

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inveresk, County of Edinburgh, in Lat. 55°56'0" N Long. 3°2'40" W, Distance from Sea 121 miles.
Height of Cistern of the Barometer above Mean Sea-level 91 feet, above Ground 4 feet. During the MONTH of January 1875
The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No. —				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		No. of hours in which it fell.	Amount in inches.	9 A.M.		P.M.		9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		Barometer. * No. —	Attach- ed Ther- mometer	Barometer. No. —	Attach- ed Ther- mometer	Max. No. —	Min. No. —	Max. in Sun's rays No. —	Min. on Grass. No. —	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.			Readings of the H. Cup Anemometer. No. —	9 h. A.M.	Velocity (0—10), and Direc- tion.	Amount (0—10), and Specie.	Velocity (0—10), and Direc- tion.	Amount (0—10), and Specie.	No. —					8 inches.	12 inches.	No. — 22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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BAROMETER, “corrected Mean” at 9 A.M., minus the Correction†† = 29.663
for Temp. (Col. 2), = 29.722 - .059
“Corrected Mean” of Barometer at 9 P.M., minus the Correction†† = 29.662
for Temp. (Col. 4), = 29.729 - .067
Mean at Station, corrected, and at 32°, = 29.663
Correction for height, feet above Mean Sea-level, = 10
Mean, reduced to 32°, and Sea-level, = 29.764
Highest Reading, corrected for Index error, on the 30 th, = 30.520
Lowest Do. Do., on the 24 th, = 28.720
Difference, or Monthly Range, = 1.800

* Each instrument tested at the Office in Edinburgh bears the stamp “S.M.S.,” and a number to be entered in the Heading; or the Number and Initials of the Maker may be here given.
† Embroidering corrections for both capillary and Index Errors.
‡ The Diurnal Range for Scotland is as yet unknown.
†† Practically, though not absolutely a minus correction.
‡‡ These “Hygrometrical Deductions” are calculated from Glaisher’s Hygrometrical Tables, Second Edition only.
‡‡‡ While the Diurnal Range is unknown, the Arithmetical Mean of Cols. 5 and 6 will be entered as the “Calculated Mean Temperature.”
Any Observations not taken under the conditions specified in the Directions on the other side, or noted at the Top of each column, must be marked as such by the observer, in each Schedule. See over.

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 4th, = 52.0
Lowest in Month, corrected for Index errors, on the 21 th, = 24.0
Difference, or Monthly Range, = 28.0
“Corrected Mean” of all the Highest, (Col. 5), = 44.8
“Corrected Mean” of all the Lowest, (Col. 6), = 34.4
Difference, or Mean Daily Range, = 9.4
** Calculated Mean Temperature of Month, = 39.6

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
“Corrected Mean,” (Col. 7), of Black Bulb, Max. in Sun, =
Lowest at Night, Black Bulb, (corrected for Index errors), on the th, =
“Corrected Mean,” (Col. 8), of Black Bulb, Min. on grass, =
Difference of above Means or Range (“exposed”), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 38.3
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 37.9
†† Computed Temperature of Dew-Point, = 37.3
†† Do. Elastic Force of Vapour, = 223
†† Do. Weight of Vapour in a Cubic Foot of Air, =
†† Relative Humidity, (Saturation = 100), = 96
RAIN fell on 17 Days; Amount in Inches, = 2.89

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		1	1		3	11	14	1			
P.M.		1	1		2	14	9	4			
Mean.		1	1	0	3	12	11	3	0	0	1.85

3.42

Observations made and
Return verified by

Wm. McIndoe

(Signed)

185
143
9

WITH REMARKS ON THE USE OF INSTRUMENTS.

Barometer.—*Weather glasses* and *Aneroids*, though admirably adapted, as the latter certainly are, to indicate variations of atmospheric pressure, are not well fitted for scientific purposes. Nor can any Barometer be used for Meteorological Observations that is not supplied with such means of *adjustment* or *compensation* as will secure the height of the mercury in the tube being accurately measured from the fluctuating surface of the mercury in the cistern. It is also necessary that every Barometer shall have been compared with a *Standard*.

An excellent Barometer is constructed by Mr. Adie of London, the use of which is attended with the great convenience of requiring *no adjustment* of the cistern. Its *scale-inches* are not true inches but so much shorter as to *compensate* the error that would otherwise arise from the fluctuations of the surface of mercury in the cistern. This form of instrument has

When a Barometer, having adjustable surfaces has to be removed from its fastenings, the ivory peg must be screwed so as to form a tight plug to the cistern. Then *scrup* up the mercury to within a quarter of an inch of the top of the tube, and take down the instrument. If it should then be carried with the cistern uppermost. Before suspending the Barometer for use, it must be ascertained whether the space above the mercury in the tube is a complete vacuum; this is the case when, on inclining the instrument so that the mercury strikes the top of the tube, a *sharp tap* is produced. If this is prevented by air it may be removed to the cistern, and got rid of, by inverting the Barometer (care being taken to prevent the loss of mercury by tightening the ivory peg), and gently tapping it; and if this plan fails, the instrument must be repaired.

Protection of Thermometers.—The Council of the Society recommend that Self-registering Thermometers and Hygrometers be enclosed in a Box, painted white outside and inside, and fixed 4 feet above grass in an exposed position free from merely local influences. The laths forming the sides and doors of the Boxes are arranged so as at once to protect the Thermometers, and to allow a complete circulation of air about the instrument facing the open end of the meteoric funnel. The boxes are made of wood slats, in the interior of which are placed double opening to the north. To accommodate a duplicate set of instruments, which is most acceptable, doors may also be made to open to the south.

Self Registering Thermometers.—Professor Phillips, of Negretti and Zambra's Patent "*Maximum*" Thermometers are recommended: printed directions for their use may be obtained with each instrument. The "*Minimum*" Thermometer of Rutherford is recommended and should be affixed to a frame separate from the "*Maximum*." It is recommended that these Thermometers be graduated on the glass stem. The "*Minimum*" Thermometer is liable to two derangements, both of which must be guarded against, and may be easily remedied by an observer. When the *column* of spirit breaks, it may be re-united by striking the instrument repeatedly against the palm of the hand; when part of the spirit distils by high temperature, it will be found in the upper bulb, it must be

Verification of Thermometers.—No instrument ought to be used for Meteorological purposes till it has been carefully *tested* by comparison with a *Standard Thermometer*. When such Thermometers are *not* graduated on the stem, but merely on an attached scale, undergo repairs, they are very liable to be removed from their position on the Scale, and ought never afterwards to be used without being *re-tested*. The self-registering, and especially the "*Minimum*" Thermometers, ought frequently to be compared with the dry bulb of the *verifier*.

The *Hygrometer* consists of two Thermometers usually, but not necessarily, mounted on one frame. As apparently slight variations from the approved ad *well tested forms* of this ap-

free from the scales and frame to which they are attached ; — the frame must be such as will bring the tubes forward by an inch, from any board on which it may be suspended ; the

Reading of the Thermometer.—Great care must be taken to avoid the effects of refraction, by bringing the eye exactly opposite the tip of the index or *column* of mercury. The opposite tip to be taken to tenths of a degree, and noted in the reading to be taken to tenths of a degree, and noted in decimals. Thus the Thermometer will be read -39.9 , or 40.0 , or 40.1 , or again, 40.4 , 40.5 , or 40.6 °C, according as it indicates a little under, an exact coincidence, or a little over 40.0 °; or $40\frac{1}{2}$, respectively; So also $40\frac{1}{4}$, and $40\frac{3}{4}$, more or less must be registered 40.2 or 40.3 , and 40.7 or 40.8 respectively. In reading Fahrenheit's *"Fazt."* and *"lin."* Thermometers, the indication of that end of the *index* which is next to the surface of the mercury or alcohol is alone noted. Readings of the Thermometers, especially of the wet and dry *bulbs*, must be rapidly taken, being so readily affected by heat from the person of the observer.

Careful observations ought to be made on the changes in the direction of the wind; and during storms, extra observations ought to be made at every hour of Greenwich time. Such a system of simultaneous observation, pursued at different Stations, would be likely to give highly interesting and important results.

Rain-gauges.—Many causes conspire to produce anomalies in rain returns. They arise partly from unfavourable situation for observation and partly from the defective nature of the instruments used. It is, indeed, difficult to obtain an unexceptionable position for the rain-gauge; but in all cases the gauge must be sunk in the ground till its edges are on a level with the close cut grass around its mouth. The rain-gauge ought to be read daily at 9 A.M., and the readings entered in the returns of the day previous.

Clouds.—Convenient abbreviations for Luke Howard's nomenclature of clouds will be found on the other side. The amount of cloud in the atmosphere ought to be estimated from

Observations of the clouds are made at 9 A.M. and at sunset, as illustrating the condition and currents of the upper and lower regions of the atmosphere. The entries in the schedule are to be made in the following manner:—In the column "Velocity

upper strata of clouds travel with *extreme* velocity from S.W., and those in the lower regions from W., with one-third the *extreme* speed of the former. Again, in the second "Cloud"

Sunshine.—The number of hours in which objects in the

Temperature of the Sea.—A knowledge of the temperature of

the ends of piers and rocks round the coast, where it is not uniformly taken by a properly constructed apparatus, from boats, from the water on the 5th, 15th and 25th of each month, the thermometer being at that time of day.

depths, noting always the temperature of the air, and the hour of observation; and continuing to observe for particular depths.

Temperature of Wells.—The temperature of the water at the

Ozone.—Mention whether Schönbein's or Moffat's papers are used. The paper is affixed by a pin to a board in the thermometer box, and the indications registered at 9 A.M. and 9 P.M.

the schedule, will indicate that the ozone paper is tinted as "3" on the scale, that the wind is from the N.W., and that its force on the scale 0—6 is "4": i.e., that it is *blowing fresh*.

Remarks.—The “*Remarks*” column is too narrow, but unavoidably so. Some of the most valuable observations that can be taken are those for which no rules can be given nor hours

in this column to prevalent diseases, differences in character, colour, velocity, and direction between the lower and upper strata of clouds, the colour of the sky, etc. Remarks ought to

of wind attaining their maximum, as well as such notes on storms as have been hinted at above. When lofty hills are in the vicinity of an Observatory, the height of clouds and of the

wise unoccupied, or in two ruled off for the purpose, from that headed "Remarks." It is intended that observations by the Electrometer should be entered in this manner on the side-

the special attention of Observers to the registration of such phenomena so that the published Summaries may fairly represent the whole of Scotland. Observation ought to be confined

—viz., on the 21st days of March, June, September, and December.

The Council recommend observers, before purchasing new instruments, to communicate with the Meteorological Secretary; and they consider it desirable that he should have full powers

EDINBURGH, November 18th.
(By Order) ~~James~~ A. B.

1

Secretary of the Meteorological Society of Scotland.

EDINBURGH

OBSERVATIONS IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

[illegible]

Have the goodness also to state any information you may be able to collect relative to the crops of grain, hay, potatoes, turnips, fruits, etc., whether plentiful, or in perfection; and the Agricutlural condition of the district generally. Disease prevails among cattle; and the Agricutlural condition of the district generally.

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inverness, County of Edinburgh, in Lat. 55°56'0" N Long. 3°24'0" W Distance from Sea one miles.Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet.During the MONTH of Feb. 1875.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No.				WIND.				RAIN.		CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.			SEA. Temperature at 1 fathom and Density.	OZONE. 0-10.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.					
		9 h. A.M.		9 h. P.M.		Protected in Shade, 3 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		No. of hours in which it fell.	Amount in inches.	9 A.M.		P.M.			9 h. A.M.											
		Barometer. * No.	Atmos- phere Ther- mometer	Barometer. No.	Atmos- phere Ther- mometer	Max. No.	Min. No.	Max. No.	Min. No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.			Velocity (0-5), and Direction.	Amount (0-10), and Species.	Velocity (0-5), and Direction.	Amount (0-10), and Species.		No. 3 inches.	No. 42 inches.	No. 22 inches.									
		inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°			°	°	°	°		°	°	°					°	°	°		
		9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.			9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.		9 h. A.M.	9 h. P.M.	9 h. A.M.					9 h. P.M.	9 h. A.M.	9 h. P.M.		
1	30.14	45	30.10	33	46	34			43	43	38	37	SW	3	SW	3																Feb has been a very severe	1			
2	30.15	52	30.10	34	42	32			35	34	37	36	SW	1	SW	1																month, with a good deal of	2			
3	29.96	30	30.	30	39	25			34	33	28	27	SW	1	SW	2																frost & snow with cold	3			
4	30.14	47	30.25	48	34	22			23	23	27	26	W	1	W	1																North and East winds	4			
5	30.33	42	30.32	43	30	28			23	23	30	30	W	1	W	1																shooting stars seen on the 3rd	5			
6	30.25	41	30.18	49	39	33			33	32	36	36	SW	1	SW	1																Lunar Halo on the 16th	6			
7	30.14	43	30.10	50	39	32			35	35	35	35	S	2	S	2																great snow storm on the 24th	7			
8	30.20	49	30.14	49	39	31			35	34	34	34	S	2	S	2																		8		
9	30.20	47	30.18	50	38	22			33	32	27	27	S	1	SE	2																		9		
10	30.22	44	30.10	54	35	30			30	30	32	31	SE	1	SE	2																		10		
11	29.98	48	29.70	49	38	33			32	31	37	36	SW	1	SW	3																		11		
12	29.87	46	29.74	49	40	38			44	43	41	40	SW	1	SW	1																		12		
13	29.78	30	29.75	50	43	39			44	43	42	41	SW	1	SW	2																		13		
14	29.80	53	30.	56	48	35			43	41	40	39	SW	1	SW	1																		14		
15	30.16	54	30.41	52	46	34			40	39	39	38	S	1	SW	2																	15			
16	30.44	51	30.50	54	50	35			44	43	42	41	W	1	SW	1																		16		
17	30.52	50	30.50	53	45	35			38	37	38	37	SW	1	SW	1																		17		
18	30.45	50	30.44	52	42	32			36	35	37	36	SE	1	SE	1																		18		
19	30.44	50	30.40	50	40	31			33	32	34	33	SE	1	SE	2																		19		
20	30.46	48	30.48	51	41	33			33	32	34	33	SE	2	E	2																		20		
21	30.52	48	30.51	50	40	32			34	33	34	33	E	1	SE	2																		21		
22	30.44	48	30.20	50	38	30			34	34	32	32	SE	1	SE	2																		22		
23	30.04	45	29.83	48	36	29			32	32	32	32	E	1	N	2																		23		
24	29.68	43	29.72	43	35	30			31	31	32	32	SE	3	SE	4																		24		
25	29.72	42	29.80	44	34	30			33	33	32	32	SE	3	SE	3																		25		
26	29.70	42	29.70	45	35	31			34	33	32	32	SE	2	SE	2																		26		
27	29.95	43	30.03	45	35	30			32	32	31	31	E	1	E	1																		27		
28	30.05	43	30.04	47	34	30			32	32	31	31	E	2	E	2																		28		
29																																				29
30																																				30
31																																				31
Sums.	3.93	194	3.42	274	261	36			137	117	124	108	39	51																						
Means.	30.140	469	30.122	498	393	313			34.9	34.2	34.4	33.9	1.4	1.8																						
+ Total Corrections for Instrumental Errors.																																				
+ Corrections for Diurnal Range.																																				
+ Corrected Means.																																				
No. of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction for Temp. (Col. 2), = 30.090
"Corrected Mean" of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4), = 30.065
Mean at Station, corrected, and at 32°, = 30.077
Correction for height, feet above Mean Sea-level, = 101
Mean, reduced to 32°, and Sea-level, = 30.178
Highest Reading, corrected for Index error, on the 17 th, = 30.520
Lowest Do. Do., on the 14 th, = 29.680
Difference, or Monthly Range, = 0.840

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 16 th, = 50.0
Lowest in Month, corrected for Index errors, on the 19 th, = 22.0
Difference, or Monthly Range, = 28.0
"Corrected Mean" of all the Highest, (Col. 5), = 39.3
"Corrected Mean" of all the Lowest, (Col. 6), = 31.3
Difference, or Mean Daily Range, = 8.0
Calculated Mean Temperature of Month, = 35.3

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
Lowest at Night, Black Bulb, (corrected for Index errors), on the th, =
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =
Difference of above Means or Range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 34.7
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 34.0
Computed Temperature of Dew-Point, = 32.9
Do. Elastic Force of Vapour, = 188
Do. Weight of Vapour in a Cubic Foot of Air, =
Relative Humidity, (Saturation = 100), = 93
RAIN fell on 10 Days; Amount in Inches, = 1.39

WIND.												SUMMARY.		
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day.			
A.M.		4	7		5	5	1							
P.M.		4	2	6		4	7	4						
Mean.		2	3	6	0	5	6	5	1			16.0		
												2.56		

Observations made and Return verified by

William Macdonald

(Signed)

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inveresk, County of Edinburgh, in Lat 55° 56' 0" N, Long 3° 2' 40" W, Distance from Sea one miles.
Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet. During the MONTH of March 1875
The Hours of Observation are of Greenwich Time.

ELECTRICITY	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No.				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.				SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.				
		9 h. A.M.		9 h. P.M.		Protected in Shade 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		Readings of the H.Cup Anemometer. No. —		No. of hours in which it fell.		Amount in inches.		9 A.M.		P.M.						9 h. A.M.			
		Barometer.	Attach- ed Ther- mometer	Barometer.	Attach- ed Ther- mometer	Max. No.	Min. No.	Max. in Sunrays No.	Min. on Grass. No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.	No.	Amount in inches.	Velocity (0-6), and Direction.	Amount (0-10), and Species.	Velocity (0-6), and Direction.	Amount (0-10), and Species.	No.	Amount in inches.	Velocity (0-6), and Direction.	Amount (0-10), and Species.					No.	Amount in inches.	Velocity (0-6), and Direction.	Amount (0-10), and Species.
		* No.	inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°					°	°	°	°
	1	30.05	44	30.16	53	35	31			32	32	32	32	E	2	NE	2																gales of Wind on the 9th & 25th	1	
	2	30.17	48	30.17	50	38	32			33	33	34	33	NE	2	NE	1																Barom. has stood high all	2	
	3	30.18	47	30.21	48	38	27			32	31	30	30	NE	1	NE	1																the month, but extremely	3	
	4	30.20	44	30.15	48	38	23			27	27	29	29	NE	1	NE	1																to on the 17th & 31st	4	
	5	30.10	44	29.94	48	38	22	Punch 24		26	26	30	30	NE	1	SE	1																Rain fell only .199 of an inch.	5	
	6	29.74	44	29.60	49	43	33	25 Punch 24		34	34	37	36	SE	2	SE	3																Vegetation much behind	6	
	7	29.47	50	29.60	53	49	44	24 Punch 34		48	48	46	43	SW	1	SW	2																		
	8	29.80	53	29.70	53	52	40			47	46	46	46	SW	1	SW	2																		
	9	29.41	52	30.30	54	47	29			40	40	36	35	NE	5	NE	2																		
	10	30.45	50	30.45	52	47	27			32	31	33	32	SW	1	NE	1																		
	11	30.44	50	30.43	50	44	27			31	30	32	31	E	1	NE	2																		
	12	30.35	49	30.23	49	38	31			34	33	34	34	E	2	E	2																		
	13	30.24	48	30.26	49	37	31	Punch 31		30	30	34	33	E	1	E	1																		
	14	30.28	49	30.31	49	38	33			35	34	35	34	SE	1	SE	1																		
	15	30.30	49	30.28	50	43	34			34	33	38	37	SE	1	SE	1																		
	16	30.26	48	30.36	49	40	30			35	34	31	30	NE	1	NE	1																		
	17	30.60	47	30.77	48	40	29			35	34	33	32	NE	2	NE	2																		
	18	30.65	47	30.20	52	43	38	35 Punch 25		30	30	37	36	SW	2	SW	4																		
	19	30.23	49	30.25	52	44	30			32	33	31	30	NE	1	NE	2																		
	20	30.26	47	30.20	51	43	33			34	33	37	36	NE	1	NE	1																		
	21	30.17	50	30.13	52	49	40	35 Punch 35		41	40	38	37	W	1	W	1																		
	22	30.16	52	30.28	53	53	39			44	42	44	43	W	1	E	1																		
	23	30.31	51	30.34	52	57	36			43	42	39	38	W	1	SW	1																		
	24	30.24	52	30.24	52	54	44	34 Punch 34		44	42	48	47	SW	2	W	2																		
	25	30.15	52	29.99	51	53	44			46	45	47	46	SW	1	SW	3																		
	26	29.97	53	29.89	60	52	35			46	43	41	40	SW	2	SW	4																		
	27	29.84	52	30.12	56	54	34			37	36	38	37	W	2	NE	2																		
	28	30.24	50	30.33	53	52	36			42	41	39	38	SW	1	W	2																		
	29	30.45	52	30.45	54	53	40	Punch 40		43	41	44	43	W	1	W	1																		
	30	30.49	52	30.56	60	52	42			48	46	47	46	W	1	W	1																		
	31	30.60	53	30.60	59	54	41			49	47	45	44	W	1	W	1																		
Sur.		11.12	13	12.12	13	14	12			23	21	23	21	44	54																				
Means.		30.185	49.4	30.211	52.0	45.5	32.7			37.7	36.8	37.6	36.8	1.4	1.7																				
+ Total Corrections for Instrumental Errors.																																			
+ Corrections for Diurnal Range.																																			
"Corrected Means."																																			
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction++
for Temp. (Col. 2), = 30.185 - .057 = 30.128
"Corrected Mean" of Barometer at 9 P.M., minus the Correction++
for Temp. (Col. 4), = 30.211 - .064 = 30.147
Mean at Station, corrected, and at 32°, = 30.137
Correction for height, feet above Mean Sea-level, = 101
Mean, reduced to 32°, and Sea-level, = 30.238
Highest Reading, corrected for Index error, on the 17 th, = 30.770
Lowest Do. Do., on the 9 th, = 29.410
Difference, or Monthly Range, = 1.360

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 17 th, = 54.0
Lowest in Month, corrected for Index errors, on the 4 th, = 25.0
Difference, or Monthly Range, = 29.0
"Corrected Mean" of all the Highest, (Col. 5), = 45.5
"Corrected Mean" of all the Lowest, (Col. 6), = 32.7
Difference, or Mean Daily Range, = 12.8
** Calculated Mean Temperature of Month, = 39.7
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 17 th, = 54.0
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 45.5
Lowest at Night, Black Bulb, (corrected for Index errors), on the 4 th, = 25.0
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 32.7
Difference of above Means or Range ("exposed"), = 12.8

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 37.7
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 36.8
Computed Temperature of Dew-Point, = 35.4
Do. Elastic Force of Vapour, = .209
Do. Weight of Vapour in a Cubic Foot of Air, = 92
Relative Humidity, (Saturation = 100), = 92
RAIN fell on 7 Days; Amount in Inches, = 0.99

WIND.		SUMMARY.					
Direction.		N	NE	E	SE	S	SW
A.M.		3	4	6	1	2	5
P.M.		3	4	9	1	2	5
Mean.		3	4	7	1	2	5

Observations made and
Return verified by

William McNaughton

(Signed)

155
78

Overask
Mar. 1875 =

The Council of the Society recommend that the Self-Registering Thermometers, and the Dry and Wet Bulb Hygrometers, be kept in Stevenson's Lowne-boarded Box for the purpose of being placed inside and outside, and on the roof of the Observatories, and that the Self-Registering Thermometers, painted white inside and outside, and on the roof of the Observatories, should be placed at such a height that, when viewed from four stout posts, also painted white, truly secured to the ground, they should each be equally distant from the four posts, and that the Bulbs of the Minimum Thermometer, and of the Dry and Wet Bulb Thermometers, will be equally at the same height of four feet above the ground, the Minimum Thermometer being hung immediately above the Minimum Thermometer, the Dry and Wet Bulb Thermometers being hung in a free open space to which the sun's rays have free access, and in such a position that the sun's rays will not be able to strike as much of the box as surrounding conditions enable the Observers to secure. The Thermometers are suspended on cross-arms to the sides of the Box and face the door, which should open to the north. The Council regard the question of UNIFORMITY OF HEIGHT ABOVE THE SURFACE OF THE GROUND, and METHOD IN PROTECTING THE THERMOMETERS, as vital in the construction of the Observatories, and in the system of Meteorological Observation, since without it Observation on one made at different Stations are incompatible, thus rendering it impossible to compare the Climates of places with each other as regards their most important features.

Professor Phillips's, and Negretti and Zambra's Maximum Thermometers, and Rubenford's Minimum Thermometer are recommended. It is recommended that these Thermometers be graduated on the glass stem. The Maximum Thermometer is liable to two drawbacks,—viz, the want of spirit breaking and part of the spirit distilling by high pressure and lodging at the top of the tube. This disadvantage is of occasional occurrence with Protected Thermometers, but of frequent occurrence with Exposed Thermometers. Hence a systematic examination of Minimum Thermometers ought to be a regular part of the work carried on by each Observer.

As made at different Stations are incompatible, thus rendering it impossible to compare the Climates of places with each other as they are, and to visit their most important features.

Professor Philip's and Negretti and Zambra's Maximum Thermometers, and Rubenford's Minimum Thermometer are recommended. It is recommended that these Thermometers be graduated on the glass stem. The Maximum Thermometer is liable to two drawbacks,—viz, the risk of spirit breaking and part of the spirit distilling by high temperature and lodging at the top of the tube. This disadvantage of occasional occurrence with Protected Thermometers, but of frequent occurrence with Exposed Thermometers. Hence a systematic examination of Minimum Thermometers ought to be a regular part of the work carried on by each Observer.

when the column of spirit chances to separate. Let the Theriometer be taken in the hand by the end furthest from the bulb, and then forcibly swung down towards the object being, on the principle of centrifugal force, to send the detached portion of spirit till it unites with the column. A few throws, or swinging strokes, will generally be sufficient for

purpose; after which the Thermometer should be placed in the upright position, allowing the rest of the spirit still adhering to the sides of the tube to drain down to the column. But another method of ascertaining the position of the spirit in the top of the tube has been adopted, if the portion of spirit in the top of the tube be not too small. Heat should be applied slowly and cautiously to the top of the tube where the detached portion of spirit is, which, being turned into vapor by the heat, will condense on the surface of the unbroken column of spirit. Care must be taken that the heat is not applied too quickly; for if this be done, the tube will crack and the instrument be spoiled. The heat should be applied inside and outside alternately, by having the top of the tube slowly heated by a spirit lamp, while the sides are heated by a gas-burner; or if less be not at hand, a piece of heated metal will serve instead.

The bulbs of the Thermometers for registering the greatest heat from the sun's rays, and the least from radiation heat

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chosen in glass jackets may also be used, being much lighter than the above. It must, however, be added, that the whole subject of the observation of Solar and Terrestrial Radiation is not yet in sufficiently advanced state to warrant the exclusive recommendation of any one of these methods.

attached; the frame must be such as will bring the tubes forward to a distance of about one inch from any board on which it may be suspended; the tubes must be covered, and altogether placed to the side, and below the level of the wet bulb, but in no case under the level of the air thermometer. The thermometer, and the α of the bulb by the cotton, which also supplies it with water, must be seen to by the Observer that the muslin is always clean, moist, and the water pure. In frosty weather, observation of the muslin must be made from 15 to 30 minutes before the hour of observation. From the film of ice thus formed evaporations will proceed as from the moist disk in ordinary circumstances. In reading the Thermometer, great care must be taken to

the reading of the thermometer being the eye exactly opposite the tip of the index column of mercury. The reading ought to be taken to tenths of a degree, and recorded in decimals. Thus a thermometer will be read 33.9° , 40.0° , or 40.1° ; or again, $4, 40.3^{\circ}$, or 40.6° according as it indicates a little under, an exact, or a little over, the temperature of the body with which it coincides with, or a little over 40° , or 40.5° , respectively. The 40.5° and 40.7° more or less must be registered 40.5° , or 40.3° , and 40.4° or 40.8° respectively. The reading of the thermometer should be taken at the same time of day, and the same part of the body, and the same surface of the spirit is alone noted. On opening the thermometer box, the Dry and Wet Bulb Thermometers are to be placed side by side, and the bulb of the thermometer is to be thrust, and rapidly, read, hunched, as they are readily affected by the temperature of the air, and not by the temperature of the person of the Observer.

on the Self-Registering Thermometer are used, since in winter the thermometer may occur at any hour; and it is necessary to observe its indications for their proper meteorological day. In the summer months the indications registered on the 3d are those which will be required for the purpose of the present paper. A series of phenomena commencing at 9 p.m. on the 2d, and ending till 7 p.m. on the 3d.

No instrument ought to be used for Meteorological purposes till it has been carefully tested by comparison with Standard Thermometers. When such Thermometers are not graduated on the stem, but merely on an attached scale, undergo repairs, they are very liable to be moved so that their position on the Scale, and ought never afterwards to be used without being re-tested. The Self-Registering, especially the aneroid Thermometers, ought frequently to be compared with dry bulb of the Hygrometer. The freezing-point of each Thermometer, marked by a scratch on the tube, ought to be tested once a year, in snow or melting ice.

In selecting instruments, the following points require attention :—

Divisions of the Venier of Barometers in reference to their scales, must be uniform, and the zero point must be the exact number denoting the perfect freedom of the Barometer from air; the erect num-

water, in cases where the observations cannot be taken daily, the observation may be made on the 5th, 15th, and 25th of each month. When convenient, extra Sea Observations might be taken for other days, and greater depths, noting also the Temperature of the Air, and the Force of the Wind.

It is also very desirable that observations on the four of Observation. It is also very desirable that observations on the four of Observation. It is also very desirable that observations on the four of Observation.

At Maxima and Minima by Thermometers continually immersed, be instituted at points along the coast, by the method proposed by Mr. S. Stevenson, and already commenced at Peterhead and Liverpool. The Temperature of the water at the bottom of cells ought,

when practicable, to be taken, both the depth of the well and the temperature of the water being used.

Mention what Test-Papers are used, Schonbein's or Mofiani's, etc.

The paper is affixed by a pin to a board in the upper corner of the monomer box, and the indications registered at 9 A.M. and 9 P.M.

connection with the force and direction of the wind at the time of observation, in the following manner:—thus $\frac{300}{30}$, as an Ozme entry in the schedule, will indicate that the Ozme paper is forced as 3 on the scale, that the wind is from the N.W. and that its force is on a scale 0—5 is 4, or blowing fresh.

Too much importance cannot be attached to the electric condition of the atmosphere in connection with terrestrial magnetism, barometrical, thermometrical, and meteorological observations generally. In the present state of our knowledge, however, every complete technological observatory should have a column in its schedule for recording the state of the atmosphere, which is unavoidably too narrow. Some of the most valuable Observations that can be taken are those of the direction and force of the wind, and of the hours of the day in which no rules can be given or hours

Remarks.

[illegible]

terminal at above. When lofty hills are in the vicinity of a Station, the general character of the clouds and the Snow-line in winter should be recorded. By the use of abbreviations the state of the weather at 9 a.m. and 3 p.m. should be registered, either in two columns, otherwise unabbreviated, or ruled off for the purpose, from the column of Remarks. Observations in connection with the Periodic Return of the Seasons, possess not only great scientific value, but are of considerable importance to the Agriculture and the Natural History of the country. The Agricultural Calendar of the State of New South Wales will direct the special attention of Observers to the registration of such phenomena, and to the

to the registration of such phenomena, so that the published Summaries may fairly represent the whole and not the parts. The persons originating the birds and, in the case of crops, to specified persons, are required from year to year on a selected piece of ground or farm, to send in to the Council, before the 1st of January, the entries in the Annual Table, published yearly in the Society's Journal, will indicate the species of plants and animals to which special attention was particularly directed.

being presented for comparison, does not afford any satisfaction.

(By reader)

A. B.

Forreman, December 1884.

[illegible][illegible]

Barley,	•
Bere or Bigg,	•
Oats,	•
Wheat,	•
Beans,	•
Peanes,	•
Potatoes,	•
Turnips,	•
Rye Grass,	•

Invested of
 Leases.

GEORGE
 mentioning virtue

[illegible]

FOREST TREES.	
Alder.
Ash.
Beech.
Birch.
Blm.
Larch.
Lime.
Oak.
Sycamore or Plane.

FOREST TREES.	In flower.	Leaf buds first appear.	In leaf.	Divested of leaves.	CROPS, mentioning variety.	Sowing or planting.	Appearing above ground.	In bar or flower.	First crop.
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[illegible]

Have the goodness also to state any information you may be able to collect relative to the Crops of Grain, Hay, Potatoes, Linings, Fruits, etc., in perfection; whether any have suffered from blight, disease, etc., and the Agricultural condition of the district generally, and the disease prevails among cattle, and the

EDINBURGH, December 1874.

BOOK POST.

Mr ALEXANDER BUCHAN

Secretary of the Meteorological Society of Scotland.

EDINBURGH.

The Remarks column is unavailing to every complete meteorological observatory. The Remarks column is unavailing to every complete meteorological observatory. The Remarks column is unavailing to every complete meteorological observatory.

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inter Creek, County of Edinburgh, in Lat. 55° 56' 0" N, Long. 3° 2' 40" W, Distance from Sea one miles.

Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 40 feet.

During the MONTH of April 1875

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No. —				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.				SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		Readings of the H.Cup Anemometer. No. —		No. of hours in which it fell.	Amount in inches.	9 A.M.		P.M.		9 h. A.M.						Temperature of WELL at depth of feet. No.	Temperature at 1 inch, and Surface.	9 A.M.	9 P.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		Barometer. * No.	Attach- ed Ther- mometer No.	Barometer. No.	Attach- ed Ther- mometer No.	Max. No.	Min. No.	Max. in Sun's rays No.	Min. on Grass. No.	Dry bulb. No.	Wet bulb. No.	Dry bulb. No.	Wet bulb. No.	Direction. No.	Force No.	Direction. No.	Force No.	No. 9 h. A.M.	Velocity (0—20), and Direc- tion.			Amount (0—10), and Species.	Velocity (0—6), and Direc- tion.	Amount (0—10), and Species.	Hours.	No. 8 inches.	12 inches.									No. 22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
1	30.60	58	30.50	57	52	41			48	47	46	45	W	1	W	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

BAROMETER,	"corrected Mean" at 9 A.M., minus the Correction \uparrow +)	=	30.007
	for Temp. (Col. 2), = 30.078. — .071.)		
"Corrected Mean" of Barometer at 9 P.M., minus the Correction \uparrow +)	for Temp. (Col. 4), = 30.063. — .078)	=	29.985
Mean at Station, corrected, and at 32°;		=	29.996
Correction for height,	feet above Mean Sea-level,.....	=	100
Mean, reduced to 32°, and Sea-level,		=	30.096
Highest Reading, corrected for Index error, on the } th,.....		=	30.600
Lowest Do. Do., on the } th,.....		=	29.050
Difference, or Monthly Range,		=	1.550

S.-R. THERMOMETER , (in shade, etc.), Highest in Month , (corrected for Index Errors), on the 4 th	=	68.0
Lowest in Month , corrected for Index errors, on the 12 th	=	29.0
Difference, or Monthly Range ,	=	39.0
"Corrected Mean " of all the Highest , (Col. 5),	=	55.0
"Corrected Mean " of all the Lowest , (Col. 6),	=	36.4
Difference, or Mean Daily Range ,	=	18.6
** Calculated Mean Temperature of Month,	=	45.7
 S.-R. THERMOMETER , Black Bulb in Sun , Highest , (corrected for Index Errors), on the 4 th		
"Corrected Mean ," (Col. 7), of Black Bulb , Max. in Sun ,.....	=	
Lowest at Night , Black Bulb , (corrected for Index errors), on the 12 th	=	
"Corrected Mean ," (Col. 8), of Black Bulb , Min. on grass,	=	
Difference of above Means or Range ("exposed"),	=	

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11),		=	43.8
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12),		=	42.2
†† Computed Temperature of Dew-Point,		=	40.3
†† Do. Elastic Force of Vapour,		=	.251
†† Do. Weight of Vapour in a Cubic Foot of Air, ...		=	
†† Relative Humidity, (Saturation = 100),		=	82
RAIN fell on Days; Amount in Inches,		=	0.74

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day.
A.M.		10	1	1	3	2	9	4			
P.M.	2	9		1	2	4	11	1			
Mean.	1	9	1	1	2	3	10	3		1.40	

Observations made and
Return verified by

William Mustane

(Signed)

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Midlothian, County of Edinburgh, in Lat. 55° 56' 0" N Long. 3° 2' 40" W Distance from Sea one miles.
 Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet. During the MONTH of May 1875.
 The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No. —				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.				SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		9 h. A.M.		9 h. P.M.		Protected in Shade 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer. No. —		No. of hours in which it fell.	Amount in inches.	9 A.M.		P.M.		SUNSHINE.						Temperature of Wet Bulb. Feet. No.	Temperature and Direction of Wind.	9 A.M. 9 P.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Barometer. * No.	Attach- ed Ther- mometer	Barometer. No.	Attach- ed Ther- mometer	Max. No.	Min. No.	Max. in Sun-rays No.	Min. on Grass. No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.	9 h. A.M.	Velocity (0—10), and Direction.			Amount (0—10), and Species.	Velocity (0—10), and Direction.	Amount (0—10), and Species.	Hours.	9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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1	30.08	59	30.02	58	60	44			48	46	47	45	SW 1	SE 1									6										Thunder Heard on the	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
2	30.	58	29.96	59	56	39			48	46	44	43	SE 1	SE 1									1										6 th 9 th and 19 th no Lightning	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
3	29.93	57	29.95	61	57	42			48	46	49	47	SW 1	SW 1									4										seen on the 6 th or 9 th	3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
4	29.98	57	29.99	63	64	44			49	46	53	51	S 1	SW 1									4										gales of wind occurred	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
5	30.06	60	29.90	59	64	44			54	52	51	49	SW 1	SW 1									4										on the 21 st 22 nd & 24 th	5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
6	29.77	60	29.60	62	64	44			48	48	50	49	S 1	S 1									4										Rain bow seen on the	6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
7	29.50	60	29.61	61	61	39			53	51	49	48	S 1	SE 1									3½										9 th 21 st	7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
8	29.63	60	29.56	62	63	48			53	53	51	50	SE 1	SE 2									2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction ++ = 29.850
 for Temp. (Col. 2), = 29.934 0.084
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction ++ = 29.844
 for Temp. (Col. 4), = 29.930 0.086
 Mean at Station, corrected, and at 32° = 29.847
 Correction for height, feet above Mean Sea-level, = 0.98
 Mean, reduced to 32°, and Sea-level, = 29.945
 Highest Reading, corrected for Index error, on the 26 th, = 30.350
 Lowest Do. Do., on the 18 th, = 29.380
 Difference, or Monthly Range, = 0.970

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 14 th, = 68.0
 Lowest in Month, corrected for Index errors, on the 16 th, = 57.0
 Difference, or Monthly Range, = 11.0
 "Corrected Mean" of all the Highest, (Col. 5), = 61.3
 "Corrected Mean" of all the Lowest, (Col. 6), = 43.8
 Difference, or Mean Daily Range, = 17.5
 ** Calculated Mean Temperature of Month, = 52.6
 S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
 Lowest at Night, Black Bulb, (corrected for Index errors), on the th, =
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =
 Difference of above Means or Range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 51.8
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 49.5
 # Computed Temperature of Dew-Point, = 47.2
 # Do. Elastic Force of Vapour, = 13.25
 # Do. Weight of Vapour in a Cubic Foot of Air, ... =
 # Relative Humidity, (Saturation = 100), = 85
 RAIN fell on 6 Days; Amount in Inches, = 0.50

WIND.		SUMMARY.	
Direction.	N NE E SE S SW W NW	Calm or Variable.	Mean Force.
A.M.	3 1 5 14 4 1		
P.M.	2 3 5 13 6 2		
Mean.	0 3 0 2 6 13 5 2		1.80

2.24

* Each instrument tested at the Office in Edinburgh bears the stamp "S.M.S.," and a number to be entered in the Heading; or the Number and Initials of the Maker may be given.
 † Embracing corrections for both capillarity and Index Errors.
 ‡ The Diurnal Range for Scotland is as yet unknown.
 § Practically, though not absolutely a minus correction.
 || Times "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition only.
 ¶ While the Diurnal Range is unknown, the Arithmetical Mean of Cols. 5 and 6 will be entered as the "Calculated Mean Temperature."
 Any Observations not taken under the conditions specified in the Directions on the other side, or noted at the Top of each column, must be marked as such by the observer, in each Schedule. See over.

Observations made and Return verified by William Maule

(Signed)

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inverness, County of Edinburgh, in Lat. 55°56' 0" N Long. 2°40' 0" W Distance from Sea 100 miles.
Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet. During the MONTH of June 1875
The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No. —				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.	
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.									
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max. in Sun's rays.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.	9 h. A.M.	No. of hours in which it fell.	Amount in inches.	Velocity (0—10), and Direction.	Amount (0—10), and Direction.	Velocity (0—10), and Direction.	Amount (0—10), and Direction.	No. 3 inches.	12 inches.					No. 22 inches.
		* No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.					No.
	1	30.30	62	30.33	60	70	46	55	58	52	54	52	SW	1	dr	1												gale of wind occurred on the 19th	1		
	2	30.39	62	30.33	62	69	36	56	56	54	56	54	dr	1	dr	1													2		
	3	30.20	60	30.03	60	61	47	53	58	53	52	50	E	2	dr	1													3		
	4	29.93	61	29.94	61	58	46	54	54	51	51	50	dr	1	W	1			.13										4		
	5	29.76	60	29.84	62	59	47	56	56	53	54	53	SW	1	S	1													5		
	6	29.67	60	29.90	63	60	43	53	53	51	56	54	SW	2	SW	1													6		
	7	29.90	61	29.96	64	60	46	53	55	53	53	53	SW	1	dr	1			.56										7		
	8	30.01	60	30.13	62	63	44	55	53	53	55	53	W	2	W	1													8		
	9	29.90	61	29.55	62	60	49	53	54	52	56	55	W	1	W	1													9		
	10	29.43	62	29.44	61	60	43	54	53	51	54	53	SW	4	SW	4			.10										10		
	11	29.42	62	29.50	62	59	44	53	54	51	51	50	W	1	SW	1													11		
	12	29.52	60	29.53	61	64	44	54	58	54	53	51	SW	1	SW	2													12		
	13	29.53	60	29.45	60	60	41	55	58	54	50	50	SW	2	W	1			.07										13		
	14	29.38	58	29.20	60	59	44	58	57	58	52	50	SW	2	SW	2			.12										14		
	15	29.14	59	29.14	60	59	46	54	56	52	53	52	SE	2	SW	2			.45										15		
	16	29.23	59	29.33	60	61	48	56	57	53	54	54	SW	1	W	1			.10										16		
	17	29.80	60	29.94	60	62	43	57	64	56	54	53	W	1	SW	1													17		
	18	30.04	60	30.10	61	63	49	54	59	53	57	56	SW	1	SW	1													18		
	19	30.03	61	29.90	62	66	47	59	58	56	53	52	SW	2	SW	3													19		
	20	29.90	62	29.80	61	63	43	58	55	54	53	50	SW	2	SW	1													20		
	21	29.80	61	29.93	62	63	44	53	53	51	51	50	W	1	W	2													21		
	22	30.02	61	30.03	61	63	52	55	54	52	56	53	W	2	WSW	1													22		
	23	30.06	62	30.20	63	62	51	54	60	51	58	55	S	2	SW	1													23		
	24	30.18	62	30.08	67	71	57	60	63	57	61	58	S	1	SW	1													24		
	25	30	67	29.78	65	66	47	63	58	60	56	53	SW	2	S	2			.03										25		
	26	29.77	63	29.90	63	60	42	54	54	52	49	48	SW	1	SW	1			.24										26		
	27	29.72	60	29.84	62	57	50	54	54	53	52	52	S	1	SW	1			.05										27		
	28	29.90	61	30.06	63	58	50	54	58	54	53	52	S	1	SW	1			.01										28		
	29	30.07	60	30.07	64	61	50	55	55	54	44	44	dr	1	dr	2			.12										29		
	30	30	61	29.84	61	60	50	57	57	51	54	44	dr	1	dr	1			.28										30		
	31																												31		
Sums.		39	5	15	5	11	13	13		9	11	8		44	43				226												
Means.		29.849	60.9	29.846	61.8	62.0	46.5	55.2		53.4	53.8	51.9		1.5	1.4																
† Total Corrections for Instrumental Errors.																															
‡ Corrections for Diurnal Range.																															
“Corrected Means.”																															
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

BAROMETER, “corrected Mean” at 9 A.M., minus the Correction† for Temp. (Col. 2), = 29.764
“Corrected Mean” of Barometer at 9 P.M., minus the Correction† for Temp. (Col. 4), = 29.758
Mean at Station, corrected, and at 32°, = 29.761
Correction for height, feet above Mean Sea-level, = 98
Mean, reduced to 32°, and Sea-level, = 29.859
Highest Reading, corrected for Index error, on the 2 th, = 30.390
Lowest Do. Do., on the 15 th, = 29.140
Difference, or Monthly Range, = 1.250

* Each instrument tested at the Office in Edinburgh bears the stamp “S.M.S.” and a number to be entered in the Heading; or the Number and Initials of the Maker may be here given.
† Embracing corrections for both capillarity and Index Errors.
‡ The Diurnal Range for Scotland is as yet unknown.
§ Practically, though not absolutely a minus correction.
|| These “Hygrometrical Deductions” are calculated from Glaisher’s Hygrometrical Tables, Second Edition only.
¶ While the Diurnal Range is unknown, the Artificial Mean of Cols. 5 and 6 will be entered as the “Calculated Mean Temperature.”
Any observations not taken under the conditions specified in the Directions on the other side, or noted at the Top of each column, must be marked as such by the observer in each Schedule. See over.

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 24 th, = 71.0
Lowest in Month, corrected for Index errors, on the 2 th, = 36.0
Difference, or Monthly Range, = 35.0
“Corrected Mean” of all the Highest, (Col. 5), = 62.0
“Corrected Mean” of all the Lowest, (Col. 6), = 46.5
Difference, or Mean Daily Range, = 15.5
** Calculated Mean Temperature of Month, = 54.2

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, = 80.0
“Corrected Mean” (Col. 7), of Black Bulb, Max. in Sun, = 71.0
Lowest at Night, Black Bulb, (corrected for Index errors), on the th, = 36.0
“Corrected Mean” (Col. 8), of Black Bulb, Min. on grass, = 46.5
Difference of above Means or Range (“exposed”), = 35.0

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 54.5
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 52.6
† Computed Temperature of Dew-Point, = 50.7
† Do. Elastic Force of Vapour, = 3.71
† Do. Weight of Vapour in a Cubic Foot of Air, = 87
† Relative Humidity, (Saturation = 100), = 87
RAIN fell on 13 Days; Amount in Inches, = 2.24

WIND.												SUMMARY.		
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day.			
A.M.	2	2	1		6	12	6	1						
P.M.	3	2			7	10	6	2						
Mean.	2	2	1	0	6	11	6	2				1.45		2.10

Observations made and
Return verified by

William McEuslane

(Signed)

45
52

WITH REMARKS ON THE USE OF INSTRUMENTS.

Hour of Observation.—The Council recommend that Observations be made precisely at 9 o'clock (Greenwich or Railway time) twice a-day for some, and once (morning or evening) for other instruments, as specified, in the following remarks, or at the top of the Schedule. It is hoped that the utmost punctuality in the time of reading the instruments will be observed. Observers, in some few cases, may find this impossible; in such instances, they are specially requested to mark opposite every reading at what time it was taken, if not at 9 o'clock.

An excellent Barometer is constructed by Mr Adie of London, the use of which is attended with the great convenience of requiring *no adjustment* of the cistern. Its *scale-inches* are not true inches but so much shorter as to *compensate* the errors that would otherwise arise from the fluctuations of the

When a Barometer having adjustable surfaces has to be removed from its fastenings, the ivory peg must be screwed so as to form a tight plug to the cistern. Then *scravo* up the mercury to within a quarter of an inch of the top of the tube and take down the instrument; it should then be carried with the cistern uppermost. Before suspending the Barometer for use, it must be ascertained whether the space above the mercury in the tube is a complete vacuum; this is the case when, on inclining the instrument so that the mercury strikes the top of the tube, a *sharp rap* is produced. If this is prevented by air it may be removed to the cistern, and got rid of by inverting the Barometer (care being taken to prevent the loss of mercury by tightening the ivory peg), and gently tapping it; and if this plan fails, the instrument must be repaired.

Protection of Thermometers.—The Council of the Society recommend that Self-registering Thermometers and Hygrometers be enclosed in a Box, painted white outside and inside, and fixed 4 feet above grass in an exposed position, free from any local influences. The laths forming the sides and doors of the Boxes are arranged so as at once to protect the Thermometers, and to allow a complete ventilation of the interior. The instruments are suspended by rods, in the centre of the Box, and face the windward side, in the open country, and the leeward side, in the neighbourhood of woods. The boxes may be made of any material, but should be made of stout, well-seasoned wood, and be painted white inside and outside. The boxes may also be made of iron, but should be painted white inside and outside. The boxes may be made of any material, but should be made of stout, well-seasoned wood, and be painted white inside and outside. The boxes may also be made of iron, but should be painted white inside and outside.

The above remarks apply equally to the Thermometers for registering the greatest heat from the sun's rays, and the least from the sky and sky radiation during night. They bulls have a black coating, which may easily be made, or melted, by the application of a mixture of lamp black and printer's ink. They are placed in tall yellow blackened boxes, whose sides protect the bulbs from the wind. The "*Maximum*" should rest on wooden supports a few inches from the surface of the grass, in an open situation. Snow must not be allowed to cover either of these Thermometers; nor the sun's heat to affect the Minimum Thermometer by dissipation.

the *Hygrometer* consists of two Thermometers usually, but not necessarily, mounted on one frame. As apparently slight deviations from the approved and *well-tested* form of this apparatus seriously vitiate the "Hygrometrical Deductions," Observers are specially requested to attend to the following conditions:—The bulbs must *hang down* by at least an inch free from the scales and frame to which they are attached:—The frame must be such as will bring the tubes forward by an inch, from any board on which it may be suspended by a water-cap must hang down and placed *below* the scales, and a little below the level of the eye of the observer. The scales and the water-cap must be such as will bring the tubes forward by an inch, from any board on which it may be suspended by a water-cap must hang down and placed below the scales, and a little below the level of the eye of the observer. The scales and the water-cap must be such as will bring the tubes forward by an inch, from any board on which it may be suspended by a water-cap must hang down and placed below the scales, and a little below the level of the eye of the observer.

Reading of the Thermometer.—Great care must be taken to avoid the effects of refraction, by bringing the eye exactly opposite the tip of the index or column of mercury. The reading ought to be taken to tenths of a degree, and noted in whole decimals. Thus the Thermometer will be read -39.9° , 0.0° , 40.0° , or 40.1° ; or again, 40.3° , 40.3° , or 40.6° , according as it indicates a liquid, an exact coincidence with, or a little under, over, or $40\frac{1}{2}^{\circ}$, respectively. So also $40\frac{1}{2}^{\circ}$, $40\frac{1}{2}^{\circ}$, more or less must be registered 40.2° or 40.3° , and 40.7° or 40.8° respectively. In reading Kutherford's *St. Mac.* and "*Min.*" Thermometers, the indication of that end of the *index* which is next to the surface of the mercury or alcohol is alone noted. Readings of the Thermometers, especially of the wet and dry *bubbles*, must be rapidly taken, being so readily affected by heat from the person of the observer.

Wind.—A wind-vane ought to be elevated 12 feet at least above surrounding objects. When it oscillates incessantly, the mean direction should be taken; and when it is stationary and always when the wind is feeble, reference may be made to the direction of smoke, etc.

Careful observations ought to be made on the changes in the direction of the wind; and during storms, extra observations

Run-gauges. Many cases conspire to produce anomalies in the returns. They arise, partly, from the defective nature of the instrument used. It is, indeed, difficult to obtain an unequivocal position for the rain-gauge; but in all cases the gauge must be sunk in the ground till its edges are on a level with the close cut grass around its mouth. The rain-gauge ought to be read daily at 9 A.M., and the readings entered in the returns for the day previous.

Clouds.—Convenient abbreviations for Luke Howard nomenclature of clouds will be found on the other side. The amount of cloud in the atmosphere ought to be estimated from

Observations of the clouds are made at 9 A.M. and at sunset, as illustrating the condition and currents of the upper and lower regions of the atmosphere. The entries in the schedule are to be made in the following manner;—In the column "Velocity

column, an entry of—, (c.g.) will indicate that the higher
2, cu-st,
regions are covered to the "amount" of 4-tenths with *stratus*
clouds; and that the sky is further obscured to the extent of
2-tenths by lower clouds of the *cumulo-stratus* kind.

Temperature of the Sea.—A knowledge of the temperature of the sea is not only in itself, but in its relations to that of our island, a very important branch of Meteorology. The Council

Ozone.—Mention under Section 1 for Moffat's papers, "The paper is affixed by a pin to a board in the thermometer box and the indications registered at 9 A.M. and 9 P.M." It is desired that these indications be registered in connection with the force and direction of the wind at the time of observation, in the following manner:—this zone, as an *exome* entry in the schedule, will indicate that the zone paper is tilted at "43° on the scale," that the wind is from the N.W., and that is forced on the scale 0—6 "4.3"; i.e., that it is *blowing* *resh*.

Remarks.—The “Remarks” column is too narrow, but unavoidable so. Some of the most valuable observations that can be taken are those for which no rules can be given nor hours

By the use of abbreviations, the state of the weather at 9 A.M., 3 P.M., and 9 P.M. should be registered, either in two columns, other than the first column, or in one column, under the heading "Remarks." It is intended that observations by the observer should be entered in this manner on the slide rule margin. Additional remarks may be made on the margin.

The Council recommend that *term day* observations be taken —viz., on the 21st days of March, June, September, and Decem-

The Council recommend observers, before purchasing new instruments, to communicate with the Meteorological Secretary and they consider it desirable that he should have full power to reject any instrument which, on being presented for comparison, does not afford him satisfaction.

FOREST TREES.					
In Flower.	Alder.
	Beech.
	Hitch.
	Elm.
	Larch.
	Lime.
	Oak.
	Sycamore or Plane.
In Leaf buds.					
In First appear.					
In Leaf.					
Drooped or Leaves.					
	Barley,				
	Oats,				
	Wheat.				
	Beans.				
	Pease.				
	Potatoes.				
	Tumpps.				
	Rye Grass.				
GROPS.					
Planting.					
Sowing or above ground.					
Appearing.					
In Bar.					
First Out.					

[illegible]

Have the goodness also to state any information you may be able to collect relative to the crops or grains, many, Potatoes, Turnips, Fruits, etc., whether planted or in perfection; whether any have suffered from blight, disease, etc. Whether Epizootic diseases prevail among cattle; and the Agricultural condition of the district generally.

To

Secretary of the Meteorological Society of Scotland

EDINBURGH.

Waresh
June 1895.

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inverness, County of Edinburgh, in Lat 55° 56' 0" N, Long 3° 2' 40" W, Distance from Sea one miles.Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet.During the MONTH of July 1875.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No. —				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.		Days of Month.		
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bubs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		9 h. A.M.									
		Barometer.	Atmospheric.	Barometer.	Atmospheric.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.	Velocity (0-6).	Amount (0-10).	Velocity (0-6).	Amount (0-10).	No. 3 inches.	No. 12 inches.	No. 22 inches.							
		* No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.						No.	
	1	29.75	60	29.70	61	59	50			53	53	54	54	NE	1	NE	1														1
	2	29.64	60	29.86	65	67	53			56	55	57	56	W	1	W	1														2
	3	30.05	63	30.38	63	60	44			58	58	51	50	S	1	S	1														3
	4	30.39	60	30.40	64	72	53			60	55	60	56	SW	1	NE	1														4
	5	30.40	60	30.43	66	73	54			61	59	63	60	W	1	S	1														5
	6	30.45	62	30.40	66	73	53			57	55	60	58	NE	1	N	1														6
	7	30.35	67	30.20	68	76	53			58	56	60	57	NE	1	NE	1														7
	8	30.08	68	29.90	68	73	45			63	60	56	53	W	1	SW	1														8
	9	29.68	64	29.41	66	64	47			55	53	54	54	S	1	S	1														9
	10	29.40	65	29.51	64	59	45			53	53	55	55	S	1	S	1														10
	11	29.60	64	29.66	63	64	47			54	53	49	49	NE	1	NE	2														11
	12	29.90	61	30.14	63	62	47			52	49	55	54	W	2	W	1														12
	13	30.16	61	30.10	60	60	45			53	52	54	54	SW	1	SW	1														13
	14	30.05	61	30.04	61	65	44			54	52	52	51	SW	1	NE	1														14
	15	30.05	61	30.15	62	60	38			55	54	46	45	NE	2	NE	1														15
	16	30.13	60	30.14	63	64	43			53	52	56	54	NE	1	NE	1														16
	17	30.09	61	30.10	64	65	52			56	55	55	54	NE	1	NE	1														17
	18	30.03	62	30	65	59	54			54	54	56	53	NE	2	NE	2														18
	19	30	60	30.05	61	58	53			56	56	57	57	NE	1	NE	1														19
	20	30.05	62	30.10	63	67	55			60	60	60	60	NE	2	NE	2														20
	21	30.08	66	29.95	66	73	44			60	59	59	58	NE	1	NE	1														21
	22	29.83	66	29.70	68	77	53			62	60	63	64	NE	1	W	1														22
	23	29.62	67	29.52	68	64	46			63	61	53	53	SW	1	SW	1														23
	24	29.50	64	29.70	68	61	45			54	52	51	50	W	2	W	1														24
	25	29.86	61	30.05	64	61	39			55	52	47	46	W	2	W	1														25
	26	30.22	61	30.32	64	65	45			53	51	54	53	W	1	W	1														26
	27	30.38	62	30.38	66	66	45			56	55	56	54	W	1	W	1														27
	28	30.40	62	30.40	67	73	44			57	56	56	54	S	1	W	1														28
	29	30.34	63	30.10	70	75	56			60	68	63	61	SW	1	SW	2														29
	30	30.16	64	30.20	65	67	50			58	56	59	55	SW	2	SW	2														30
	31	30.20	64	30.23	67	72	50			56	52	57	54	SW	2	W	1														31
Sums.		1024	84	1224	149	196	252			203	156	180	138	39	36			3-18													
Means.		30.02	62	30.03	64	66	34			56	55	55	54	13	12																
† Total Corrections for Instrumental Errors.																															
† Corrections for Diurnal Range.																															
"Corrected Means."																															
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction†† = 29.936
for Temp. (Col. 2), = 30.02 - 0.09 = 29.936
"Corrected Mean" of Barometer at 9 P.M., minus the Correction†† = 29.942
for Temp. (Col. 4), = 30.039 - 0.097 = 29.942
Mean at Station, corrected, and at 32° = 29.939
Correction for height, feet above Mean Sea-level, = 98
Mean, reduced to 32°, and Sea-level, = 30.037
Highest Reading, corrected for Index error, on the 6th, = 30.450
Lowest Do. Do. on the 10th, = 29.650
Difference, or Monthly Range, = 1.000

* Each instrument tested at the Office in Edinburgh bears the stamp "S.M.S.," and a number to be entered in the Heading; or the Number and Initials of the Maker may be here given.
† Embracing corrections for both capillarity and Index Errors.
†† The Diurnal Range for Scotland is as yet unknown.
‡ These "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition only.
§ While the Journal Range is unknown, the Arithmetical Mean of Cols. 5 and 6 will be entered as the "Calculated Mean Temperature."
|| Observations not taken under the conditions specified in the Directions on the other side, or noted at the Top of each column, must be marked as such by the observer, in each Schedule. See over.

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 22th, = 77.0
Lowest in Month, corrected for Index errors, on the 15th, = 58.0
Difference, or Monthly Range, = 39.0
"Corrected Mean" of all the Highest, (Col. 5), = 66.3
"Corrected Mean" of all the Lowest, (Col. 6), = 48.1
Difference, or Mean Daily Range, = 18.2
** Calculated Mean Temperature of Month, = 57.2

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
Lowest at Night, Black Bulb, (corrected for Index errors), on the th, =
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =
Difference of above Means or Range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 56.2
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 54.7
†† Computed Temperature of Dew-Point, = 53.3
†† Do. Elastic Force of Vapour, = 4.09
†† Do. Weight of Vapour in a Cubic Foot of Air, =
†† Relative Humidity, (Saturation = 100), = 90
RAIN fell on 12 Days; Amount in Inches, = 3.18

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		4	7	1		4	4	9	2		
P.M.		5	7	1		4	4	9	3		
Mean.		3	7	1	0	4	4	9	2	0	1.25

156

Observations made and Return verified by

William McAuslane

(Signed)

1250

Greene,
July 1875.

Secretary of the Meteorological Society of Scotland.

EDINBURGH.

BOOK POST.

One of the chief objects that the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1853, was to secure REGULAR UNIFORMITY in the system of observation pursued at all its stations. Uniformity in the observations is absolutely necessary to justify the publication of Monthly Results from different observations, and being found that differences between the Returns from two Stations, so very considerable as to render them altogether incomparable, may arise from dissimilarity in the position or the nature of the instruments, or from the number of hours of observation, or even from

[illegible]

Hour of
Observation.

Buameters are roughly variations of atmospheric pressure, are not fitted for scientific purposes. No Buameter should be used for Meteorological Observation that is not supplied with some means of adjustment or compensation which will secure that the weight of the mercury in the tube is accurately measured from the reflecting surface of the mercury in the cistern.

The Barometer in which the error arising from the reflecting surface of the mercury in the cistern is entirely got rid of is Foreman's. In this instrument the mercury in the cistern is raised by means of a screw to a level with the bottom of the tube, which is made of glass, and the pressure of the surface is then read off. It is just

The barometer originally constructed by Mr. Aute of London, and usually called the Board of Trade Barometer, has the great convenience of requiring no adjustment of the cistern. Its scale-marks are not true inches, but so much shorter as to compensate the error that would otherwise arise from the fluctuations of the surface of the mercury.

of mercury in the cistern. This is an excellent Barometer for ordinary Observers, inasmuch as it entirely eliminates the error of observation likely to arise in not a few cases in setting the instrument to the zero point of the fixed scale when the light is not good. To show the accuracy with which these Barometers are made, we have placed a few of them side by side with a standard.

It may be stated, that one was compared, during a whole year, with another; but it will be found, that the Society's Standard Barometer, particularly care being given to its use, does not differ from the readings of the other, more than 0·003 inch. To make the comparison when atmospheric pressure was rising or falling very rapidly, with the result that none of the readings differed from those of the Standard more than 0·003 inch.

The modification of Fortin's Barometer is used at a number of the Observatories, by which the coincidence of the zero-point with

the surface of the mercury is indicated by a little ivory float, whose stem passes freely through the lid and out of the cistern. When the index-ling on this little piston-rod is brought, by the adjusting screw, to form one straight line with those on its ivory frame, the surface of the mercury is then at the exact height from which the scale is graduated. In taking an observation, this preliminary setting is graduated. In taking an observation, this preliminary setting is graduated.

EDINBURGH, December 1874..

It is absolutely necessary that the Barometer which is to be used, shall have been compared with a Standard Barometer. The Barometer should be suspended in as good a light as can be ascertained, and to facilitate the readings a piece of white paper may be put behind the tube. It must be hung truly perpendicular, and exposed to neither the sun's direct rays nor the heat of a fire, and should have received a well tested bar by a tube. The object

and must not be hung against a wall nearest the brass being to secure that the whole instrument, including the thermometer, and the attached thermometer, shall be in contact with the contained mercury, it is evident that the best position is that in which is least liable to sudden changes of temperature.

The eye, by raising and lowering it, must be brought into the plane of the vernier, which must be carefully adjusted so that the lower edge of the vernier, and the convex surface of the mercury in the tube, form exactly a tangent to the corvex surface of the mercury in the tube. Observations must be taken quickly; so as to prevent the observer's hands and person from affecting the mercury.

In the following cases, adjustment and reading

The use of a lens will introduce accurate adjustments. A mistake not infrequently made by those beginning to observe, consisting in setting the edge of the venier to the level of the clear surface of the mercury which is in direct contact with the glass tube, must be carefully avoided.

The errors most frequently made in reading the Barometer are, 0.500 inch, and 0.050 inch; this is to say, errors of 1/2000 inch.

instead of 29-365 inches, either of the following is sometimes set down, viz.: as 30-365 inches, 28-365 inches, or 29-815 inches. Experience having shown that even the very best Observers make these mistakes, particular attention is directed to the matter.

When a Barometer having adjustable surfaces has to be removed from its fastenings, the ivory peg must first be screwed so as to form a screw of a convenient

A tight plug to the castron, thus preventing the escape of the tube, but to allow the mercury not quite to the top of the tube, but to

Then screw in the mercury not quite to the top of the instrument; it

within a quarter of an inch of it, and take down the instrument; it

should then be carried with the castron upmost. ~~When~~ When suspend-

ing the Barometer for use, it must be ascertained whether the space

above the mercury in the tube is a complete vacuum. This is the

done, it is on inclining the instrument, a sharp tap is struck when

As Barometers are liable to be deranged by the introduction of air into their tubes, on removal from place to place, & in being roughly handled, it may be useful to Observers to know how the instrument may be expell'd. First close up the cistern, by screwing the ivory stopper down, so that the air may not come in, then screw the

very tight, so as to prevent the escape of mercury; and saw up the instrument to about half an inch from the top of the glass; and having slowly inverted the instrument, place the top of our air-vessel against the bottom of the glass, and gently tap on the cistern with the palm of the hand, so as to induce the air to ascend through the column to the cistern, whence it may escape. Since there is the pressure of two atmospheres—the pressure of the mercury in the

Barometer, and the air outside—pressing on any air that may be within the tube, it is usually a tedious operation to get it wholly ex-
hausted. After repeated trials, however, it is generally accomplished; and the clear metallic sound of the mercury, when gently struck
against the top of the glass tube, will show that the whole of the air has been expelled. On hanging up the Barometer, care must be
taken to prevent the mercury from falling, by touching the top of the glass tube with the finger, and then the tube will rise to its proper level.

taken to screw down the mercury in the tube before unscrewing and
float of the cistern, for if this be not attended to, the mercury will
flow out, and the instrument be seriously damaged.

Have the goodness also to state any information you may be able to collect relative to the Crops of Grain, Hay, Potatoes, Turnips, Fruits, etc., whether plentiful, or in perfection; whether any have suffered from blight, disease, etc. Whether Epizootic disease prevails among cattle; and the Agricultural condition of the district generally.

[illegible]

OBSERVATIONS IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

EDNEBURGH, December 1874..

It is absolutely necessary that the Barometer which is to be used, shall have been compared with a Standard Barometer. The Barometer should be suspended in as good a light as can be ascertained, and to facilitate the readings a piece of white paper may be put behind the tube. It must be hung truly perpendicular, and exposed to neither the sun's direct rays nor the heat of a fire, and should have received a well tested bar by a tube. The object

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against the top of the glass tube, will show that the whole of the air has been expelled. On hanging up the Barometer, care must be
taken to prevent the mercury from falling, by touching the top of the glass tube with the finger, and then the tube will rise to its proper level.

taken to screw down the mercury in the tube before unscrewing and
float of the cistern, for if this be not attended to, the mercury will
flow out, and the instrument be seriously damaged.

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inveresk, County of Edinburgh, in Lat 55° 56' 0" Long 3° 2' 40" W Distance from Sea one miles.
 Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet. During the MONTH of August 1875.
 The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No. —				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.			
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.											
		Barometer.	Attach- ed Ther- mometer	Barometer.	Attach- ed Ther- mometer	Max.	Min.	Max. in Sun's rays	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.	Readings of the H. Cup Anemometer. No. —	No. of hours in which it fell.	Amount in inches.	Velocity (0—7), and Direction.	Amount (0—10), and Species.	Velocity (0—6), and Direction.	Amount (0—10), and Species.	No. 8 inches.	12 inches.					No. 22 inches.		
		* No.		No.		No.	No.	No.	No.										9 h. A.M.	No.													
		inches.	°	inches.	°																												
	1	30.26	63	30.26	64	72	45			60	58	60	58	NE	1	SE	1			Rain amount												Barley Harvest commenced on the 9th, Oats & Wheat on the 10th general on the 16th and all cut down by the end of the month and nearly all in the Barn yard, a few crops and in fine condition. Thunder on the 11th but no lightning seen. Rainbows seen on the 25th & 28th.	
	2	30.26	64	30.24	65	69	53			57	55	61	59	W	1	W	1																
	3	30.22	66	30.28	64	68	50			59	57	56	55	NE	1	NE	1			-21													
	4	30.25	63	30.25	63	67	45			57	56	53	52	NE	1	NE	1																
	5	30.25	63	30.25	64	59	52			55	54	56	54	NE	1	NE	1																
	6	30.24	62	30.24	62	60	52			53	53	53	54	NE	2	NE	1			-08													
	7	30.24	63	30.24	63	63	52			56	55	54	53	NE	1	NE	2			-08													
	8	30.20	62	30.14	62	59	52			55	54	54	54	NE	1	NE	1			-02													
	9	29.98	62	29.77	62	57	53			55	55	54	54	NE	2	NE	1			-08													
	10	29.76	63	29.78	64	63	54			59	59	55	54	SE	1	SE	1			-08													
	11	29.73	62	29.78	64	68	52			60	59	57	56	SE	1	SE	1			-37													
	12	29.83	62	29.80	66	67	55			58	57	59	58	SE	1	SE	2			(37)													
	13	29.87	65	29.94	66	61	54			55	55	56	56	NE	1	SE	1			-01													
	14	29.94	65	30.05	65	68	56			60	60	60	60	SE	1	SE	1			-03													
	15	30.06	66	30.10	68	71	57			64	62	62	60	SE	1	SE	1			-03													
	16	29.93	67	29.80	70	73	60			63	61	65	64	SE	2	SE	3			-10													
	17	29.80	69	29.76	70	74	58			64	63	64	62	W	1	W	4			-10													
	18	29.86	69	30.07	70	73	49			59	57	57	55	W	1	W	2																
	19	30.18	67	30.24	68	66	48			55	54	54	52	W	1	W	1																
	20	30.21	66	30.20	67	66	52			56	54	56	55	W	1	W	1																
	21	30.15	65	30.24	65	67	46			57	56	54	52	W	4	NE	1																
	22	30.15	65	30.05	67	69	54			60	57	58	56	SE	1	SE	2																
	23	29.96	65	29.80	66	65	55			56	55	58	57	SE	2	SE	2			-12													
	24	29.75	65	29.70	66	69	51			58	57	57	56	SE	2	SE	2			-12													
	25	29.61	65	29.62	64	68	53			54	54	56	55	S	2	S	2			-11													
	26	29.70	68	29.88	66	67	50			59	58	54	53	S	2	S	2			-05													
	27	29.98	66	30.14	64	65	51			57	55	54	53	SE	4	SE	2			-05													
	28	30.11	65	30	66	64	48			57	56	53	51	SE	1	SE	1																
	29	29.95	64	29.90	65	68	50			59	57	57	55	SE	1	SE	1																
	30	29.88	64	29.80	64	58	44			54	53	49	49	SE	3	SE	2			-05													
	31	29.91	61	30.20	66	63	38			53	53	44	42	SE	2	NE	2																
Sums.		1713	142	1511	152	166	157	32		234	199	192	154	17		17				153													
Means.		30.007	64.6	30.017	65.4	66.0	51.3			57.5	56.4	56.2	55.0	1.5		1.5																	
† Total Corrections for Instrumental Errors.																																	
† Corrections for Diurnal Range.																																	
"Corrected Means."																																	
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction†† = 29.910
 for Temp. (Col. 2), = 30.007... -0.097
 "Corrected Mean" at 9 P.M., minus the Correction†† = 29.918
 for Temp. (Col. 4), = 30.017... -0.099
 Mean at Station, corrected, and at 32°, = 29.914
 Correction for height, feet above Mean Sea-level, = 97
 Mean, reduced to 32°, and Sea-level, = 30.011
 Highest Reading, corrected for Index error, on the 3th, = 30.280
 Lowest Do. Do., on the 25th, = 29.610
 Difference, or Monthly Range, = 0.670

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 17th, = 74.0
 Lowest in Month, corrected for Index errors, on the 7th, = 38.0
 Difference, or Monthly Range, = 36.0
 "Corrected Mean" of all the Highest, (Col. 5), = 66.0
 "Corrected Mean" of all the Lowest, (Col. 6), = 51.3
 Difference, or Mean Daily Range, = 14.7
 ** Calculated Mean Temperature of Month, = 58.6
 S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
 Lowest at Night, Black Bulb, (corrected for Index errors), on the th, =
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =
 Difference of above Means or Range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 56.9
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 55.7
 †† Computed Temperature of Dew-Point, = 54.8
 †† Do. Elastic Force of Vapour, = 42.7
 †† Do. Weight of Vapour in a Cubic Foot of Air, ... =
 †† Relative Humidity, (Saturation = 100), = 92
 RAIN fell on 12 Days; Amount in Inches, = 1.23

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Mean Force.	Mean Velocity in miles per day.
A.M.	27					13	12	6			
P.M.	161					23	11	5	1		
Mean.	261					23	11	5	1	0	1.50

2.25

Observations made and Return verified by William Macdonald

(Signed)

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inveresk, County of Edinburgh, in Lat. 55° 56' 0" N, Long. 3° 2' 40" W, Distance from Sea one miles.

Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet.

During the MONTH of September 1875

The Hours of Observation are of Greenwich Time.

[illegible]

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction††		=	
for Temp. (Col. 2), = 30.0 - 2.2 - 0.89		=	29.931
"Corrected Mean" of Barometer at 9 P.M., minus the Correction††		=	29.930
for Temp. (Col. 4), = 30.0 - 2.4 - 0.94		=	29.930
Mean at Station, corrected, and at 32°,.....		=	29.930
Correction for height, feet above Mean Sea-level,.....		=	98
Mean, reduced to 32°, and Sea-level,.....		=	30.028
Highest Reading, corrected for Index error, on the 14 th,.....		=	30.450
Lowest Do. Do., on the 26 th,.....		=	29.160
Difference, or Monthly Range,		=	1.290

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 29 th ,	=	71.0
Lowest in Month, corrected for Index errors, on the 29 th ,	=	39.0
Difference, or Monthly Range,	=	32.0
" Corrected Mean " of all the Highest, (Col. 5).	=	61.9
" Corrected Mean " of all the Lowest, (Col. 6),	=	47.2
Difference, or Mean Daily Range,	=	14.7
** Calculated Mean Temperature of Month,	=	54.5

S.-R. THERMOMETER, Black Bulb in Sun, Highest,	(corrected for	
Index Errors), on the	th,	=
“Corrected Mean, ” (Col. 7), of Black Bulb, Max. in Sun,		=
Lowest at Night, Black Bulb, (corrected for Index errors), on the	th, ...	=
“Corrected Mean, ” (Col. 8), of Black Bulb, Min. on grass,		=
Difference of above Means or Range (“exposed”),		=

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11),	=	53.0
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12),	=	52.0
‡‡ Computed Temperature of Dew-Point,	=	51.0
‡‡ Do. Elastic Force of Vapour,	=	3.
‡‡ Do. Weight of Vapour in a Cubic Foot of Air, ...	=	
‡‡ Relative Humidity, (Saturation = 100),	=	93
RAIN fall on 13 Days; Amount in Inches,	=	2.62

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.		5	2	3	5	9	3	2			
P.M.		4	6	1	6	8	4	1			
Mean.		0.5	4	2	6	8	3	2	0	1.45	

2.10

Observations made and
Return verified by

William McMustane

(Signed)

145
58
7

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inverurie, County of Edinburgh, in Lat 55°56'0" N Long. 2°2'40" W Distance from Sea 17 1/2 miles.
Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet. During the MONTH of March 1875.
The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No. —				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.		
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.										
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. No.	Min. No.	Max. in Shade.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.	Velocity (0-6), and Direction.	Amount (0-10), and Species.	Velocity (0-6), and Direction.	Amount (0-10), and Species.	No. 3 inches.	12 inches.	No. 22 inches.								
		* No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.							
		inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	1	29.74	60	29.56	60	60	42			54	54	48	48	WSW	1	SW	1															
	2	29.55	60	29.50	61	56	40			46	45	50	50	WSW	1	SW	1															
	3	29.50	60	29.34	60	57	42			47	46	45	45	SSW	1	S	2															
	4	29.53	60	29.56	62	60	50			47	46	56	55	SW	2	SW	4															
	5	29.60	61	29.70	63	62	47			53	50	50	49	W	4	SW	5															
	6	30.05	60	29.95	65	57	44			50	48	49	48	SW	4	SW	4															
	7	30.05	60	30.10	64	56	47			48	46	41	50	SW	3	SW	5															
	8	29.95	60	29.73	61	58	43			55	54	47	46	SSW	2	SW	1															
	9	29.76	60	29.80	58	48	32			44	44	36	35	S	1	SW	1															
	10	29.70	56	29.24	57	51	37			34	33	44	44	S	2	S	4															
	11	29.12	55	29.20	51	51	30			43	42	34	34	S	1	S	1															
	12	29.30	54	29.30	55	46	31			33	33	33	33	S	1	S	1															
	13	29.35	51	29.40	52	50	34			35	34	37	37	SE	1	SE	1															
	14	29.50	52	29.70	55	47	42			38	38	44	44	SE	2	SE	5															
	15	29.80	52	29.80	55	49	40			44	44	44	44	E	1	SE	1															
	16	29.77	51	29.80	55	50	40			45	45	45	45	ENE	1	ENE	1															
	17	29.84	53	29.98	57	50	44			49	48	47	47	SE	1	SE	1															
	18	30.04	54	30.06	58	51	40			49	48	46	46	SE	2	SE	2															
	19	29.98	54	29.92	55	50	42			44	44	47	46	SE	2	SE	2															
	20	29.81	52	29.60	55	47	43			46	45	44	43	SE	2	SE	3															
	21	29.50	54	29.53	60	54	45			45	45	47	46	SE	1	SE	1															
	22	29.52	55	29.60	58	53	42			49	48	46	45	SE	2	SE	2															
	23	29.65	55	29.90	56	51	44			49	49	47	46	SE	1	SE	1															
	24	30.10	54	30.16	56	50	38			46	45	43	42	SE	1	SE	1															
	25	30.17	54	30.13	56	51	36			39	39	38	37	S	1	SE	1															
	26	30.05	54	29.94	51	54	41			42	41	46	45	SE	1	SE	3															
	27	29.93	54	30.06	54	48	35			48	47	40	39	SE	2	SE	1															
	28	30.10	51	30.22	60	51	34			41	41	38	37	SE	1	SE	1															
	29	30.16	57	30.20	60	48	40			41	41	44	43	E	1	E	1															
	30	30.10	55	30.04	52	46	38			42	41	41	40	SE	2	SE	1															</

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction†† = 29.708
for Temp. (Col. 2), = 29.781 - 0.073
"Corrected Mean" of Barometer at 9 P.M., minus the Correction†† = 29.699
for Temp. (Col. 4), = 29.776 - 0.077
Mean at Station, corrected, and at 32°, = 29.704
Correction for height, feet above Mean Sea-level, = 100
Mean, reduced to 32°, and Sea-level, = 29.804
Highest Reading, corrected for Index error, on the 28th, = 30.220
Lowest Do. Do., on the 11th, = 29.120
Difference, or Monthly Range, = 1.100

* Each instrument tested at this Office in Edinburgh bears the stamp "S.M.S.," and a number to be entered in the Heading; or the Number and Initials of the Maker may be here given.
† Enhancing corrections for both capillarity and Index Errors.
†† The Diurnal Range for Scotland is as yet unknown.
‡ Practically, though not absolutely a minus correction.
‡‡ These "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition only.
‡‡‡ While the Diurnal Range is unknown, the Arithmetical Mean of Cols. 5 and 6 will be entered as the "Calculated Mean Temperature."
Any Observations not taken under the conditions specified in the Directions on the other side, or noted at the Top of each column, must be marked as such by the observer, in each Schedule. See *etc.*

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 5th, = 62.0
Lowest in Month, corrected for Index errors, on the 11th, = 30.0
Difference, or Monthly Range, = 32.0
"Corrected Mean" of all the Highest, (Col. 5), = 51.9
"Corrected Mean" of all the Lowest, (Col. 6), = 40.1
Difference, or Mean Daily Range, = 11.8
** Calculated Mean Temperature of Month, = 46.0
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
Lowest at Night, Black Bulb, (corrected for Index errors), on the th, =
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =
Difference of above Means or Range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 44.5
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 43.6
† Computed Temperature of Dew-Point, = 42.6
† Do. Elastic Force of Vapour, = 273
† Do. Weight of Vapour in a Cubic Foot of Air, =
† Relative Humidity, (Saturation = 100), = 93
RAIN fell on 16 Days; Amount in Inches, = 2.21

WIND. SUMMARY.											
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day.
A.M.											
P.M.											
Mean.	0	1	5	8	11	5	1	0	0	1.80	3.24

Observations made and
Return verified by

William McInnes

(Signed)

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inverclyde, County of Edinburgh, in Lat. 55° 56' 0" Long. 3° 2' 10" Distance from Sea one miles.
Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet. During the MONTH of November 1875.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No.				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.				SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.		9 h. P.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		Barometer.	Attach- ed Ther- mometer	Barometer.	Attach- ed Ther- mometer	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.	Velocity (0-6), and Direction.	Amount (0-10), and Species.	Velocity (0-6), and Direction.	Amount (0-10), and Species.	No.	8 inches.	12 inches.	No.	22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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1	30.	51	29.90	54	44	35			41	40	38	37	SE	1	SE	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	"	ms.	" meteor.
ci-cu.	" cirro-cumulus.	n.	" nimbus.
ci-s.	" cirro-stratus.	r.	" rain.
cu.	" cumulus.	h.r.	" heavy rain.
cu-s.	" cumulo-stratus.	c. h. r.	" continued heavy rain.
d.	" dew.	s.	" stratus.
f.	" frost.	sc.	" scud.
fr.	" hoar-frost.	s.	" snow.
h.	" haze.	sol. h.	" solar halo.
h. d.	" heavy dew.	sq.	" squall.
hl.	" hail.	sq.	" squall.
l.	" lightning.	t.	" thunder.
li. cl.	" light clouds.	t. s.	" thunder storm.
li. sh.	" light showers.	w.	" wind.
lu. co.	" lunar corona.	g.	" gale of wind.
lu. h.	" lunar halo.		

TABLE FOR ESTIMATING FORCE OF WIND.

Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.
0	Calm	1.5	Light breeze	4	Blowing hard
0.5	Very light air	2	Fresh breeze	5	Blowing a gale
1	Light air	3	Very fresh	6	Violent gale

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction†† for Temp. (Col. 2), = 29.797
"Corrected Mean" of Barometer at 9 P.M., minus the Correction†† for Temp. (Col. 4), = 29.800
Mean at Station, corrected, and at 32°, = 29.798
Correction for height, feet above Mean Sea-level, = 1.01
Mean, reduced to 32°, and Sea-level, = 29.899
Highest Reading, corrected for Index error, on the 23rd th, = 30.470
Lowest Do. Do., on the 10th, = 29.040
Difference, or Monthly Range, = 1.430

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 15th, = 56.0
Lowest in Month, corrected for Index errors, on the 10th, = 21.0
Difference, or Monthly Range, = 35.0
"Corrected Mean" of all the Highest, (col. 5), = 42.8
"Corrected Mean" of all the Lowest, (col. 6), = 32.5
Difference, or Mean Daily Range, = 10.3
** Calculated Mean Temperature of Mo., = 37.6

S.-R. THERMOMETER, Black Bulb Sun, Highest, (corrected for Index Errors), on the 15th, = 56.0
"Corrected Mean," (Col. 7), of Black B. Max. in Sun, = 42.8
Lowest at Night, Black Bulb, (corrected Index errors), on the 10th, = 21.0
"Corrected Mean," (Col. 8), of Black B Min. on grass, = 32.5
Difference of above Means or Range ("exp"), = 10.3

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 36.3
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 35.8
†† Computed Temperature of Dew-Point, = 35.1
†† Do. Elastic Force of Vapour, = 2.65
†† Do. Weight of Vapour in a Cubic Foot of Air, = 95
†† Relative Humidity, (Saturation = 100), = 95
RAIN fell on 1 Days; Amount in Inches, = 4.27

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		4	8	1	2	2	6	3	4		
P.M.		3	7	3	3	1	5	6	2		
Mean.		4	7	2	2	2	5	5	3	0	1.50

2.25

Observations made and
Return verified by

William McEustace

(Signed)

Overseer
of Pass. 1875-

BOOK POST.

Mr ALEXANDER BUCHAN,

Secretary of the Meteorological Society of Scotland,

EDINBURGH.

Have the goodness also to state any information you may be able to collect relative to the Crops of Grain, Hay, Potatoes, Turnips, Frits, etc., whether plentiful, or in perfection; whether any have suffered from blight, disease, etc. Whether Epizootic disease prevails among cattle; and the Agricultural condition of the district generally.

[illegible][illegible]

OBSERVATIONS IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

[illegible]

The Hygrometer in use at the Society's Stations consists of one or two Thermometers usually, but not necessarily, mounted upon a wooden frame. As apparently slight errors arise from the approved form of this apparatus, we occasionally visit the stations to see the Hygrometers actually regulated.

In reading the Hygrometer Observations, Observe that the tubes forming the Hygrometrical Columns are fixed in the frame to which they attend to the following conditions:—The tubes must hang down at least an inch free from the bottom of the frame; they are attached; the frame must be such as will bring the tubes forward at right angles to the eye, so that the meniscus may be seen clearly; the interior must be cool, and altogether placed to the side and under the shade of the wet bulb, but in no case under the direct rays of the sun; the tube must be of medium fineness, and fastened at the top by the bulb, the bottom must be open, and the neck of the bulb by the cotton, which also supplies it with water. A small quantity of water must be put in the bottle, so that the level of the liquid can be seen by the Observer that the muslin is always clean and moist, and the water pure. In frosty weather, observation is made by means of a glass, which is covered with muslin, and must be made with great care. The thermometer must be moistened by immersion from 15 to 30 minutes before the hour of observation. From the film of ice thus formed evaporation will proceed as from the moist cloth in ordinary circumstances.

In reading the thermometer great care must be taken to bring the eye exactly opposite the tip of the index or column of mercury, and the reading ought to be taken to tenths of a degree, and noted in decimals. Thus if the thermometer will read .397°, 40°·6, or 40°·1; or again, 40°·4, 40°·5, or 40°·6, according as it indicates the units, tenths, or hundredths, the observer should note 40°·5, or 40°·50, or 40°·500, as he may choose to do so. So also 40°·8, and 40°·8, more or less may be noted 40°·2, or 40°·20, or 40°·200 respectively. In reading Rutherford's Minimum Thermometer, the indication of that end of the index which is next the surface of the spirit is alone noted. On opening the Thermometer Box, the Dry Bulb Wet Bulb Thermometers are to be first, and rapidly, exposed to the air.

The Hygrometer is read at 9 a.m. and 9 p.m. The Self-Registering Thermometers are read at 9 p.m. only, as indicating the greatest and least degrees of temperature in the 24 hours preceding. It is not a matter of indifference whether the Self-Registering Thermometers are read, since, in winter at least, the extremes may occur at any hour; and it is necessary to register their occurrences to their proper meteorological day. In the order the observations are taken, the readings of the thermometers of the Society's schedules, the indications registered on the 3d are those of a series of phenomena commencing at 9 p.m. on the 2d, and extending till 9 p.m. on the 3d.

No instrument ought to be used for Meteorological purposes till it has been carefully tested by comparison with a Standard Thermometer. When such Thermometers are sent to the stations, as are not graduated on the stem, but merely on the bulb, attached scale, undergo repairs, they are very liable to be moved from their position on the Scale, and ought never afterwards to be used without being re-tested. The Self-Registering Thermometers, Minimum Thermometers, ought frequently to be compared with the dry bulb of the Hygrometer. The large amount of each Thermometer, marked by a scratch on the tube, ought to be tested once a year, in snow or during ice.

The following points require attention:—

[illegible]

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Inverurie, County of Edinburgh, in Lat. 55°56'0" N, Long. 3°2'40" W, Distance from Sea 100 miles.Height of Cistern of the Barometer above Mean Sea-level 90 feet, above Ground 4 feet.During the MONTH of December 1872.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER. No. —				WIND.				RAIN.		CLOUDS.				THERMOMETERS under Ground.				SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.									
		Barometer. * No. —	Attach- ed Ther- mometer	Barometer. No. —	Attach- ed Ther- mometer	Max. No. —	Min. No. —	Max. in Sun's rays No. —	Min. on Grass. No. —	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.	Readings of the H. Cup Anemometer. No. —	No. of hours in which it fell.	Amount in inches.	Velocity (0—5), and Direction.	Amount (0—10), and Species.	Velocity (0—5), and Direction.	Amount (0—10), and Species.	No. — 3 inches.	12 inches.	No. — 22 inches.				
		inches.	°	inches.	°														9 h. A.M.												
1	30.20	45	30.18	46	35	25			32	32	30	30	SE	1	SE	1			—												1
2	30.12	44	30.06	49	35	28			25	25	32	32	SE	1	SE	1			.06												2
3	29.95	47	29.90	49	35	27			33	33	30	30	SE	1	SE	2			—												3
4	30.06	45	30.20	44	34	20			28	28	33	32	SE	1	SE	1			.10												4
5	30.25	41	30.34	43	32	24			27	27	29	29	SE	1	SE	1			.20												5
6	30.43	41	30.60	46	33	26			27	27	31	31	E	1	E	2			.10												6
7	30.64	41	30.56	53	32	29			26	26	31	30	SE	1	SE	1			—												7
8	30.51	44	30.50	49	33	29			31	30	31	30	SE	1	SE	1			—												8
9	30.43	43	30.42	45	35	31			33	32	34	34	SE	1	SE	1			—												9
10	30.28	45	30.14	46	40	39			36	35	40	39	SE	1	SE	1			—												10
11	30.10	50	30.06	49	43	40			40	39	38	37	SE	1	SE	1			—												11
12	30.06	50	30.07	50	44	38			40	39	39	38	SE	1	SE	1			—												12
13	30.10	50	30.13	50	44	38			41	40	39	38	SE	1	SE	1			—												13
14	30.06	50	30.06	59	44	26			41	40	28	28	SE	1	SE	1			—												14
15	30.06	51	30.04	51	41	35			27	26	37	36	SE	1	SE	1			—												15
16	30.03	50	30. —	50	44	33			38	37	36	35	E	1	E	1			—												16
17	29.94	49	29.75	52	44	34			34	33	37	36	E	1	SE	4			—												17
18	29.55	52	29.70	54	45	36			44	43	38	38	SE	1	SE	1			.04												18
19	29.40	50	29.40	52	44	37			40	40	39	39	SE	1	SE	1			.07												19
20	29.31	50	29.20	51	49	35			41	40	38	37	SE	2	SE	5			—												20
21	29.51	50	29.14	53	52	36			40	39	40	39	SE	3	SE	5			.30												21
22	29.20	50	29.42	53	45	36			41	40	38	38	SE	1	SE	5			.18												22
23	29.52	50	29.70	55	48	36			40	40	41	41	SE	5	SE	5			.12												23
24	29.57	50	29.74	53	49	36			48	47	42	41	SE	5	SE	5			.24												24
25	30.04	50	30.24	52	49	40			40	39	44	43	SE	2	SE	2			—												25
26	30.30	51	30.30	53	49	42			44	43	46	42	SE	1	SE	2			—												26
27	30.30	52	30.20	54	48	33			42	41	40	39	SE	1	SE	3			—												27
28	30.41	51	30.28	51	46	34			33	32	40	39	SE	1	SE	1			—												28
29	30.22	50	30.13	50	47	42			40	39	46	44	SE	1	SE	1			—												29
30	30.08	52	29.80	53	48	42			46	45	44	42	SE	1	SE	2			—												30
31	29.74	51	29.58	54	49	40			46	44	44	43	SE	5	SE	5			.10												31
Sums.		139	255	389	19	76	117		24	19	228	199	50	65			151														
Means.		30.012	48.2	29.998	50.3	125	33.8		369	362	373	364	1.6	2.1																	
† Total Corrections for Instrumental Errors.																															
† Corrections for Diurnal Range.																															
"Corrected Means."																															
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction†† = 29.959
for Temp. (Col. 2), = 30.012 - 0.053 = 29.959
"Corrected Mean" of Barometer at 9 P.M., minus the Correction†† = 29.939
for Temp. (Col. 4), = 29.998 - 0.059 = 29.939
Mean at Station, corrected, and at 32°, = 29.949
Correction for height, feet above Mean Sea-level, = 101
Mean, reduced to 32°, and Sea-level, = 30.050
Highest Reading, corrected for Index error, on the 7 th, = 30.640
Lowest Do. Do., on the 21 th, = 29.140
Difference, or Monthly Range, = 1.500

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 21 th, = 52.0
Lowest in Month, corrected for Index errors, on the 4 th, = 20.0
Difference, or Monthly Range, = 32.0
"Corrected Mean" of all the Highest, (Col. 5), = 42.5
"Corrected Mean" of all the Lowest, (Col. 6), = 33.8
Difference, or Mean Daily Range, = 8.7
** Calculated Mean Temperature of Month, = 38.1

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
Lowest at Night, Black Bulb, (corrected for Index errors), on the th, =
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =
Difference of above Means or Range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 37.1
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 36.3
†† Computed Temperature of Dew-Point, = 35.2
†† Do. Elastic Force of Vapour, = 2.05
†† Do. Weight of Vapour in a Cubic Foot of Air, =
†† Relative Humidity, (Saturation = 100), = 93
RAIN fell on 1 Days; Amount in Inches, = 1.51

WIND.												SUMMARY.		
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day.			
A.M.	4	2	1		5	12	6	1						
P.M.	5	3	1		8	9	5							
Mean.	4	3	1	0	7	10	5	1	0		1.85			

Observations made and
Return verified by

Wm. M. Munro

(Signed)

185
148

Waresch
Decr 1845

The Council of the Society recommaned that the Self-Hygrometer, meaning of the scale of every instrument; the rejection of Thermo-
meters, and the Dry and Wet Bulb Hygrometers, be kept in Stevenson's Loxwood-board Box for
the weather, as shown in the past by repeated and annoying breakages
of Thermometers of similar or structure; and as regards Maximum
Thermometers, either Nagels and Zamboni, or Phillips, which
seemed to last longer in the high latitudes, and were
sewed to four feet posts, also painted white, finally
to be placed in position the Baths of the Minimum
Thermometer, and the Wet Bulb Thermometers, will be
at the same height of four feet above the ground, the
at the same height of four feet above the ground, the

to be made on the changes in the direction of the wind, and during storms, except observations at every hour of Greenwich time. Such a system of simultaneous observation, pursued at different Stations, is likely to give highly valuable and important results particularly in connection with the system of thickly-planted Stations over a limited district now Edinburgh called Storm Stations, the course of being established by the Society for the systematic investigation of the relation of the force of the wind to Barometric Genuines, and other points connected with winds.

Force of the Wind at any particular hour of observation, the Pressure being indicated by the Barometer, and the Direction of the Wind, the Anemometer recently brought under the notice of the Society by Mr T. Stevenson, the Honorary Secretary, and Mr R. Ballingall, Superintendent Observer at Dalnair, are recommended as likely to secure more satisfactory results than have hitherto been obtained from the ordinary method of making observations on the face of the Wind-vane.

[illegible]

the observation of Solar and Terrestrial Radiation is not yet in sufficiently advanced state to warrant the exclusive recommendation of any one of these methods.

The Hygrometer in use at the Society's Station consists of two Thermometers usually, but not necessarily, mounted upon the same frame. As apparently slight deviations from the approved form of this apparatus seriously vitiate the Hygrometrical Observations, Observers are specially warned

in reading the Thiemeometer great care must be taken to bring the eye exactly opposite the tip of the index of mercury. The reading ought to be taken to tenths of a degree, and noted in decimals. Thus Thiemeometer will be read 38.9° , 40.0° , or 40.1° ; or again, 40.0° , 40.5° , or 40.6° , according as it indicates a little under, at, or above 40° . In the second column, an 80° coincidence with, or a little over 40° , or $40\frac{1}{2}$, respectively, indicates a coincidence with, or more or less must be registered 40.2° , or 40.4° , or 40.6° , or 40.8° , or 41.0° , or 41.2° , or 41.4° , or 41.6° , or 41.8° , or 42.0° , or 42.2° , or 42.4° , or 42.6° , or 42.8° , or 43.0° , or 43.2° , or 43.4° , or 43.6° , or 43.8° , or 44.0° , or 44.2° , or 44.4° , or 44.6° , or 44.8° , or 45.0° , or 45.2° , or 45.4° , or 45.6° , or 45.8° , or 46.0° , or 46.2° , or 46.4° , or 46.6° , or 46.8° , or 47.0° , or 47.2° , or 47.4° , or 47.6° , or 47.8° , or 48.0° , or 48.2° , or 48.4° , or 48.6° , or 48.8° , or 49.0° , or 49.2° , or 49.4° , or 49.6° , or 49.8° , or 50.0° , or 50.2° , or 50.4° , or 50.6° , or 50.8° , or 51.0° , or 51.2° , or 51.4° , or 51.6° , or 51.8° , or 52.0° , or 52.2° , or 52.4° , or 52.6° , or 52.8° , or 53.0° , or 53.2° , or 53.4° , or 53.6° , or 53.8° , or 54.0° , or 54.2° , or 54.4° , or 54.6° , or 54.8° , or 55.0° , or 55.2° , or 55.4° , or 55.6° , or 55.8° , or 56.0° , or 56.2° , or 56.4° , or 56.6° , or 56.8° , or 57.0° , or 57.2° , or 57.4° , or 57.6° , or 57.8° , or 58.0° , or 58.2° , or 58.4° , or 58.6° , or 58.8° , or 59.0° , or 59.2° , or 59.4° , or 59.6° , or 59.8° , or 60.0° , or 60.2° , or 60.4° , or 60.6° , or 60.8° , or 61.0° , or 61.2° , or 61.4° , or 61.6° , or 61.8° , or 62.0° , or 62.2° , or 62.4° , or 62.6° , or 62.8° , or 63.0° , or 63.2° , or 63.4° , or 63.6° , or 63.8° , or 64.0° , or 64.2° , or 64.4° , or 64.6° , or 64.8° , or 65.0° , or 65.2° , or 65.4° , or 65.6° , or 65.8° , or 66.0° , or 66.2° , or 66.4° , or 66.6° , or 66.8° , or 67.0° , or 67.2° , or 67.4° , or 67.6° , or 67.8° , or 68.0° , or 68.2° , or 68.4° , or 68.6° , or 68.8° , or 69.0° , or 69.2° , or 69.4° , or 69.6° , or 69.8° , or 70.0° , or 70.2° , or 70.4° , or 70.6° , or 70.8° , or 71.0° , or 71.2° , or 71.4° , or 71.6° , or 71.8° , or 72.0° , or 72.2° , or 72.4° , or 72.6° , or 72.8° , or 73.0° , or 73.2° , or 73.4° , or 73.6° , or 73.8° , or 74.0° , or 74.2° , or 74.4° , or 74.6° , or 74.8° , or 75.0° , or 75.2° , or 75.4° , or 75.6° , or 75.8° , or 76.0° , or 76.2° , or 76.4° , or 76.6° , or 76.8° , or 77.0° , or 77.2° , or 77.4° , or 77.6° , or 77.8° , or 78.0° , or 78.2° , or 78.4° , or 78.6° , or 78.8° , or 79.0° , or 79.2° , or 79.4° , or 79.6° , or 79.8° , or 80.0° , or 80.2° , or 80.4° , or 80.6° , or 80.8° , or 81.0° , or 81.2° , or 81.4° , or 81.6° , or 81.8° , or 82.0° , or 82.2° , or 82.4° , or 82.6° , or 82.8° , or 83.0° , or 83.2° , or 83.4° , or 83.6° , or 83.8° , or 84.0° , or 84.2° , or 84.4° , or 84.6° , or 84.8° , or 85.0° , or 85.2° , or 85.4° , or 85.6° , or 85.8° , or 86.0° , or 86.2° , or 86.4° , or 86.6° , or 86.8° , or 87.0° , or 87.2° , or 87.4° , or 87.6° , or 87.8° , or 88.0° , or 88.2° , or 88.4° , or 88.6° , or 88.8° , or 89.0° , or 89.2° , or 89.4° , or 89.6° , or 89.8° , or 90.0° , or 90.2° , or 90.4° , or 90.6° , or 90.8° , or 91.0° , or 91.2° , or 91.4° , or 91.6° , or 91.8° , or 92.0° , or 92.2° , or 92.4° , or 92.6° , or 92.8° , or 93.0° , or 93.2° , or 93.4° , or 93.6° , or 93.8° , or 94.0° , or 94.2° , or 94.4° , or 94.6° , or 94.8° , or 95.0° , or 95.2° , or 95.4°

[illegible][illegible]

BOOK

POST.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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[illegible]

Quackoo, . . .	
Cutlew, . . .	
House-Swallow	
Lapping, . .	
Flower, . . .	
Sand-Martin, .	
Starling, . . .	
Swan,	
Rail or Corn C	

[illegible]

FRUITS.	le,	rk Currant,	ry,	ssberry,	ch,	ry,	m,	wberry,
---------	-----	-------------	-----	----------	-----	-----	----	---------

[illegible]

Barberry,
Boulevard or Elter,
Broom,
Hazel,
Hawthorn,
Holly,
Laburnum,
Lilac,
Mazzeum,
Mountain Ash or Rowan,
Red Flowering Currant,
Rhododendron Ponticum,
Whin,

OBSERVATIONS IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

FOREST TREES.		SHRUBS, ETC.		FRUITS.		MIGRATORY BIRDS.	
First in Flower.	Last in Flower.	First in Blossom.	Last in Blossom.	First in Blossom.	Last in Blossom.	First in Arrival.	Last in Departure.
Alder.		Barberry.		Apple.		Cuckoo.	
Asp.		Boutree or Elder.		Black Currant.		Curlew.	
Beech.		Broom.		Cherry.		House-Swallow.	
Birch.		Hazel.		Gean.		Lapwing.	
Elm.		Hawthorn.		Roseberry.		Plover.	
Larch.		Holly.		Peach.		Sand Martin.	
Lime.		Laburnum.		Pear.		Starling.	
Oak.		Myrica.		Plum.		Swan.	
Sycamore or Plane.		Rhododendron Ponticum.		Strawberry.		Rail or Corn Crake.	
		Red Flowering Currant.					
		Mountain Ash or Rowan.					
		Whin.					

Have the goodness also to state any information you may be able to collect relative to the Crops of Grain, Hay, Potatoes, Turnips, Fruits, etc., whether plentiful, or in perfection; whether any have suffered from blight, disease, etc. Whether Epizootic disease prevails among cattle; and the Agricultural condition of the district generally.

EDINBURGH.

Secretary of the Meteorological Society of Scotland,

Mr ALEXANDER BUCHAN

BOOK POST.

To