

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park Aberdeen, County of Aberdeen, in Lat. 57° 9' N, Long. 2° 6' W, Distance from Sea 2 miles.

Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.

During the MONTH of January 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.		WIND.				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.		No. of hours in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer.	9 h. A.M.		P.M.		SUNSHINE. Hours.	9 h. A.M.					Temperature of WELL at depth of feet, No.	Temperature at 1 fathom, and Density.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Barometer. * No.	Attached Thermometer.	Barometer. No.	Attached Thermometer.	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.		Velocity (0-10), and Species.	Velocity (0-10), and Species.	Velocity (0-10), and Species.	Amount (0-10), and Species.		No. 3 inches.							No. 12 inches.	No. 22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Patten Park Aberdeen, County of Aberdeen, in Lat. 57° 9' N, Long. 2° 6' W, Distance from Sea 2 miles.

Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.

During the MONTH of February 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.		WIND.				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.		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.		No. of hours in which it fell.		Amount in inches.		9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer.		9 h. A.M.		P.M.			9 h. A.M.					Temperature of WELL at depth of feet, No.		Temperature at 1 fathom, and Density.	
		Barometer.	Attached Ther- mometer	Barometer.	Attached Ther- mometer	Max.	Min.	Max. in Sun/shade	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	No.	No.	Direction.	Force.	Direction.	Force.	Velocity (0-9)	Amount (0-10), and Species.	Velocity (0-9)	Amount (0-10), and Species.	SUNSHINE. Hours.	No. 3 inches.	No. 12 inches.	No. 22 inches.		No. 3 inches.	No. 12 inches.	No. 22 inches.	9 A.M.		9 P.M.			
		* No.				No.	No.	No.	No.																												
		inches.	°	inches.	°	°	°	°	°	°	°	°																									
	1	28.745	42	29.100	44	31.6	33.0			33.8	32.8	34.0	32.5	0.06	NW	3	NW	4			10		4										1				
	2	29.750	41	29.950	46	43.4	33.5			37.0	33.5	36.5	33.0	0.00	NW	3	NW	1			5		3										2				
	3	29.920	43	29.930	45	54.5	32.8			44.4	41.5	41.2	40.8	0.00	N	1	SW	1			5		6										3				
	4	29.950	46	29.890	48	49.5	42.0			47.0	45.0	46.9	45.0	0.00	SW	2	SW	3			5		2										4				
	5	30.000	47	29.950	52	49.0	41.0			48.0	46.6	46.0	44.5	0.00	SW	1	SW	1			3		10										5				
	6	29.700	47	29.250	50	47.0	41.0			45.0	42.2	46.9	44.2	0.02	SW	3	SW	3			8		2										6				
	7	29.530	44	29.250	48	52.0	33.0			41.0	38.5	46.0	43.0	0.20	S	3	N	1			8		3										7				
	8	29.625	46	29.890	46	37.0	36.0			36.9	35.8	34.0	34.0	1.15	N	1	N	1			10		10										8				
	9	30.100	42	30.310	46	49.6	32.2			35.5	35.0	39.3	35.5	0.09	SE	1	SE	1			10		10										9				
	10	30.075	46	30.950	37	56.0	35.0			49.0	47.0	50.0	46.0	0.00	SW	2	SW	2			10		4										10				
	11	30.145	47	30.120	50	50.4	39.0			48.2	40.0	44.0	39.0	0.00	N	1	N	2			0		4										11				
	12	30.007	46	30.380	44	44.0	40.0			42.9	40.2	36.0	33.0	0.00	N	1	NW	1			6		8										12				
	13	30.325	40	30.010	49	49.5	31.0			32.0	30.5	46.0	43.0	0.02	SW	1	N	3			6		8										13				
	14	29.760	48	29.850	50	53.5	39.0			30.0	46.0	44.0	43.2	0.01	NW	3	NW	3			3		3										14				
	15	29.995	57	30.200	56	42.4	36.5			38.0	36.5	37.0	36.0	0.00	NW	1	NW	1			6		4										15				
	16	30.300	44	30.350	49	43.0	31.0			34.2	33.5	38.0	35.6	0.00	NW	1	SW	1			6		0										16				
	17	30.300	44	30.300	50	50.8	30.2			39.8	38.0	45.0	43.0	0.00	SW	1	SW	1			2		2										17				
	18	30.190	47	30.005	47	47.0	40.0			42.0	39.0	42.5	40.0	0.00	SW	3	SW	3			5		3										18				
	19	29.600	48	29.510	50	37.5	42.5			47.8	45.8	50.0	47.5	0.03	SW	5	SW	4			8		0										19				
	20	29.855	47	29.455	57	33.0	35.4			40.0	37.2	38.5	36.0	0.00	SW	2	SW	4			0		4										20				
	21	29.440	45	29.500	50	57.0	39.0			39.0	36.4	39.0	37.0	0.00	SW	3	SW	4			0		0										21				
	22	29.640	44	29.080	49	41.0	35.4			39.0	36.5	44.0	42.5	0.10	SW	1	S	3			2		3										22				
	23	29.025	41	29.450	47	41.2	36.5			38.6	34.8	36.0	33.0	0.00	SW	3	SW	2			0		0										23				
	24	29.415	41	29.000	47	43.2	31.0			37.2	38.5	38.5	37.6	0.25	S	3	S	3			8		0										24				
	25	29.200	43	29.325	47	45.0	36.8			43.8	42.0	38.0	36.5	0.07	SW	2	SW	4			2		0										25				
	26	29.145	43	29.450	47	45.0	36.4			39.0	36.6	33.6	34.0	0.24	SW	3	SW	1			5		0										26				
	27	28.355	46	29.105	46	46.0	34.6			43.0	41.0	39.0	36.0	0.00	N	6	N	3			8		0										27				
	28	29.355	42	29.450	44	46.0	31.4			33.8	31.7	39.0	36.0	0.00	SW	1	SW	1			0		8										28				
	29																																	29			
	30																																	30			
	31																																	31			
Sums.		12 06	12	11 02	43	46	11 6			14 7	12 10	16 4	13 5																								
Means.		19.517	13.7	19.923	23.7	21.1	17.0			27.9	23.7	15.2	25.6			61		64			141		3		103												
+ Total Corrections for Instrumental Errors.		-010		-010												218		229			5		3.7														
+ Corrections for Diurnal Range.																																					
+ Corrected Means.		29.707		29.721																																	
No. of Columns.		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						

NOTATION USED IN GENERAL REMARKS.					
a.	denotes aurora.	m.	denotes meteor.		
ci.	" cirrus.	ms.	" meteors.		
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.	" fog.	sc.	" squall.		
fr.	" frost.	sleet.	" sleet.		
h-fr.	" hoar-frost.	s.	" snow.		
h.	" haze.	so. ha.	" solar halo.		
h. d.	" heavy dew.	sq.	" squalls.		
hl.	" hail.	sgs.	" squalls.		
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. ha.	" 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

NOTATION USED IN GENERAL REMARKS.

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

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 \ddagger for Temp. (Col. 2), = 29.707

"Corrected Mean" of Barometer at 9 P.M., minus the Correction \ddagger for Temp. (Col. 4), = 29.721

Mean at Station, corrected, and at 32', = 29.716

Correction for height, feet above Mean Sea-level, = 50

Mean, reduced to 32', and Sea-level, = 29.716

Highest Reading, corrected for Index error, on the 12 th, = 30.390

Lowest Do. Do. on the 28 th, = 28.365

Difference, or Monthly Range, = 2.025

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 14 th, = 57.5

Lowest in Month, corrected for Index errors, on the 7 th, = 30.2

Difference, or Monthly Range, = 27.3

"Corrected Mean" of all the Highest, (Col. 5), = 47.5

"Corrected Mean" of all the Lowest, (Col. 6), = 36.1

Difference, or Mean Daily Range, = 11.4

** Calculated Mean Temperature of Month, = 41.8

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), = 40.9

Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 38.7

Computed Temperature of Dew-Point, = 35.9

Do. Elastic Force of Vapour, = 211

Do. Weight of Vapour in a Cubic Foot of Air, =

Relative Humidity (Saturation = 100), = 84

RAIN fell on 12 Days; Amount in Inches, = 2.26

WIND.		SUMMARY.			
Direction.		N	NE	E	SE
A.M.		0	0	1	2
P.M.		0	1	0	1
Mean.		0	1	0	2

Observations made and
Return verified by

(Signed) Peter Harper Observer

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Arthur Park, Aberdeen, County of Aberdeen, in Lat. 57° 9' N, Long. 2° 16' W, Distance from Sea 2 miles.Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.During the MONTH of March 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.		WIND.				CLOUDS.				SUNSHINE. Hours.	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.		No. of hours in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer. No. _____ 9 h. A.M.	9 A.M.		P.M.		9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Barometer. * No. _____ Inches. °	Attached Thermometer. No. _____ Inches. °	Barometer. No. _____ Inches. °	Attached Thermometer. No. _____ Inches. °	Max. No. _____ Inches. °	Min. No. _____ Inches. °	Max. in Sun's rays No. _____ Inches. °	Min. on Grass. No. _____ Inches. °	Dry bulb. Inches. °	Wet bulb. Inches. °	Dry bulb. Inches. °	Wet bulb. Inches. °			Direction.	Force.	Direction.	Force.		Velocity (0-10), and Direction.	Amount (0-10), and Direction.	Velocity (0-10), and Direction.		Amount (0-10), and Direction.	No. _____ Inches.	No. _____ Inches.					No. _____ Inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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1	29.225	44	29.040	44	44.0	33.0			41.5	39.2	37.0	35.0	0.00	SE	3	SW	2			10		4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction \uparrow = 29.441
for Temp. (Col. 2), = 41.1
"Corrected Mean" of Barometer at 9 P.M., minus the Correction \uparrow = 29.479
for Temp. (Col. 4), = 41.2
Mean at Station, corrected, and at 32° = 29.460
Correction for height, feet above Mean Sea-level, = 49
Mean, reduced to 32°, and Sea-level, = 29.509
Highest Reading, corrected for Index error, on the 27 th, = 30.110
Lowest Do. Do., on the 2 th, = 28.705
Difference, or Monthly Range, = 1.305

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 19 th, = 53.0
Lowest in Month, corrected for Index errors, on the 4 th, = 27.5
Difference, or Monthly Range, = 25.5
"Corrected Mean" of all the Highest, (Col. 5), = 47.5
"Corrected Mean" of all the Lowest, (Col. 6), = 35.5
Difference, or Mean Daily Range, = 12.0
** Calculated Mean Temperature of Month, +45.5 = 41.5
S-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 19 th, = 53.0
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 47.5
Lowest at Night, Black Bulb (corrected for Index errors), on the 4 th, = 27.5
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 35.5
Difference of above means or range ("exposed"), = 12.0

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 41.0
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 39.0
Computed Temperature of Dew-Point, = 36.5
Do. Elastic Force of Vapour, = 2.15
Do. Weight of Vapour in a Cubic Foot of Air, = 84
Relative Humidity (Saturation = 100), = 84
RAIN fell on 18 Days; Amount in Inches, = 1.64

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		-	-	-	4	4	18	3	2	-	4.00
P.M.		-	1	-	3	1	21	3	2	-	3.58
Summary		0	1	0	7	5	39	6	4	0	3.8

Observations made and
Return verified by

(Signed)

Peter Harper - 0.65
1920

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park, Aberdeen, County of Aberdeen, in Lat. 57° 9' N, Long. 2° 6' W, Distance from Sea 2 miles.
Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 40 feet. During the MONTH of April 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.		WIND.				CLOUDS.				SUNSHINE. Hours.	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, at 5 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		No. of hours in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer. No. _____ 9 h. A.M.	9 A.M.		P.M.									
		Barometer. * No. _____	Attached Thermometer.	Barometer. No. _____	Attached Thermometer.	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.	Force.	Direction.	Force.		Velocity (0-10), and Species.	Amount (0-10), and Species.	Velocity (0-10), and Direction.		Amount (0-10), and Species.							
																										9 h. A.M.			9 h. P.M.			
																										Inches.	°		Inches.	°		
1	29.900	46	29.920	48	44.4	33.0			43.8	41.8	40.0	38.5	0.16	S	2	B	1												showers from 10 Am	1		
2	29.900	44	29.900	45	52.0	39.0			43.0	39.0	37.2	35.0	0.00	NW	1	0													fair fine all day -	2		
3	29.980	46	29.930	50	49.0	37.8			41.5	38.8	49.2	47.5	0.14	SW	2	SW	1												fair unsettled sun & showers	3		
4	29.400	43	29.650	47	60.0	43.8			46.5	40.4	37.0	35.0	0.08	N	3	SE	2												very unsettled slight showers	4		
5	29.850	43	29.950	46	50.0	35.6			41.5	38.8	45.4	43.0	0.04	NW	2	NW	1												so do settling afternoon	5		
6	29.600	48	29.425	50	59.0	40.0			38.0	43.0	37.6	49.0	0.00	S	2	N	3												sun showers, sun fair	6		
7	29.360	46	29.600	45	46.5	38.6			44.5	39.5	43.5	41.0	0.10	N	1	NW	3												light drizzle, wind, showers	7		
8	30.055	46	30.200	49	56.6	39.2			45.0	41.6	46.5	42.0	0.00	NW	3	SW	0.5												fair mild unsettled	8		
9	30.200	48	30.240	57	48.0	42.0			48.0	43.6	41.6	38.0	0.00	SW	0.5	SW	1												fair mild fine all day	9		
10	30.230	41	30.050	50	55.2	43.2			49.0	46.6	47.0	44.6	0.00	S	0.5	SW	1												fair fine all day	10		
11	29.640	52	29.560	46	55.0	46.0			52.0	46.0	47.0	40.0	0.03	SW	5	SW	3												fair breezy day had showers	11		
12	29.785	42	29.725	46	43.5	32.0			38.0	32.0	37.0	34.0	0.05	NW	3	N	2												fair cold with stormy	12		
13	29.050	42	29.800	44	43.2	32.0			39.0	38.0	36.0	35.0	0.04	NW	4	NW	2												fair cold with stormy	13		
14	29.800	42	29.850	44	46.0	32.0			38.0	33.0	37.0	34.0	0.30	NW	3	NW	1												fair cold with stormy	14		
15	29.400	41	30.070	49	42.0	31.0			36.0	33.5	34.0	31.5	0.10	NW	2	NW	3												fair cold with stormy	15		
16	30.200	42	30.300	38	39.0	29.2			35.5	33.0	32.4	29.5	0.14	NW	2	NW	2													fair cold with stormy	16	
17	30.340	42	30.540	39	40.5	29.0			35.6	32.8	31.0	28.0	0.09	NW	2	NW	2													fair cold with stormy	17	
18	30.350	40	30.350	40	36.0	30.0			34.6	34.0	33.5	32.6	0.08	NW	2	NW	1													fair cold with stormy	18	
19	30.250	41	30.120	48	44.0	30.5			38.8	38.2	40.0	38.5	0.00	S	0.5	SE	1													fair cold with stormy	19	
20	29.700	44	29.860	44	48.0	36.0			44.8	44.0	36.0	35.2	0.02	SW	0.5	NW	1													fair cold with stormy	20	
21	29.710	44	29.720	44	43.0	33.0			40.0	37.5	35.0	34.0	0.08	NW	2	N	2													fair cold with stormy	21	
22	29.640	44	29.600	46	45.6	33.0			40.0	38.2	38.0	35.4	0.00	NW	2	SW	1													fair cold with stormy	22	
23	29.610	46	29.750	46	50.8	31.0			46.8	42.0	37.5	35.0	0.00	S	0.5	SE	1													fair cold with stormy	23	
24	29.800	46	29.755	43	47.8	32.5			45.2	40.4	38.0	35.8	0.00	N	1	N	1													fair cold with stormy	24	
25	29.650	44	29.635	47	53.0	28.5			48.5	45.0	40.0	38.0	0.00	SE	0.5	SE	1													fair cold with stormy	25	
26	29.655	48	29.610	48	46.4	39.0			43.4	42.5	43.6	41.0	0.00	SE	1	E	1													fair cold with stormy	26	
27	29.580	44	29.530	48	44.0	41.0			42.2	41.6	42.0	40.5	0.15	SE	2	E	2													fair cold with stormy	27	
28	29.580	44	29.560	50	48.0	41.0			44.5	44.0	43.0	44.0	0.06	SE	1	SE	1													fair cold with stormy	28	
29	29.580	48	29.450	48	46.0	40.8			42.0	41.5	42.0	41.5	0.10	SE	1	E	1													fair cold with stormy	29	
30	29.400	48	29.530	50	57.5	40.5			40.8	40.0	45.2	44.6	0.06	S	1	S	1													fair cold with stormy	30	
31																															fair cold with stormy	31
Sums.		1781	13	1612	15	146	106			134	149	145	136	184	3				14		11											
Means.		29.805	44.5	29.824	46.2	47	63.6			42.7	40.1	40.5	38.2	39.3	297				6.1		5.5											
+ Total Corrections for Instrumental Errors.		-0.70		-0.10																												
+ Corrections for Diurnal Range.																																
"Corrected Means."		29.795		29.814																												
No. of Columns.		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	

NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	cirrus.	ms.	meteors.
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.	fog.	sc.	scud.
fr.	frost.	s.	sleet.
h. fr.	hoar-frost.	s.	snow.
h.	haze.	so. ha.	solar halo.
h. d.	heavy dew.	sq.	squall.
h. l.	hail.	sq.	squalls.
l.	lightning.	t.	thunder.
li. cl.	light clouds.	t. s.	thunder-storm.
li. sh.	light showers.	w.	wind.
lu. co.	lunar corona.	5.	gale of wind.
lu. ha.	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 $\frac{1}{1000}$ for Temp. (Col. 2), = 29.751
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{1000}$ for Temp. (Col. 4), = 29.768
Mean at Station, corrected, and at 32° = 29.760
Correction for height, feet above Mean Sea-level, = 49
Mean, reduced to 32°, and Sea-level, = 29.809
Highest Reading, corrected for Index error, on the 18 th, = 30.350
Lowest Do. Do., on the 7 th, = 29.360
Difference, or Monthly Range, = 0.990

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 30 th, = 57.5
Lowest in Month, corrected for Index errors, on the 25 th, = 28.5
Difference, or Monthly Range, = 29.0
"Corrected Mean" of all the Highest, (Col. 5), = 47.6
"Corrected Mean" of all the Lowest, (Col. 6), = 36.0
Difference, or Mean Daily Range, = 11.6
** Calculated Mean Temperature of Month, = 41.8

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), = 41.6
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 39.2
Computed Temperature of Dew-Point, = 36.2
Do. Elastic Force of Vapour, = 2.14
Do. Weight of Vapour in a Cubic Foot of Air, =
Relative Humidity (Saturation = 100), = 82
RAIN fell on 19 Days; Amount in Inches, = 1.84

WIND.		SUMMARY.			
Direction.		N	NE	E	SE
A.M.		1	1	5	6
P.M.		1	2	3	3
Mean.		2	3	3	8

Observations made and
Return verified by

(Signed) Peter Harper

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park, Aberdeen, County of Aberdeen, in Lat. 57.9 N, Long. 2.6 W, Distance from Sea 22 miles.
Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet. During the MONTH of May 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				SUNSHINE.	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.			No. of hours in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer. No. _____	9 A.M.		P.M.		9 h. A.M.					Temperature of WELL at depth of feet, No. _____	Temperature at 1 fathoms, and Density.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Barometer. * No. _____	Attached Thermometer No. _____	Barometer. No. _____	Attached Thermometer 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.	Force	Direction.	Force		Velocity (0-6) and Direction.		Amount (0-10), and Species.	Velocity (0-6) and Direction.	Amount (0-10), and Species.							Hours.	No. _____ 3 inches.	No. _____ 12 inches.	No. _____ 22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction $\frac{1}{10}$ for Temp. (Col. 2), = 29.824
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{10}$ for Temp. (Col. 4), = 29.841
Mean at Station, corrected, and at 32°, = 29.832
Correction for height, feet above Mean Sea-level, = .49
Mean, reduced to 32°, and Sea-level, = 29.861
Highest Reading, corrected for Index error, on the 26 th., = 30.500
Lowest Do. Do. on the 5 th., = 29.350
Difference, or Monthly Range, = 1.150

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 26 th., = 68.2
Lowest in Month, corrected for Index errors, on the 11 th., = 34.2
Difference, or Monthly Range, = 34.0
"Corrected Mean" of all the Highest, (Col. 5), = 58.8
"Corrected Mean" of all the Lowest, (Col. 6), = 41.2
Difference, or Mean Daily Range, = 15.6
** Calculated Mean Temperature of Month, = 49.0
S-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th., = 5
"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), = 48.2
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 45.4 } 2.8
Computed Temperature of Dew-Point, = 42.3
Do. Elastic Force of Vapour, = 270
Do. Weight of Vapour in a Cubic Foot of Air, =
Relative Humidity (Saturation = 100), = 89
RAIN fell on 10 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.	4	2	5	3	1	10	-	6	0	2.42	
P.M.	5	3	4	6	3	7	2	1	0	2.16	
Mean.	9	3	9	9	4	17	2	7	0	2.3	

Observations made and
Return verified by

(Signed)

Peter A. Harper

10.22

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park, Aberdeen, County of Aberdeen, in Lat. 57° 7' N, Long. 2° 6' W, Distance from Sea 2 miles.

Height of Cistern of the Barometer above Mean Sea-Level 441 feet, above Ground 4 feet.

During the MONTH of June 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.		WIND.				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. Sun/shrubs Grass.		9 h. A.M.		9 h. P.M.		No. of hours in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer. No. _____	9 A.M.		P.M.		9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																
		Barometer. * No. _____	Attached Thermometer. _____	Barometer. No. _____	Attached Thermometer. _____	Max. No. _____	Min. No. _____	Max. in Sun/shrubs No. _____	Min. on Grass. No. _____	Dry bulb. _____	Wet bulb. _____	Dry bulb. _____	Wet bulb. _____			Direction.	Force.	Direction.	Force.		Velocity (0-10), and Direction.	Amount (0-10), and Species.	Velocity (0-10), and Direction.	Amount (0-10), and Species.	No. _____	No. _____					No. _____																																																																																																																																																																																																																																																																																																																																																																																																										
																																Inches.	_____	Inches.	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	ms.	denotes meteor.
ci.	" cirrus.	ms.	" nimbus.
ci-cu.	" cirro-cumulus.	r.	" rain.
ci-s.	" cirro-stratus.	h. r.	" heavy rain.
cu.	" cumulus.	c. h. r.	" continued heavy rain.
cu-s.	" cumulo-stratus.	s.	" stratus.
d.	" dew.	sc.	" scud.
f.	" fog.	s.	" sleet.
fr.	" frost.	s.	" snow.
h-fr.	" hoar-frost.	so. ha.	" solar halo.
h.	" haze.	sq.	" squall.
h. d.	" heavy dew.	sqs.	" squalls.
li.	" hail.	t. s.	" thunder-storm.
li. cl.	" lightning.	w.	" wind.
li. sh.	" light showers.	g.	" gale of wind.
lu. co.	" lunar corona.		
lu. ha.	" 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), =	30.043
"Corrected Mean" of Barometer at 9 P.M., minus the Correction ++ for Temp. (Col. 4), =	30.058
Mean at Station, corrected, and at 32°, =	30.050
Correction for height, feet above Mean Sea-level, =	49
Mean, reduced to 32°, and Sea-level, =	30.009
Highest Reading, corrected for Index error, on the 5th, =	30.520
Lowest Do. Do., on the 18th, =	29.750
Difference, or Monthly Range, =	0.770

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 28th, =	73.8
Lowest in Month, corrected for Index errors, on the 20th, =	33.6
Difference, or Monthly Range, =	40.2
"Corrected Mean" of all the Highest, (Col. 5), =	59.3
"Corrected Mean" of all the Lowest, (Col. 6), =	45.4
Difference, or Mean Daily Range, =	13.9
** Calculated Mean Temperature of Month, =	52.3
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), =	52.4
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), =	49.3
Computed Temperature of Dew-Point, =	46.1
Do. Elastic Force of Vapour, =	314
Do. Weight of Vapour in a Cubic Foot of Air, =	
Relative Humidity (Saturation = 100), =	80
RAIN fell on 9 Days; Amount in Inches, =	1.49

WIND.		SUMMARY.			
Direction.		N	NE	E	SE
A.M.		10	2	1	4
P.M.		8	4	1	8
Mean.		18	6	2	12

Observations made and Return verified by

(Signed) Peter Harper

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park, Aberdeen, County of Aberdeen, in Lat. 57° 9' N, Long. 2° 6' W, Distance from Sea 2 miles.

Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.

During the MONTH of July 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				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. <i>Mention the hour at which Storms, including Thunder and Lightning, began and ended.</i>	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.			No. of hours in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer. No. _____ 9 h. A.M.	9 A.M.		P.M.						9 h. A.M.			
		Barometer. * No. _____ inches.	Attached Thermometer.	Barometer. No. _____ inches.	Attached Thermometer.	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.		Velocity (0-10), and Direction.	Amount (0-10), and Species.	Velocity (0-10), and Direction.	Amount (0-10), and Species.					No. _____ inches.	No. _____ inches.	No. _____ inches.	
	1	30.040	61	30.045	64	74.2	54.0	51.4	58.5	62.4	57.5	0.00	SW	2	SW	1																1	
	2	30.100	66	29.865	62	68.8	53.6	65.2	60.2	55.6	53.4	0.20	SW	1	SE	1																2	
	3	29.650	61	29.600	61	66.4	51.0	59.2	54.4	57.0	52.0	0.00	SW	3	SW	3																3	
	4	29.840	62	29.755	62	58.8	55.0	58.0	52.4	58.1	52.1	0.00	NW	2	NW	3																4	
	5	29.670		29.585		62.7	50.3	50.2	49.9	51.4	51.1	0.05	SE	2	SE	2																5	
	6	29.485		29.555		54.5	48.0	48.3	47.4	50.9	44.0	0.82	NW		NW																	6	
	7	30.065		30.155		54.2	38.4	49.5	46.3	45.6	43.0	0.58	SW		SW																	7	
	8	30.128		30.032		65.4	47.4	48.1	45.8	60.0	57.4	0.00	SE		SE																	8	
	9	30.165		30.155		78.1	59.5	60.0	56.2	74.5	65.5	0.02	SW		SW																	9	
	10	30.140		30.145		71.0	50.6	67.3	58.7	58.2	51.4	0.00	S		S																	10	
	11	30.170		30.005		61.0	40.8	55.0	50.8	56.5	53.5	0.35	NW		NW																	11	
	12	29.955		29.855		60.0	44.5	54.0	49.9	53.5	51.5	0.00	NW		NW																	12	
	13	29.865		29.875		59.2	49.8	49.6	46.5	51.2	48.0	0.03	SE		SE																	13	
	14	29.902		29.870		56.2	50.0	51.3	47.0	51.6	47.7	0.01	SE		SE																	14	
	15	29.812		29.869		58.8	50.0	51.6	47.7	55.0	52.2	0.01	SE		SE																	15	
	16	29.808		29.640		52.7	49.5	52.4	51.0	51.6	51.3	1.20	SE		SE																	16	
	17	29.600	55	29.625	52	59.0	39.0	50.8	46.0	59.0	51.4	0.25	NE	2	NE	2																17	
	18	29.775	55	29.880	55	55.2	48.8	51.0	49.2	51.4	50.0	0.00	N	3	N	3																18	
	19	29.950	57	30.005	57	55.4	49.0	53.4	49.0	51.4	48.5	0.00	NE	1	NE	1																19	
	20	30.550	58	30.100	58	60.0	48.0	55.2	50.0	50.5	48.0	0.00	SE	1	SE	1																20	
	21	30.005	58	29.900	59	62.4	46.2	51.8	48.4	53.8	54.8	0.13	SE	1	S	1																21	
	22	29.795	58	29.750	58	66.8	52.0	57.0	56.5	55.4	52.6	0.00	S	0.5	S	0.5																22	
	23	29.750	59	29.795	59	67.6	45.0	60.8	56.8	55.5	54.0	0.00	SW	1	S	0.5																23	
	24	29.008	59	29.950	59	62.0	47.0	57.2	55.0	56.4	54.6	0.00	S	0.5	S	0.5																24	
	25	30.000	58	29.950	59	62.0	48.0	55.0	53.0	48.4	47.6	0.32	S	0.5	SE	2																25	
	26	29.800	60	29.800	60	59.2	52.0	55.0	54.5	55.4	54.8	0.28	S	1	S	1																26	
	27	29.815	60	29.805	59	64.0	52.0	59.8	57.6	55.2	53.2	0.00	SW	1	SE	1																27	
	28	29.750	58	29.655	58	56.0	53.0	53.0	53.6	51.5	50.8	0.33	S	1	N	1																28	
	29	29.550	57	29.555	56	67.5	42.2	51.0	49.0	57.2	66.6	0.51	NW	1	NW	1																29	
	30	29.620	56	29.675	58	66.5	49.0	55.0	51.5	56.4	62.6	0.00	NW	3	NW	3																30	
	31	29.720	58	29.820	58	59.0	52.0																										31
Sums.		1647	9	18440	10	69	46	138	72	124	121	5.09																					
Means.		29.867	58.8	29.858	58.7	61.8	48.9	54.9	51.8	54.9	52.0																						
+ Total Corrections for Instru- mental Errors.																																	
+ Correc- tions for Diurnal Range.																																	
+ "Cor- rected 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 \ddagger for Temp. (Col. 2), = 29.786
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction \ddagger for Temp. (Col. 4), = 29.777
 Mean at Station, corrected, and at 32°, = 29.781
 Correction for height, feet above Mean Sea-level, = 0.48
 Mean, reduced to 32°, and Sea-level, = 29.829
 Highest Reading, corrected for Index error, on the 7 th, = 30.155
 Lowest Do. Do., on the 6 th, = 29.485
 Difference, or Monthly Range, = 0.670

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 9 th, = 78.1
 Lowest in Month, corrected for Index errors, on the 7 th, = 38.4
 Difference, or Monthly Range, = 39.7
 "Corrected Mean" of all the Highest, (Col. 5), = 61.8
 "Corrected Mean" of all the Lowest, (Col. 6), = 48.9
 Difference, or Mean Daily Range, = 12.9
 ** Calculated Mean Temperature of Month, = 55.3
 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), = 54.9
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 51.9
 †† Computed Temperature of Dew-Point, = 49.0
 †† Do. Elastic Force of Vapour, = 34.9
 †† Do. Weight of Vapour in a Cubic Foot of Air, = 80
 †† Relative Humidity (Saturation = 100), = 80
 RAIN fell on 16 Days; Amount in Inches, = 5.09

WIND.		SUMMARY.			
Direction.	N NE E SE S SW W NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day	
A.M.	1 2 1 8 5 7 0 7	0			
P.M.	2 2 0 10 6 4 0 7	0			
Mean.	3 4 1 8 11 10 0 14	0			

Observations made and
Return verified by

(Signed) Peter Harper

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Dunfermline, Fife, County of Fife, in Lat. 56° 12' N, Long. 2° 44' W, Distance from Sea 2 miles.
Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.

The Hours of Observation are of Greenwich Time.

During the MONTH of August 1903.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				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. <i>Mention the hour at which Storms, including Thunder and Lightning, began and ended.</i>	Days of Month.			
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs. Sun's rays on Grass.		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.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	Readings of the H. Cup Anemometer. No. _____	Velocity (0-6) and Direction.	Amount (0-10), and Species.	Velocity (0-6) and Direction.	Amount (0-10), and Species.					No. 8 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.	No.	No.
		inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°		
	1	29.900	57.	29.875	57.	60.0	46.8			55.2	53.2	53.2	52.0	0.03	SE	0.5	S	0.5	8	ci	10										Fair, mild, dull, like rain	1
	2	29.800	59.	29.700	59.	66.2	50.2			50.8	52.6	55.4	53.5	0.33	NW	1	8	0.5	8	ci	8										dull, some slight showers	2
	3	29.505	59.	29.700	59.	62.0	52.6			58.0	55.4	57.8	56.4	0.06	NW	1	SW	0.5	8	ci	8										dull, slight showers throughout the day	3
	4	29.560	59.	29.600	59.	68.4	52.8			56.6	53.5	57.2	52.0	0.00	SW	1	W	4	8	ci	6										unsettled high wind & some rain	4
	5	29.720	60.	29.875	56.	62.0	52.0			58.8	52.4	52.0	51.0	0.43	W	1	W	1	5	ci	6										heavy showers from 10 AM	5
	6	29.910	57.	30.000	58.	64.0	45.8			56.2	50.6	52.6	51.0	0.03	W	1	W		4	ci	6										some showers, distant thunder	6
	7	30.050	59.	30.000	60.	66.5	44.2			56.0	52.4	57.4	53.4	0.25	SW	1	SW	0.5	2	ci	6										fair & fine all day.	7
	8	29.770	57.	29.600	59.	57.6	52.0			55.2	54.8	55.0	54.6	0.15	S	1	S	1	10	ci	10										Rain, with distant thunder	8
	9	29.360	59.	29.375	60.	63.0	54.0			56.5	54.9	59.0	55.6	0.26	S	1.5	SW	3	10	ci	8										slight rain to 10 AM then fair	9
	10	29.500	57.	29.700	58.	57.0	51.5			63.0	52.0	53.0	62.0	0.11	N	1	SW	1	10	ci	8										Rain from early morning	10
	11	29.834	58.	29.850	57.	63.2	42.0			57.8	49.4	46.0	51.8	0.00	SW	0.5	SW	1	2	ci	6										fair & fine.	11
	12	29.850	58.	29.880	58.	66.0	44.0			56.5	53.4	54.0	53.0	0.03	SW	0.5	SW	0.5	5	ci	6										fair & fine, distant thunder	12
	13	29.610	57.	29.700	58.	65.4	44.5			57.0	54.0	58.0	56.5	0.13	SW	5	SW	1	5	ci	8										frequent showers after 10 AM	13
	14	29.610	57.	29.180	58.	57.4	48.1			55.0	54.5	55.2	55.0	0.64	SE	1	SE	1	8	ci	10										heavy rain all day	14
	15	29.000	58.	29.000	59.	60.4	52.2			57.0	56.4	54.5	53.8	0.04	S	1	S	0.5	for	8	ci	6									dull, fair all day	15
	16	29.300	58.	29.625	56.	63.2	51.4			53.4	51.6	58.0	56.0	0.00	W	2	SW	1	8	ci	0										showers AM, then fair	16
	17	29.700	57.	29.750	58.	64.6	41.0			55.8	50.4	51.4	50.0	0.06	W	1	SW	0.5	2	ci	6										fair to 6 PM, showers later	17
	18	29.650	58.	29.650	58.	63.0	47.0			55.0	52.2	52.2	51.4	0.04	S	1	N	0.5	8	ci	8										slight rain, distant thunder	18
	19	29.650	57.	29.650	56.	57.6	41.4			52.4	51.5	50.0	49.0	0.15	S	1	S	0.5	10	ci	8										Rain & distant thunder	19
	20	29.550	56.	29.410	54.	60.8	40.3			51.0	48.8	50.4	49.0	0.32	SW	1	SW	1	2	ci	8										some rain & some thunder after 1 PM	20
	21	29.360	56.	29.620	57.	60.0	42.0			52.0	48.8	57.0	44.0	0.00	SW	2	SW	2	6	ci	0										fair & fine.	21
	22	29.650	56.	29.800	58.	65.4	41.0			52.0	49.0	50.4	48.0	0.12	SW	1	SW	5	8	ci	0										some rain from 9 AM clearing at noon	22
	23	29.900	55.	29.900	57.	66.2	38.8			50.5	48.6	48.0	45.6	0.02	SW	0.5	SW	0.5	0	ci	0										fair and fine.	23
	24	29.900	56.	29.925	56.	61.2	37.5			49.0	48.0	52.6	51.0	0.00	S	0.5	SE	0.5	2	ci	0										fair and fine	24
	25	30.005	57.	30.007	57.	63.0	47.0			54.8	50.5	51.0	48.5	0.00	NW	2	NE	0.5	2	ci	6										do do	25
	26	29.940	53.	29.750	57.	56.4	46.8			52.2	50.0	56.0	54.0	0.26	SW	2	S	2	8	ci	8										Rain most of the day -	26
	27	29.575	60.	29.500	59.	70.0	51.4			63.0	59.8	57.2	53.0	0.00	SW	2	SW	4	8	ci	8										fair day breeze	27
	28	29.525	58.	29.640	59.	67.5	53.2			60.0	52.6	55.5	51.6	0.00	W	4	W	1	9	ci	6										fair, westerly breeze	28
	29	29.648	55.	29.000	53.	58.4	44.0			53.8	51.6	57.5	44.4	0.00	NW	1	NW	1	6	ci	6										dull some slight rain	29
	30	30.000	56.	29.568	56.	57.0	38.5			50.0	47.0	48.4	47.8	0.48	SW	1	S	1	3	ci	10										fair, heavy rain from 4 PM	30
	31	29.775	56.	30.060	54.	56.6	42.6			51.2	48.8	49.8	48.2	0.40	SW	4	SW	1	10	ci	4										Stormy showers setting in	31
	Sums.	18 10 3	20	168 3	20	138	12 10			13 8	13 13	147	13 8			2		3														
	Means.	21	417	217	21	888	72 9	69	070	22	141	7	59	5	108	9	45	0	191		187											
	* 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	

NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	" cirrus.	ms.	" meteors.
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.	" frost.	s.	" sleet.
h-fr.	" hoar-frost.	s.	" snow.
h.	" haze.	so. ha.	" solar halo.
h. d.	" heavy dew.	sq.	" squall.
hi.	" hail.	sq.	" squalls.
li.	" 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. ha.	" 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	2.5	Very fresh	6	Violent gale

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction \ddagger = 29.616
for Temp. (Col. 2), = 29.681.....0.065
"Corrected Mean" of Barometer at 9 P.M., minus the Correction \ddagger = 29.629
for Temp. (Col. 4), = 29.706.....0.077
Mean at Station, corrected, and at 32°,..... = 29.622
Correction for height, feet above Mean Sea-Level,..... = .48
Mean, reduced to 32°, and Sea-level,..... = 29.660
Highest Reading, corrected for Index error, on the 31st..... = 30.060
Lowest Do. Do., on the 15th..... = 29.070
Difference, or Monthly Range,..... = 1.060

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 27th..... = 70.0
Lowest in Month, corrected for Index errors, on the 24th..... = 37.5
Difference, or Monthly Range,..... = 32.5
"Corrected Mean" of all the Highest, (Col. 5),..... = 62.2
"Corrected Mean" of all the Lowest, (Col. 6),..... = 46.5
Difference, or Mean Daily Range,..... = 15.7
** Calculated Mean Temperature of Month,..... = 54.3
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 27th..... = 70.0
"Corrected Mean," (Col. 7) of Black Bulb, Max. in Sun,..... = 62.2
Lowest at Night, Black Bulb (corrected for Index errors), on the 24th..... = 37.5
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass,..... = 46.5
Difference of above means or range ("exposed"),..... = 15.7

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11),..... = 54.0
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12),..... = 51.6
Computed Temperature of Dew-Point,..... = 49.2
Do. Elastic Force of Vapour,..... = .350
Do. Weight of Vapour in a Cubic Foot of Air,..... = 5.4
Relative Humidity (Saturation = 100),..... = 84
RAIN fell on 21 Days; Amount in Inches,..... = 4.34

WIND.												SUMMARY.			
Direction.	N	NE	E	SE	S	SW	W	NW	Variable.	Mean Force.	Mean Velocity in miles per day				
A.M.	1	0	2	2	3	12	5	5	1	3.28					
P.M.	0	3	2	1	5	14	3	2	1	4.22					
Mean.	1	3	4	3	8	26	8	7	2	3.7					

Observations made and
Return verified by

(Signed) Peter Harper

OBSERVATIONS.

direct numbering of the scale of every instrument; the rejection of thermometers the frameworks of which are not likely to stand exposure to the weather, as shown in the past by repeated and annoying failure of the thermometer in similar constructions; and regulations as to the use of the instrument. The same regulations, as proposed by Theodore, might be applied to similar constructions; and regulations as to the use of the instrument. The same regulations, as proposed by Theodore, might be applied to similar constructions; and regulations as to the use of the instrument.

well-exposed, situations. Careful observations are recommended to be made on the changes in the direction of the wind, and during storms, extra 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 round Edinburgh called STORM STATIONS, in the establishment of which the Society for the systematic investigation, and relation of the force of the wind to BAROMETRIC pressure, has taken the most energetic interest.

The Committee have a self-registering Hemispherical Cup Anemometer, which, when used in conjunction with a self-registering Tachometer, will give the amount of Wind that passes in per day, and also the mean Velocity of the Wind at the time of observation may be ascertained. For indicating the

As regards the velocity of the wind, the Society have a self-registering Anemometer, which, when used in conjunction with a self-registering Tachometer, will give the amount of Wind that passes in per day, and also the mean Velocity of the Wind at the time of observation may be ascertained. For indicating the

of the Wind at any particular hour of observation, the Pressure of the Atmosphere, and the Direction and Force of the Wind, the barometer recently brought under the notice of the Society by Mr. T. Stevenson, the Honorary Secretary, and Mr. R. Ballingall, the Secretary at Edinburgh, are recommended as likely to secure conformity in making observations on the Force of the Wind. Many causes conspire to produce anomalies in Rain Returns, arising partly from the difficulty of obtaining a perfectly unobjectionable situation for observation, and partly from the defective nature of the instruments used. A Rain Gauge should not be placed on a slope or terrace, but on a level piece of ground, and in an open situation as the Observer is enabled to observe it, and to take the necessary precautions to secure it from being obstructed by trees, buildings, or other obstructions, at least as many feet from the base as they are in height. The more important directions, in which it is most desirable to have a free exposure, are, in order of their importance, S.W., N.E., S.E., S., and W. The order of the gauge must be perfectly level, and fixed so that it will remain level in all weathers, and be at a height of one foot above the ground, over grass. In dry gauges as Fleming's, which surmounted

On a measuring-rod attached to a float, the rod ought to be fixed so that the float rises and falls with the tide. The instrument is used in the following manner: The tide is first measured, and the float rise to its height only at the time the instrument is used, it being found that a stem projecting above the rim of the gauge seriously interferes with the proper measurement of the Rain-gauge.

When a measuring-glass is used, care should be taken to hold the gauge vertically. The Rain Gauge ought to be read daily at 10 A.M., and the reading entered in the Returns of the previous day. The Gauge is read once a month, the reading is to be made on the 15th of the month, and the amount entered for the previous month, and the amount for the month of the year, and the amount for the year-falls may, for convenience, be registered in the columns

[illegible]

to be estimated from the greater or less obscuration of sky overhead (i.e. within 20° or 30° of the zenith). The strata of clouds that appear near the horizon are viewed obliquely; and these, being unable to judge of their amount, we ought not to take into account in the Clouds' column, though their appearance changes may be noted among the Remarks. The amount of cloud is free from a scale of 0 to 10; thus, when the sky over-head is free from clouds it is entered 0; when half-covered by clouds, 5, wholly covered, 10, and so on.

Observations of the Clouds are made at 9 A.M. and at sunset, ascertaining 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.—Thus in the column Velocity and Direction, S.W. will indicate that the upper strata of clouds travel with S.W. wind, and the lower strata with S.E. wind; and in the column Force, 3 will indicate that the upper strata of clouds travel with three times the force of the lower strata. Again, in second column, 10 will indicate that the upper strata of clouds travel with one-third the force of the lower strata.

and column, an entry of $\frac{1}{2}$, will indicate that the higher parts are covered to the amount of 4 tenths with stratus Clouds ; that the sky is further obscured by the extent of 2-tenths by cumulus Clouds of such various kind.

Returns on pebbles Clouds, accompanied with drawings, will afford materially the development of a more exact nomenclature of clouds, as well as throw light on the electrical, and other of their obscure phenomena of Meteorology, which objects in the paper.

The approximate number of Hours^h, which objects in the sun's rays cast shadows, would be entered in the proper lunation.

Quint.

As the germination and growth of crops and plants generally depend greatly on the temperature of the soil,—the amount and consistency,—the Council recommend that observations in this interesting department be made at intervals of 9 A.M., by thermometers permanently fixed in the soil, their use being sunk to depths of 3, 12, and 22 inches, and the stems or ground proceeded from the sun's rays, and fluid with sloping columns, to prevent rain-water being conveyed to the bulbs by means of wooden tubes.

A knowledge of the Temperature of the Sea is not only in itself important in its relations to that of our mind, a most important branch of Meteorology. The Council therefore recommend that the Temperature of the Sea be frequently taken by properly constructed apparatus, from boats, or from islands, from the ends of piers and rocks round the coast, where it is influenced by that of River water, and as it is also, as far as possible by currents sweeping along the coast, and thus determining the nature of the land, either greatly heated by the temperature of radiation, At or near the edge of high tide, cooled by nocturnal radiation. As on the north side of high

NEXT TREES.	In flower.	In leaf buds first appear.	In leaf.	Diseased or leaves.	CROPS, mentioning variety.
Battle,
Bore or Bigg,
Oats,
Wheat,
Beans,
Pease,
Potatoes,
Turnips,
Rye Grass,
Sowing or above ground.
Apparing or flower.
In Bar o

SHRUBS, ETC.		PERFUMS.		Fruit Ripens generally.		MIGRATORY BIRDS.	
First in Blossom.	Barberry,	Apple,	Black Currant,	Cherry,	Gean,	Lapwing,	House-Swallow,
	Broom,					Plover,	
	Hazel,						
	Hawthorn,						
	Holly,						
	Laburnum,						
	Lilac,						
	Measeon,						
	Mountain Ash or Rowan,						
	Red Flowering Currant,						
	Rhododendron Ponticum,						
	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; and the agricultural condition of the district, wherever you have suffered from blight disease, etc. Whether, Epidemic, or not.

Epizootic disease prevails among cattle; and the Agricultural condition of the district generally is in a state of depression.

Scottish Meteorological Society

122 George Street

FOUNDED 1887

BOOK POST.

701-20

Shedden

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park, Aberdeen, County of Aberdeen, in Lat. 57° 9' N, Long. 2° 26' W, Distance from Sea 2 miles.

Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.

During the MONTH of September 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				SUNSHINE.	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. Sun's rays Grass.		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.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	Readings of the H. Cup Anemometer.	Velocity (0-10).		Amount (0-10), and Species.	Velocity (0-10).	Amount (0-10), and Species.					No. 8 inches.	No. 12 inches.	No. 22 inches.	Temperature of WELL at depth of feet, No.	Temperature at 1 fathom, and Density.	9 A.M.	9 P.M.		
		* No.		No.		No.	No.	No.	No.							No.						No.																	
		inches.	°	inches.	°	°	°	°	°	°	°	°	°		°																								
	1	29.890	55	29.920	56	62.6	46.0			54.0	53.6	54.0	49.0	0.44	SE	1.5	SW	2			10		0								heavy rain 12 noon then fair	1							
	2	30.015	56	29.750	55	60.2	45.2			53.6	51.5	52.2	53.0	0.89	SW	1	SE	1			8		10								heavy rain from 2 PM	2							
	3	29.800	56	29.960	55	59.4	45.8			53.0	51.6	48.6	46.2	0.19	SW	1	SW	1			8		0								showers after 1 PM unsettled	3							
	4	30.005	56	29.825	56	62.0	45.0			54.4	52.2	48.8	42.5	0.10	S	1.5	S	2			6		6								fair unsettled.	4							
	5	29.560	57	29.825	56	65.0	43.0			56.0	53.2	49.0	46.0	0.00	S	2	SW	0.5			10		0								Slight rain, dull, clearing	5							
	6	29.930	57	30.010	55	65.0	46.0			53.2	50.0	58.0	56.0	0.00	SW	1	SW	0.5			3		2								fair fine all day	6							
	7	30.000	56	29.750	55	56.0	42.0			49.8	47.8	51.2	48.8	0.03	S	1.5	SW	2			10		2									dull unsettled some showers	7						
	8	29.750	56	29.625	56	65.1	46.8			56.0	52.0	52.0	48.8	0.52	SW	1	S	2			4		10									fair fine some showers PM	8						
	9	29.140	56	29.630	52	56.0	48.8			52.0	47.0	43.8	43.0	0.12	SW	3	SW	2			3		4									stormy cold showers	9						
	10	29.650	52	29.400	52	57.4	39.4			51.0	45.0	48.0	45.6	0.00	SW	2	SE	1			2		10									fair dull unsettled	10						
	11	29.350	53	29.400	53	56.0	41.4			48.0	45.0	46.2	43.4	0.09	SW	3	SW	2			3		2									unsettled some showers	11						
	12	29.570	52	29.600	50	56.0	44.2			48.0	46.0	46.0	44.0	0.08	SW	2	SW	2			4		10									fair dull	12						
	13	29.800	54	30.150	53	54.5	44.0			51.1	47.9	45.6	42.5	0.02	SW	2	SW	2			4		4									Cool showers unsettled	13						
	14	30.400	57	30.550	49	51.5	40.0			48.0	43.6	39.0	38.0	0.00	SW	1	SW	0.5			4		0									fair cool	14						
	15	30.550	57	30.545	57	57.2	32.8			42.0	40.4	56.2	54.5	0.00	SW	0.5	SE	1			0		2									clear white frost PM fine	15						
	16	30.400	57	30.245	53	53.0	37.5			44.8	43.5	50.0	47.2	0.19	SW	1	SE	1			8		8									fine dull all day	16						
	17	30.150	52	30.300	53	59.5	48.6			53.2	52.8	50.6	49.0	0.00	S	1	S	1			8		0									dull clearing and fine	17						
	18	30.370	53	30.390	56	60.5	45.0			54.2	52.4	47.0	43.0	0.00	S	1	S	0.5			2		4									fair fine	18						
	19	30.580	56	30.440	57	57.4	47.0			55.0	54.5	52.6	52.0	0.00	SE	4	SE	1			Rank fog		haze										dull damp fog all day	19					
	20	30.420	57	30.400	57	62.0	51.0			55.4	54.2	54.0	52.0	0.00	SE	1	SE	1			2		2									fair & clear	20						
	21	30.340	57	30.310	58	62.0	51.0			55.8	54.6	57.0	56.4	0.00	SE	1	SE	2			4		0									fair & fine	21						
	22	30.255	58	30.253	57	59.0	51.5			55.2	53.8	53.0	50.2	0.00	SE	1	SE	2			8		0										do do	22					
	23	30.300	56	30.350	58	56.4	51.8			55.0	54.0	53.0	52.5	0.02	SE	0.5	SE	1			10		Rank fog										fair, fog from noon	23					
	24	30.285	56	30.250	57	56.4	51.6			53.5	53.0	53.0	52.0	0.00	S	1	S	0.5			Rank fog		0										fair very damp fog all day	24					
	25	30.180	53	30.150	60	66.0	47.4			54.0	53.4	54.5	52.0	0.01	S	0.5	S	0.5			Rank fog		Rank fog										do	25					
	26	29.940	57	29.840	58	53.0	48.0			52.0	49.4	53.2	52.0	0.00	SW	0.5	SE	1			Rank fog		Rank fog										fog morning clear from 10 am	26					
	27	29.940	54	29.840	58	60.6	42.0			52.2	52.0	45.2	43.0	0.13	SE	1.5	SW	0.5			Rank fog		Rank fog										damp haze, rain from noon	27					
	28	29.740	57	29.740	58	56.4	50.2			52.6	52.2	57.2	50.0	0.00	SW	1	S	0.5			2		0									fair & fine all day	28						
	29	29.740	57	29.800	59	59.0	50.8			53.0	52.2	54.4	54.0	0.20	SE	2	S	0.5			10		10									heavy rain from 12 noon	29						
	30	29.740	57	29.800	59	59.0	50.8			54.0	53.0	53.5	50.6	0.03	S	1.5	SW	1			4		3									fair & fine all day	30						
	31																																						
Sums.		144	112	15	5	103	15	18	6	126	119	147	136	6	4	4	4	4																					
Means.		90.0175	14.9	90.0370	16.8	243.1	176.3			68.5	1.08	25.0	24.2	3.05	39.5	35.5			187	141																			
Total Corrections for Instrumental Errors.		30.006	54.9	30.012	55.6	58.8	45.9			52.3	50.4	50.8	48.1		1.32	1.18			62	47																			
Corrected Means.		29.996		29.992																																			
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								

NOTATION USED IN GENERAL REMARKS.			
a.	denotes aurora.	m.	denotes meteor.
ci.	cirrus.	ms.	meteors.
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.	fog.	sc.	scud.
fr.	frost.	s.	sleet.
h. fr.	hoar-frost.	s. ha.	snow.
h.	haze.	so. ha.	solar halo.
h. d.	heavy dew.	sq.	squall.
hl.	hail.	sqs.	squalls.
l.	lightning.	t. s.	thunder.
li. cl.	light clouds.	t. s.	thunder-storm.
li. sh.	light showers.	w.	wind.
lu. co.	lunar corona.	g.	gale of wind.
lu. ha.	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 $\frac{1}{1}$ = 92.5
 for Temp. (Col. 2), = 29.996 71
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{1}$ = 92.29
 for Temp. (Col. 4), = 30.002 72
 Mean at Station, corrected, and at 32', = 92.7
 Correction for height, feet above Mean Sea-level, = 49
 Mean, reduced to 32', and Sea-level, = 29.976
 Highest Reading, corrected for Index error, on the 14th, 15th, = 30.540
 Lowest Do. Do., on the 11th, = 29.340
 Difference, or Monthly Range, = 1.200

S.-R. THERMOMETER, (in shade, etc.) Highest in Month, (corrected for Index Errors), on the 6th, 8th, 26th, = 65.0
 Lowest in Month, corrected for Index errors, on the 15th, = 32.8
 Difference, or Monthly Range, = 32.2
 "Corrected Mean" of all the Highest, (Col. 5), = 58.8
 "Corrected Mean" of all the Lowest, (Col. 6), = 45.9
 Difference, or Mean Daily Range, = 12.9
 ** Calculated Mean Temperature of Month, = 52.3
 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), = 51.5
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 49.2
 ** Computed Temperature of Dew-Point, = 46.8
 ** Do. Elastic Force of Vapour, = 32.1
 ** Do. Weight of Vapour in a Cubic Foot of Air, =
 ** Relative Humidity (Saturation = 100), = 84
 RAIN fell on 16 Days; Amount in Inches, = 3.05

WIND. SUMMARY.											
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.	1	0	1	7	8	8	3	2	0	2.64	
P.M.	0	2	0	6	9	9	2	2	0	2.36	
Mean.	1	2	1	13	17	17	5	4	0	2.5	

Observations made and Return verified by Peter Haxby

(Signed)

OBSERVATIONS.

correct numbering of the scale every instrument, the rejection of Thermometers the frameworks of which are not likely to stand exposure to the weather, as shown in the past by repeated and annoying breakages of Thermometers of similar construction; and as regards Maximum Thermometers, either Negretti and Zamboni's, or Phillips's, whether they will act at the highest temperatures they may be, or not, is a matter which the Society Members and Observers have a right to have their instruments compared by the Secretary, and to advise with him regarding the purchase of instruments. Very great care should be bestowed on the Observations of the Wind, the accuracy of which, both as regards Direction and Force, is so essential towards the right discussion of many of the more important problems of the science.

A Wind-vane ought to be elevated at least 12 feet above surface, and should be so placed as to be perfectly unobscured, and in a direction nearly opposite to the prevailing winds.

1. As regards Direction.—Especially when the Vane is stationary, and the wind is feeble, reference may be made to the direction of smoke, or of the flags in well-exposed situations. Careful observations are recommended to be made on the changes in the direction of the wind; and during storms, extra observations at every hour of Greenwich time. Such

As observations made at different Stations are incompatible, it is rendering it impossible to compare the climates of places with one another as regards their most important features. The following are recommended, and Hubbard's Minimum Thermometer, and Register are recommended. It is recommended that these Thermometers be graduated on the glass stem. The minimum Thermometer is liable to two arrangements—viz, the one of spirit breaking, and the other of spirit rising by high temperature. The latter is the best. This device is liable to occasional occurrence with exposed Thermometers, but of course not with those used in examination. Minimum Thermometers ought to be a part of the work carried on by each Observer. Fortunately, spirit thermometers may be easily set right by

Let the thermometer be taken in the hand by the end farthest from the bulb, and the bulb being raised above the head, and then forcibly swung down towards the feet, the object being, on the principle of centrifugal force, to disengage the detached portion of spirit fall generally with the detached portion of spirit fall it will unite with the column.

A few throvs, or swinging strokes, will generally be sufficient for the purpose; after which the Thermometer should be placed in a slanting position, to allow the rest of the spirit still adhering to the sides of the tube to drain down to the column. By this method must be adopted, if the portion of spirit in the tube be small. Heat should be applied slowly and cautiously to the top end of the tube where the detached portion of spirit is, till, being turned into "vapour" by the heat, will condense on the surface of the unbroken column of spirit. Care must be taken that the spirit is not applied too quickly; for, if this be done, the tube will break and the instrument be destroyed. The best way to apply the requisite amount of heat is by bringing the end of the tube close to a fire, or a minute flame from a gas-burner; or, it can be done by holding the tube in the hand, and holding it close to a fire.

The bulbs from the snows for registering the greatest heat must be made of the sun's rays, and the least fire radiation during night, have a black coating which may easily be made or received by the application of a mixture of lampblack and printer's ink. They are placed in shallow enamelled boxes, whose sides protect the bulbs from the wind.

Maximum should be freely exposed to the sun, and the Minimum Thermometer should be placed in the shade, so as to be free from the sun's rays in an open situation. Snow must not be allowed to rest on either of these Thermometers; nor the sun's heat to affect the bulb of the Minimum Thermometer by distillation. Black-nibs enclosed in "snow jackets" may be used, being indeed, preferable to the

It must, however, be added, that the whole subject of the observation of Solar and Terrestrial Radiation is not yet in a sufficiently advanced state to warrant the exclusive recommendation of these methods.

The Observations required by the Society's Stations consists of two kinds of Thermometers usually, but not necessarily, mounted together, one of the *Wet Bulb* and the other of the *Dry Bulb* type, and a *Psychrometer*, the record form of this apparatus is sojournly revised and improved.

The Observations of the *Wet Bulb* Thermometer are specially requested to attend to the following conditions:—The bulbs must hang down 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 in such a manner from any board on which it may be suspended; the water in the bulb must be covered, and altogether placed to the side, and a little above the level of the wet bulb, but in no case under the bulb; the bulb must be of medium fineness, and fashioned at the neck of the tube by the cotton, which also supplies it with water. It must be so placed by the Observer, that it may be exposed to the sun, and to the breeze.

In frosty weather, observation is a matter of delicacy and must be made with great care. The bulb must be sustained by immersion from 15 to 30 minutes before the hour of observation. From the film of ice thus formed evaporation will be used 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 column of mercury. The reading ought to be taken to tenths of a degree, and noted in decimals. Thus the Thermometer will read -39° , 40° , or $40^{\circ} \cdot 1$; or again, 40° , $40^{\circ} \cdot 5$, $40^{\circ} \cdot 6$, according as it indicates a little under, an exact, or a little over 40° ; 40° , $40^{\circ} \cdot 5$, respectively. Also, 40° , $40^{\circ} \cdot 5$, or more, may best be registered as 40° , $40^{\circ} \cdot 5$, and $40^{\circ} \cdot 6$, instead of 40° , $40^{\circ} \cdot 5$, and $40^{\circ} \cdot 6$, respectively, of that index which is next below the spirit is alone noted. On opening the Thermometer Box the Dry and Wet Bulb Thermometers are to be first, rapidly read, inasmuch as they are readily affected by heat from the person of the Observer.

The Hygrometer is read at 9 a.m. and 9 p.m. The Self-Registering Thermometers are read at 9 p.m. only, as in-
of observing dictating the greatest and least degrees of temperature
temperature. It is not material
in the 24 hours preceding.

reference when the Self-Registering Thermometers are read, since the thermometer is not to be used at intervals of less than 15 minutes, and at least, the extremes may occur at any hour; and it is necessary to refer their occurrence to their proper meteorological hour.

In the Society's schedules, the indications registered on the thermometer are to be noted at the hour of observation, and in the case of those of a series of phenomena commencing at 9 p.m. on the 30th, 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 used, as are not graduated on the stem, but merely on an 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, especially the minimum Thermometers, ought frequently to be compared with a dry bulb of the Hygrometer. The freezing-point of each thermometer, marked by a scratch on the tube, ought to be tested a year, in snow or melting ice.

In selecting instruments, the following points require attention. The divisions of the vernier of Barometers in reference to the scales, and the perfect freedom of the Parameter from air; the

correct numbering of the scale of every instrument, the rejection of the thermometer's frameworks of which we are not likely to stand exposed to their weather, as shown in the past by repeated and unavailing attempts to thermometers of similar construction; and as regards Maximum Thermometers, either Negretti and Zamboni's, or Philip's, whether they will act at the highest temperatures they may be ordered to register. As the laws of the Society, Members are obliged to observe have a right to have their instruments compared by the Secretary, and to advise with him regarding the purchase of instruments. Very great care should be bestowed on the Observations of the Force and Wind, the accuracy of which, both as regards Direction and Force, is so essential towards the right discussion of many of the more important problems of the science.

A Wind-Vane ought to be elevated at least 12 feet above surrounding objects. When it oscillates incessantly, the mean direction should be taken. In all cases, but especially when the Vane is stationary, and when the wind is feeble, reference may be made to the direction of smoke¹, or to the changes in the direction of the wind; and during storms, extra observations at every hour of Greenwich time. Such a system of simultaneous observation, pursued at several Stations, is likely to give highly valuable and important results, particularly in connection with the system of thickly-planted Stations, on a limited district round Edinburgh called STORM STATIONS, in the course of being established by the Society for the systematic investigation of the relation of the force of the wind to BAROMETRIC GRADIENTS, and other points connected with storms.

The Council would recommend the Hemispherical Cup Anemometer,² a self-registering instrument which shows the amount of Wind that passes it per day; from which also the mean Velocity of the Wind at the time of observation may be ascertained. For indicating the Force and

¹ As regards Wind and Pressure.

² As regards Wind and Pressure.

Force of the Wind at any particular hour of observation, the Pressure of the Air, and the Direction of the Wind, as determined by the Anemometers recently brought under the notice of the Society by Mr. T. Stevenson, the Honorary Secretary, and Mr. R. Balling, of the Society's Observer at Ballantray, are recommended as likely to ensure uniformity in making observations on the Force of the Wind.

Many causes conspire to produce anomalies in Rain Returns, arising partly from the difficulty of obtaining a perfectly unobstructible situation for observation, and partly from the defective nature of the instruments used. The Rain Gauge should not be placed on a slope or terrace, but on a level piece of ground, in as open a situation as the Observer can procure for it. As it is often difficult to obtain a position free and unobstructed by surrounding objects as is desirable, care should be taken to place it at some distance from shrubs, trees, buildings, or other obstructions, at least as many feet from their base as they are in height. The more important directions to be observed in this respect are, to have a free exposure, and, in the case of its importance, S.W., N.E., S.E., and W. The top of the gauge must be perfectly level, and fixed so that it will be at least six feet above the height of one foot above the highest level of ground.

In such cases as Flights, where the instrument is read, being found that a stem projecting above the rim of the gauge seriously interferes with the proper measurement of the Rain-fall. When a measuring-glass is used, care should be taken to hold it quite perpendicular. The Rain Gauge ought to be read daily at A.M., and the reading entered in the Returns of the previous day, if the Gauge is read once a month, the reading is to be made on the first of the month, and the amount entered for the previous month. Snow-falls may, for convenience, be registered in their columns.

under the following conditions:—When a Snow shower occurs, it should be noted in the Remarks and the letter S affixed to the depth of water received in Gauge. The depth of the snow must be measured in some open place where it is not drifted or blown away, and the snow is to drift is observed, and registered in addition to, and as a check upon, the indications of the Gauge. For wind, rain and snow, the observations should be made in the usual manner, and no special register observations only; and nothing that portends of the nature of destruction or inference.

Convenient abbreviations for the nomenclature of Clouds will be found on the other side. The amount of Clouds ought to be estimated from the greater or less observation of the sky overhead (i.e. within 20° or 30° of the zenith). The strata of Clouds that appear near the horizon are viewed obliquely; and if Clouds be unable to judge of their amount, we ought not to take any account in the Cloud column, though their appearance may suggest it, as noted among the Remarks. The amount of Cloud is given from 1 to 10, according to the sky-coverage. Cloud is never to be entered 0, as the sky is never wholly clear; and Cloud is entered 0, when half-covered by Clouds, 5, from Clouds, 10, and so on.

Observations of the Clouds are made at 9 A.M. and at sunset, 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:—Thus, in the column Velocity of Direction, the

S. W. will indicate that the upper strata of Clouds travel with a
2. W. extreme velocity from S.W., and those in the lower regions from
N.W., with one-third the speed of the former. Again, in the second
4. S. column, an entry of 2. cu-45, will indicate that the higher
regions are covered to the amount of 2-fourths with stratus Clouds ;
and that the sky is further obscured to the extent of 2-tenths by
lower Clouds of the cumulo stratus kind.

Remarks on peculiar Clouds, accompanied with drawings, will
assist materially in the development of a more exact nomenclature
of Clouds, as well as throw light on the electrical, and other of the
more obscure phenomena of Meteorology. The approximate number of Hours in which objects in the sun's
rays cast shadows, should be entered in the proper
columns.

As the germination and growth of crops and plants generally depend greatly on the temperature of the soil,—its amount and constancy,—the Council recommend be made Observations in this interesting department be made at 9 A.M., by Thermometers permanently fixed in the soil, these bulbs being sunk to depths of 3, 12, and 22 inches, and the stems above ground protected from the sun's rays, and fitted with sloping iron collars, to prevent rain-water being conveyed to the bulbs by the stems or wooden frames. A knowledge of the Temperature of the Sea is not only in itself important in its relations to that of our island, a most important branch of Meteorology. The Council therefore recommend that the Temperature of the Sea be carefully taken by a properly constructed apparatus, from boats, or, if this be impracticable, from the ends of piers and rocks round the coast, where it is not influenced by that of river water, and as little influenced as possible by currents sweeping along the coast, and thus acquiring the temperature of the land, other greatly heated by the sun, or cooled by nocturnal radiation. At or near the mouth of high

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water, in cases where the observations cannot be taken daily, the observations may be made on the 5th, 15th, and 25th of each month. When convenient, observations might be taken for other days of the month, noting the temperature of the air, and the greater depths, noting the temperature of the water.

Hour of Observation. It is also necessary that observations be taken at daily maxima and minima by Thermometers freshly brought to be insituated at points along the coast, by the method proposed by Mr. T. Stevenson, and already commenced at Seahead and Liverpool.

Temperature. The temperature of the water at the bottom of Wells ought to be practicable, to be taken, both the depth of the temperature well and of the water being noted.

Mention what Test-Papers are used, Schönbörs's, etc.

Ozone. 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.—Thus 3", as an Ozone entry in the schedule will indicate that the ozone paper is taken at 3 on the scale of the instrument, the N.W., and that its force on the scale of the instrument is equal to 3.

Two much important notes be attached to the entries, viz:

Atmospheric Electricity.—The study of the structure in connection with terrestrial magnetism, barometrical, thermometrical, and meteorological phenomena generally. A proper meteorological is, in truth, necessary to every complete meteorological observatory.

The Remarks column is unavoidably too narrow. Some of the most valuable Observations that can be taken are those for which no rules can be given nor hours assigned. The use of contractions, therefore, to be taken advantage of and a list of such as are in general use is given at the foot of the column. Read special and extraordinary Observations, great providence courts, &c.

the same, and the same is given in this column for the present year. The difference between the Lower and Upper Series of notes is not so great as it is in the case of the other two series. Remarks ought to be made on the occurrence of Meteors, comets, auroræ, &c. Remarks ought to be made on the occurrence of Storms, and on the Barometer, Thunder-Storms, and remarkable falls of Snow, Hail or Rain, the Hour of Storms, and Wind commencing, attaining their maximum, and ending, as well as such Notes on Storms as have been mentioned above. When lofty hills are in the vicinity of a Station, the height of Clouds and of the Snow-line in winter should be recorded. By the use of observations, the state of the weather at 9 A.M. and P.M. should be registered, either in two columns, otherwise unoccupied, or ruled off for the purpose, from the column of 'Remarks.' Observations in connection with the Periodic Return of the Observations in Seasons, possess not only great scientific value, but in connection with are of considerable importance in connection with the Periodic Return of the Observations in Agriculture, Horticulture, and Natural History. The Council would direct the special attention of Observers to the registration of such phenomena, so that the observations Summaries may fairly represent the whole of Strands.

Observations ought to be confined to individual trees and shrubs; to particular species of birds, and, in the case of crops, to specified portions removed from year to year on a selected piece of ground or farm. The Annual Table, published yearly in the Society's Journal, will indicate the species of plants and animals to which special attention was more particularly directed.

The Council recommend Observers, before purchasing new instruments, and in repeating old ones, to communicate with the Meteorological Society, in order that every instrument may be examined and improved before being used; and they consider it necessary that Observers should have full power to reject any instrument which is not approved by the Society.

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Black C	Bourtree or Elder,
Cherry,	Broom,
Gan,	Hazel,
Goosebe	Hawthorn,
Peach,	Holly,
Plum,	Laburnum,
Strawbe	Lilac,
	Mazeron,
	Mountain Ash or Rowan,
	Red Flowering Currant,
	Rhododendron Ponticum,
	Whin,

To the SECRETARY,



★

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Drum Park Aberdeen, County of Aberdeen, in Lat. 57° 9' N, Long. 2° 6' W, Distance from Sea 2 miles.
Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet. During the MONTH of October 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.		WIND.				CLOUDS.				THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.	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.		No. of hours in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer. No. _____	9 A.M.		P.M.		9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		Barometer.	Attached Ther- mometer.	Barometer.	Attached Ther- mometer.	Max.	Min.	Max. in Sun's rays.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.			Direction.	Force.	Direction.	Force.		Velocity (0-5) and Species.	Amount (0-10), and Species.	Velocity (0-5) and Species.	Amount (0-10), and Species.	No. _____	No. _____					No. _____																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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	1	29.750	58	29.655	60	60.2	52.0			54.4	53.2	55.0	53.0	0.00	SW	1.5	S	0.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction for Temp. (Col. 2), = 29.410
"Corrected Mean" of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4), = 29.428
Mean at Station, corrected, and at 32°, = 29.419
Correction for height, feet above Mean Sea-level, = .48
Mean, reduced to 32°, and Sea-level, = 29.467
Highest Reading, corrected for Index error, on the 18th, = 30.015
Lowest Do. Do. on the 12th, = 28.950
Difference, or Monthly Range, =

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 2nd, = 61.2
Lowest in Month, corrected for Index errors, on the 24th, = 33.5
Difference, or Monthly Range, = 27.7
"Corrected Mean" of all the Highest, (Col. 5), = 52.1
"Corrected Mean" of all the Lowest, (Col. 6), = 42.0
Difference, or Mean Daily Range, = 10.1
** Calculated Mean Temperature of Month, = 47.1
S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 2nd, = 61.2
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 61.2
Lowest at Night, Black Bulb (corrected for Index errors), on the 24th, = 33.5
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 42.0
Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 47.5
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 45.5
† Computed Temperature of Dew-Point, = 43.3
† Do. Elastic Force of Vapour, = .481
† Do. Weight of Vapour in a Cubic Foot of Air, = .86
† Relative Humidity (Saturation = 100), = 86
RAIN fell on 20 Days; Amount in Inches, = 4.66

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		1	2	2	3	7	9	5	2	-	2.72
P.M.		1	2	2	4	10	7	3	2	-	2.30
Mean.		2	4	4	7	17	16	8	4	0	2.5

Observations made and Return verified by Peter Harper

(Signed)

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park Aberdeen, County of Aberdeen, in Lat. 57.9 N, Long. 2.6 W, Distance from Sea 2 miles.
Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.

During the MONTH of November 1903.

The Hours of Observation are of Greenwich Time.

Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.		WIND.				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.		No. of hours in which it fell.		Amount in inches.		9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer.		9 A.M.		P.M.						9 h. A.M.		9 h. P.M.	
	Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.			Direction.	Force.	Direction.	Force.	No.	Amount (0-10), and Direction.	No.	Amount (0-10), and Direction.	No.	Amount (0-10), and Direction.	No.	Amount (0-10), and Direction.					No.	Amount (0-10), and Direction.	No.	Amount (0-10), and Direction.
	* No.	inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°					°	°	°	°
1	30.070	50.	30.100	54.	49.6	38.6			40.0	39.5	48.8	47.0	0.00	SW	0.5	SW	1			3	0										1			
2	30.010	52.	29.995	53.	50.0	37.0			48.8	47.2	47.0	46.0	0.15	SW	1	SW	1			8	0										2			
3	30.105	52.	30.150	52.	51.0	33.7			37.0	36.2	43.8	42.5	0.00	SW	0.5	SW	2.5			2	0										3			
4	30.290	48.	30.500	53.	53.6	32.5			43.8	41.2	46.2	43.0	0.00	SW	0.5	SW	0.5			2	0										4			
5	30.500	49.	30.505	57.	50.5	35.0			36.0	35.4	47.0	45.4	0.00	SW	0.5	SW	1			2	0										5			
6	30.515	46.	30.500	48.	46.2	31.0			33.8	32.4	32.0	31.0	0.00	SW	1	SW	0.5			2	0										6			
7	30.400	42.	30.310	48.	40.0	26.0			28.2	27.5	32.0	31.0	0.00	SW	0.5	SW	1			0	0										7			
8	30.100	44.	29.800	30.	49.0	27.6			41.4	40.0	48.0	47.0	0.02	S	1	SW	2			8	0										8			
9	29.900	45.	29.650	48.	49.2	35.4			36.4	35.5	42.0	40.0	0.00	W	0.5	SW	1			2	0										9			
10	29.990	46.	30.095	49.	43.0	33.4			43.0	39.4	42.2	40.2	0.03	W	1.5	W	2			2	0										10			
11	30.200	46.	30.110	48.	44.2	32.0			39.0	37.8	41.4	39.5	0.05	SW	1	SW	1			6	0										11			
12	29.945	57.	30.100	57.	54.0	37.0			53.2	49.0	49.0	47.0	0.00	W	2	SW	0.5			4	0										12			
13	29.990	48.	29.680	51.	51.5	32.0			44.2	43.2	50.0	48.4	0.03	S	0.5	S	3			8	0										13			
14	29.460	48.	29.425	51.	47.8	46.0			47.0	45.0	39.0	37.2	0.26	SW	2	SW	0.5			2	0										14			
15	29.400	47.	29.650	48.	48.8	33.0			47.2	46.8	41.6	41.0	0.56	SW	2	W	2			10	0										15			
16	29.750	45.	29.890	45.	42.6	37.0			40.0	39.2	37.4	34.5	0.12	W	2	W	1			10	0										16			
17	29.760	44.	30.100	46.	43.0	33.0			39.8	37.6	40.6	36.0	0.06	W	3	W	1			4	0										17			
18	30.200	43.	30.195	47.	42.2	32.2			38.0	33.2	40.0	37.5	0.05	W	0.5	W	1			8	0										18			
19	30.130	41.	30.050	50.	47.5	38.2			42.0	40.5	44.2	41.0	0.00	SW	1	SW	0.5			6	0										19			
20	29.660	45.	29.380	47.	47.0	41.5			41.0	39.0	43.0	38.5	0.17	W	2	W	2			6	0										20			
21	29.250	46.	29.725	47.	46.0	38.0			45.0	40.2	39.6	37.0	0.11	W	3	W	2			4	0										21			
22	29.800	45.	29.750	45.	51.2	36.0			38.0	36.5	47.0	45.0	0.08	W	0.5	W	2			8	0										22			
23	29.750	47.	29.480	52.	52.0	43.0			46.5	44.2	47.0	46.0	0.08	SW	1	W	2			6	0										23			
24	29.850	48.	30.000	49.	48.0	37.0			38.0	35.0	38.0	35.0	0.04	W	1	SW	1			2	0										24			
25	29.800	44.	29.745	44.	39.0	32.6			33.8	33.0	35.0	35.0	0.30	W	1	W	3			8	0										25			
26	29.900	41.	30.100	45.	34.5	31.0			32.0	31.0	35.0	32.0	0.15	W	2	W	1			10	0										26			
27	29.600	41.	29.205	44.	31.6	24.0			33.0	34.2	33.8	32.5	0.60	S	1	S	1			10	0										27			
28	29.210	42.	29.450	43.	42.0	32.5			40.0	38.0	39.0	38.5	0.27	W	2	W	2			10	0										28			
29	29.480	40.	29.450	37.	44.0	30.6			32.5	31.0	30.0	28.5	0.15	W	1	W	1			3	0										29			
30	29.450	38.	29.610	41.	34.0	28.5			29.4	28.8	32.4	31.4	0.19	W	1	W	1			4	0										30			
31																																31		
Sums.	1481	13	1294	13	147	1415			147	158	146	145	2	5	3																			
Means.	25.995	16.4	26.790	23.2	181.0	136.7			287.6	238.5	3.30	274.6	3.38	36.0	39.0					157	130													
+ Total Corrections for Instrumental Errors.	-0.10		-0.10																															
+ Corrections for Diurnal Range.																																		
"Corrected Means."	29.856		29.883																															
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				

NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	" "	ms.	" "
ci-cu.	" "	n.	" "
ci-s.	" "	r.	" "
cu.	" "	c. h. r.	" "
cu-s.	" "	s.	" "
d.	" "	sc.	" "
f.	" "	s.	" "
fr.	" "	so. ha.	" "
h-fr.	" "	sq.	" "
h.	" "	sq.	" "
h. d.	" "	sq.	" "
h. l.	" "	sq.	" "
h. sh.	" "	sq.	" "
h. co.	" "	sq.	" "
h. ha.	" "	sq.	" "

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 $\frac{1}{2}$ for Temp. (Col. 2), = 29.810
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{2}$ for Temp. (Col. 4), = 29.831
Mean at Station, corrected, and at 32°, = 29.820
Correction for height, feet above Mean Sea-Level, = 50
Mean, reduced to 32°, and Sea-level, = 29.870
Highest Reading, corrected for Index error, on the 6th, = 30.505
Lowest Do. Do. on the 27th, = 29.195
Difference, or Monthly Range, = 1.310

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 12th, = 54.0
Lowest in Month, corrected for Index errors, on the 27th, = 24.0
Difference, or Monthly Range, = 30.0
"Corrected Mean" of all the Highest, (Col. 5), = 46.0
"Corrected Mean" of all the Lowest, (Col. 6), = 34.6
Difference, or Mean Daily Range, = 11.4
** Calculated Mean Temperature of Month, = 40.3
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), = 40.3
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 38.5
Computed Temperature of Dew-Point, = 36.2
Do. Elastic Force of Vapour, = 2.14
Do. Weight of Vapour in a Cubic Foot of Air, =
Relative Humidity (Saturation = 100), = 86
RAIN fell on 21 Days; Amount in Inches, = 3.38

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		1	1	0	0	3	13	8	4	0	2.40
P.M.		0	1	0	0	2	14	8	9	0	2.60
Mean.		1	2	0	0	5	24	12	13	0	2.5

Observations made and Return verified by Peter Harper

(Signed)

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park Aberdeen, County of Aberdeen, in Lat. _____, Long. _____, Distance from Sea 2 miles.

Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.

During the MONTH of December 1903.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				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 Sun's rays	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	Velocity (0-10), and Species.	Amount (0-10), and Species.	Velocity (0-10), and Species.	Amount (0-10), and Species.	No. 3 inches.					No. 12 inches.	No. 22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction \ddagger for Temp. (Col. 2), = 29.643
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction \ddagger for Temp. (Col. 4), = 29.666
 Mean at Station, corrected, and at 32°, = 6.55
 Correction for height, feet above Mean Sea-level, = 50
 Mean, reduced to 32°, and Sea-level, = 29.705
 Highest Reading, corrected for Index error, on the 28th, = 30.290
 Lowest Do. Do. on the 7th, = 28.890
 Difference, or Monthly Range, = 1.400

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 22nd, = 51.0
 Lowest in Month, corrected for Index errors, on the 3rd, = 19.5
 Difference, or Monthly Range, = 31.5
 "Corrected Mean" of all the Highest, (Col. 5), = 40.5
 "Corrected Mean" of all the Lowest, (Col. 6), = 31.9
 Difference, or Mean Daily Range, = 8.6
 ** Calculated Mean Temperature of Month, = 36.2
 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), = 36.7
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 35.4
 Computed Temperature of Dew-Point, = 33.6
 Do. Elastic Force of Vapour, = 1.93
 Do. Weight of Vapour in a Cubic Foot of Air, = _____
 Relative Humidity (Saturation = 100), = 89
 RAIN fell on 16 Days; Amount in Inches, = 2.49

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		0	0	0	2	11	11	3	1	0	
P.M.		0	0	0	3	15	11	1	4	0	
Mean.		0	0	0	8	26	22	4	2	0	

Observations made and Return verified by Peter Harper.

(Signed)

