	Board of Northern Lights.	8	4	9	20	896	35·29	238	..
d Stornoway	Air Ministry	8	1	0	52	1196	47·08	279	217
Tiupanhead	Board of Northern Lights.	..	..	..	170	824	32·45	..	..
Butt of Lewis	Board of Northern Lights.	8	4	6	170	848	33·37	246	..

## DIVISION XIX.—NORTHERN COUNTIES.

SUTHERLAND. (Area, 2080 sq. mi.)

<b>1.—DORNOCH FIRTH. 413 sq. mi.</b>									
<b>2.—FLEET, BRORA &amp; C. 309 sq. mi.</b>									
d Dornoch (Strath Halladale)	J. McCrone, Esq.	5	1	0	85	580	22·84	186	132
d Golspie (Technical School)	E. W. Read, Esq.	6	1	9	105	708	27·88	202	138
d Dunrobin Castle	The Duke of Sutherland	5	1	6	14	660	26·00	189	151
<b>3.—HELMSDALE &amp; C. 226 sq. mi.</b>									
<b>4.—NORTH COAST STREAMS. 736 sq. mi.</b>									
d Tongue Manse	Rev. David Lundie	5	1	0	180	893	35·17	272	205
d Melvich Schoolhouse	A. MacIntosh Esq.	5	1	0	200	859	33·83	225	183
Cape Wrath	Board of Northern Lights	7	4	8	400	521	20·51?	..	..
<b>5.—LOCH LAXFORD &amp; C. 256 sq. mi.</b>									
d Loch More (Achfary)	Mr J. Munro	5	1	0	137	1945	76·59	290	250
<b>6.—ENARD BAY. 138 sq. mi.</b>									
Stour Head	Board of Northern Lights	..	..	..	..	646	25·42	179	..

**7.—INSULAR. 2 sq. mi.**

CAITHNESS. (Area, 696 sq. mi.)

<b>1.—BERRIEDALE, DUNBEATH &amp; C. 169 sq. mi.</b>									
Clythness	Board of Northern Lights	..	..	..	..	718	28·26	202	..
<b>2.—WICK &amp; C. 184 sq. mi.</b>									
d Wick	Air Ministry	8	1	2	82	721	28·41	250	155
Nosshead	Board of Northern Lights	7	4	7	175	667	26·26	..	..
<b>3.—THURSO &amp; C. 238 sq. mi.</b>									
d Thurso (Buckies)	J. H. M. Davidson, Esq.	5	0	11	240	859	33·83	248	198
Thurso (Holburn Head)	Board of Northern Lights	3	0	8	75	672	26·46	178	..
Dunnet Head	Board of Northern Lights	3	1	0	246	900	35·44	..	..
<b>4.—FORSS &amp; C. 104 sq. mi.</b>									
d Reay (The Manse)	Rev. Dugald Carmichael	8	1	0	49	822	32·35	269	197
<b>5.—INSULAR. 1 sq. mi.</b>									
Stroma	Board of Northern Lights	..	..	..	104	571	22·46	..	..

## DIVISION XIX.—NORTHERN COUNTIES—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground.	above Sea Level.		1922			
ORKNEY. (Area, 389 sq. mi.)		<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>ft.</i>	<i>mm.</i>	<i>in.</i>		
Pentland Skerries	Board of Northern Lights	7	3	9	170	809	31·87	235	..
Hoy (Cantickhead)	Board of Northern Lights	3	1	0	115	779	30·68	206	..
Hoy (Graemsay Sound, High)	Board of Northern Lights	5	0	4	115	761	29·97	237	..
Hoy (Graemsay Sound, Low)	Board of Northern Lights	8	4	3	55	889	34·99	229	..
Copinsay	Board of Northern Lights	..	..	..	..	557	21·91	..	..
D Pomona (Deerness)	Air Ministry	5	4	0	161	825	32·47	285	189
Hellyar Holm	Board of Northern Lights	3	1	0	60	856	33·69	257	..
Shapinsay (Balfour Castle)	Mr. W. Liddell	5	0	6	50	765	30·13	..	..
Auskerry	Board of Northern Lights	3	2	6	10	370	14·58?	204	..
Sanday (Start Point)	Board of Northern Lights	3	1	0	80	771	30·37	204	..
Westray (Noup Head)	Board of Northern Lights	3	1	0	260	653	25·71	207	..
North Ronaldshay	Board of Northern Lights	3	0	4	140	716	28·18	215	..
Sule Skerry	Board of Northern Lights	3	0	6	113	738	29·07	187	..
SHETLAND. (Area, 558 sq. mi.)									
Fair Isle, North	Board of Northern Lights	..	..	..	262	450	17·72	..	..
Sumburgh Head	Board of Northern Lights	..	..	..	..	533	21·00	..	..
Bressay	Board of Northern Lights	3	1	0	105	628	24·71	183	..
D Lerwick	Air Ministry	8	1	0	54	1008	39·67	283	199
D Fetlar (The Manse)	Rev. J. A. Campbell	5	1	0	30	827	32·56	238	183
D Unst (Balta Sound, Halligarth)	Dr. T. E. Saxby	5	1	0	31	1150	45·29	288	221

## IRELAND.

## DIVISION XX.—MUNSTER.

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
CORK. (Area, 2873 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
1.—SHANNON—Left Bank Tributaries. 79 sq. mi.									
2.—DINGLE BAY. 4 sq. mi.									
3.—KENMARE & C. 47 sq. mi.									
4.—BANTRY BAY. 197 sq. mi.									
Bantry House .....	W. Stevens, Esq. ....	5	1	8	25	1359	53·50	204	167
d Garinish Island .....	T. O'Donohoe, Esq. ....	5	0	6	15	1807	71·16	210	184
5.—DUNMANUS BAY. 57 sq. mi.									
6.—BANDON & C. 694 sq. mi.									
d CastleTownshend (GlenBarrahane)	Capt. Sir M. P. Coghill, Bt.	5	1	3	100	1135	44·70	204	161
d Castle Townshend (Seafield) .....	Major H. Chavasse .....	5	0	8	40	1176	46·31	217	162
Skipbreen (Hollybrook Farm)	Col. A. H. Morgan, D.S.O.	8	1	6	60	1418	55·81	..	207
d Caheragh (The Rectory) .....	Rev. A. W. Whitley .....	5	1	0	98	1530	60·24	222	186
Clonakilty (Shannon Vale Ho.)	T. J. Bennett, Esq. ....	5	1	3	135	1063	41·86	182	..
d Drinagh Rectory .....	Rev. Harold Hadden .....	5	2	0	..	1416	55·74	..	..
d Ballineen (Kilmeen Rectory) ..	F. W. Dobbin, Esq., M.D. ..	5	1	0	350	1367	53·83	212	164
d Kinsale (Scilly House) .....	J. J. Orr, Esq., M.D. ....	5	1	0	62	965	37·99	191	158
d Dunmanway (The Rectory) ...	Rev. Canon A. Wilson ...	5	1	6	205	1514	59·62	233	183
d Enniskean (Kilcoleman) .....	Miss E. Longfield .....	5	3	0	180	1141	44·94	153	143
7.—CORK HARBOUR. 726 sq. mi.									
d Ballinageary (Inchibeg) .....	H. N. Walsh, Esq. ....	5	1	0	400	2088	82·22	..	151
d Crookstown (Bellmount) .....	Capt. J. E. H. Herrick ....	8	2	6	400	1249	49·18	208	172
d Ballintemple (Blackrock Road)	Michael Murphy, Esq. ....	12	1	0	96	825	32·46	186	137
d Cork (Corn Market) .....	D. J. O'Mahony, Esq. ....	5	1	0	19	862	33·92	183	144
d Cork (University College) .....	H. N. Walsh, Esq. ....	5	1	0	65	946	37·25	201	146
d Cork (University College) ... (R)	H. N. Walsh, Esq. ....	6	1	6	65	935	36·83	201	149
d Cork (Wellington Road) .....	R. C. Sikes, Esq., C.E. ...	5	2	2	120	950	37·40	188	160
d Middleton (Ballinacurra) .....	J. H. Bennett, Esq. ....	8	1	0	25	824	32·43	206	150
d Queenstown (Fota Island) ...	Mr. R. Forbes .....	5	1	6	35	944	37·17	172	147
d Glanmire (Lota Lodge) .. No. 1.	A. F. Sharman-Crawford Esq	5	1	0	200	1017	40·02	207	164
d Glanmire (Lota Lodge) .. No. 2.	A. F. Sharman-Crawford Esq	5	1	0	100	953	37·52	202	159
d Dripsey Woollen Mills .....	H. N. Walsh, Esq. ....	5	1	0	250	957	37·69	223	158
8. WOMANAGH & C. 118 sq. mi.									
d Roches Point .....	Air Ministry .....	8	1	0	33	943	37·14	242	159
d Shanagarry (Kinoith) .....	Miss L. P. Strangman .....	5	1	0	85	800	31·50	..	134
9.—BLACKWATER. 922 sq. mi.									
d Mallow (Longueville) .....	R. E. Longfield, Esq. ....	5	1	0	315	795	31·30	200	157
Kanturk (Castlecarr) .....	Mrs. Norton Barry .....	..	..	..	..	912	35·92	227	171
d Mitchelstown Castle .....	W. D. Webber, Esq. ....	8	3	0	345	870	34·26	..	..
10.—SUIR. 3 sq. mi.									
11.—INSULAR. 26 sq. mi.									
KERRY. (Area, 1851 sq. mi.)									
1.—SHANNON—Left Bank Tributaries. 372 sq. mi.									
2.—TRALEE BAY & C. 221 sq. mi.									
Castlegregory (Kilgobbin Rec.)	Rev. E. A. Hackett .....	5	3	6	30	1636	64·41	..	..

## DIVISION XX.—MUNSTER—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
KERRY—(con.).		in.	ft.	in.	ft.	mm.	in.		
3.—DINGLE BAY. 789 sq. mi.									
M Cahirciveen Water Works . . . . .	Air Ministry . . . . .	5	0	11	420	1576	62·04	..	..
Cahirciveen (Valencia Observty) . . . . .	Air Ministry . . . . .	8	1	0	30	1358	53·46	246	198
M Gap of Dunloe (Gearahameen) . . . . .	Air Ministry . . . . .	8	3	0	75	2464	97·00	..	..
d Killarney (Flesk Mills) . . . . .	D. E. McDonnell, Esq., C.E. . . . .	8	2	6	95	1278	50·30	..	..
d Killarney (District Asylum) . . . . .	E. W. Griffin, Esq., M.D. . . . .	5	1	2	173	1271	50·04	256	192
Killorglin (Callinafercy) . . . . .	Maj. M. R. Leeson-Marshall . . . . .	5	0	6	30	1422	56·00	188	..
4.—KENMARE & C. 426 sq. mi.									
D Darrynane Abbey . . . . .	Miss M. O'Connell . . . . .	5	1	0	13	1387	54·61	245	204
D Kenmare (Dromore Castle) . . . . .	Lt.-Col. E. Hood . . . . .	5	0	9	90	1693	66·65	241	208
D Kenmare (Sheen Falls) . . . . .	Irish Rainfall Association . . . . .	5	0	8	25	1624	63·93	224	195
D Kenmare (Dunkerron Castle) . . . . .	Miss L. Palmer . . . . .	5	1	6	70	1482	58·36	229	198
5.—BLACKWATER. 30 sq. mi.									
6.—INSULAR. 13 sq. mi.									
WATERFORD. (Area, 715 sq. mi.)									
1.—BLACKWATER. 243 sq. mi.									
Cappoquin (Mt. Melleray Abbey) . . . . .	Irish Rainfall Association . . . . .	5	1	0	760	1051	41·38	..	..
2.—COLLIGAN & C. 259 sq. mi.									
3.—SUIR. 213 sq. mi.									
D Knockaderry Reservoir . . No. 1 . . . . .	J. J. Fleming, Esq., C.E. . . . .	5	7	7	247	843	33·19	205	138
D Knockaderry Reservoir . . No. 2 . . . . .	J. J. Fleming, Esq., C.E. . . . .	5	7	7	248	636	25·05?	199	121
D Waterford (Brook Lodge) . . . . .	C. P. Bolton, Esq., C.E. . . . .	5	1	0	104	778	30·63	183	138
d Waterford (Tycor Waterworks) . . . . .	J. J. Fleming, Esq., C.E. . . . .	5	0	7	171	778	30·62	..	150
D Waterford (Gortmore) . . . . .	Mrs. N. H. White . . . . .	5	1	2	137	750	29·51	209	138
D Portlaw (Mayfield) . . . . .	J. Anderson, Esq. . . . .	5	1	6	70	890	35·03	199	146
Portlaw (Curraghmore Gdns.) . . . . .	Mr. D. Crombie . . . . .	5	1	0	95	802	31·56	..	..
D Carrick-on-Suir (Seskin) . . . . .	J. Ernest Grubb, Esq. . . . .	8	1	0	542	883	34·75	208	151
TIPPERARY. (Area, 1660 sq. mi.)									
1.—SHANNON—Left Bank Tributaries. 582 sq. mi.									
Cappaghwhite (Greenfields Stud) . . . . .	Irish Rainfall Association . . . . .	5	1	0	350	834	32·83	..	..
D Nenagh (Traverston) . . . . .	Miss A. H. Norris . . . . .	5	1	0	333	991	39·03	264	168
D Killaloe (Ballina) . . . . .	Office of Public Works . . . . .	5	2	0	126	1114	43·86	232	180
D Nenagh (St. Mary's Rectory) . . . . .	Rev. Canon C. W. McDowell . . . . .	5	1	0	180	834	32·82	220	158
D Nenagh (Castle Lough) . . . . .	S. Parker-Hutchinson, Esq. . . . .	5	1	3	120	958	37·70	235	168
D Terryglass (Old Court) . . . . .	M. D. Hickie, Esq. . . . .	5	1	0	150	781	30·75	212	152
Terryglass (Slevoyre) . . . . .	Gen. Sir W. B. Hickie, K.C.B. . . . .	8	1	0	143	745	29·35	216	156
2.—BLACKWATER. 21 sq. mi.									
3.—SUIR. 965 sq. mi.									
Clogheen (Clashleigh) . . . . .	Irish Rainfall Association . . . . .	5	0	7	180	955	37·61	..	..
Clonmel (Coolgreany) . . . . .	Irish Rainfall Association . . . . .	8	1	0	100	837	32·96	..	..
Cahir (Abbey) . . . . .	Mrs. W. Rochfort . . . . .	5	1	0	160	823	32·41	203	144
D Tipperary . . . . .	Edward Ensor, Esq. . . . .	5	1	0	333	744	29·30	195	143
D Tipperary (Kingswell) . . . . .	Irish Rainfall Association . . . . .	5	1	0	350	769	30·26	158	134
D Fethard (Coolmore) . . . . .	Miss Murphy . . . . .	5	1	0	347	850	33·47	223	159
d Cashel (Ballinamona) . . . . .	E. W. M. Murphy, Esq. . . . .	5	1	0	262	768	30·23	221	141
d Cashel (Ballyowen House) . . . . .	Irish Rainfall Association . . . . .	5	1	0	485	772	30·38	197	144
d Thurles (Brittas Castle) . . . . .	Mrs. Knox . . . . .	6	1	0	360	695	27·35	..	125
Templemore (Barnane) . . . . .	Capt. A. Carden, R.A. . . . .	5	1	0	650	969	38·13	194	..
4.—BARROW—Nore. 92 sq. mi.									
D Roscrea (Timoney Park) . . . . .	S. Parker-Hutchinson, Esq. . . . .	1	0		475	781	30·73	189	145

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.	1922				
<b>LIMERICK. (Area, 1040 sq. mi.)</b>		<i>in.</i>	<i>ft.</i>	<i>in.</i>	<i>ft.</i>	<i>mm.</i>	<i>in.</i>		
<b>1.—SHANNON—Right Bank Tributaries. 7 sq. mi.</b>									
D Limerick (Derravoher) . . . . .	Sir A. W. Shaw . . . . .	5	1	0	40	855	33·65	235	166
<b>2.—SHANNON—Left Bank Tributaries. 944 sq. mi.</b>									
Abbeyfeale (Springmount Sch.) . . . . .	J. F. O'Kelly, Esq. . . . .	8	1	5	360	934	36·77	180	..
D Knocklong (Kilfrush) . . . . .	F. J. B. Gubbins, Esq. . . . .	5	1	0	314	837	32·94	215	164
D Pallasgreen (Woodville) . . . . .	J. F. MacMahon . . . . .	..	..	..	400	830	32·68	195	155
Glin (Shannon Lawn) . . . . .	C. V. Hickie, Esq. . . . .	4	3	0	20	1018	40·08	..	..
D Foynes (Coolnanes) . . . . .	Lord Monteagle . . . . .	5	1	0	50	928	36·52	234	168
D Foynes (National School) . . . . .	W. Purtill, Esq. . . . .	5	1	8	15	944	37·17	..	..
Limerick (O'Connell Street) . . . . .	R. Davison, Esq., C.E. . . . .	5	1	0	51	938	36·92	213	168
Limerick (Mulgrave Street) . . . . .	Sir A. W. Shaw . . . . .	5	1	1	60	912	35·92	241	171
Limerick (Strand) . . . . .	W. J. C. Horne, Esq. . . . .	5	1	0	50	864	34·03	223	155
D Glenstal Castle . . . . .	Sir Charles Barrington, Bt. . . . .	8	1	0	400	982	38·66	224	183
D Castleconnell Rectory . . . . .	Rev. L. G. Davis . . . . .	5	1	0	88	1023	40·27	191	167
<b>3.—BLACKWATER. 64 sq. mi.</b>									
<b>4.—SUIR. 25 sq. mi.</b>									
Galbally Rectory . . . . .	Rev. J. F. Young . . . . .	5	1	0	380	1041	41·00	..	..
<b>CLARE. (Area, 1270 sq. mi.)</b>									
<b>1.—GALWAY BAY, SOUTH. 100 sq. mi.</b>									
<b>2.—MAL BAY &amp; C. 294 sq. mi.</b>									
D Inagh (Mount Callan) . . . . .	Lt.-Col. F. Tottenham . . . . .	5	1	0	479	1770	69·69	245	226
<b>3.—SHANNON—Right Bank Tributaries. 854 sq. mi.</b>									
Kilkee (Liscrona) . . . . .	Irish Rainfall Association . . . . .	5	1	1	80	1023	40·26	233	..
D Dromoland Castle . . . . .	Lord Inchiquin . . . . .	5	1	3	45	910	35·84	208	164
D Killaloe (Clarisford) . . . . .	Rt. Rev. Bishop Berry . . . . .	..	1	3	130	1074	42·30	200	168
D Broadford (Hurdlestown) . . . . .	Lt.-Col. W. A. Bentley . . . . .	5	1	0	167	1128	44·42	244	191
<b>4.—INSULAR. 22 sq. mi.</b>									

**WEXFORD.** (Area, 902 sq. mi.)

<b>1.—BARROW. 43 sq. mi.</b>											
<b>2.—OWENDUFF &amp; C. 240 sq. mi.</b>											
D	Foulkesmill (Longraigue)	.....Miss J. Deane	5	1	1	220	860	33·86	161	136	
<b>3.—SLANEY &amp; C. 467 sq. mi.</b>											
D	Johnstown Castle	.....Lady Maurice Fitzgerald	5	1	0	201	875	34·45	143	128	
D	Enniscorthy (Summersville)	.....W. Waring, Esq.	5	6	0	106	731	28·77	201	128	
D	Enniscorthy (Monksgrange)	.....Goddard H. Orpen, Esq.	5	1	0	565	963	37·93	181	155	
D	Enniscorthy (Woodbrook)	.....E. C. Blacker, Esq.	5	1	0	370	1047	41·23	186	173	
D	Newtownbarry (Weston)	.....G. T. Lewis, Esq.	5	1	0	153	880	34·63	200	141	
<b>4.—OWENAVORRAGH &amp; C. 146 sq. mi.</b>											
D	Oulart (Wells House)	.....C. M. Doyne, Esq.	5	1	0	220	865	34·07	214	146	
D	Gorey (Courtown House)	.....Earl of Courtown	5	3	0	60	792	31·18	176	125	
<b>5.—OVOCA &amp; C. 6 sq. mi.</b>											

## DIVISION XXI.—LEINSTER—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground.	above Sea Level.		1922			
KILKENNY. (Area 798 sq. mi.)									
1.—SUIR. 162 sq. mi.									
d Piltown (Bessborough) .....	Mr. T. E. Tomalin .....	8	3	7	60	728	28·66	200	136
2.—BARROW—Nore. 527 sq. mi.									
Inistioge (Mount Alto) .....	Mrs. Tighe .....	8	1	0	860	699	27·51?	..	..
d Inistioge (Woodstock Gardens) ..	Mrs. Tighe .....	5	1	0	400	898	35·35	176	152
Kilkenny (Lavistown House) ..	Miss F. E. Butler .....	5	2	5	170	596	23·47	170	135
d Kilkenny Castle .....	Earl of Ossory .....	8	1	6	194	678	26·68	176	148
d Castlecomer House .....	Capt RHPrior-Wandesforde ..	5	1	0	380	903	35·56	219	169
3.—BARROW. 109 sq. mi.									
d Goresbridge (BarraghscoreHouse) ..	H. de M. Fleming, Esq. ...	5	1	0	130	654	25·75	211	133
WICKLOW. (Area, 781 sq. mi.)									
1.—BARROW. 12 sq. mi.									
2.—SLANEY. 200 sq. mi.									
d Shillelagh (Coollattin Gardens) ..	Duncan Brough, Esq. ....	5	0	9	383	930	36·61	163	149
3.—OVOC & C. 241 sq. mi.									
d Arklow Rectory .....	H. W. Strong, Esq. ....	5	1	0	186	664	26·14	167	126
d Rathdrum (Avondale) .....	A. C. Forbes, Esq. ....	5	0	6	420	900	35·42	..	..
4.—VARTRY & C. 193 sq. mi.									
d Wicklow (Wentworth House) ..	E. N. Wynne, Esq., C.E. ...	5	1	1	23	742	29·23	180	125
d Rathnew (Clonmannon) .....	Rev. W. H. A. Truell .....	5	1	6	27	708	27·87	175	131
d Roundwood (Vartry Lodge) ...	Dublin Corporation .....	5	1	8	720	918	36·15	188	144
d Roundwood (Knockatemple) ..	Dublin Corporation .....	5	1	8	700	962	37·87	218	154
d Roundwood .....	Dublin Corporation .....	5	1	8	800	1048	41·25	231	165
d Newcastle (Killadreenan) .....	C. Denys Hanan, Esq., M.D. ..	8	1	2	256	787	30·97	170	135
w Tithever .....	Dublin Corporation .....	5	1	6	1000	951	37·46	..	..
w Annacarter Schoolhouse .....	Dublin Corporation .....	5	1	6	750	1030	40·55	..	..
d Greystones (Rathdown) .....	Miss L. Armstrong .....	5	0	6	160	729	28·70	183	125
d Enniskerry (Kilgarron) .....	Irish Rainfall Association .	5	0	9	400	860	33·87	187	..
5.—LIFFEY & C. 135 sq. mi.									
CARLOW. (Area, 346 sq. mi.)									
1.—BARROW—Nore. 9 sq. mi.									
2.—BARROW. 216 sq. mi.									
Bagnalstown (Fenagh House) ..	D.R.P. Beresford, Esq. O.B.E. ..	5	1	0	340	805	31·69	196	135
m Bagnalstown (Fenagh House) ..	D.R.P. Beresford, Esq. O.B.E. ..	5	1	0	340	766	30·14	..	..
Carlow (Browne's Hill) .....	Col. R. Browne Clayton ..	5	1	0	291	781	30·75	..	..
3.—SLANEY. 121 sq. mi.									
d Rathvilly (Lisnavagh Gardens) ..	C. E. Faulkner, Esq. ....	5	4	3	400	774	30·48	176	154
d Hacketstown Rectory .....	Rev. C. S. S. Ellison .....	5	1	2	590	867	34·15	229	164
QUEEN'S COUNTY. (Area, 664 sq. mi.)									
1.—SHANNON—Left Bank Tributaries. 25 sq. mi.									
2.—BARROW—Nore. 339 sq. mi.									
d Abbey Leix (Blandsfort) .....	H. Bland, Esq. ....	5	2	6	532	813	32·02	203	154
d Mountrath (Baureigh) .....	D. McCaw, Esq. ....	5	1	0	810	1340	52·74	220	192
3.—BARROW. 300 sq. mi.									
Carlow (Sunnyside) .....	E. Shackleton, Esq. ....	5	1	0	178	753	29·63	170	142
d Mountmellick (Summer Grove) ..	W. A. Robinson, Esq. ....	5	1	0	252	929	36·56	204	169
KING'S COUNTY. (Area, 772 sq. mi.)									
1.—SHANNON—Left Bank Tributaries. 560 sq. mi.									
d Birr Castle .....	Earl of Rosse .....	8	1	0	175	750	29·53	216	160

## DIVISION XXI.—LEINSTER—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground.	above Sea Level.		1922			
KING'S COUNTY—(con.).		in.	ft.	in.	ft.	mm.	in.		
1.—SHANNON—Left Bank Tributaries—(con.).									
D Meelick (Victoria Lock) . . . . .	Office of Public Works . . .	5	2	0	121	657	25·88	206	151
D Tullamore (Rathrobin) . . . . .	Lt.-Col. M. W. Biddulph . .	5	1	0	400	770	30·32	199	160
D Tullamore (St.Catherine's Rect.)	Rev. R. S. Craig . . . . .	5	1	6	201	677	26·67	197	147
Tullamore (St.Vincent's Hosp.)	Dr. G. A. Moorhead . . . . .	5	1	0	225	875	34·45	..	..
Ferbane (Turraun Peat Works)	Leinster Carbonizing Co.Ltd.	8	1	2	170	727	28·61	186	148
2.—BARROW—Nore. 5 sq. mi.									
3.—BARROW. 156 sq. mi.									
4.—BOYNE. 51 sq. mi.									
KILDARE. (Area, 654 sq. mi.)									
1.—BARROW. 332 sq. mi.									
Monasterevin (Moore Abbey) . .	Irish Rainfall Association .	5	1	0	236	701	27·58	..	..
2.—LIFFEY. 246 sq. mi.									
D Sallins (Palmerstown) . . . . .	The Countess of Mayo . . .	5	1	0	321	616	24·25	205	150
D Straffan House . . . . .	B. H. Barton, Esq. . . . .	5	1	0	256	695	27·35	190	168
D Clongowes Wood College . . . .	Rev. M. J. Murphy, S.J. . .	8	1	0	246	625	24·59	..	..
3.—BOYNE. 76 sq. mi.									
DUBLIN. (Area, 354 sq. mi.)									
1.—VARTRY & C. 23 sq. mi.									
Shankill (Sherrington) . . . . .	Lt. Col. J. C. W. Erck . . .	5	8	0	123	596	23·47	..	..
Carrickmines (Claremont) . . . .	John Read, Esq. . . . .	5	0	11	300	574	22·61	..	..
Ballybrack (Marino) . . . . .	Rt. Hon. L. A. Waldron . .	5	3	6	..	469	18·46	..	100
D Foxrock (Kilteragh) . . . . .	W. Ogilvie, Esq. . . . .	5	1	0	250	601	23·65	143	118
2.—LIFFEY & C. 188 sq. mi.									
D Glen-na-Smoel (Rathmines WW)	Dublin Corporation . . . . .	5	1	0	510	767	30·20	222	157
D Ballyboden (Rathmines W. W.)	Dublin Corporation . . . . .	5	1	0	344	663	26·11	199	136
Stillorgan (Tipperstown) . . . .	Irish Rainfall Association .	..	..	..	278	554	21·81	..	..
Dundrum (The Castle) . . . . .	Dr. A. S. Goff . . . . .	5	3	0	170	603	23·76	199	..
D Kingstown (Harbour Yard) . . .	Office of Public Works . . .	8	1	0	52	549	21·60	147	119
Belgard Castle . . . . .	Capt. A. F. Maude . . . . .	5	1	0	400	568	22·35	177	128
D Monkstown (Pakenham Road)	Irish Rainfall Association .	5	0	10	45	594	23·40	..	..
D Rathmines (Dartrey Road) . . .	T. Mason, Esq. . . . .	5	6	0	130	537	21·13	166	131
Harold's Cross (Westfield Park)	F. P. Dixon, Esq., C.E. . . .	5	0	9	125	484	19·06	170	..
Rathmines (Ormond Road) . . .	Irish Rainfall Association .	5	1	0	99	516	20·32	..	..
D Harold's Cross (Pretoria Terrace)	E. H. Cannon, Esq. . . . .	5	0	11	155	486	19·12	192	128
Donnybrook (Belmont Avenue)	Douglas Waring, Esq. . . . .	5	0	9	100	551	21·69	174	112
D Donnybrook (Anglesea Road) . .	F. C. D. Joynt, Esq. . . . .	5	1	0	30	470	18·52	166	104
D Dublin (FitzWilliam Square) . .	Sir J. W. Moore, M.D. . . .	8	1	6	54	518	20·41	196	128
D Dublin (Ringsend Pumpg.Stn.)	Dublin Corporation . . . . .	10	1	1	25	490	19·29	176	123
D Dublin (Trinity College) . . . .	Prof. W. E. Thrift . . . . .	8	1	0	13	486	19·15	188	117
D Dublin (Phoenix Park) . . . . .	Ordnance Survey Office . .	8	1	0	156	544	21·41	195	140
D Clontarf (Pumping Station) . . .	Dublin Corporation . . . . .	5	4	9	22	520	20·47	178	117
D Glasnevin (Roy.Botanic Gdns.)	Sir F. W. Moore . . . . .	8	1	0	55	574	22·61	230	134
Sutton (Tower Cottage) . . . . .	Irish Rainfall Association .	5	1	0	30	446	17·55	..	..
D Howth Castle . . . . .	J.Gaisford St.Lawrence, Esq.	5	1	9	35	530	20·86	190	132
3.—NANNY, DELVIN & C. 142 sq. mi.									
D Malahide (Seamount) . . . . .	J. G. Jameson, Esq. . . . .	5	1	0	150	606	23·87	192	134
D Skerries (Milverton Hall) . . . .	Capt. E. G. Woods . . . . .	5	1	6	190	480	18·90	198	130
D Balbriggan (Ardgillan) . . . .	No. 1 Capt. E. R. Taylor . . .	5	1	0	211	617	24·31	199	138
Balbriggan (Ardgillan) . . . .	No. 3 Capt. E. R. Taylor . . .	5	1	0	211	616	24·24	..	..
4.—INSULAR. 1 sq. mi.									
D Lambay Island . . . . .	Hon. Cecil Baring . . . . .	5	1	0	20	597	23·52	167	140

## DIVISION XXI.—LEINSTER—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground.	above Sea Level.	1922					
MEATH. (Area 909 sq. mi.)			in.	ft.	in.	ft.	mm.	in.		
1.—SHANNON—Left Bank Tributaries. 32 sq. mi.										
2.—LIFFEY & C. 72 sq. mi.										
Dunboyne (Stirling, Clonee) ...	Mr. J. Pilkington .....	8	1	0	231		769	30·29	206	..
3.—NANNY, DELVIN & C. 150 sq. mi.										
4.—BOYNE. 560 sq. mi.										
d Summerhill House .....	Mr. W. Lauder.....	5	1	0	372		794	31·25	185	155
d Athboy (Mitchelston) .....	W. J. Hopkins, Esq.....	5	1	0	260		803	31·61	203	165
Athboy (Frankville) .....	Mrs. C Coghill.....	8	1	3	227		853	33·57	178	..
d Navan (Staffordstown) .....	R. J. Butler, Esq. ....	5	1	0	250		749	29·49	192	153
d Drogheda (Mornington) .....	W. Brydon Hill, Esq. ....	5	1	6	60		611	24·05	186	139
d Kells (Headfort) .....	The Marquis of Headfort..	8	0	8	227		851	33·50	206	158
5.—DUNDALK BAY. 95 sq. mi.										
WESTMEATH. (Area, 712 sq. mi.)										
1.—SHANNON—Left Bank Tributaries. 517 sq. mi.										
d Athlone .....	Office of Public Works ...	5	2	0	132		651	25·63?	202	134
d Athlone (Twyford House) .....	J. P. Hodson, Esq. ....	5	1	0	187		838	32·99	213	..
d Streamstown (Windmill) .....	F. W. Jeeves, Esq.....	5	1	6	..		873	34·38	209	164
d Moate (Coolatore) .....	H. A. S. Upton, Esq. ....	5	1	6	369		779	30·67	222	158
d Mullingar (Belvedere House)...	Mr. J. Bayliss .....	5	1	0	367		834	32·83	207	135
d Mullingar (Ballynegall Gardens)	Major Hawkesworth Smyth	5	2	0	340		916	36·08	217	169
d Rathowen (Cromlyn) .....	(R) Maj.-Gen. J. P. Battersby, CB	8	1	6	298		842	33·16	220	160
d Castlepollard (Gillardstown Ho.)	W. Hardy, Esq.....	5	1	0	290		839	33·04	175	146
d Castlepollard (Pakenham Hall)	Mr. W. Allan .....	5	1	6	300		886	34·87	201	162
2.—BOYNE. 195 sq. mi.										
LOUTH. (Area, 316 sq. mi.)										
1.—BOYNE. 32 sq. mi.										
2.—DUNDALK BAY & C. 264 sq. mi.										
d Dundalk (Town Hall) .....	M. Sellars, Esq., C.E. ....	8	55	0	82		675	26·56	188	131
Dundalk (Ballymacallet) .....	M. Sellars, Esq., C.E. ....	5	2	3	207		1040	40·94	..	..
d Dundalk (Aughneskea Res.) ...	M. Sellars, Esq., C.E. ....	5	1	3	670		995	39·16	191	162
3.—CARLINGFORD LOUGH. 20 sq. mi.										
d Greenore .....	T. Chambers, Esq., C.E. ...	5	1	0	20		718	28·27	174	134
LONGFORD. (Area, 424 sq. mi.)										
1.—ERNE. 61 sq. mi.										
2.—SHANNON—Left Bank Tributaries. 363 sq. mi.										
d Ballymahon (New Castle) .....	W. A. King-Harman, Esq..	5	2	5	200		826	32·52	222	159
Longford (The Rectory) .....	Rev. H. Justice .....	5	1	0	185		917	36·12	214	168
d Cloondraha .....	Office of Public Works ...	5	2	0	130		594	23·38?	223	133
d Castle Forbes Gardens .....	The Earl of Granard.....	8	1	0	161		913	35·95	228	161

## DIVISION XXII.—CONNAUGHT.

GALWAY. (Area 2377 sq. mi.)

**1.—ERIFF & C. 141 sq. mi.****2.—GALWAY BAY, NORTH. 277 sq. mi.**



## DIVISION XXII.—CONNAUGHT—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.	
		Diam.	Height Ground	above Sea Level.					
LEITRIM. (Area, 615 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
1.—ERNE. 152 sq. mi.									
2.—DROWES & C. 85 sq. mi.									
3.—SLIGO BAY. 135 sq. mi.									
4.—SHANNON—Right Bank Tributaries. 47 sq. mi.									
5.—SHANNON—Left Bank Tributaries. 196 sq. mi.									
D Ruskey .....	Office of Public Works ...	5	2	0	141	645	25·38?	223	176
D Drumshanbo (Lough Allen Sluice)	Office of Public Works ....	5	2	0	169	841	33·11	225	172

## DIVISION XXIII.—ULSTER.

CAVAN. (Area, 753 sq. mi.)

1.—ERNE. 489 sq. mi.									
d Killeshandra (Castle Hamilton)	Major W. J. Hamilton ...	5	1	0	251	863	33·99	193	158
d Belturbet (Cloverhill) .....	Mrs. Sanderson .....	5	1	0	202	769	30·27	221	168
2.—SHANNON—Right Bank Tributaries. 34 sq. mi.									
3.—SHANNON—Left Bank Tributaries. 91 sq. mi.									
4.—BOYNE. 122 sq. mi.									
5.—DUNDALK BAY. 17 sq. mi.									

FERMANAGH. (Area, 713 sq. mi.)

1.—ERNE. 667 sq. mi.									
d Enniskillen (Florence Court) ...	J. McBrien, Esq. ....	5	1	5	169	1129	44·47	252	184
d Enniskillen (Portora School) ..	W. N. Tetley, Esq. ....	5	1	0	251	926	36·47	..	..
Belleek (Heronshaw) .....	T. Beacom, Esq. ....	5	1	5	150	1053	41·47	..	..

2.—DROWES &amp; C. 46 sq. mi.

MONAGHAN. (Area, 498 sq. mi.)

1.—ERNE. 208 sq. mi.									
2.—DUNDALK BAY. 132 sq. mi.									
3.—BANN—Lough Neagh, West. 158 sq. mi.									
d Monaghan (Workhouse) .....	Dr. J. Campbell Hall .....	5	1	1	240	791	31·14	167	146

ARMAGH. (Area, 514 sq. mi.)

1.—DUNDALK BAY. 118 sq. mi.									
2.—CARLINGFORD LOUGH. 23 sq. mi.									
d Bessbrook (The Woodhouse) ..	J. S. W. Richardson, Esq. .	5	1	0	260	945	37·20	209	169
3.—BANN—Lough Neagh, East. 37 sq. mi.									
d Lurgan (Belle Vue) .....	S. A. Bell, Esq. ....	5	0	5	200	709	27·92	192	155
4.—BANN, UPPER. 144 sq. mi.									
d Tanderagee .....	Dr. J. Taylor .....	5	1	6	198	787	31·00	189	150
5.—BANN—Lough Neagh, West. 192 sq. mi.									
d Armagh Observatory .....	Air Ministry .....	8	1	0	204	755	29·73	217	157
Richhill (Sandymount) .....	Mrs. C. B. Lamb .....	5	1	0	200	689	27·11	205	150

## DIVISION XXIII.—ULSTER—(con.).

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain.		Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.		1922			
DOWN. (Area, 961 sq. mi.)		in.	ft.	in.	ft.	mm.	in.		
<b>1.—CARLINGFORD LOUGH. 104 sq. mi.</b>									
d Warrenpoint (Clonallon) . . . . .	Lt.-Col. A. W. Mansergh . .	5	1	3	15	847	33·33	217	156
d Newry (Bridge Street Ho.) . . . . .	C. Blaney, Esq. . . . .	5	1	0	23	931	36·65	180	151
<b>2.—DUNDRUM BAY &amp; C. 173 sq. mi.</b>									
d Mourne Mount'ns (Fofanny Res.) . . . . .	J. H. H. Swiney, Esq., C.E. . .	5	1	0	938	1444	56·86	192	165
d Seaforde . . . . .	Major W. G. Forde . . . . .	8	0	5	180	935	36·80	192	161
<b>3.—STRANGFORD LOUGH. 260 sq. mi.</b>									
Sainfield House . . . . .	Rev. E. H. Blackwood-Price . .	5	0	9	300	868	34·18	227	..
d Newtownards (Scrabo Hill) . . . . .	Newtownards U.D.C. . . . .	1	6		540	795	31·30	195	169
<b>4.—COAST STREAMS. 47 sq. mi.</b>									
d Donaghadee (Coastguard Stat.) . . . . .	Air Ministry . . . . .	8	1	0	35	757	29·81	212	150
d Donaghadee (Craigmore) . . . . .	Dr. S. B. Coates . . . . .	5	1	0	60	741	29·18	207	141
<b>5.—BELFAST LOUGH. 206 sq. mi.</b>									
d Waringstown . . . . .	W. J. Gibson, Esq. . . . .	3	4	0	190	692	27·23	..	..
d Waringstown . . . . .	W. J. Gibson, Esq. . . . .	8	1	0	187	739	29·11	..	..
d Bangor (Chorlton) . . . . .	C. T. Ingold, Esq. . . . .	7	0	11	67	835	32·87	162	143
<b>6.—BANN—Lough Neagh, East. 7 sq. mi.</b>									
<b>7.—BANN, UPPER. 162 sq. mi.</b>									
Banbridge (Observatory) . . . . .	Mr. H. D. Fleming . . . . .	5	1	6	210	779	30·68	209	148
d Banbridge (Milltown) . . . . .	J. E. Kennedy, Esq. . . . .	5	1	0	200	732	28·83	212	151
Banbridge (Millbank) . . . . .	Mrs. J. W. Mulligan . . . . .	5	1	0	257	764	30·08	207	153
Portadown (Moyallon House) . . . . .	Mr. J. Lynas . . . . .	5	0	5	130	766	30·15	197	156
<b>8.—INSULAR. 2 sq. mi.</b>									
ANTRIM. (Area, 1193 sq. mi.)									
<b>1.—BELFAST LOUGH. 107 sq. mi.</b>									
d Lisburn (Ulster Provincial Sch.) . . . . .	J. Woolman, Esq. . . . .	5	1	6	208	955	37·58	227	164
d Belfast (Queen's University) . . . . .	Mr. G. Robinson . . . . .	5	1	0	62	828	32·59	207	153
d Belfast (Cave Hill Road) . . . . .	Miss C. Firth . . . . .	5	1	0	200	916	36·07	236	173
d Belfast (Sewage Outfall Wks.) (R) . . . . .	H. A. Cutler, Esq., C.E. . . .	8	2	11	26	797	31·39	206	138
Belfast (Oldpark Filters) . . . . .	F.W. McCullough, Esq., C.E. . .	5	3	6	203	823	32·41	194	147
Carrickfergus (Dorisland) . . . . .	F.W. McCullough, Esq., C.E. . .	5	3	0	250	806	31·75	205	156
Carrickfergus (South Woodburn) . . . . .	F.W. McCullough, Esq., C.E. . .	5	3	0	640	951	37·46	221	171
Carrickfergus (North Woodburn) . . . . .	F.W. McCullough, Esq., C.E. . .	5	3	0	735	1024	40·33	223	179
Carrickfergus (Copeland) . . . . .	F.W. McCullough, Esq., C.E. . .	5	3	0	424	740	29·13	201	141
Carrickfergus (Lough Mourne) . . . . .	F.W. McCullough, Esq., C.E. . .	5	3	0	596	908	35·75	202	162
<b>2.—GLENARM &amp; C. 186 sq. mi.</b>									
d Larne (Sallagh Springs) . . . . .	W. G. Younger, Esq. . . . .	5	1	0	566	1099	43·25	215	191
d Glenarm Castle . . . . .	Mr. J. Smith . . . . .	5	1	0	70	1012	39·83	213	186
<b>3.—BUSH &amp; C. 193 sq. mi.</b>									
<b>4.—BANN, LOWER. 112 sq. mi.</b>									
<b>5.—BANN—Lough Neagh, East. 590 sq. mi.</b>									
Stonyford (Belfast W.W.) . . . . .	F.W. McCullough, Esq., C.E. . .	5	1	6	437	845	33·28	181	159
d Antrim (Ardnaveigh) . . . . .	H. B. Murray, Esq. . . . .	5	1	6	210	781	30·76	197	159
d Ballymena (Harryville) . . . . .	J. R. Williams, Esq. . . . .	5	1	5	150	996	39·21	246	207
d Broughshane (Quolie) . . . . .	H. O'Hara, Esq., C.E. . . . .	5	1	3	864	1029	40·53	246	202
<b>6.—INSULAR. 5 sq. mi.</b>									
LONDONDERRY. (Area, 816 sq. mi.)									
<b>1.—LOUGH SWILLY. 6 sq. mi.</b>									
Londonderry (Dunruadh) . . . . .	J. H. Welch, Esq. . . . .	5	0	6	130	946	37·25	245	187

STATIONS.	AUTHORITIES.	Rain Gauge.				Depth of Rain. 1922	Days with ·01 in. or more.	Days with ·04 in. or more.
		Diam.	Height Ground	above Sea Level.				
LONDONDERRY—(con.).		in.	ft.	in.	ft.	mm.	in.	
2.—BUSH & C. 9 sq. mi.								
3.—BANN, LOWER. 240 sq. mi.								
4.—BANN—Lough Neagh, West. 196 sq. mi.								
5.—FOYLE & C. 365 sq. mi.								
M	Glenedra (Spelhoagh Mountain) . . . . . M. A. Robinson, Esq., C.E.	5	1	0	1333	1355	53·36	..
D	Glenedra Hill . . . . . M. A. Robinson, Esq., C.E.	5	1	0	1333	1444	56·84	233
D	Glenedra Lodge . . . . . M. A. Robinson, Esq., C.E.	5	1	0	950	1274	50·15	234
D	Londonderry (Creggan Res.) . . . . . Mr. W. Hutchison . . . . .	8	1	0	325	1008	39·68	269
D	Limavady (Dogleap) . . . . . Miss D. Robertson . . . . .	5	1	0	141	824	32·43	230
	Limavady (Drenagh) . . . . . M. M. McCausland, Esq. . .	5	1	6	80	848	33·40	242
	Bellarena . . . . . Irish Rainfall Association . .	5	1	3	7	878	34·56	245
TYRONE. (Area, 1257 sq. mi.)								
1.—ERNE. 46 sq. mi.								
2.—BANN—Lough Neagh, West. 442 sq. mi.								
D	Donaghmore . . . . . Messrs. McClintons, Ltd. . .	5	1	3	260	900	35·42	181
M	Donaghmore . . . . . Messrs. McClintons, Ltd. . .	5	1	3	260	884	34·81	..
D	Tullyhogue (Rockdale House) . . . . . Major R. Stevenson . . . . .	5	1	0	275	974	38·35	234
3.—FOYLE. 769 sq. mi.								
D	Omagh (Edenfel) . . . . . Lt.-Col. J. B. Buchanan . .	8	1	6	280	1169	46·02	235
D	Sion Mills (Sion House) . . . . . Capt. J. C. Herdman . . . .	5	3	0	100	970	38·18	236
DONEGAL. (Area, 1875 sq. mi.)								
1.—DONAGH & C. 146 sq. mi.								
D	Malin Head . . . . . Air Ministry . . . . .	8	1	0	208	771	30·36	247
2.—LOUGH SWILLY. 273 sq. mi.								
D	Letterkenny (Mental Hospital) . . . . . E. E. Moore, Esq., M.D. . .	5	1	0	183	1041	40·98	247
D	Rathmullen (Fort Royal) . . . . . Col. C. A. S. Montgomery . .	5	1	4	35	999	39·33	..
3.—SHEEPHAVEN & C. 307 sq. mi.								
D	Milford (The Manse) . . . . . Rev. W. J. Young . . . . .	5	1	6	150	1013	39·90	247
D	Dunfanaghy (St. Helen's) . . . . . J. J. MacGrath, Esq., M.D.	8	0	9	50	927	36·49	214
4.—GWEEBARRA & C. 341 sq. mi.								
D	Narin (Kiltorish) . . . . . Lt.-Col. C. P. H. Gardner . .	5	1	6	100	1184	46·62	257
5.—DONEGAL BAY. 322 sq. mi.								
D	Killybegs (Rockmount) . . . . . Com. G. G. Philipps, R.N. . .	5	1	0	65	1489	58·64	241
6.—ERNE. 68 sq. mi.								
7.—DROWES & C. 10 sq. mi.								
8.—FOYLE. 396 sq. mi.								
9.—INSULAR. 12 sq. mi.								

# BRITISH RAINFALL 1922.

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PART IV.

## FLUCTUATIONS OF MONTHLY RAINFALL.

By JOHN GLASSPOOLE, M.Sc., A.I.C.

### INTRODUCTION.

A consideration of the fluctuations of monthly rainfall follows naturally that of the fluctuations of annual rainfall, the subject of an article printed in *British Rainfall*, 1921. It is proposed to discuss here the extent to which the rainfall at the same place fluctuates from year to year in months of the same name (as for example in all Januarys), and to compare the fluctuations from place to place and from month to month over the British Isles. The subject has many aspects and it has been found convenient to divide the paper into sections and sub-sections. Each section is devoted to deductions from statistics of one class ; while the sub-sections are concerned with different uses of such statistics.

In Section I the results of a search through the wide field of rainfall statistics are set out. Occasions of perfectly dry months are discussed. The heaviest known falls at any places in the British Isles are given, and also the heaviest relative to the averages for the places and months in question. In sub-sections IB and IE the cartographical method is adopted and the months which were the driest and wettest over the British Isles as a whole are considered.

In Section II the records for seven stations where the rainfall has been preserved for 100 years or so are utilised. For many purposes the monthly rainfall averaged over 35 years is regarded as the standard, *i.e.*, it is assumed to be a sufficiently good approximation to the "normal." The question whether this assumption is justified is discussed (IIA) ; the averages for the seven stations for the standard 35 years, 1881 to 1915, being compared with the averages for the longest periods available. In the next sub-section of the paper (IIB) the extent of the fluctuations of monthly rainfall at each of the same seven stations is examined.

In Section III the question as to which months' rainfall is most liable to fluctuation is discussed with reference to the records at six representative stations. It is found that winter and summer months have not very different characteristics.

The investigation is extended by the discussion in Section IVA of the statistics for typical months, January and July, at 53 stations, a number which is large enough to enable maps to be drawn with some precision. The resemblance between the maps showing the mean deviation in a summer month and that in a winter month is striking. The statistics for the same 53 stations provide the basis for a series of maps illustrating the frequency of small or large deviations from

the average, and for maps showing the extreme range of monthly rainfall.

In the survey of the great wealth of material available an endeavour has been made to obtain intelligible answers to the most pressing questions on the subject of monthly rainfall. Many more questions challenge further investigation.

#### SECTION I.—GENERAL INFORMATION.

It is of interest to enumerate the extremes of monthly rainfall which have been recorded at any individual station since systematic observations have been made, both in actual rainfall and as a percentage of the average.

##### *A. Occasions when no rain has occurred during a month over large areas.*

The occurrence of .00 in. for the month at any station is always arresting. In 1893, during the famous spring drought, some 20 stations in the south-east of England, mostly in Kent and Sussex, measured no rain for a period of 50 days or more. Locally in this district there was a two months' drought from March 17th to May 16th. The year 1893 was unprecedented for long periods of little or no rain. It is a matter of chance whether long periods of no rain will coincide with our arbitrary unit of time, the month, but in February, 1891, and again in June, 1921, considerable areas of the British Isles had no rain at all. In February, 1891, some 270 stations situated in the centre and south-east of England measured no rain for the month. In June, 1921, the areas so affected occurred locally in Kent, Sussex and Hampshire, and in a coastal strip of South Wales and the South of Ireland. In July, 1911, a small area in the north of Wiltshire received no rain. It is in the districts of least rainfall to the east and south-east of the British Isles that long periods of little or no rainfall occur most frequently. I am not aware of the occurrence of a rainless month at any station in the wettest districts in the north-west of the British Isles. In this connection it should be borne in mind that in the British Isles the number of days with rain shows a correlation with the amount of rainfall, but there is also a well-marked tendency for an increase in the frequency of days with rain from east to west and from south-east to north-west, irrespective of the amount of the rainfall. The chances of a long period without any rain are therefore less to the north-west and west of the British Isles than they are to the south-east and east.

##### *B. An extremely dry month, February, 1891.*

In Table I is set out a comparison between some of the driest and wettest months over England and Wales in actual rainfall. Of these the most striking dry month over the British Isles generally is undoubtedly February, 1891, which is, so far as can be ascertained, the driest month for which data are available. A map showing the

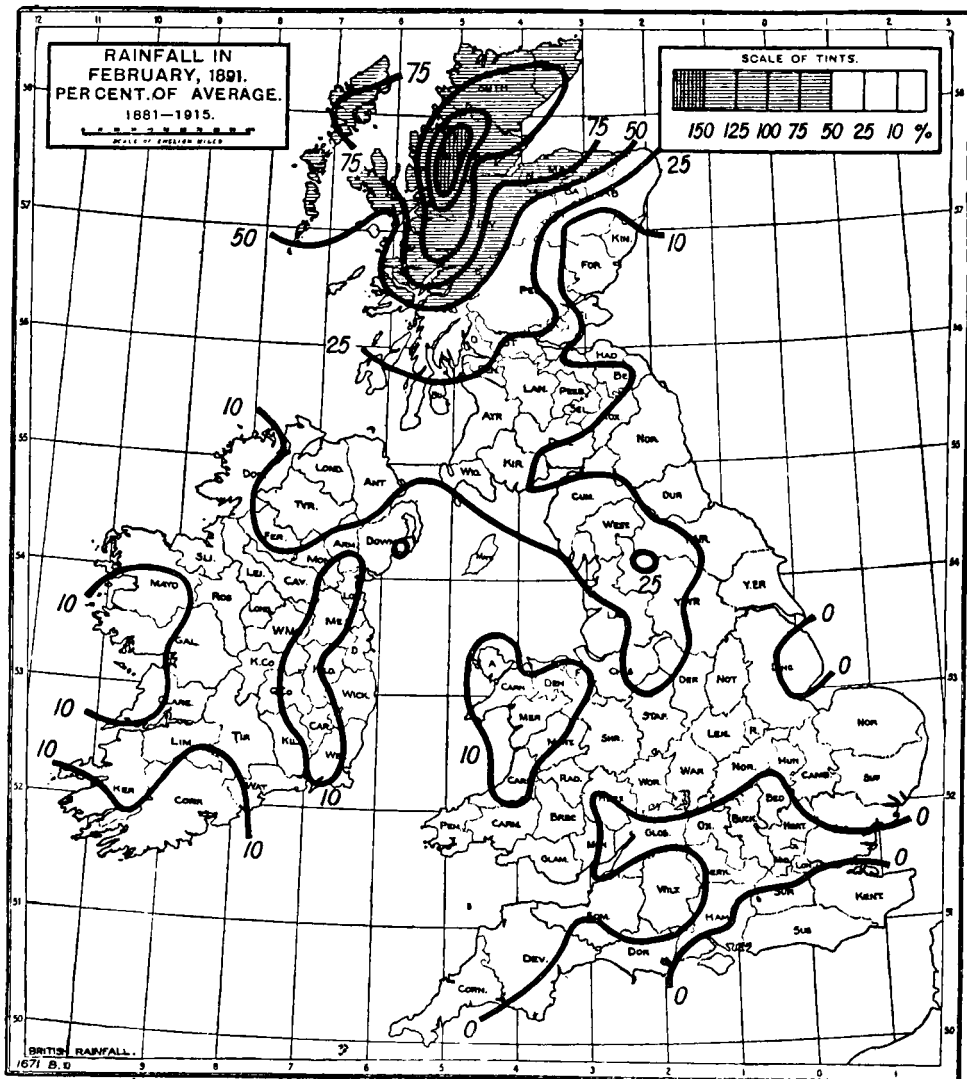


FIG. 1.

rainfall over the British Isles as a percentage of the average (1881 to 1915) in this month is given in Fig. I. Practically everywhere south of a line from Islay to Aberdeenshire the rainfall is shown to be less than 25 per cent., or one quarter of the average. Over large areas in the centre of Ireland and everywhere in England and Wales, with the exception of the north-west of England and of Wales, the rainfall is less than 10 per cent. of the average. In the southern centre of England and in narrow strips reaching out to South Devonshire, the Severn Estuary and the Thames Estuary, the amount is negligible. The northern half of Scotland does not participate in this conspicuous absence of rainfall. In fact, over a large part of Scotland, from Fort William to the north coast, the rainfall exceeds the average, reaching

rather more than 50 per cent. in excess of the average in Central Ross-shire. The general rainfall as a percentage of the average for the British Isles for this dry month is set out in Table II.

TABLE I.—*Comparison of some of the Dry and Wet Months over England and Wales generally in actual rainfall.*

<i>Wet Months.</i>				<i>Dry Months.</i>			
			in.				in.
September, 1918	..	..	7·40*	February, 1891	..	..	·15*
December, 1868	..	..	7·39†	February, 1921	..	..	·35‡
December, 1876	..	..	7·24‡	April, 1893	..	..	·36§
August, 1912	..	..	6·86‡	June, 1921	..	..	·40‡

\* Evaluated from Table II.

† Evaluated by planimeter measurements from map of actual rainfall, *British Rainfall*, 1911, p. [178].

‡ Mean of the actual rainfall values at a number of stations at least 150.

§ Mean of the percentage values at selected stations.

TABLE II.—*Comparison of a Dry and Wet Month over the British Isles generally.*

						Percentage of Average, 1881 to 1915.	
						February, 1891.	September, 1918.
England	..	..	..	..	..	5	286
Wales	..	..	..	..	..	10	314
England and Wales	..	..	..	..	..	6	291
Scotland	..	..	..	..	..	49	169
Ireland	..	..	..	..	..	11	226
British Isles	..	..	..	..	..	21	235

### *C. The heaviest Monthly Falls on Record.*

The largest amounts of rainfall recorded in one month are naturally sought for in districts of greatest annual rainfall and of the greatest number of days with rain, such as the English Lake District, Snowdonia and parts of Inverness-shire. Out of some million monthly values of rainfall filed by the British Rainfall Organization the actual largest values on record are :—

<i>Station.</i>	<i>County.</i>	<i>Month.</i>	<i>Amount.</i>
Llyn Llydaw No. 9 .. ..	Carnarvon ..	October, 1909 ..	56·54 in.
Borrowdale, The Styne No. 10	Cumberland ..	January, 1872..	50·05 in.
Ben Nevis Observatory ..	Inverness ..	December, 1900	48·34 in.

It is of interest to note that these largest amounts of rainfall occurred in winter months, *i.e.*, when the orographical rain is usually most highly developed. Rain-gauges are comparatively rare in these rainy mountainous districts, and, moreover, two of these three records are not long, so that it must be emphasized that these are the maximum amounts of rainfall which have been measured in a month and are on record.

#### *D. High Percentage Values on Record.*

The monthly amounts given in the previous sub-section have been calculated to correspond to 320, 280 and 230 per cent. of their respective monthly averages for the 35 years 1881 to 1915. The drier areas of the British Isles cannot rival the wet areas in the actual amount of rain recorded, the largest monthly amount, *viz.*, 56·54 in., approaching twice as much as that recorded in the whole of the wettest year at either Shoeburyness or Margate since observations began in 1864, *viz.*, 33·24 in. in 1872 and 32·18 in. in 1877 respectively. It is of interest to compare the large percentages of the averages occurring at dry stations by dealing with the months of the famous Bruton and Norwich rain-storms of June, 1917, and August, 1912, respectively. In these storms as much as 9·56 in. was recorded on the 28th June, 1917, at Sexey's School, Bruton, in Somerset, and 7·31 in. on the 26th August, 1912, at Blofeld Road, Brundall, near Norwich. The monthly rainfall in these districts was naturally very large and a computation of the fall in relation to the average gives the following estimates for the maximum monthly falls:—

June, 1917 .. ..	410 per cent. of average 1881 to 1915.
August, 1912 .. ..	470 per cent. of average 1881 to 1915.

Thus, monthly rainfall has exceeded four times and reached nearly five times the average. It is of interest to note that although the wetter districts of the west give the largest actual values for monthly rainfall, it is the drier districts in the centre and east of Great Britain which have given, in relation to the average, the largest deviations. It is also the summer months and not the winter months which have given in relation to the average, the largest departures.

#### *E. An extremely wet month, September, 1918.*

The most striking wet month over the British Isles generally, when the rainfall is compared with the average, was undoubtedly September, 1918. In this month the whole of England and Wales and all but the north-east of Ireland had rainfall more than twice the average (*see* Fig. 2). In Ireland the amount exceeds 250 per cent. over considerable areas in the south and east and 300 per cent. of the average along the coast of Wexford. In England and Wales falls of 250 per cent. are widespread. Three times the average occurs over a large area in the north of England, extending from Southport to Goole and from Kirkby

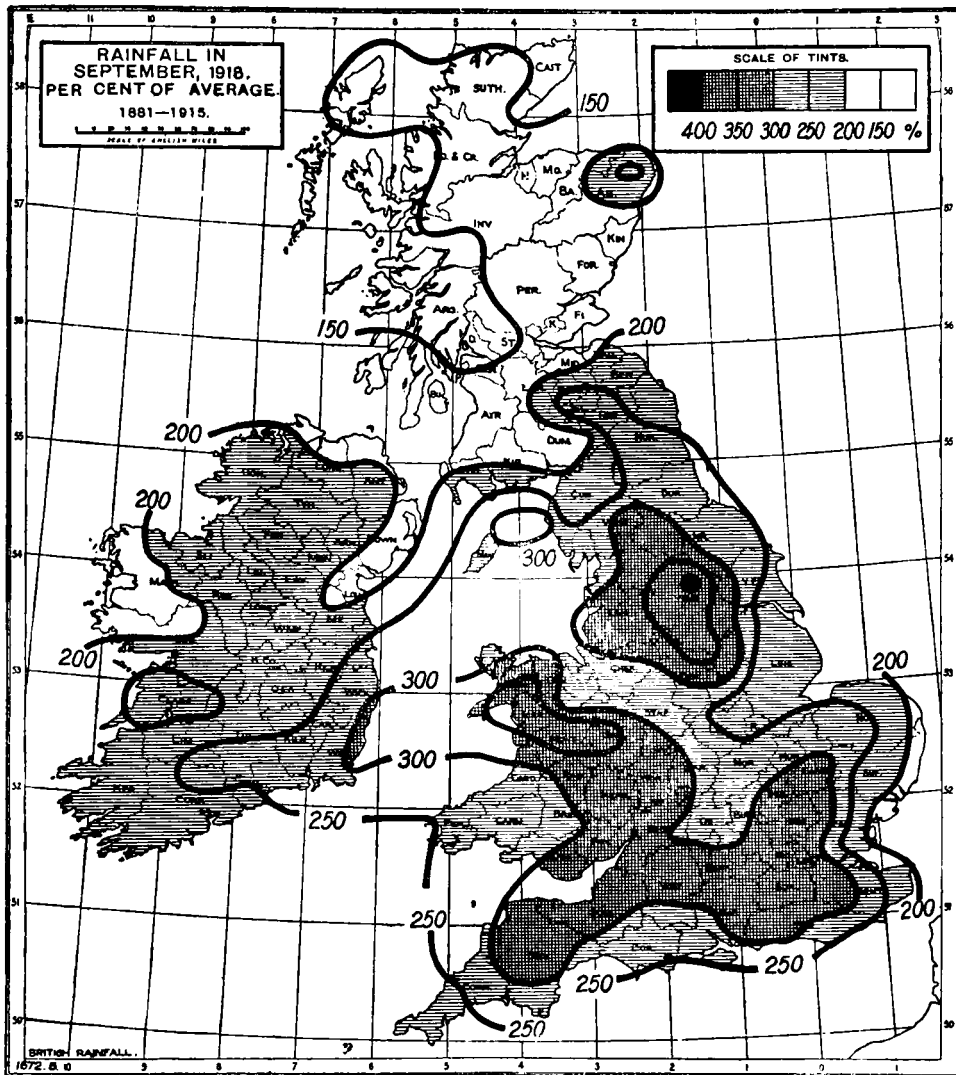


Fig. 2.

Stephen to Derby, and over practically the whole of the district south-west of a line from Llandudno to Maidstone, the coastal regions, however, not being included. More than 350 per cent. of the average occurs in the north of England and in the north of Wales, while as much as 401 per cent. is recorded at Garforth, near Leeds. In Scotland it is only in the extreme south and in Aberdeenshire that the fall exceeds twice the average; there are parts of the west coast from the Clyde to Skye where the fall is less than 150 per cent. It is worthy of notice that in both the maps of extreme monthly rainfall (Figs. 1 and 2), the areas of the largest departures from the average occur in roughly the same locality, viz., the centre and south of England

and Wales. In both cases the rainfall of the northern half of Scotland is dissimilar to that of the remainder of the British Isles.\*

The general values for the British Isles and for the countries as evaluated from the map are set out in Table II together with those for the dry month. In evaluating the general values for these two months the method adopted was to take the mean of the percentage values at 150 points. The points were distributed so far as possible that the number of points in any area of the same size was in proportion to the respective average rainfall, *i.e.*, the wetter areas had more points than the dry areas.

The general rainfall over the British Isles in these two extreme months varies approximately from 7·3 in. to ·7 in., a range of 6·6 in. A general rainfall of 7·3 in. for the British Isles as a whole corresponds nearly to the average general rainfall for the three months April, May and June, which amounts to about 7·8 in. In this wet month, September, 1918, a weight of water equal to about 57,000,000,000 tons fell over the British Isles, or enough water to fill about 160 lakes as big as Windermere, a lake 10·5 miles long and of mean breadth and depth of 950 yards and 78 feet respectively.

Taking the average consumption of water per head per day as 36 gallons (the amount utilised in London), the quantity of rain falling in this wet month would be sufficient for the whole population of the British Isles for about 20 years, assuming no loss by evaporation or percolation during storage.

## SECTION II.—SEVEN REPRESENTATIVE STATIONS WITH LONG HISTORIES.

### A. *Comparison of averages for the 35 years 1881 to 1915, with averages for long periods.*

So far in the present paper the average utilised has been for the period 1881 to 1915. This has been adopted as a standard of reference in publications of the *Meteorological Office* and in other papers. It is therefore of importance to know how closely such an average compares with that for a longer period. Not many reliable records extending over so long a period as 100 years are available. Seven long records† have been selected, and although the periods are not quite the same in all cases, a comparison is made in Table III between averages for

\* See *A Comparison of the Fluctuations of Annual Rainfall over the British Isles*, p. 262.

† For none of these records have the complete data been published.—See, however, *Rainfall Tables of the British Isles*, 1866 to 1880 and 1866 to 1890 (Meteorological Office publications), which include Rothesay, Kendal, Greenwich, Armagh, Chichester, Seathwaite; *British Rainfall*, 1919, pp. 259–260, for Chichester, 1834 to 1919; *British Rainfall*, 1915, pp. 36–37, for Greenwich, 1815 to 1914; *Journal of Scottish Met. Soc.*, Vol. V, No. XLIX–L, p. 22, for Rothesay, 1800 to 1875, and Vol. X, No. X, p. 3, for Dr. Buchan, on *The Monthly and Annual Rainfall of Scotland*, 1866 to 1890.

the 35 years, 1881 to 1915, and those of the long periods at these stations. It will be seen that at each of the seven stations in two or more months the 35 year average exhibits a departure of 10 per cent. or more from the average of a longer period. At Spalding the departure exceeds 10 per cent. in as many as five months.

TABLE III.—*Average Rainfall 1881–1915 compared with average of Long Periods (average of long periods taken as 100).*

	Rothsay, Bute.	Kendal, Westmor- land.	Greenwich, London.	Spalding, Lincoln- shire.	Chichester, Sussex.	Armagh Ob- servatory, Armagh.	Seathwaite, Cumber- land.	Mean of Seven Stations.
Period ..	1800– 1921.	1806– 1921.	1815– 1921.	1829– 1921.	1834– 1921.	1840– 1921.	1845– 1921.	
No. of years	122	116	107	93	88*	82	77	
	%	%	%	%	%	%	%	%
January ..	89	100	93	89	94	89	88	92
February ..	95	95	102	95	105	97	99	98
March ..	95	106	108	104	111	103	105	105
April ..	110	109	90	89	99	100	103	100
May ..	104	110	92	102	105	103	107	103
June ..	100	90	104	85	102	103	92	97
July ..	107	97	92	96	100	97	98	98
August ..	105	103	95	95	100	111	102	102
September	97	89	83	84	84	93	92	89
October ..	87	91	97	101	104	88	90	94
November	98	99	100	100	105	96	102	100
December..	99	104	110	113	116	104	103	107
Year ..	98	99	97	96	103	99	98	99

\* Average utilised is for the 84 years, 1836–1919. See *British Rainfall*, 1919, pp. 259–260.

September is the month of greatest difference on the whole, the average rainfall for the 35 years 1881 to 1915 being for the seven stations 11 per cent. less than that for the longer period for which data are available, *i.e.*, September has tended to become drier in more recent years. As a matter of fact, the average for the Septembers of the period 1881 to 1915 is as much different from the average of the long period at these stations as it is from the average for the shorter period

of the overlapping 35 years, viz., 1875 to 1909. So that the dry character of the Septembers of 1910 to 1915, in comparison with the wet Septembers of 1875 to 1880, is sufficient to explain discrepancies of this order. At Spalding, for example, the percentages of the long period average for the years 1910 to 1915 are 57, 79, 50, 71, 30 and 40 compared with values for the years 1875 to 1880 of 105, 209, 81, 52, 140 and 273. The substitution of one of these groups of years for the other makes a striking difference in the average as shown below :—

Spalding, September, 1875 to 1909	..	2.14 in.
„ „ 1881 to 1915	..	1.81 „

At Spalding the average for the long period 1829 to 1921 is 2.15 in. The dryness of the Septembers of 1910 to 1915 in comparison with those of 1875 to 1880 is apparent practically everywhere in the British Isles. The 1881 to 1915 average is less than 90 per cent. of the 1875 to 1909 average, over about a half of England and Wales, a third of Scotland and a quarter of Ireland. The largest areas are in central England, from Scarborough and Norwich in the north-east to Haverfordwest, St. Austell and Southampton in the south-west, and also in the south-east of Scotland. Over a wide belt in England, stretching from Hull to Bristol, the 1881 to 1915 average is less than 85 per cent. of the 1875 to 1909 average. The change was least in Kent and in the extreme north of Scotland, being less than 5 per cent. For the British Isles as a whole the average for the Septembers of 1881 to 1915 is only 90 per cent. of that for the period 1875 to 1909. So that in a comparatively short period the monthly average has changed considerably.

At the seven stations in Table III the 35 year averages for the seven months, February, April, May, June, July, August and November, are in reasonably good agreement with those for the longer period. On the whole the summer and winter months present changes of approximately equal magnitude. In spite of the considerable differences for the months, the values for the year are much more in accordance, being in each case within 4 per cent. of the value for the longer period.

The precise relationship between the monthly rainfall for this period 1881 to 1915 and that for longer periods has not been evaluated for the British Isles as a whole. It has been established, however, that while 35 years is sufficiently long to yield a fairly constant value for the average of a whole year, it is far from being long enough to yield steady normal values for the months. The difference arises from the variability relatively to the normal being greater in the case of monthly rainfall than in that of annual rainfall.

### *B. The Range of Fluctuation of Monthly Rainfall.*

In dealing with fluctuations of monthly rainfall it is important to deal with long periods where possible, and consequently the extreme monthly values have been extracted for the stations utilised in Table III. The values are set out in Table IV as a percentage of the long

TABLE IV.—*Mean and Extreme Monthly Rainfall at long period stations.*

Station .. Period .. No. of Years	Rothesay, Bute. 1800–1921. 122.				Kendal, Westmorland. 1806–1921. 116.				Greenwich, London. 1815–1921. 107.			
	Mean.	Driest.	Wet-test.	Range.	Mean.	Driest.	Wet-test.	Range.	Mean.	Driest.	Wet-test.	Range.
	in.	%	%	%	in.	%	%	%	in.	%	%	%
January ..	5.03	10	207	197	5.03	9	294	285	1.82	14	239	225
February ..	4.19	14	236	222	4.29	4	251	247	1.54	3	262	259
March ..	3.77	6	217	211	3.88	5	270	265	1.61	11	255	244
April ..	2.72	0	253	253	2.66	19	290	271	1.63	4	267	263
May ..	2.92	3	239	236	2.86	2	285	283	1.89	13	231	218
June ..	3.08	2	279	277	3.22	10	267	257	1.95	11	311	300
July ..	3.71	5	228	223	4.10	13	221	208	2.43	4	302	298
August ..	4.66	27	226	199	4.98	24	235	211	2.31	3	233	230
September ..	4.16	4	214	210	4.44	7	278	271	2.16	7	256	249
October ..	5.05	12	209	197	5.37	10	235	225	2.61	18	293	275
November ..	5.15	18	202	184	5.17	13	260	247	2.28	18	263	245
December ..	5.49	7	202	195	5.74	8	248	240	2.05	15	294	279
Year ..	49.93	69	143	74	51.74	63	134	71	24.28	52	146	94

Station .. Period .. No. of Years	Spalding, Lincolnshire. 1829–1921. 93.				Chichester, Sussex. 1834–1921. †88.				Armagh Observatory. 1840–1921. 82.			
	Mean.	Driest.	Wet-test.	Range.	Mean.	Driest.	Wet-test.	Range.	Mean.	Driest.	Wet-test.	Range.
	in.	%	%	%	in.	%	%	%	in.	%	%	%
January ..	1.84	14	260	246	3.20	10	305	295	2.83	13	222	209
February ..	1.55	0	340	340	2.45	2	303	301	2.30	8	294	286
March ..	1.58	18	234	216	2.32	0	286	286	2.28	20	193	173
April ..	1.61	8	396	388	1.95	0	267	267	2.11	1	204	203
May ..	1.86	8	302	294	2.07	10	298	288	2.32	2	266	264
June ..	2.13	12	263	251	2.31	1	291	290	2.44	11	230	219
July ..	2.54	9	354	345	2.65	11	323	312	2.99	6	237	231
August ..	2.65	9	255	246	3.02	18	266	248	3.25	29	217	188
September ..	2.15	12	274	262	3.08	0	308	308	2.65	4	206	202
October ..	2.50	3	249	246	4.22	8	250	242	3.09	29	246	217
November ..	2.08	22	252	230	3.53	17	244	227	2.96	27	218	191
December ..	1.99	13	326	313	3.51	12	297	285	3.00	18	239	221
Year ..	24.48	62	152	90	34.31	64	148	84	32.22	69	128	59

Station .. Period .. No. of Years	Seathwaite, Cumberland. 1845–1921. 72.				Mean Range, Seven Stations.
	Mean.	Driest.	Wettest.	Range.	
	in.	%	%	%	
January ..	15.17	8	208	200	237
February ..	11.97	11	250	239	271
March ..	10.61	8	252	244	234
April ..	7.18	10	236	226	267
May ..	6.86	8	249	241	261
June ..	7.12	15	239	224	260
July ..	8.65	20	240	220	263
August ..	11.36	23	235	212	233
September ..	10.77	5	235	230	247
October ..	13.29	15	237	222	232
November ..	13.31	19	261	242	224
December ..	15.88	7	203	196	247
Year ..	132.17	66	135	69	80

† Average utilised is for the 84 years 1836–1919, see *British Rainfall*, 1919, pp. 259–260.

period average, and the following features of the table may be mentioned :—

*With regard to Minima—*

- (a) For every month of the year there is in the seven at least one station at which the rainfall has not been below 10 per cent. of the average.
- (b) Rather less than half of the minima values are below 10 per cent. of the average.
- (c) Minima of less than 10 per cent. are more frequent in the summer than in the winter months. In September six stations have minimum values below 10 per cent.
- (d) The minima are largest at Armagh and at Seathwaite, at which stations minima exceeding 20 per cent. are credited to three months and two months respectively.
- (e) There are five entries of zero, months with no rain having occurred in the hundred years observations at Chichester in March, April and September, at Spalding in February, and at Rothesay in April.

*With regard to Maxima—*

- (f) Every maximum value, except that for Armagh in March, exceeds 200 per cent., or twice the average. Many of the maximum values are, however, little in excess of this amount.
- (g) In most months there is at least one station out of the seven at which the rainfall exceeds three times the average. At Spalding and Chichester the maximum value exceeds three times the average in five and in four months respectively.
- (h) Maxima exceeding 300 per cent. are more frequent in summer than in the winter months. In July three stations have maximum values above 300 per cent.
- (i) The largest value is 396 per cent., in April at Spalding, or nearly four times the average.

*With regard to Range—*

- (j) The smallest range is 173 per cent., at Armagh in March, and the largest range 388 per cent., at Spalding in April.
- (k) Spalding and Chichester generally have the largest range, and Rothesay and Armagh the smallest range. It is noticeable that these stations have the largest and smallest fluctuations of annual rainfall respectively.
- (l) The mean values of the range for the seven stations set out in the last column in Table IV are remarkably uniform, varying only from 271 per cent. in February to 224 in November.

- (m) The mean of the ranges in the six summer months for the seven stations is 255 per cent., and that for the six winter months 241. The range of the summer months is therefore only slightly greater than that for the winter months, in spite of the tendency of the summer months to give more extreme monthly values both in dry and in wet months.

### SECTION III.—SIX REPRESENTATIVE STATIONS ON A LINE ACROSS THE BRITISH ISLES FROM N.W. TO S.E.

#### A. *Mean Deviation of Monthly Rainfall, 1881 to 1915.*

A convenient method of comparing the extent of the fluctuations of rainfall at various places is by evaluating the mean deviation at each station. This is done for any station by expressing the rainfall of each of the thirty-five months of the same name as a percentage of the average, by writing down the arithmetical departures from 100, taking the sum of these departures irrespective of the sign, and dividing by 35, thus obtaining the mean deviation.

The mean deviation of annual rainfall during the 35 years 1881 to 1915 has been found to vary from 6 per cent. in the north-west of Donegal to rather more than 16 per cent. of the annual fall in the centre of England, in the neighbourhood of Herefordshire and Leicestershire.†

TABLE V.—1881 to 1915. *Mean Deviation of Annual Rainfall from the average: the rainfall being expressed as a percentage of the annual average of that period.*

Buncrana, Rockfort .. ..	Donegal .. ..	%
Islay, Eallabus .. ..	Argyllshire .. ..	6·0
Southport, Hesketh Place .. ..	Lancashire .. ..	8·0
Ross, Birchlea .. ..	Hereford .. ..	10·6
Wellingborough, Swanspool .. ..	Northants .. ..	17·3
Tenterden, View Tower .. ..	Kent .. ..	14·7
		10·8

In other words, the fluctuations of annual rainfall relatively to the average are approximately three times as great in the centre of England as in the north-west of Ireland for the period in question.

It becomes a matter of importance to consider the variation of the mean deviation for the month, both from month to month throughout the year and also from station to station. It was hoped that by so doing some light would be thrown on the question as to whether the summer months, with their thunderstorms and heavy patches of rain, have larger fluctuations than the winter months with their highly developed orographical rains; and also whether the areas in the centre of England owe their large annual fluctuations to the summer or to the winter months.

† See *British Rainfall*, 1921, p. 288: *The Fluctuations of Annual Rainfall*.

As a preliminary investigation, six representative and thoroughly reliable stations have been chosen, situated across the British Isles in a line from north-west to south-east, cutting across the region of large annual fluctuations in the centre of England. The records at Buncrana, in Donegal, and Eallabus, in Islay, represent the areas with small annual deviation, while Ross and Wellingborough are situated in the areas with large annual fluctuations. Southport is intermediate between these two groups, and Tenterden is nearer the Continent. The values of the mean deviations of annual rainfall at these six stations are set out in Table V, and similar values for each month in Table VI.

TABLE VI.—1881 to 1915. *Mean Deviation of Monthly rainfall from the average; the rainfall being expressed as a percentage of the monthly averages of that period.*

Station.	Jan.	Feb.*	Mar.	Apr.	May.	June.	July.	Aug.	Sept.†	Oct.	Nov.	Dec.
Buncrana ..	% 33	% 31	% 30	% 25	% 27	% 42	% 25	% 28	% 38	% 29	% 26	% 21
Islay ..	26	33	35	27	30	47	25	27	33	27	23	22
Southport ..	40	45	36	38	38	37	48	31	46	31	31	33
Ross ..	47	61	51	46	40	41	51	40	51	45	39	48
Wellingborough ..	38	52	39	40	39	43	48	28	51	42	34	47
Tenterden ..	47	51	39	37	48	42	48	44	49	42	36	42
Mean ..	39	45	38	36	37	42	41	33	45	36	31	36

\* In the present state of our knowledge it is not possible to correct the values for February for the shorter length of this month. The shortness of the month would account somewhat for the higher values.

† September is the month of greatest change in the value of the average rainfall, and this would account to some extent for the high values.

The greatest range in any one month is in February, viz., from 31 to 61 per cent., while in June the variation is only from 37 to 47 per cent. In comparison with the mean deviation of annual rainfall, and in view of the much shorter period of time utilised in monthly rainfall, the mean deviation for the months, both from month to month and over the British Isles, appears to be remarkably uniform. At the six stations the months of the largest variation in relation to the average are February and September, each with mean deviations of 45 per cent. of their average monthly rainfall. This is in harmony with the observed facts that both February and September have been months of excessive wetness and of extreme dryness. In 1891, 1895 and 1921, February was noteworthy for low rainfall over the British Isles as a whole, that of 1891 (see Fig. 1) being probably the driest month of any name for which data are available for the British Isles. In 1910, 1915 and 1916, February was wet. For September we have that of 1865 as

one of the driest months relatively to the average ever recorded, and that of 1918 (see Fig. 2) as one of the wettest months relative to the average for which data are available. A subsidiary maximum occurs in June and July, while August and November are the months of least fluctuations, November having the smallest number of 31 per cent.

A comparison of the mean of these values for the six summer months and for the six winter months is set out in Table VII. In the case of

TABLE VII.—*Comparison of Mean Deviations of winter and summer months (from Table VI).*

Station.	Mean of Mean Deviations of		
	Summer (six months).	Winter (six months).	Whole Year.
	%	%	%
Buncrana .. ..	31	28	30
Islay .. ..	32	28	30
Southport .. ..	40	36	38
Ross .. ..	45	49	47
Wellingborough .. ..	42	42	42
Tenterden .. ..	45	43	44
Mean .. ..	39	38	38.5

the stations situated to the north-west and near the coast the fluctuations of monthly rainfall are somewhat larger in the summer months than in the winter months, the difference, however, is not very marked. In the case of Ross, the station with the largest mean deviation of annual rainfall, the converse is the case. It is also clear that the large annual deviation of the centre of England cannot be attributed wholly to the large fluctuations of the summer months, the larger fluctuations being maintained throughout the year. It would appear that the value of the mean deviation for any month depends to a considerable extent on the value of the mean deviation for the year.

#### SECTION IV.—53 REPRESENTATIVE STATIONS. STATISTICS AND MAPS FOR JANUARY AND JULY.

##### *A. Monthly Rainfall, 1881–1915, January and July.*

The investigation was carried a stage further by the preparation of maps showing the geographical distribution of the value of the mean deviation for a winter and a summer month, viz., January and July. The months January and July were chosen, rather than any other months, from a consideration of the isomeric maps, *i.e.*, maps

constructed by plotting the percentages which the average monthly rainfall forms of the annual average. The contrast in these two months is illustrated by the following statement :—" In January, representing the winter solstice, the proportion of the year's rainfall falling is greatest in the rainy westerly uplands, pointing to a predominance of

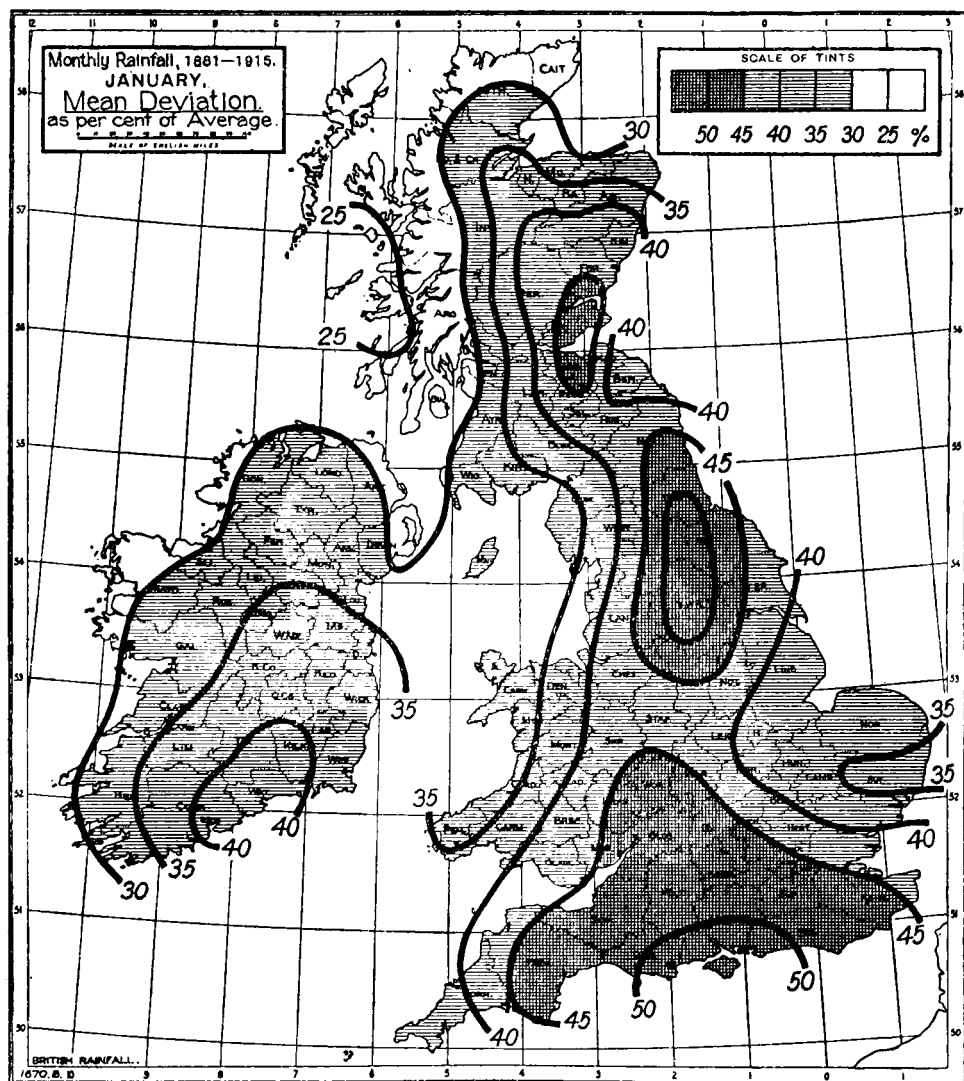


Fig. 3.

rain of the orographical type. There is a diminution in the percentage values observed towards the east, and a well-marked minimum along the east coast occurs in the districts where orographical rain is least frequent. The map provides an interesting contrast with that for July. In this month the rainy regions of the west show definite minima, indicating that in these districts of orographical rainfall

the rain-bearing winds are producing their least effect in the summer. Towards the east the percentage values increase, reaching their maximum in the regions where the January percentages were at a minimum. These are the districts in which cyclonic and thunderstorm rains are most prevalent in summer. In a general way the two maps are

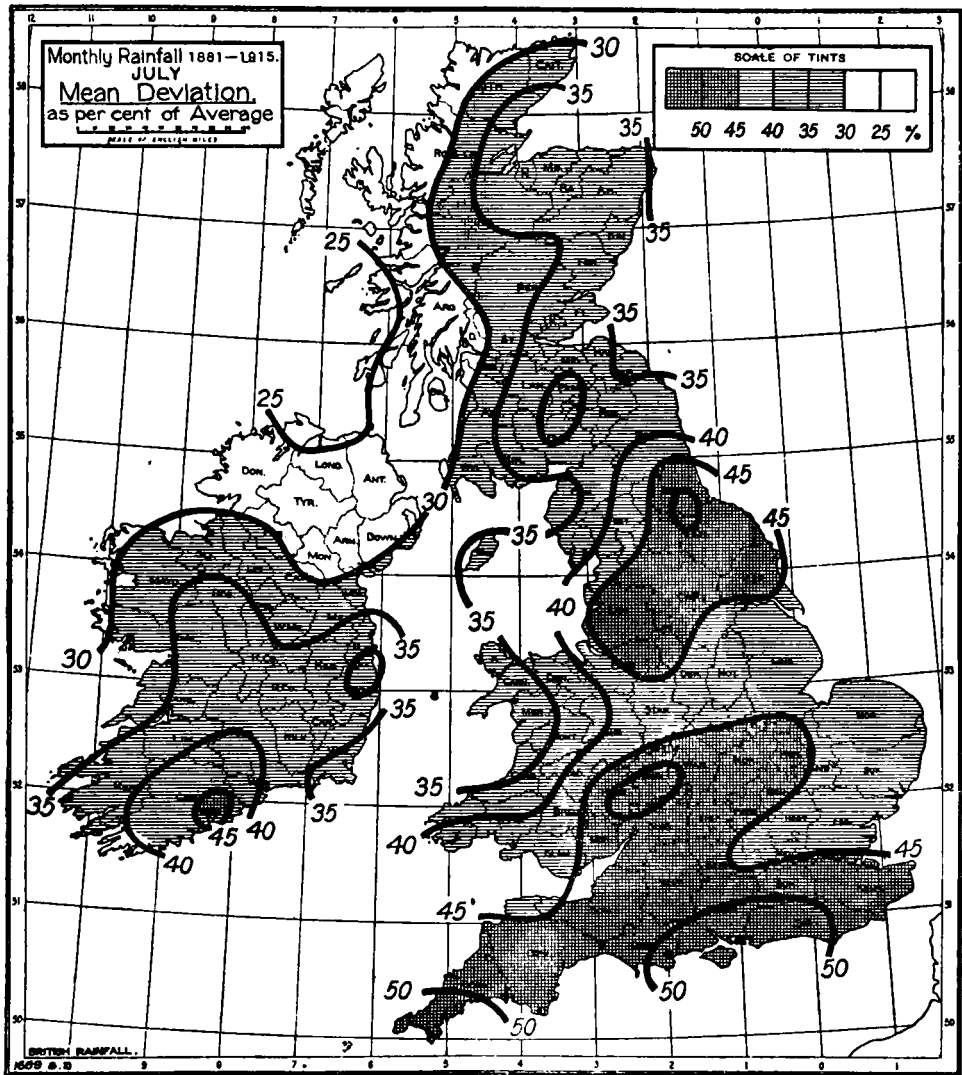


Fig. 4.

complementary.”\* From this it is reasonable to suppose that if the fluctuations of rainfall are in the main controlled by orographical rain, the mean deviation of the rainfall of January will be greater than that of July. On the other hand, if it is the intense falls associated with summer thunderstorms or cyclonic rains which fundamentally control

\* Salter in *The Rainfall of the British Isles*, p. 193.

the fluctuations, then it is July and not January which would have the larger values for the mean deviation.

The values of the mean deviation for 53 stations situated over the British Isles for the period 1881 to 1915 are set out in Table VIII, and maps showing the geographical distribution are given in Figs. 3 and 4. The general distribution of the mean deviation for January shows a central core of large fluctuation stretching practically the whole length of Great Britain, with a subsidiary one running parallel in the southern centre of Ireland. Inland and to the south the values increase, exceeding 40 per cent. in the south of Ireland, the south-east of Scotland and over the greater part of England and Wales, including the area from Carlisle and St. Austell in the west to Hull, Wellingborough and Chelmsford in the east. In these areas of England and Scotland fluctuations of more than 45 per cent. are widespread, but the value reaches 50 per cent. only in small areas in the neighbourhood of Edinburgh, in central Yorkshire and in the extreme south of England near the Isle of Wight. Values of less than 30 per cent. occur along the west and north coasts of Ireland, and over considerable areas along the west and north coasts of Scotland, while in the neighbourhood of Mull the value is somewhat less than 25 per cent. The range is from less than 25 per cent. in Mull to rather more than 50 per cent. in isolated areas of Great Britain.

The map for July exhibits features remarkably similar to that for January, not only in the general distribution of the areas of large and small fluctuations, but also in the actual values over the British Isles generally. The actual range and the general run of the lines are extremely similar. In Ireland the fluctuations for July are slightly less in the north and slightly more in the south, the map for July being rather more complex than that for January. In Scotland the 40 line for July includes a much smaller area than is the case for January. In England and Wales the main feature of difference appears to be the somewhat greater complexity and the somewhat higher values in the south for the map of July.

By taking the mean of the values given in Table VIII for the mean deviation of January and July, general values are obtained for the British Isles as a whole. The values are :—

January, 38 per cent.                      July, 38 per cent.

This is a remarkable illustration of the similarity of the extent of the monthly fluctuations of the two typical winter and summer months. Moreover, these maps show a strong resemblance to the map of mean deviation of annual rainfall published in *British Rainfall*, 1921. In all three maps the general run of the lines and the geographical position of the areas with large and small values are similar. The general value of the mean deviation of annual rainfall for the British Isles is 11 per cent., so that the rainfall for the month relative to the average

TABLE VIII.—Statistics for 53 Stations for the 35 years 1881 to 1915.\*

STATION.	JANUARY.										JULY.										Ratio of Monthly mean deviation to the Annual deviation.		
	Average.	Mean deviation.	Number of Percentage Values within certain limits.						Extremes.		Average.	Mean deviation.	Number of Percentage Values within certain limits.						Extremes.				
			0-50.	51-75.	76-99.	100-124.	125-149.	150-199.	200 or more.	Smallest.			Largest.	0-50.	51-75.	76-99.	100-124.	125-149.	150-199.	200 or more.		Smallest.	Largest.
ENGLAND.																							
Camden Square ..	in. 1.86	% 45	10	4	4	7	4	2	4	27	% 222	in. 2.38	% 45	8	6	3	8	4	3	3	22	% 218	3.8
Tenterden ..	2.15	47	10	4	4	3	8	4	2	28	233	2.09	48	9	4	4	4	4	2	8	251	4.4	
Ventnor ..	2.56	51	12	2	5	3	5	5	3	26	243	2.04	54	8	8	5	3	5	0	5	10	258	3.8
Oxford (Rad. Obsy.)	1.81	48	12	2	4	5	5	5	2	29	243	2.37	46	9	2	5	10	5	0	5	5	197	3.1
Wellingborough ..	1.85	38	5	7	7	6	5	5	0	43	196	2.29	48	9	4	5	3	8	1	5	200	2.6	
Bury St. Edmunds	1.79	31	4	7	7	9	4	3	1	38	203	2.50	42	9	3	8	7	5	1	15	211	2.7	
Geldeston ..	1.66	35	5	6	6	8	5	3	2	38	203	2.50	42	9	3	8	7	5	1	15	211	2.7	
Marlborough ..	2.46	48	9	4	5	5	5	6	1	22	220	2.33	44	10	2	8	5	3	2	15	241	3.0	
Ashburton ..	5.17	48	9	5	4	4	6	5	2	18	226	2.44	45	10	1	4	8	7	0	0	193	3.1	
St. Austell ..	4.28	39	7	3	8	5	6	6	0	22	212	3.04	47	9	3	5	3	5	2	11	241	3.2	
Ross ..	2.42	47	9	4	4	7	5	6	1	12	186	3.35	50	10	3	5	6	7	3	11	266	2.7	
Church Stretton ..	2.53	44	8	4	4	8	3	7	1	24	200	2.45	40	7	4	7	6	5	5	1	21	227	3.3
Hodsock Priory ..	1.77	45	8	6	4	4	6	6	1	26	200	2.27	42	6	7	6	7	3	5	2	8	263	2.6
Mickleover ..	2.02	42	5	9	7	2	7	4	1	33	202	2.45	43	9	2	7	7	3	5	2	8	256	3.8
Southport ..	2.55	40	7	5	4	8	4	7	0	26	181	2.86	48	7	7	6	3	6	4	2	12	256	3.8
Wetherby ..	2.06	55	11	5	1	6	2	9	1	6	217	2.50	47	8	7	3	5	4	1	14	222	4.0	
Hull ..	1.80	41	6	8	8	3	3	5	2	24	256	2.34	45	7	8	3	8	5	1	17	245	3.2	
Wolsingham ..	2.92	50	6	10	5	1	5	6	2	24	219	2.82	50	9	6	4	3	5	7	11	235	3.7	
Rothbury ..	2.66	45	7	6	7	6	2	5	2	21	228	2.75	38	6	5	10	3	5	6	20	190	4.0	
Seathwaite ..	13.28	34	5	3	11	6	4	6	0	9	167	8.46	34	5	6	8	8	5	2	21	245	3.6	
Kirkby Stephen† ..	4.04	44	6	8	8	3	2	7	1	12	218	3.35	43	7	6	5	4	8	4	17	235	3.2	
WALES.																							
Cardiff ..	3.78	44	5	11	4	2	7	4	2	21	205	3.11	45	7	5	6	6	4	5	15	241	3.5	
Haverfordwest ..	4.61	34	3	10	6	4	9	3	0	41	179	3.20	41	6	6	9	4	4	2	23	244	2.9	
Aberystwyth ..	4.09	34	2	8	11	5	2	7	0	10	183	3.86	31	3	7	9	7	6	3	0	22	176	3.5
Llandudno ..	2.58	34	4	7	9	4	7	4	0	27	178	2.39	37	7	5	7	7	3	6	0	34	192	3.6
ISLE OF MAN.																							
Douglas ..	3.54	33	3	9	11	5	3	3	1	43	202	3.34	37	5	7	8	7	3	4	1	9	254	3.9

\* For full names and positions of Stations see Table II., p. 263. † 54° 28' N; 2° 21' W.

TABLE VIII (contd.)—Statistics for 53 Stations for the 35 years 1881 to 1915.\*

STATION.	JANUARY.										JULY.										Ratio of Monthly mean deviation to the Annual deviation.			
	Average.	Mean deviation.	Number of Percentage Values within certain limits.						Extremes.		Average.	Mean deviation.	Number of Percentage Values within certain limits.						Extremes.					
			0-50.	51-75.	76-99.	100-124.	125-149.	150-199.	200 or more.	Smallest.			Largest.	0-50.	51-75.	76-99.	100-124.	125-149.	150-199.	200 or more.			Smallest.	Largest.
SCOTLAND.																								
Dumfries (Cargen)	in.	36	3	9	8	6	2	6	1	15	211	3.24	39	4	6	8	6	5	6	0	17	196	3.0	3.3
Marchmont House	2.28	31	3	5	10	10	3	4	0	27	194	3.05	34	5	6	8	4	5	5	1	26	201	2.7	3.0
Edinburgh (Charlotte Sq.)	1.68	52	10	7	2	3	7	4	2	29	255	2.69	39	6	6	7	6	6	6	1	21	210	3.9	2.9
Girvan (Pinmore)	4.72	31	2	7	9	6	10	1	0	15	198	3.65	31	4	3	12	6	7	2	1	16	211	3.6	3.6
Islay Eallabus)	4.68	26	2	3	15	6	8	1	0	21	168	3.41	25	4	3	6	16	4	2	0	31	177	3.1	3.1
Mull (Quinish)	5.60	24	3	3	10	13	5	1	0	18	179	4.05	24	3	5	7	15	4	1	0	24	183	3.1	3.1
Loch Dhu	9.10	32	3	6	9	8	5	4	0	10	178	4.83	29	2	6	12	7	5	2	1	25	201	2.7	2.5
Crieff	3.99	41	5	11	7	6	5	4	2	18	206	2.99	35	4	5	10	9	2	4	1	15	222	3.4	2.9
Blair Atholl	3.28	42	6	8	7	5	4	4	2	20	235	2.52	32	3	8	6	11	2	3	2	17	202	3.7	2.8
Aberdeen (Cranford House)	2.38	40	6	7	7	4	6	3	2	25	216	2.96	36	5	6	7	9	3	5	0	23	191	4.5	4.0
Gordon Castle	2.02	31	3	7	9	10	0	5	1	35	203	3.20	38	4	7	10	5	5	2	2	21	231	2.7	3.3
Loch Quoich (Glenquoich)	13.75	27	4	4	7	11	5	4	0	19	163	6.42	31	2	9	10	6	2	6	0	25	185	2.6	3.0
Alness (Ardross Castle)	3.80	35	5	6	6	8	5	5	0	31	194	3.03	37	4	10	6	6	3	6	0	31	199	3.1	3.3
Loch Torridon (Bendamp)	9.40	29	3	7	7	9	6	2	1	21	209	5.42	28	3	5	9	11	3	4	0	25	170	2.8	2.7
Stornoway	5.17	29	3	7	6	12	4	3	0	25	174	3.03	29	2	7	8	10	6	1	1	28	226	2.8	2.8
Wick	2.46	26	1	7	14	4	6	3	0	36	176	2.63	32	4	5	12	3	7	4	0	36	181	2.6	3.2
IRELAND.																								
Cork (University College)	4.04	42	7	5	8	3	8	2	2	20	218	2.71	47	6	10	3	6	2	7	1	9	216	3.6	4.0
Valencia (Glanleam)	5.63	29	2	6	10	8	6	3	0	37	163	3.76	36	2	11	7	4	5	6	0	28	186	3.0	3.7
Waterford (Brook Lodge)	3.69	40	4	11	3	5	5	7	0	21	196	3.24	35	4	10	4	8	4	4	1	6	218	3.6	3.2
Nenagh (Castle Lough)	3.96	36	4	8	7	4	8	3	1	17	209	3.14	36	4	9	6	8	3	5	0	25	187	3.6	3.6
Dublin (Fitz William Sq.)	2.29	39	5	7	7	8	4	2	2	19	249	2.56	40	7	3	11	5	3	4	2	24	225	3.7	3.8
Mullingar (Belvedere)	3.21	38	4	9	6	5	6	3	2	33	205	3.18	34	3	8	8	9	1	5	1	30	219	3.9	3.5
Greene	2.51	31	2	7	11	8	1	6	0	24	183	2.85	31	4	6	6	12	4	2	1	22	258	3.3	3.9
Ballinrobe (Cranmore)	4.94	32	3	7	9	6	7	3	0	21	179	3.35	35	5	6	9	4	5	6	0	16	169	3.3	3.6
Collooney (Markree Obsv.)	3.93	30	2	7	10	6	6	4	0	29	175	3.46	33	4	8	5	8	5	5	0	42	172	3.8	4.2
Omagh (Edenfel)	3.54	32	2	8	10	4	6	5	0	12	188	3.40	28	3	4	11	7	8	1	1	18	206	3.7	3.3
Buncrana (Rockfort)	3.50	33	4	4	11	5	7	4	0	27	181	3.46	25	3	4	10	12	4	1	1	14	218	5.5	4.2

\* For positions of Stations see Table II., p. 263.

varies roughly three and a half times as much as that for the year over the British Isles generally.\* In Table VIII the ratios of the mean deviation for January and July to that for the whole year is given for each station. It will be noticed that the values are fairly uniform. For both January and July the ratios exceed 4.0 in the south-east of England, in the north-west of Ireland and in the neighbourhood of Aberdeen. They are less than 3.0 in the centre of England and Wales and in the centre and north-west of Scotland. The distribution of these values in January and July is nearly identical. In January the range is from 2.6 at four stations to 5.5 at Buncrana, in Donegal. This value of 5.5 is much higher than at any other station, owing no doubt to the low value of 6.0 per cent. for the mean deviation of annual rainfall. In July the range is from 2.5 to 4.5. So that excluding this one value at Buncrana, the range of the ratio of the mean deviation of monthly rainfall 1881 to 1915, for either January or July, to the mean deviation of annual rainfall at numerous stations situated in all parts of the British Isles is only from 2.5 to 4.5.

This illustrates the dependence of the value of the monthly mean deviation on the annual mean deviation at any station.

The summer month July, is not apparently responsible for the larger fluctuations in the centre of the British Isles any more than January, and thunderstorm rain (common in July) does not appear to fluctuate to any greater extent than the typical orographical rain of January.

#### *B. Frequencies of Occurrence of Specified Percentage Departures.*

The geographical distribution of the number of monthly departures of certain magnitude was also considered. In Table VIII are set out

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\* On simple assumptions a theoretical relation between annual and monthly deviations can be established. The assumptions are :—

- (a) that there is a "normal" or "Gaussian" distribution of monthly rainfall;
- (b) that each month of the year has the same average fall and the same deviation from the average;
- (c) that there is no correlation between the falls in successive months; and
- (d) that the number of years in question is high enough to yield good averages.

On these assumptions :—

- (1) The average annual rainfall is 12 times the average monthly rainfall.
- (2) The average deviation of annual rainfall is  $\frac{1}{\sqrt{12}}$  times the average deviation of monthly rainfall.

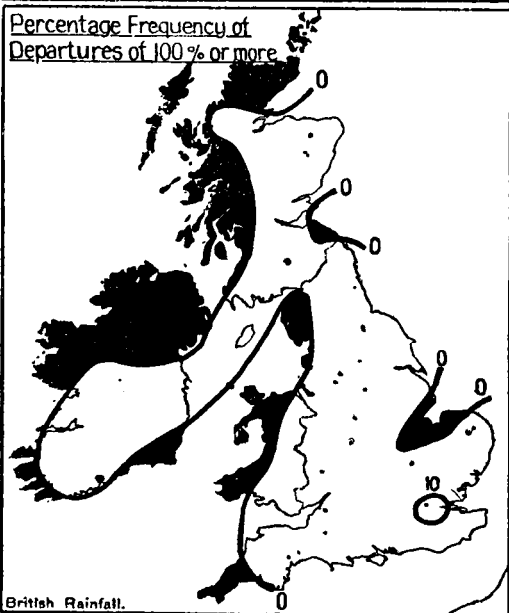
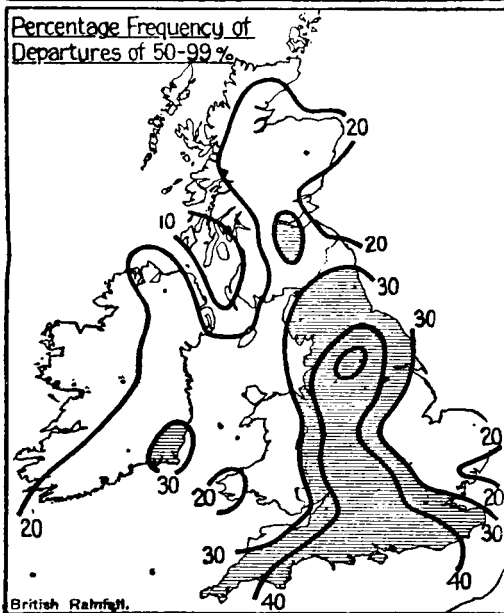
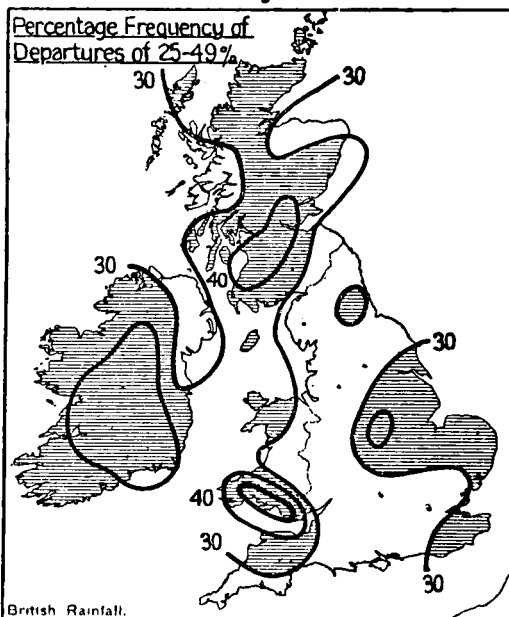
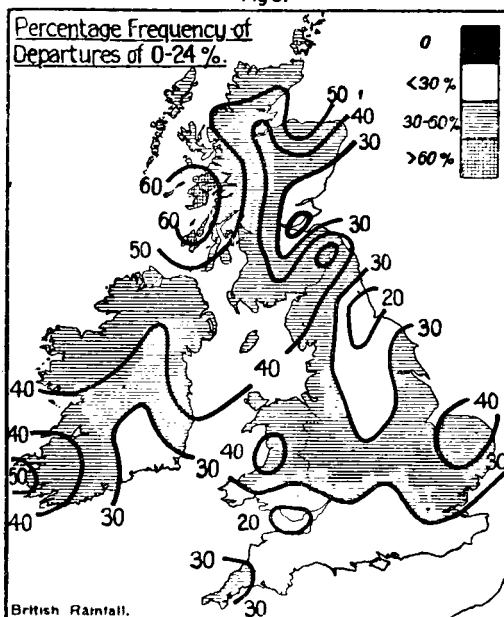
(3) The average proportional deviation of monthly rainfall is  $\sqrt{12}$  times (or 3.46 times) the proportional deviation of annual rainfall. The actual factors found from the statistics was 3.5. It is remarkable that in spite of the manifest departures of the assumptions above from the truth that the results for the British Isles generally should agree so well. For individual stations the agreement is not so good and the variability of the values in the last columns of Table VIII is indicative of the effect of the assumptions not being strictly true. The values given in these columns may be regarded as so many shots at  $\sqrt{12}$  obtained from different samples of the same collection of monthly rainfall data for the years 1881 to 1915.

## MONTHLY RAINFALL, 1881-1915.

Fig 5.

JANUARY.

Fig 6.



1674. B.

Fig 7

Fig 8.

the number of percentage values falling within certain limits at each of the 53 stations. The limits chosen were from 1 to 50 per cent. inclusive, from 51 to 75, from 76 to 99, from 100 to 124, from 125 to 149, from 150 to 199 and 200 or more. The largest and smallest percentage values are also set out for each station. These percentage values were further grouped by combining those from 76 to 99 and

those from 100 to 124 giving the number of departures from 0 to 24 per cent. Similarly those from 51 to 75 and from 125 to 149 were combined to give departures of from 25 to 49 per cent., and those from 1 to 50 and from 150 to 199 to give departures of from 50 to 99 per cent. The values obtained for both January and July were plotted on maps and isopleths drawn to represent the frequencies as percentages of the possible number of occurrences. The maps are reproduced as Figs. 5, 6, 7 and 8 for January and Figs. 9, 10, 11 and 12 for July.

(a) *Frequencies of Departures from the average of from 0 to 24 per cent.*—It is clear from Figs. 5 and 9 that departures within these limits are frequent over the British Isles generally, occurring on more than half the possible number of occasions in the north-west of Scotland and Ireland. Departures of this magnitude occur as frequently as 60 per cent. of the possible number of occasions in both January and July in the neighbourhood of Islay and Mull. Over the greater part of England and Wales departures within these limits are less frequent, being below 30 per cent. in the south of Ireland and in parts of the south and east of Great Britain. Departures of this magnitude are least frequent in January, when in South Wales, in county Durham and in the neighbourhood of the Firth of Forth the number is less than 20 per cent. So that Januarys and Julys of small departures from the average are most frequent in the north-west and least frequent in the east and south of Great Britain.

(b) *Frequencies of departures from the average of from 25 to 49 per cent.* are more uniformly distributed over the British Isles, being nearly everywhere between 20 and 40 per cent. The maps for January and July, Figs. 6 and 10, present generally similar distributions of frequencies of the same magnitude.

(c) *Frequencies of departures from the average of 50 to 99 per cent.*—Departures of 50 to 74 per cent. and of 75 to 99 per cent. are not by themselves sufficiently numerous to justify the reproduction of separate maps. Departures between 50 and 99 per cent. have therefore been grouped together. Figs. 7 and 11 are extremely interesting in comparison with the first maps of the series, Figs. 5 and 9, showing as they do that large departures are distinctly more frequent in the centre and south, whereas small departures are seen to be most frequent in the north-west. The frequency of departure between 50 and 99 per cent. is over 40 per cent. in the centre and southern centre of England and Wales. Departures of the magnitude dealt with occur on as few as 20 per cent. of the possible number of occasions in the north-west of Ireland and Scotland, while in parts of the west coast of Scotland such departures are rare, occurring on less than 10 per cent. of the possible number of occasions.

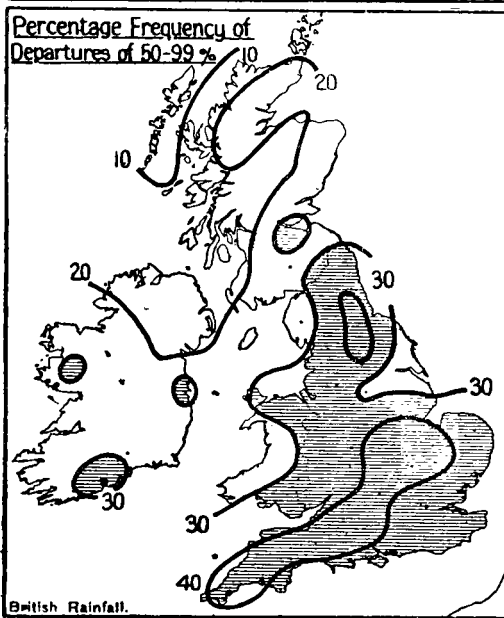
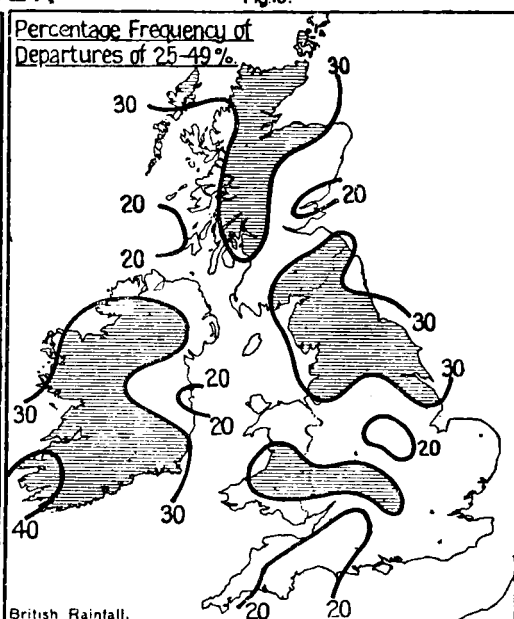
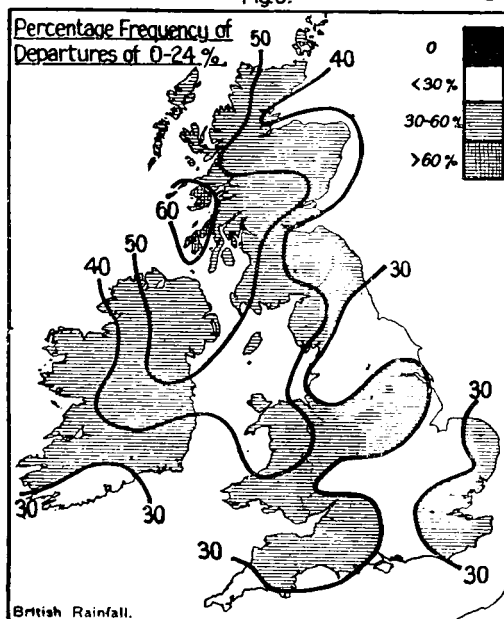
(d) *Frequencies of departures from the average of 100 per cent. or more.*—During the thirty-five years for which observations have been considered, departures of more than this amount are not recorded in

## MONTHLY RAINFALL, 1881-1915.

Fig.9.

JULY.

Fig.10.



#75.A.

Fig.11.

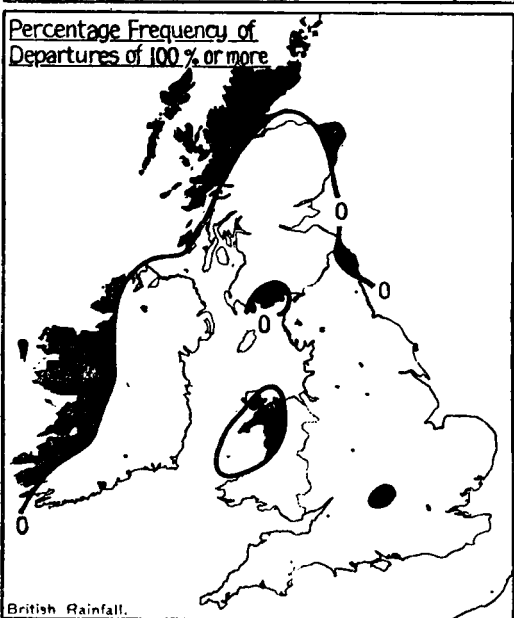


Fig.12.

the west and north of Wales, Scotland and Ireland. In England the areas with no such departure are small and confined generally to coastal regions. Only at one station, *viz.*, Camden Square (London), in January, did the frequency reach 10 per cent. of the possible number of occasions.

This series of maps showing the frequency of occurrences of departures of certain magnitudes is of interest in emphasizing the

similarity of the fluctuations of January and July. The maps present points of similarity with the maps showing the frequency of occurrences of departures of annual rainfall and the two series should be compared.\*

*C.—Extremes of Monthly Rainfall.*

It has frequently been pointed out that the extremes of deficiency and of excess when expressed as a percentage of the monthly average are not equally balanced about the mean, it being impossible to have less than no rainfall (or a deficiency of more than 100 per cent.), while the rainfall of a month may be nearly 400 per cent. in excess of the average. The percentage excess in the wettest January and the percentage deficiency in the driest January was extracted for each station for the 35 years 1881 to 1915. The data are set out in Table VIII. Everywhere the wettest January is in excess of the average by as much as 60 per cent. The lowest values occur along the west and north-west coasts of Scotland and Ireland and the extreme north-west coast of England. Practically everywhere the value exceeds 75 per cent. In the southern half of Ireland, in the east and centre of Scotland and of England the wettest January is more than twice the average, and over considerable areas in the south-east of England in Perthshire and in the neighbourhoods of Hull and Edinburgh the excess exceeds 125 per cent. The driest January in the period varies from a deficiency of 60 per cent. to 90 per cent. of the average. Deficiencies of more than 80 per cent. occur mainly in southern Ireland, in the southern half of Scotland, the north of England and in the south-west of England and Wales. The centre and south of England is not conspicuous in this period for dry Januarys. A map showing the geographical distribution of the extreme percentage range of the monthly rainfall of January is given in Fig. 13. This is as low as 150 per cent. on the west coast, and exceeds 200 per cent. in the south of Ireland, in the neighbourhoods of Perth and Edinburgh and over considerable areas in the south and north-east of England.

In July the distributions of the percentage excess and deficiency are very similar to that of January, except that the values are generally somewhat larger in July. The wettest July exceeds twice the average over a considerably larger area than is the case in January. The area with 125 per cent. in excess is also larger, being situated mainly in the north-west and south of England and Wales. More than 150 per cent. in excess occurs locally in England mainly in the centre and south. It is in England that the distribution of percentage deficiency differs most in July from that of January. Over practically the whole of England the deficiency in the driest July is more than 80 per cent., being over 90 per cent. over a large part of the south and centre of England. The map of extreme

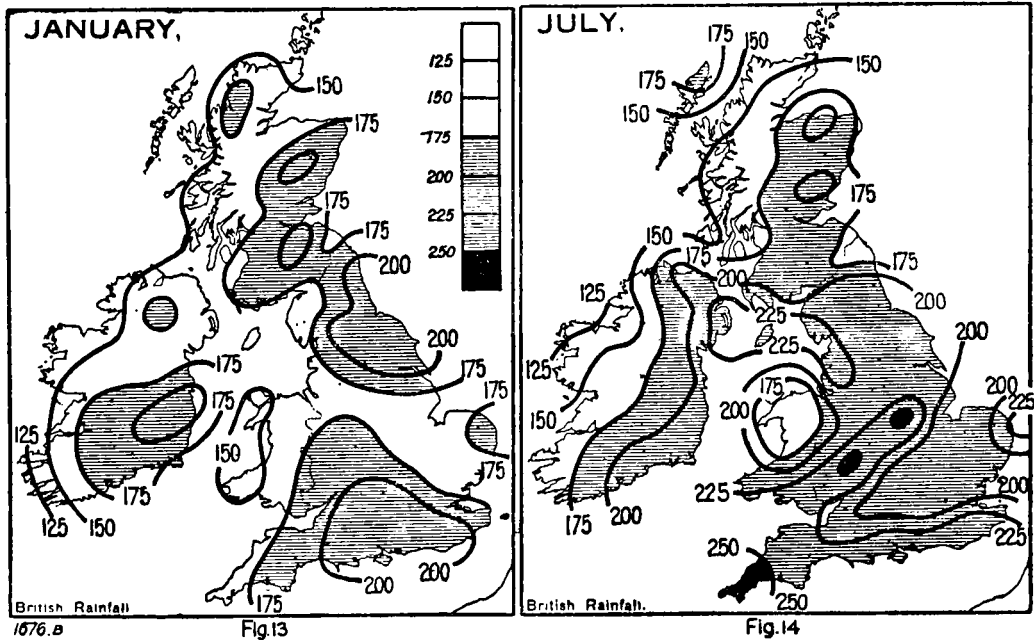
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\* See *British Rainfall*, 1921, p. 296.

percentage range for July is given in Fig. 14 along with that for January. Except in the north-west of Ireland, the values for July are generally larger, the main difference being in England, where the area with an extreme range of twice the average is much larger in July. It is of interest to compare these maps with the map showing

### MONTHLY RAINFALL, 1881-1915.

#### Extreme Percentage Range.



the geographical distribution of the extreme range of annual rainfall.\* In all three maps the least range occurs to the north-west, the range in the centre, south and east being generally larger.

Taking the mean of the values given in Table VIII as giving the general value for the British Isles as a whole, the following values are obtained :—

#### British Isles.

		January.	July.
Percentage excess in Wettest month	..	101	116
Percentage deficiency in Driest month	..	76	82
Extreme Percentage Range	.. ..	177	198

Thus, for the period 1881 to 1915, although the general values for the mean deviation for January and July are the same, July gives somewhat wider extremes of rainfall than January. This is in accord with the conclusion arrived at from a consideration of the actual extremes of monthly rainfall ever recorded, p. 238, and also from a consideration of the extreme monthly values at long period stations, p. 244.

\* See *British Rainfall*, 1921, p. 299.

## SUMMARY.

1. Monthly rainfall values have varied from .00 in. to over 50 in. Months with no rainfall have occurred in the south and centre of the land masses. In relation to the average of the period 1881 to 1915, monthly rainfall has varied from 0 to nearly 500 per cent. of the average; the drier districts of the east and centre (which had their maximum percentage values in the summer months) have experienced larger extreme fluctuations than the wetter districts of the west (which had their maximum in the winter months); the summer months have experienced larger extreme fluctuations than the winter months. The general monthly rainfall over the British Isles has varied from .7 in. to 7.3 in.

2. A comparison of monthly averages for the 35 years 1881-1915 with those for periods of about 100 years indicates that at individual stations departures from the long average of 10 per cent. are likely to occur. A period of 35 years is therefore not sufficiently long to give steady normal values for the month.

3. The general value over the British Isles of the mean deviation 1881-1915 is 38 per cent. of the average for both January and July. The general value of the mean deviation for the annual rainfall is 11 per cent.

4. Fluctuations of monthly rainfall are similar in various months, exhibiting similar geographical distributions as the fluctuations of annual rainfall, so that those for the months are a function of that for the year at any individual station.

5. The two types of rain occurring in the summer and winter months, viz., thunderstorm and orographical rains respectively are subject to similar amounts of variation. July is subject to somewhat wider extremes than January; in January areas of deficient or excessive rainfall are rather more widespread.

## A COMPARISON OF THE FLUCTUATIONS OF ANNUAL RAINFALL OVER THE BRITISH ISLES.

By JOHN GLASSPOOLE, M.Sc., A.I.C.

The distribution of annual rainfall over the British Isles is exceedingly complex, depending as it does to so large an extent on the orography of the country. In the mountain regions of western Inverness-shire, in Snowdonia and in the English Lake District, the rainfall exceeds 150 in. per annum, while in the neighbourhood of the Thames Estuary rather less than 20 in. usually falls. In the study of the fluctuations of rainfall from year to year, it is desirable to eliminate as far as possible this complex and wide variation in the distribution of the actual amount of rainfall from place to place. In order to do this it is usual to consider the rainfall of any particular station as a percentage of the average annual fall as in Table I.

TABLE I.—*Annual Rainfall, 1908–1913.*

				Actual Rainfall.		Percentage of Average.	
				Glenquoich.	Fort Augustus.	Glenquoich.	Fort Augustus.
				in.	in.	%	%
Average 1881–1915	..			110·75	44·20	100	100
1908	..	..	..	107·40	43·93	97	99
1909	..	..	..	98·60	37·44	89	85
1910	..	..	..	106·13	42·22	96	96
1911	..	..	..	122·19	44·78	110	101
1912	..	..	..	124·28	50·26	112	114
1913	..	..	..	119·55	45·50	108	103

Thus from the rainfall at the two stations, Glenquoich and Fort Augustus, for the years 1908 to 1913 it is difficult to appreciate the relative wetness and dryness of the individual years, but if these figures are expressed as a percentage of the average, the comparison of one year's rainfall with another becomes clear. These stations are situated at altitudes of 569 and 68 ft. respectively, some 25 miles apart in Inverness-shire. Glenquoich lies at the bottom of a steep-sided valley of no great width, surrounded on all sides by lofty hills. Fort Augustus is further to the east in a much wider valley which runs from south-west to north-east, *i.e.*, in the direction of the prevailing wind. Although the average annual rainfall is very different, a consideration of the percentage values from year to year emphasizes the

similarity in the relative wetness at the two stations. It has been shown that not only is the correlation between the fluctuations at adjacent stations high, but that there is "some general relationship between the rainfall of the east and the west of each country, although it is not very close, being least marked in Scotland."\*

In order to carry the investigation a stage further the rainfall at various stations has been compared with that at a fixed station. The station chosen was Radcliffe Observatory at Oxford, which is situated in the southern part of central England. This district experiences the largest fluctuations of annual rainfall in the British Isles, the variation diminishing to the north-west and to the coast.† For a large number of stations over the British Isles the percentage of the average of each of the years in the period 1881 to 1915 was available, and in order to compare the series of figures for one station with those at Oxford the "correlation coefficient" has been evaluated.

The correlation coefficient is a measure of the resemblance of two sets of observations.‡ If there is no relation between the values of the annual rainfall for two stations the coefficient should be 0, the closer the relation the more nearly will the value approach unity. If, when one station has rainfall above the average, the other station has rainfall below the average and *vice versa*, the correlation coefficient is negative.

Correlation coefficients have been evaluated for the annual rainfall during the 35 years 1881–1915, the fall at each of 53 stations being correlated with that at Oxford. The coefficients are set out in Table II, p. 263. They have also been plotted on a map, and the distribution emphasized by means of isopleths as shown in Fig. 1. As the period utilised for the correlation coefficient is the same throughout, the values obtained are strictly comparable one with the other. It is not implied that if other samples of rainfall data for a different period had been utilised the result would have been identical.

As will be seen from the map (Fig. 1) the value of the coefficient diminishes with increasing distance from Oxford, but more rapidly to the north than to the west. Values greater than  $+0.50$  occur in the centres of Scotland and Ireland and practically everywhere in England and Wales. South of a line running from Aberystwyth to York and then to Margate the value exceeds  $+0.70$ , while over a considerable area stretching from Cardiff practically to London, the correlation

\* *Q. J. R. Met. Soc.*, Vol. XLIX, No. 208. "The Fluctuations of Annual Rainfall in the British Isles considered cartographically," by Carle Salter and J. Glasspoole.

† *British Rainfall*, 1921, p. 293. "The Fluctuations of Annual Rainfall," by J. Glasspoole.

‡ *Q. J. R. Met. Soc.*, Vol. XXXIV., No. 148, p. 277. "An Elementary Explanation of Correlation illustrated by Rainfall and depth of Water in a Well," by R. H. Hooker, and also *The Computer's Handbook*, Section V, "Computations related to the Theory of Probabilities" (Meteorological Office publication).

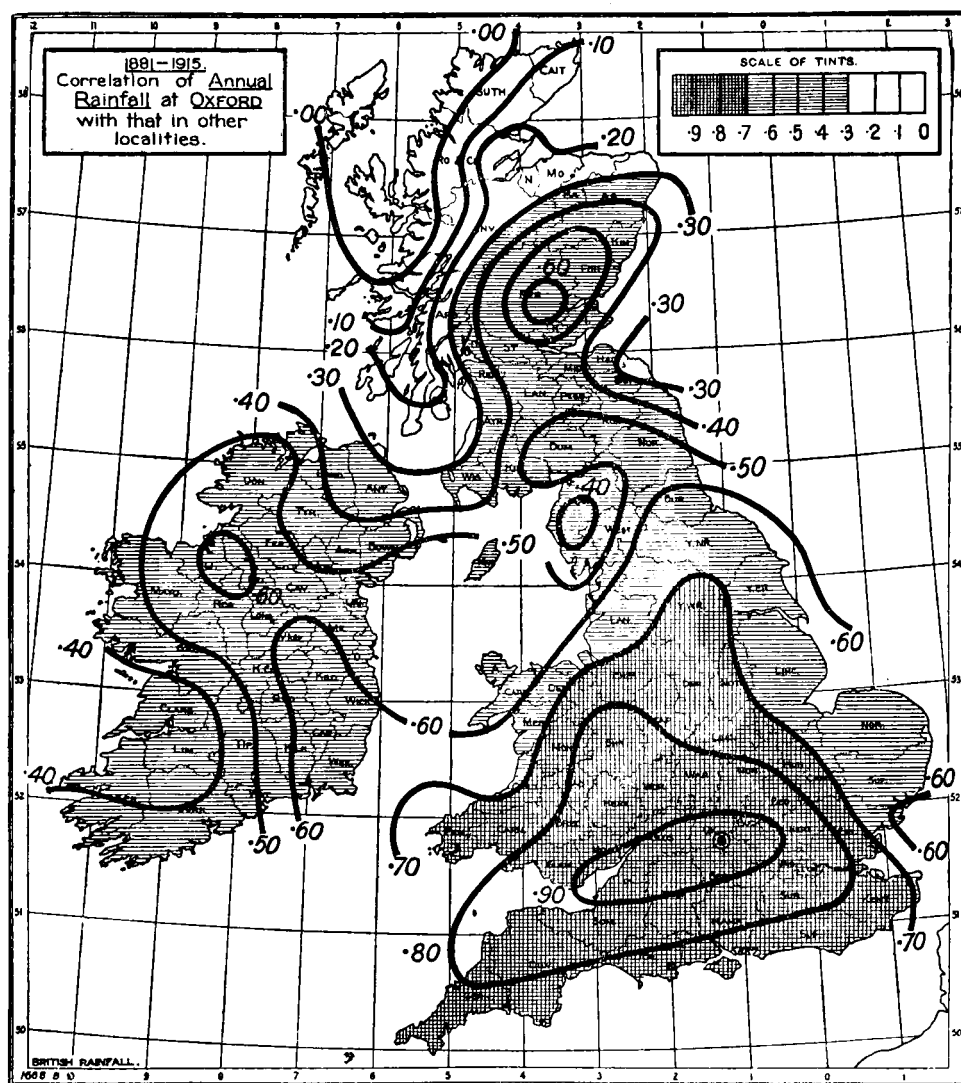


Fig. 1.

coefficient is as high as  $+.90$ . For Magdalen College, a station 1 mile to the south-east of Radcliffe Observatory, a value of  $+.96$  is obtained.

Values of less than  $+.50$  occur in the north of England, to the extreme south and north of Ireland, and over the northern half of Scotland, but it is only in the north of Scotland that the value falls below  $+.30$ . Further northward the value falls off rapidly to  $.00$  along the north-west coast and the Hebrides. At Stornoway the largest negative value of  $-.01$  is obtained.

The map indicates that everywhere except in the north of Scotland the fluctuations of annual rainfall from year to year are similar, as if controlled by some common factor. The more mountainous regions of the British Isles are not generally marked by either relatively

TABLE II.—*Positions of the Stations; Correlation Coefficients with Radcliffe Observatory, Oxford, Annual Rainfall, 1881–1915.*

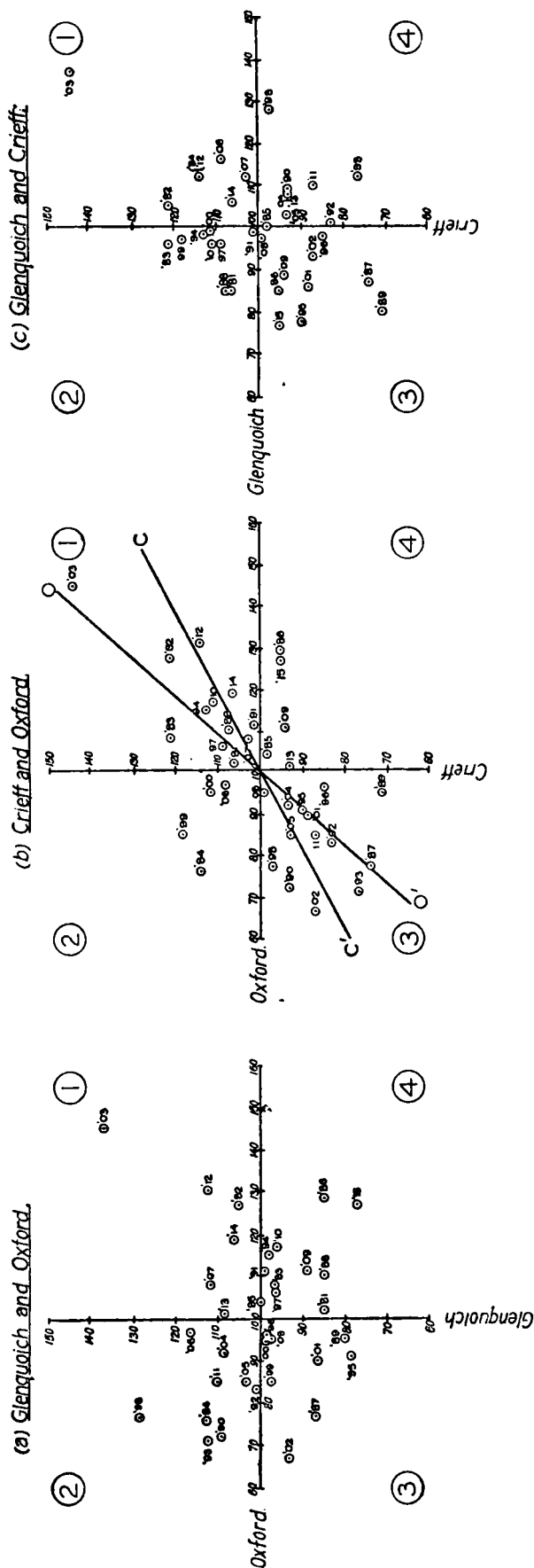
STATION.	COUNTY.	Latitude.	Longitude.	Height above Sea- level.	Correla- tion Co- efficient.
ENGLAND.					
St. Pancras (Camden Square) ..	London .. ..	51° 33'N	0° 8'W	111	+·85
Tenterden (View Tower) ..	Kent .. ..	51° 4'N	0° 42'E	190	+·75
Ventnor (Royal National Hos.)	Hampshire .. ..	50° 36'N	1° 13'W	59	+·72
Oxford (Magdalen College) ..	Oxford .. ..	51° 45'N	1° 15'W	186	+·96
Oxford (Radcliffe Observatory)	Oxford .. ..	51° 46'N	1° 16'W	208	+1·00
Wellingborough (Swanspool) ..	Northants .. ..	52° 18'N	0° 41'W	155	+·81
Bury St. Edmunds (Westley)	Suffolk .. ..	52° 15'N	0° 40'E	226	+·61
Beccles (Geddeston) .. ..	Norfolk .. ..	52° 28'N	1° 31'E	37	+·69
Marlborough (Mildenhall) ..	Wiltshire .. ..	51° 26'N	1° 42'W	456	+·90
Ashburton (Druid House) ..	Devon .. ..	50° 32'N	3° 46'W	583	+·79
St. Austell (Trevarna) .. ..	Cornwall .. ..	50° 20'N	4° 47'W	300	+·79
Ross (Birchlea) .. ..	Hereford .. ..	51° 55'N	2° 35'W	213	+·85
Church Stretton (Wolstaston)	Shropshire .. ..	52° 35'N	2° 48'W	800	+·84
Worksop (Hodsock Priory) ..	Nottingham .. ..	53° 22'N	1° 5'W	56	+·70
Mickleover Manor .. ..	Derby .. ..	52° 54'N	1° 33'W	280	+·76
Southport (Hesketh Park) ..	C. Lancs .. ..	53° 39'N	2° 59'W	37	+·64
Wetherby (Ribston Hall) ..	Yorks, W.R. .. ..	53° 59'N	1° 24'W	130	+·71
Hull (Pearson Park) .. ..	Yorks, E.R. .. ..	53° 45'N	0° 16'W	12	+·64
Wolsingham .. ..	Durham .. ..	54° 44'N	1° 52'W	464	+·62
Rothbury (Cragside) .. ..	Northumberland .. ..	55° 19'N	1° 53'W	405	+·53
Borrowdale (Seathwaite) ..	Cumberland .. ..	54° 30'N	3° 10'W	422	+·36
WALES.					
Cardiff (Ely Pumping Station)	Glamorgan .. ..	51° 29'N	3° 14'W	53	+·92
Haverfordwest (Grammar Sch.)	Pembroke .. ..	51° 48'N	4° 59'W	95	+·75
Aberystwyth (Gogerddan) ..	Cardigan .. ..	52° 26'N	4° 1'W	83	+·67
Llandudno .. ..	Carnarvon .. ..	53° 20'N	3° 50'W	71	+·56
ISLE OF MAN.					
Douglas (Borough Cemetery) ..	Isle of Man .. ..	54° 10'N	4° 28'W	284	+·60
SCOTLAND.					
Dumfries (Cargen) .. ..	Kirkcudbright .. ..	55° 2'N	3° 37'W	85	+·57
Marchmont House .. ..	Berwick .. ..	55° 44'N	2° 25'W	498	+·29
Edinburgh (Charlotte Square)	Midlothian .. ..	55° 55'N	3° 11'W	190	+·42
Girvan (Pinmore) .. ..	Ayr .. ..	55° 10'N	4° 49'W	207	+·29
Islay (Eallabus) .. ..	Argyll .. ..	55° 47'N	6° 15'W	68	+·26
Mull (Quinish) .. ..	Argyll .. ..	56° 36'N	6° 13'W	35	+·01
Loch Dhu .. ..	Perth .. ..	56° 46'N	4° 7'W	325	+·46
Crieff .. ..	Perth .. ..	56° 22'N	3° 51'W	432	+·66
Blair Atholl .. ..	Perth .. ..	56° 46'N	3° 51'W	420	+·59
Aberdeen (Cranford House) ..	Aberdeen .. ..	57° 7'N	2° 8'W	120	+·42
Gordon Castle .. ..	Moray .. ..	57° 38'N	3° 6'W	107	+·21
Loch Quoich (Glenquoich) ..	Inverness .. ..	57° 4'N	5° 15'W	569	+·01
Alness (Ardross Castle) ..	Ross and Cromarty ..	57° 44'N	4° 21'W	450	+·25
Loch Torridon (Bendamph) ..	Ross and Cromarty ..	57° 31'N	5° 32'W	20	—·00
Stornoway .. ..	Ross and Cromarty ..	58° 11'N	6° 22'W	51	—·01
Wick .. ..	Caithness .. ..	58° 27'N	3° 6'W	81	+·13
IRELAND.					
Cork (University College) ..	Cork .. ..	51° 53'N	8° 30'W	65	+·41
Valencia (Glanleam) .. ..	Kerry .. ..	51° 56'N	10° 20'W	75	+·42
Waterford (Brook Lodge) ..	Waterford .. ..	52° 14'N	7° 2'W	104	+·61
Nenagh (Castle Lough) ..	Tipperary .. ..	52° 53'N	8° 23'W	120	+·39
Dublin (Fitz William Square)	Dublin .. ..	53° 20'N	6° 15'W	47	+·58
Mullingar (Belvedere) ..	Westmeath .. ..	53° 29'N	7° 22'W	360	+·63
Greenore .. ..	Louth .. ..	54° 1'N	6° 8'W	13	+·54
Ballinrobe (Cranmore) ..	Mayo .. ..	53° 37'N	9° 13'W	99	+·53
Collooney (Markree Obsy.) ..	Sligo .. ..	54° 11'N	8° 27'W	122	+·66
Omagh (Edenfel) .. ..	Tyrone .. ..	54° 36'N	7° 18'W	273	+·47
Buncrana (Rockfort) .. ..	Donegal .. ..	55° 8'N	7° 27'W	55	+·50

high or low coefficients, so that the orography of the country does not appear to be a controlling factor in this relationship. The centres of the land masses have somewhat higher values than is the case in the neighbourhood of the coast. This is doubtless connected with the operation of influences which render these inland areas more liable to large fluctuations of annual rainfall.

The high value of  $+0.66$  at Crieff is of interest in comparison with the low value of  $+0.01$  at Glenquoich, only some 75 miles to the north-west. In order to examine the rainfall at these stations in greater detail, "dot diagrams" were prepared by plotting the annual rainfall as a percentage of the average (*a*) at Glenquoich and Oxford, (*b*) at Crieff and Oxford and (*c*) at Glenquoich and Crieff. In (*a*) the values for Oxford are measured horizontally and those for Glenquoich vertically. The year has been indicated against the corresponding dot, thus '89 and '10 for 1889 and 1910 respectively. If Glenquoich had always been dry when Oxford was dry and wet when Oxford was wet, the dots would all have occurred in the first and third quadrants, as it is, the number in each quadrant is practically the same. In fact, the departure at Glenquoich is as often similar to that at Oxford (*e.g.*, 1903 and 1887) as it is dissimilar (*e.g.*, 1898 and 1915). In the case of (*b*) Crieff and Oxford, there is a distinct tendency for the dots to group themselves in the first and third quadrants, and these quadrants contain no fewer than 26 out of the 35 dots, so that the diagram emphasizes the fact that there is a considerable correlation between the fluctuations at Crieff and at Oxford, much more than there is between Glenquoich and Oxford. The dot diagram of (*c*) Glenquoich and Crieff is similar to that for Glenquoich and Oxford in that there is no marked tendency for the dots to accumulate in any quadrants. The correlation coefficient of annual rainfall between Glenquoich and Crieff is as low as  $+0.41$ . It is a remarkable fact that the correlation coefficient, *viz.*,  $+0.66$ , between Crieff and Oxford, situated some 340 miles apart, should be higher than that for Glenquoich and Crieff, only 75 miles apart. This points to a lack of similarity between the fluctuations of annual rainfall in the north of Scotland with that elsewhere in the British Isles which is very striking. It seems reasonable to conclude that the general influences which determine the amount of the rainfall in the British Isles do not operate in the north of Scotland.

In the case of (*b*) Crieff and Oxford, the best fitting straight line to the values obtained for Crieff and Oxford have been drawn, *viz.*, CC' and OO' respectively. These lines make angles with the horizontal of roughly 27 deg. and 48 deg. respectively. The line CC' gives the most probable value for Crieff, determined by statistical methods, when the rainfall at Oxford is known, *e.g.*, if the rainfall at Oxford is 120 per cent. of the average, the best estimate for that at Crieff is 110 per cent. Similarly, OO' gives the probable value for Oxford, determined by statistical methods, if the rainfall at Crieff is known. The diagram

**FIG. II.** Dot diagrams showing the Annual Rainfall as Per Cent. of Average at (a) Glenquoich and Oxford, (b) Crieff and Oxford, (c) Glenquoich and Crieff, during each of the 35 years 1881-1915.



demonstrates that larger fluctuations are usually experienced at Oxford than at Crieff. In the case of (a) Glenquoich and Oxford and (c) Glenquoich and Crieff, it is not possible to make deductions of any value as to the likely fluctuations at either Oxford or Crieff from a knowledge of the rainfall at Glenquoich.

That the fluctuations of rainfall are similar at neighbouring stations has long been recognised, but the degree of similarity and the precise extent of the falling off over the British Isles with increasing distance has not previously been evaluated. In a paper read before the Meteorological Society\* in 1922, the relation of the correlation coefficient of weekly rainfall was considered for three stations, viz., Rothamsted, York and Aberdeen. It was found that the coefficients diminished regularly with increasing distance and a mathematical expression connecting these values was deduced. The values obtained for the mean of the coefficients for several weeks of the year, after smoothing, were as follows:—Aberdeen and York,  $+0.53$ ; York and Rothamsted,  $+0.59$ ; Aberdeen and Rothamsted,  $+0.37$ . The agreement of this last figure with the coefficient given in Table II for the annual rainfall at Aberdeen and Oxford of  $+0.41$  is noteworthy.

In 1914, Mr. J. I. Craig† considered the geographical distribution across Europe of the “lines of thermal equicorrelation” in relation to Cairo. He dealt with nine stations for the months of January, April, July and October. In working with stations so far apart he obtained large negative coefficients as well as large positive coefficients. With south-west England the values of the correlation coefficients were:—

TABLE III.—*Correlation coefficients of the monthly mean temperature for Lower Egypt with that for south-west England.*

r.	January	April	July	October
=	$-0.56$	$-0.24$	$-0.19$	$-0.40$

The correlation of rainfall over an equally wide area does not seem to have been undertaken hitherto.

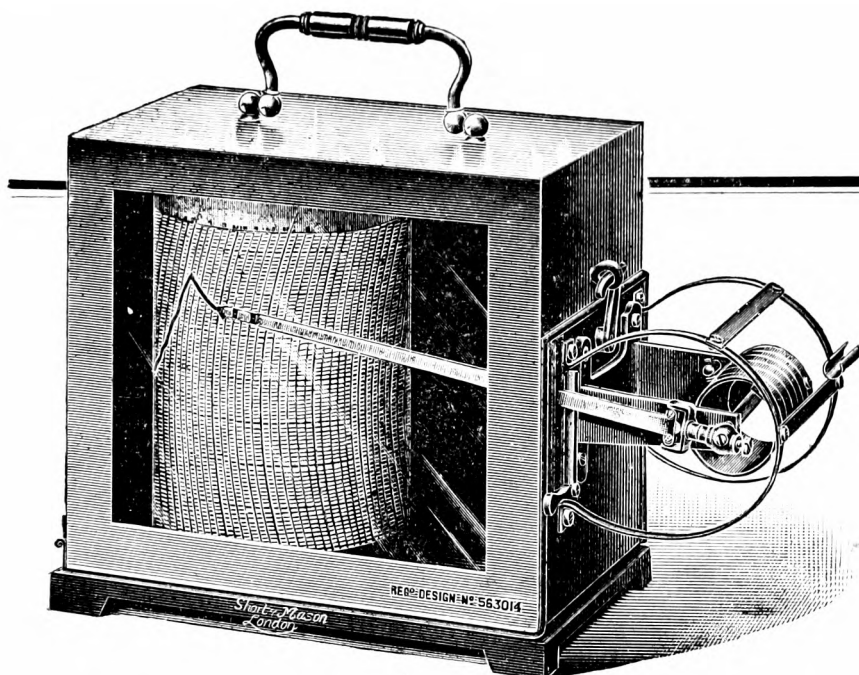
### SUMMARY.

In the present paper the fluctuations of annual rainfall over the British Isles are compared with those at Oxford. It is shown that in general the correlation is close but it breaks down in the north of Scotland. It is hoped to develop this preliminary investigation by carrying the comparison with Oxford to stations in Europe, and also by dealing with some other basic station in a similar manner.

\* *Q. J. R. Met. Soc.*, Vol. XLVIII, No. 203, p. 234. “The Correlation of Weekly Rainfall,” by R. A. Fisher and W. A. Mackenzie.

† *Q. J. R. Met. Soc.*, Vol. XLI, No. 174, p. 89. “A See-saw of Temperature between England and Egypt,” by J. I. Craig.





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