

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Diethie Park, Aberdeen, County of Aberdeen, in Lat. 57° 9' N, Long 2° 6' W, Distance from Sea 3 miles.
 Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.
 During the MONTH of January 1901.
 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 No. _____	9 A.M.		P.M.		9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max. in Sun/rays.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.			Direction.	Force.	Direction.	Force.		Velocity (0-6) and Direction.	Amount (0-10), and Species.	Velocity (0-6) and Direction.	Amount (0-10), and Species.	No. 3 inches.	No. 12 inches.					No. 22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		No. _____	_____	No. _____	_____	No. _____	_____	No. _____	_____	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	No. _____	_____	No. _____	_____	No. _____	_____	No. _____	_____	No. _____	_____	Hours.	_____	_____					_____																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction $\frac{1}{10}$ for Temp. (Col. 2), = 29.823
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{10}$ for Temp. (Col. 4), = 29.846
 Mean at Station, corrected, and at 32°, = 29.835
 Correction for height, 44 feet above Mean Sea-level, = 50
 Mean, reduced to 32°, and Sea-level, = 29.885
 Highest Reading, corrected for Index error, on the 6 th, = 30.455
 Lowest Do. Do., on the 27 th, = 28.760
 Difference, or Monthly Range, = 1.715

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 21 th, = 54.2
 Lowest in Month, corrected for Index errors, on the 10 th, = 26.0
 Difference, or Monthly Range, = 28.2
 "Corrected Mean" of all the Highest, (Col. 5), = 41.7
 "Corrected Mean" of all the Lowest, (Col. 6), = 33.6
 Difference, or Mean Daily Range, = 8.1
 ** Calculated Mean Temperature of Month, = 37.7
 S-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
 Lowest at Night, Black Bulb (corrected for Index errors), on the th, =
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =
 Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 37.8
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 36.4
 # Computed Temperature of Dew Point, = 35.6
 # Do. Elastic Force of Vapour, = 2.06
 # Do. Weight of Vapour in a Cubic Foot of Air, =
 # Relative Humidity (Saturation = 100), = 92
 RAIN fell on 16 Days; Amount in Inches, = 1.92

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	0	4	4	17	2	3	0	1.52	2.31
P.M.	1	0	0	5	2	15	3	5	0	1.68	2.82
Mean.	1	0	0	4	3	16	3	4	0	1.60	2.57

* Each instrument tested at the Office in Edinburgh bears the stamp "S.M.S."; and a number to be entered in the Heading of the column.
 † Number and Initials of the Maker may be here given.
 ‡ Embracing corrections for both capillarity and Index Errors.
 § The Diurnal Range for Scotland is as yet unknown.
 ¶ Presumably, though not absolutely a minus correction.
 ** These "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition 1897.
 †† While the Diurnal Range is unknown, the Arithmetic Mean of Cols. 5 and 6 will be entered as the "Calculated Mean Temperature."
 ‡‡ Any observations not taken under the Conditions specified in the Directions on the other side, or noted at the Top of each column, must be marked as such by the observer, in each Schedule. See over.

Observations made and Return verified by Peter Harper (Signed)

OBSERVATIONS,

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

In selecting instruments, the following points require attention:—The divisions of the various of Barometers in reference to the scales, and the perfect freedom of the Barometer in air: the

A knowledge of the Temperature of the Sea is not only in itself, but in its relations to that of our island, a most important and potent branch of Meteorology. The Council therefore recommends that the Temperature of the Sea be systematically 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 as possible, where it is not furthest veering along the coast, and thus acquiring the temperature of the island. They are greatly heated by the sun, and cooled by nocturnal radiation. At or near them, the water is

OBSERVATIONS IN		FOREST TREES.		
In	Flower.			
		Alder,		
		Asp.		
		Beech,		
		Birch,		
		Blm.		
		Larch,		
		Time,		
		Oak.		
		Sycamore or Plane,		

Barberry,
Bountree or Blder,
Hazel,
Broom,
Hawthorn,
Holly,
Laburnum,
Lilac,
Leveroon,
Mountain Ash or Rowan,
Red Flowering Currant,
Hododendron Ponticum,
Yew,

OBSERVATIONS IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

OBSERVATIONS IN		FOREST TREES.		
In	Flower.			
		Alder,		
		Asp.		
		Beech,		
		Birch,		
		Blm.		
		Larch,		
		Time,		
		Oak.		
		Sycamore or Plane,		

A knowledge of the Temperature of the Sea is not only in itself, but in its relations to that of our island, a most important and useful branch of Meteorology. The Council therefore recommend that the Temperature of the Sea be ascertained 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 as possible by the surface of the water, which is constantly being renewed by the waves sweeping along the coast, and thus acquiring the temperature of the land. The observations should be made at the same hour, and the thermometer, either greatly heated by the sun, or cooled by nocturnal radiation. At or near the mouth of each river, the temperature should be ascertained at the same hour, and the thermometer, either greatly heated by the sun, or cooled by nocturnal radiation. At or near the mouth of each river, the temperature should be ascertained at the same hour, and the thermometer, either greatly heated by the sun, or cooled by nocturnal radiation.

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 February 1901.

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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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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.	s.	" sleet.
h. fr.	" hoar-frost.	s.	" snow.
h.	" haze.	so. ha.	" solar halo.
h. d.	" heavy dew.	sq.	" squall.
hl.	" hail.	sqs.	" squalls.
l.	" lightning.	t. s.	" thunder-storm.
li. cl.	" light clouds.	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 $\frac{1}{10}$ for Temp. (Col. 2), = 29.971
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{10}$ for Temp. (Col. 4), = 29.977
Mean at Station, corrected, and at 32°, = 29.974
Correction for height, 44 feet above Mean Sea-level, = 5.0
Mean, reduced to 32°, and Sea-level, = 30.024
Highest Reading, corrected for Index error, on the 15th, = 30.580
Lowest Do. Do., on the 27th, = 29.250
Difference, or Monthly Range, = 1.330

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 22th, = 45.8
Lowest in Month, corrected for Index errors, on the 14th, = 17.0
Difference, or Monthly Range, = 28.8
"Corrected Mean" of all the Highest, (Col. 5), = 40.1
"Corrected Mean" of all the Lowest, (Col. 6), = 31.4
Difference, or Mean Daily Range, = 8.7
** Calculated Mean Temperature of Month, = 35.8
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), = 34.8
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 33.5
Computed Temperature of Dew-Point, = 31.5
Do. Elastic Force of Vapour, = 1.76
Do. Weight of Vapour in a Cubic Foot of Air, =
Relative Humidity (Saturation = 100), = 88
RAIN fell on 17 Days; Amount in Inches, = 2.477

WIND.	SUMMARY.										Mean Force.	Mean Velocity in miles per day
	Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.		
A.M.		2	0	0	1	0	4	8	13	0	1.21	1.46
P.M.		0	0	1	0	1	1	7	17	1	1.20	1.44
Mean.		1	0	1	1	1	2	7	15	0	1.20	1.45

Observations made and
Return verified by

(Signed)

Peter Harper

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at North Fork Merdun, County of Sheridan, 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 March ~~1900~~ 1901

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. Sun's rays 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 h. A.M.	9 A.M.		P.M.		9 h. A.M.																																																																																																																																																								
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max. in Sun's rays	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.				Direction.	Force.	Direction.	Force.		Velocity (0-10), and Direction.		Amount (0-10), and Direction.	Velocity (0-10), and Direction.	Amount (0-10), and Direction.	No. 3 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. _____	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	29.105	43.	28.941	44.	41.0	29.0				39.4	37.8	41.0	40.5	0.26	SE	3	SE	1		10	"	8	ci							dull cold, rain from 10 Am	1																																																																																																																																																			
2	29.050	41.	28.790	45.	46.8	34.0				36.8	36.0	41.8	40.5	0.03	S	1	SE	2		8	ci	10	"							fair all day, showers P M	2																																																																																																																																																			
3	29.050	44.	29.400	43.	50.0	35.6				37.2	38.0	34.0	32.6	0.00	SW	1	SW	1		4	"	2	ci							fair & fine all day	3																																																																																																																																																			
4	29.500	44.	29.200	42.	45.5	29.0				35.8	32.0	34.0	32.8	0.00	SW	1	S	2		2	ci	8	ci							fair all day, Showers P.M.	4																																																																																																																																																			
5	28.900	41.	29.030	42.	48.0	35.0				40.2	39.0	37.8	36.0	0.01	S	2	SW	3		4	ci	6	ci							dull fair cold wind	5																																																																																																																																																			
6	29.060	44.	28.900	43.	46.6	34.8				38.0	35.5	39.0	36.5	0.02	SW	2	SW	1		5	ci	4	st							fair & fine	6																																																																																																																																																			
7	28.970	45.	29.745	43.	46.8	32.8				39.2	37.8	42.0	39.8	0.00	N	1	N	3		6	ci	8	ci							fair all day	7																																																																																																																																																			
8	30.040	42.	30.295	44.	46.4	38.0				41.2	39.0	35.0	33.8	0.00	N	3	NW	1		4	ci	4	st							do do	8																																																																																																																																																			
9	30.125	44.	30.150	50.	55.0	32.0				38.4	36.8	44.0	41.0	0.00	SW	1	SW	2		2	ci	5	ci								do do	9																																																																																																																																																		
10	30.100	46.	29.875	46.	64.0	37.6				47.0	44.6	37.5	38.0	0.00	N	0.5	SW	1		3	ci	0									fair & fine all day	10																																																																																																																																																		
11	29.850	45.	29.905	50.	57.2	32.0				41.4	40.0	41.8	40.0	0.00	SW	0.5	E	1		6	ci	2	ci								do do do	11																																																																																																																																																		
12	29.925	50.	29.950	50.	55.5	38.0				42.6	41.0	41.6	40.0	0.00	SW	0.5	E	1		5	"	0									fair & fine all day	12																																																																																																																																																		
13	30.160	50.	30.100	46.	58.0	31.0				47.5	46.0	42.0	41.0	0.00	SW	1	S	2		2	ci	0									do do do	13																																																																																																																																																		
14	30.140	49.	30.145	50.	42.4	38.2				40.0	38.5	40.0	38.6	0.00	SW	2	S	1		10	ci	10	ci								do do do	14																																																																																																																																																		
15	30.045	43.	30.9	46.	42.5	37.5				38.0	36.6	39.2	38.6	0.12	E	1	N E	1		10	ci	10	"								fair & fine all day	15																																																																																																																																																		
16	29.855	46.	29.900	46.	43.5	37.2				40.4	39.6	40.0	39.0	0.03	N E	1	N E	2		10	"	8	ci								fair & fine all day	16																																																																																																																																																		
17	29.905	46.	29.930	42.	45.0	37.0				41.6	40.2	40.2	38.6	0.01	N	1	N E	2		10	"	8	ci								Clearing up some slight rain	17																																																																																																																																																		
18	29.910	44.	29.915	44.	44.2	33.0				40.8	38.4	39.8	35.0	0.01	N E	2	N E	2		6	ci	8	ci								Clear some rain. dry later	18																																																																																																																																																		
19	29.925	44.	30.000	41.	42.0	34.2				39.0	34.0	39.5	35.2	0.08	N E	2	N E	2		3	ci	8	ci								fair, some slight rain	19																																																																																																																																																		
20	30.000	43.	30.120	42.	45.0	34.8				39.8	37.4	40.0	37.6	0.00	N E	2	N E	2		6	ci	8	ci								fair cold all day	20																																																																																																																																																		
21	30.220	44.	30.300	46.	45.0	38.0				40.0	37.8	39.0	37.0	0.00	N E	1	N E	1		8	ci	4	ci								stormy slight showers	21																																																																																																																																																		
22	30.400	44.	30.520	46.	45.0	39.0				40.0	38.0	37.0	35.5	0.00	N W	1	N W	1		5	ci	0									fair & fine all day	22																																																																																																																																																		
23	30.540	44.	30.450	42.	46.8	31.0				41.0	38.5	39.0	37.5	0.00	SW	0.5	SW	1		8	ci	0									do do	23																																																																																																																																																		
24	30.195	45.	30.100	37.	43.8	31.0				41.0	37.6	36.0	28.9	0.08	SW	1	N W	2		6	ci	8	ci								fair, Sleet to Snow from 3 P.M.	24																																																																																																																																																		
25	30.095	40.	30.075	35.	35.5	24.0				28.0	28.0	28.2	27.0	0.17	N W	2	N W	1		8	ci	6	ci								Snow showers all day	25																																																																																																																																																		
26	29.900	38.	29.800	34.	36.0	28.5				28.0	27.0	28.2	26.8	0.22	N W	2	N W	2		6	ci	6	ci								do do do	26																																																																																																																																																		
27	29.700	38.	29.710	40.	34.0	24.0				27.5	27.0	34.0	32.6	0.22	N W	1	N W	2		6	ci	8	ci								do do do	27																																																																																																																																																		
28	29.650	36.	29.750	33.	35.0	23.0				32.0	31.5	31.0	29.0	0.16	N W	2	N W	1		8	ci	6	ci								do do do	28																																																																																																																																																		
29	29.700	30.	29.500	36.	39.2	12.0				22.5	20.0	33.6	32.0	0.22	SW	0.5	E	2		2	ci	6	ci								Clear some Snow Soft P.M.	29																																																																																																																																																		
30	28.955	36.	28.755	42.	41.8	32.0				36.2	35.2	36.2	35.5	0.26	SE	4	S	1		10	"	10	"								Sleet to 12. then fair, rain P.M.	30																																																																																																																																																		
31	28.850	42.	28.920	40.	43.4	33.5				35.0	36.8	37.0	35.0	0.00	SW	1	SW	1		7	ci	4	ci								fair and fine all day	31																																																																																																																																																		
Sums.	14116	12	1794	9	148	155				158	161	156	161	6						185		175										NOTATION USED IN GENERAL REMARKS.																																																																																																																																																		
Means.	29.740	42.9	29.749	42.5	45.4	32.4				38.2	36.3	37.8	35.9	1.95						4.4		5.5										a. denotes aurora.																																																																																																																																																		
+ Total Corrections for Instru- mental Errors.	29.730	24.739																														m. denotes meteor.																																																																																																																																																		
+ Corrections for Diurnal Range.																																ms. " meteors.																																																																																																																																																		
"Cor- rected Means."																																n. " nimbus.																																																																																																																																																		
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		ci. " cirrus.																																																																																																																																																		
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																																	lu. co. " lunar corona.																																																																																																																																																	
																																	lu. ha. " lunar halo.																																																																																																																																																	
																																		g. " gale of wind.																																																																																																																																																

BAROMETER,	"Corrected Mean" at 9 A.M., <i>minus</i> the Correction $\ddagger \ddagger$	=	29.691
	for Temp. (Col. 2), =	0.034	
"Corrected Mean" of Barometer at 9 P.M.,	<i>minus</i> the Correction $\ddagger \ddagger$	=	29.702
	for Temp. (Col. 4), =	0.037	
Mean at Station, corrected, and at 32°,		=	29.697
Correction for height,	feet above Mean Sea-level,	=	50
Mean, reduced to 32°, and Sea-level,		=	29.747
Highest Reading, corrected for Index error, on the 23 th,		=	30.570
Lowest Do.	Do., on the 30 th,	=	28.755
Difference, or Monthly Range,		=	1.785

S.-R. THERMOMETER, (in shade, etc.), **Highest in Month**, (corrected for Index Errors), on the 10 th, = 64° 0

Lowest in Month, corrected for Index errors, on the 29th, = 12° 0

Difference, or **Monthly Range**, = 52° 0

“Corrected **Mean**” of all the **Highest**, (Col. 5), = 45° 4

“Corrected **Mean**” of all the **Lowest**, (Col. 6), = 32° 4

Difference, or **Mean Daily Range**, = 13° 0

** Calculated **Mean Temperature** of Month, = 38° 9

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

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11),	=	38.0
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12),	=	36.1
Computed Temperature of Dew-Point,	=	33.5
Do. Elastic Force of Vapour,	=	.192
Do. Weight of Vapour in a Cubic Foot of Air,	=	
Relative Humidity (Saturation = 100),	=	84
RAIN fell on 17 Days; Amount in Inches,	=	1.45

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.	2	5	1	2	2	12	2	5	0	1.44	2.05
P.M.	1	7	2	2	5	7	0	7	0	1.55	2.40
Mean.	2	6	1	2	3	10	1	6	0	1.50	2.24

Observations made and
Return verified by

(Signed) Step 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 April 1901.

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.			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 No.	Min. on Grass. No.	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. 3 inches.	No. 13 inches.	No. 22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	cirrus.	ms.	micro-meteor.
ci-cu.	cirro-cumulus.	n.	nebula.
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.
hl.	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.	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 $\frac{1}{1000}$ for Temp. (Col. 2), = 29.666
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{1000}$ for Temp. (Col. 4), = 29.713
 Mean at Station, corrected, and at 32°, = 29.689
 Correction for height, feet above Mean Sea-level, = 50
 Mean, reduced to 32°, and Sea-level, = 29.739
 Highest Reading, corrected for Index error, on the 7th, = 30.260
 Lowest Do. Do., on the 1st, = 29.005
 Difference, or Monthly Range, = 1.255

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 21st, = 65.8
 Lowest in Month, corrected for Index errors, on the 6th, = 27.0
 Difference, or Monthly Range, = 38.8
 "Corrected Mean" of all the Highest, (Col. 5), = 52.7
 "Corrected Mean" of all the Lowest, (Col. 6), = 35.5
 Difference, or Mean Daily Range, = 17.2
 ** Calculated Mean Temperature of Month, = 44.1
 S-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 1st, = 65.8
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 52.7
 Lowest at Night, Black Bulb (corrected for Index errors), on the 1st, = 27.0
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 35.5
 Difference of above means or range ("exposed"), = 17.2

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 43.8
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 41.6
 Computed Temperature of Dew-Point, = 39.0
 Do. Elastic Force of Vapour, = .239
 Do. Weight of Vapour in a Cubic Foot of Air, = 83
 Relative Humidity (Saturation = 100), = 83
 RAIN fell on 17 Days; Amount in Inches, = 2.20

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		1	3	-	5	1	12	5	3	-	1.58
P.M.		1	5	1	3	5	9	2	3	1	1.25
Mean.		1	4	1	4	3	10	4	3	0	1.42

2.02

Observations made and
Return verified by

(Signed)

Peter Harper

INSTRUCTIONS

FOR TAKING METEOROLOGICAL OBSERVATIONS,

WITH REMARKS ON THE USE OF INSTRUMENTS.

ONE of the chief objects that the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1856, was to secure REGULAR UNIFORMITY in the system of observation pursued at all its Stations. Uniformity in the observations is absolutely necessary to justify the publication of Monthly Results from different observations, it being found that differences between the Returns from two Stations, so very considerable as to render them quite incomparable, may arise from dissimilarity in the position or shelter of instruments, different hours of observation, or even from the use of differently constructed instruments. It is therefore hoped, that those who kindly furnish Reports to the Society will, by a scrupulous attention to the following Directions, secure for their Monthly Returns an accuracy and value commensurate with the labour and pains involved in making them; and, for the Tables published by the Society, an entire comparableness among the several Returns, without which the Society's Reports must inevitably fail in achieving one of the main objects of Meteorological Observation.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich or Railway Time only), of the columns of the Schedule. It is hoped that the utmost punctuality in the time of reading the instruments will be observed. Observers, in some few cases, may find this impossible; in such instances they are specially requested to mark opposite every reading the time at which it was taken, if not at 9 A.M. or 9 P.M. Weather-Glasses and Aneroids, though well suited to indicate roughly variations of atmospheric pressure, are not fitted for scientific purposes. No Barometer should be used for Meteorological Observation that is not supplied with some means of adjustment or compensation which will secure that the height of the mercury in the tube is accurately measured from the fluctuating surface of the mercury in the cistern.

The Barometer in which the error arising from the fluctuating surface of the mercury in the cistern is entirely got rid of is FORTIN'S Barometer, the arrangement consisting in applying pressure by means of a screw to the bottom of the cistern, which is made of flexible leather, thus raising or depressing the surface till it just meets the ivory point which forms the zero point of the fixed scale. The Barometer originally constructed by Mr. Adie of London, and usually called the Board of Trade Barometer, has the great convenience of requiring no adjustment of the cistern. Its scale-inches are not true inches but so much shorter as to compensate the error that would otherwise arise from the fluctuations of the surface of mercury in the cistern. This is an excellent Barometer for ordinary Observers, inasmuch as it entirely eliminates the error of observation likely to arise in not a few cases in setting the instrument to show the zero point of the fixed scale when the light is not good. To show the zero point of the fixed scale when the light is not good, may be stated, that one was compared, during a whole year, with the Society's Standard Barometer, particular care being given to make the comparison when atmospheric pressure was rising or falling very rapidly, with the result that none of the readings differed from those of the Standard more than 0.003 inch.

A modification of Fortin's Barometer is used at a number of the Society's Stations, by which the coincidence of the zero point with the surface of the mercury is indicated by a little ivory float, whose stem passes freely through the lid and case of the cistern. When the index-line on this little piston-rod is brought, by the adjusting screw, to form one straight line with the top of its ivory frame, the surface of the mercury is then at the exact height from which the scale is graduated. In taking an observation, this preliminary setting must be made with scrupulous accuracy; as a slight error here will vitiate the readings from the vernier.

It is absolutely necessary that the Barometer which is to be used shall have been compared with a Standard Barometer. The Barometer should be suspended in as good a light as can be secured, and to facilitate the reading, a piece of white paper may be put behind the tube. It must be hung truly perpendicular, and exposed to neither the sun's direct rays nor the heat of a fire, and must not be hung against a wall heated by a fire. The object being to secure that the whole instrument, including the brass fittings, the contained mercury, and the attached Thermometer, shall be, when read at one uniform temperature, is evident that the best position is that which is least liable to sudden changes of temperature.

In taking an Observation, the Attached Thermometer is first noted; the tube must then be gently tapped, and the cistern-adjustment carefully made. The eye, by raising and lowering it, must be brought into the plane of the back and front of the index—usually the lower edge of the vernier, which must be carefully adjusted so as to form exactly a tangent to the convex surface of the mercury in the tube. Observations must be taken quickly, so as to prevent heat from the observer's hands and person from affecting the mercury. The use of a lens will facilitate an accurate adjustment and reading of the Barometer. A mistake not unfrequently made by those beginning to observe, consisting in setting the edge of the vernier to the level of the clear surface of the mercury which is in direct contact with the glass tube, must be carefully avoided.

The errors most frequently made in reading the Barometer are errors of 1.000 inch, 0.000 inch, and 0.050 inch; that is to say, instead of 29.365 inches, either of the following is sometimes set down—viz. as 30.365 inches, 29.365 inches, or 29.815 inches. Experience having shown that even the very best Observers make these mistakes, particular attention is directed to the matter. When a Barometer having adjustable surfaces has to be removed from its fastenings, the ivory peg must first be screwed so as to form a tight plug to the cistern, thus preventing the escape of the mercury. Then screw up the mercury not quite to the top of the tube, but to within a quarter of an inch of it, and take down the instrument; it should then be carried with the cistern uppermost. Before suspending the Barometer for use, it must be ascertained whether the space above the mercury in the tube is a complete vacuum; this is the case if on inclining the instrument, a sharp tap is produced when the mercury strikes the top of the tube. If a dull tap is heard, there is air in the tube, which must be got rid of.

As Barometers are liable to be deranged by the introduction of air into their tubes, on removal from place to place, or in being roughly handled, it may be useful to Observers to know how the ivory peg may be expelled. First close up the cistern by screwing the ivory peg tight, so as to prevent the escape of mercury; then screw up the mercury to about half an inch from the top of the tube; and having slowly inverted the instrument, place the top of it on a yielding substance, such as the book and gently tap on the cistern with the palm of the hand, so as to induce the air to ascend through the column to the cistern, whence it may escape. Since there is the weight of two atmospheres—the pressure of the mercury in the Barometer and the air outside—pressing on any air that may be inside the tube, it is usually a tedious operation to get it wholly expelled. After repeated trials, however, it is generally accomplished; and the clear metallic sound of the mercury, when gently struck against the top of the glass tube, will show when the whole of the air has been expelled. On hanging up the Barometer, care must be taken to screw down the mercury in the tube before unfastening the float of the cistern, for, if this be not attended to, the mercury will flow out, and the instrument be seriously damaged.

The Council of the Society recommend that the Self-Registering Thermometers, and the Dry and Wet Bulb Hygrometers, be kept in Stevenson's Louver-boarded Box for protection to the weather, as shown in the pasty repeated and annoying breakages of Thermometers of similar construction; and as regards Maximum Thermometers, either Negretti and Zambra's, or Phillips's, whether they will act at the highest temperatures they may be required to register. By the laws of 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.

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 sciences. 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 smoke, etc., 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 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, in the 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, 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 of the Wind at any particular hour of observation, the Pressure Anemometers recently brought under the notice of the Society by Mr. T. Stevenson, the Honorary Secretary, and Mr. R. Ballingall, the Society's Observer at Ealingham, are recommended as likely to secure 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 unobstructed 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 secure for it. As it is often difficult to obtain a position as 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. The more important directions, these being as they are in height. The more important directions, towards which it is most desirable to have a free exposure, are, in the order of their importance, S.W., N.E., S.E., S., and W. The rain 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 ground, over grass. In such gauges as Fleming's, which are furnished with a measuring-rod attached to a float, the rod ought to be fixed down, and the float rise to its height only at the time the instrument is read; it 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 9 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 the rain 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. No depth of the snow must be measured in some open place where the drift is observed, and registered in addition to, and as a check upon, the indications of the Rain Gauge. For wind, rain, and snow, as indeed in every column, the Observer cannot be too careful to register observations only; and nothing that partakes of the nature of deduction or inference.

Convenient abbreviations for the nomenclature of Clouds will be found on the outside. The amount of Cloud ought to be estimated from the greater or less obscuration 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, being unable to judge of their amount, we ought not to take them into account in the Clouds column, though their appearance and changes may be noted among the Remarks. The amount of Cloud is entered from a scale of 0 to 10; thus, when the sky overhead is free from Clouds it is entered 0, when half-covered by Clouds, 5, wholly covered, 10, and so on. 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 and Direction, 6, S. W. will indicate that the upper strata of Clouds travel with extreme velocity from S.W., and those in the lower regions from W., with one-third the speed of the former. Again, in the second Cloud column, an entry of $\frac{2}{4}$, will indicate that the higher regions are covered to the amount of 4-tenths with stratus Clouds; and that the sky is further obscured to the extent of 2-tenths by lower Clouds of the cumulo stratus kind. 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 column. As the germination and growth of crops and plants generally depend greatly on the temperature of the soil, the temperature of the ground should be noted in the 'Remarks' column. Observations in this interesting department may be made at 9 A.M., by Thermometers permanently fixed in the soil, their bulbs being sunk to depths of 3, 12, and 22 inches, and the stems above ground protected from the sun's rays, and fixed with stopping collars, to prevent run-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, but in its relations to that of our island, a most important branch of Meteorology. The Council therefore carefully taken by a properly constructed apparatus on board ship, if this be impracticable, from the ends of piers and rocks, and the coast, where it is not influenced by that of river, the sea, and the influence as possible by currents sweeping along the coast, and thus acquiring the temperature of the land, either greatly raised by the sun or cooled by nocturnal radiation. At or near the time of high

correct numbering of the scale of every instrument; the rejection of Thermometers the frameworks of which are likely to stand exposure to the weather, as shown in the pasty repeated and annoying breakages of Thermometers of similar construction; and as regards Maximum Thermometers, either Negretti and Zambra's, or Phillips's, whether they will act at the highest temperatures they may be required to register. By the laws of 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.

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CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

water, in cases where the Observations cannot be taken daily, the observation may be made on the 5th, 15th, and 25th of each month. When convenient, extra Sea Observations might be taken for other and greater depths, noting always the Temperature of the Air and the Hour of Observation. It is also very desirable that observations on the daily Maxima and Minima by Thermometers continuously immersed, be instituted at points along the coast, by the method proposed by Mr. T. Stevenson, and already commenced at Peterhead and Liverpool. The Temperature of the water at the bottom of Wells ought, when practicable, to be taken, both the depth of the water, and the temperature of the water being noted.

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 3rd W., as an Ozone entry in the schedule will indicate that the Ozone paper is tinted as 3 on the scale, that the wind is from the N.W., and that its force on the scale 0-5 is 4, or blowing fresh.

Too much importance cannot be attached to the electric condition of the atmosphere in connection with terrestrial magnetism, barometrical, thermometrical, and electrical meteorological phenomena generally. A proper Electrometer 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 ought, therefore, to be taken every advantage of, and a list of such as in general use is given at the foot of the column. Besides special and extraordinary Observations, great prominence ought to be given in this column to Prevalent Diseases, differences in character, colour, velocity, and direction between the Lower and Upper Strata of clouds, the Colour of the Sky, etc. Remarks ought to be made on the occurrence of Meteors, Auroræ Boreales, remarkable depressions, elevations, and fluctuations of the Barometer, Thunder-Storms, and remarkable falls of Snow, Hail, or Rain, the Hour of Storms of Wind commencing, attaining their maximum, and ending, as well as such Notes on Storms as have been hinted at 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 abbreviations, the state of the weather at 9 A.M. and 9 P.M. should be registered, either in two columns, otherwise occupied, or ruled off for the purpose, from the column of 'Remarks.' Observations in connection with the Periodic Return of the Seasons, possess not only great scientific value, but are of considerable importance in connection with the periodic life of Agriculture, Horticulture, and Natural History. The Council would direct the special attention of Observers to the registration of such phenomena, so that the published Summaries may fairly represent the whole of Scotland. Observations ought to be confined to individual trees and shrubs; to particular species of birds, and, in the case of crops, to specified sorts reared 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 is more particularly directed.

The Council recommend Observers, before purchasing new instruments, and in repairing old ones, to communicate with the Meteorological Secretary, in order that every instrument may be examined and improved before being used; and they consider it necessary that he should have full power to reject any instrument which, on being presented for comparison, does not afford him satisfaction. (By Order) A. E. ERSKIN, Secretary.

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FOREST TREES.		GEORGS.		MIGRATORY BIRDS.		FRUIT.		FRUIT.		SHRUBS, ETC.	
In flower.	Last Appear.	In flower.	Last Appear.	In flower.	Last Appear.	In flower.	Last Appear.	In flower.	Last Appear.	In flower.	Last Appear.
Alder.		Barley.		Oats.		Beans.		Peas.		Turnips.	
Beech.		Bare or Bigg.		Wheat.		Peas.		Peas.		Turnips.	
Birch.											
Blm.											
Larch.											
Linne.											
Oak.											
Sycamore or Plane.											

MIGRATORY BIRDS.		FRUIT.		FRUIT.		SHRUBS, ETC.	
First Arrival.	Departure.	First in Blossom.	First in Blossom.	First in Blossom.	First in Blossom.	First in Blossom.	First in Blossom.
Chickadee.		Apple.		Black Currant.		Broom.	
House-wallow.		Cherry.		Hazel.		Holly.	
Lapwing.		Gooseberry.		Laburnum.		Lilac.	
Plover.		Hawthorn.		Mezerion.		Mountain Ash or Rowan.	
Sand-Martin.		Plum.		Rhododendron Ponticum.		Whin.	
Swan.		Strawberry.					
Starling.							
Thrush.							
Willow-Wren.							

To the SECRETARY,

Scottish Meteorological Society,

122 George Street,

EDINBURGH.

BOOK POST.



SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at North 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 May 1901.

The Hours of Observation are of Greenwich Time.

[illegible]

Barometer, "corrected Mean" at 9 A.M., minus the Correction $\uparrow \uparrow$ =	30.089
for Temp. (Col. 2), =	0.66
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\uparrow \uparrow$ =	30.087
for Temp. (Col. 4), =	0.66
Mean at Station, corrected, and at 32°, =	30.088
Correction for height, feet above Mean Sea-level, =	49
Mean, reduced to 32°, and Sea-level, =	30.137
Highest Reading, corrected for Index error, on the 28 th , =	30.600
Lowest Do. Do., on the 7 th , =	29.336
Difference, or Monthly Range, =	1.264

S.-R. THERMOMETER, (in shade, etc.), **Highest in Month,** (corrected for Index Errors), on the 4 th, = 68.2

Lowest in Month, corrected for Index errors, on the 16 th, = 33.0

Difference, or **Monthly Range,** = 35.2

“Corrected **Mean**” of all the **Highest,** (Col. 5), = 57.8

“Corrected **Mean**” of all the **Lowest,** (Col. 6), = 41.3

Difference, or **Mean Daily Range,** = 16.5

** Calculated **Mean Temperature** of Month, = 49.6

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =

“Corrected **Mean,**” (Col. 7), of **Black Bulb, Max. in Sun,** =

Lowest at Night, Black Bulb (corrected for Index errors), on the th, =

“Corrected **Mean,**” (Col. 8), of **Black Bulb, Min. on grass,** =

Difference of above means or range (“exposed”), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb , (Cols. 9 and 11),	=	49.7
Mean (corrected) A.M. and P.M. Reading of Wet Bulb , (Cols. 10 and 12),	=	47.4
‡‡ Computed Temperature of Dew-Point ,	=	44.9
‡‡ Do. Elastic Force of Vapour ,	=	300
‡‡ Do. Weight of Vapour in a Cubic Foot of Air ,	=	
‡‡ Relative Humidity (Saturation = 100),	=	85
RAIN fell on 10 Days ; Amount in Inches ,	=	2.02

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

Observations made and Return verified by	}
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(Signed) Peter Harper

OBSERVATIONS,

correct 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 breakages of Thermometers of similar construction; and as regards maximum Thermometers, either Negretti and Zambra's, or Phillips's, whether they will act at the highest temperatures they may be, or whether they will act at the laws of the Society. Members and Observers have a right to have their instruments compared by the Secretaries, and to advise with him respecting the purchase of instruments. Very great care should be bestowed on the Observations of the Wind, and the accuracy of which, both as regards Direction and Force, is so essential towards the right discussion of many of the observations of the Society.

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

Force of the Wind at any particular hour of observation, the Pressure of the Air, and the Direction of the Wind, are recorded by the Anemometers recently brought under the notice of the Society by Mr. T. Stevenson, the Honorary Secretary, and Mr. R. Bellingh, the Secretary at Edinburgh, are recommended as likely to secure uniformity in making observations on the Force of the Wind. Many causes conspire to produce anomalies in Rain Return, and arising partly from the difficulty of obtaining a sufficient quantity of rain, and partly from the defective nature of the rain gauge, the Rain gauge should not be placed on a slope or terrace, but on a level piece of ground, not as open a situation as the Observer can secure for it. As it is often difficult to obtain a position as free and unobstructed by surrounding objects as is desirable, trees, buildings, or other observations, at least as many feet from their base as they are in height. The more important directions, towards which it is most desirable to have a free exposure, are, in the order of their importance, W., N.E., S.E., and W. The rim 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 ground, over grass. In such gauges, Fleming's, which are furnished

With a measuring rod attached to a float, the rod ought to be fixed down, and the float rise to its height only at the time instrument is used, it being found that a span 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 9 A.M., and the reading entered in the *Journal* 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 the rain column. After the snow-fall has melted it should be noted in the *Journal* and the letter S entered in the column of the month.

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Observations of the Clouds are made at 9 A.M. and at sunset, as illustrating the condition and currents of the upper and lower regions of the atmosphere. The entries in the schedule are to be made in the following manner:—Thus, in the column Velocity and Direction, 8 S.W.

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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 is the proper sunshade.

As the germination and growth of crops and plants generally depend greatly on the temperature of the soil,—its underground amount and consistency,—the Council recommend that Observations in this interesting department be made by Thermometers. Observations 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 tin collars, to prevent run-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, but 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 ascertained by a properly constructed apparatus, on 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 as possible by currents sweeping along the coast, and thus acquiring the Temperature of the land, either greatly heated by the sun or cooled by nocturnal radiation. At or near the bottom of high

correct 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 breakages of Thermometers of similar construction; and as regards maximum Thermometers, either Negretti and Zambra's, or Phillips's, whether they will act at the highest temperatures they may be, or whether they will act at the laws of the Society. Members and Observers have a right to have their instruments compared by the Secretaries, and to advise with him respecting the purchase of instruments. Very great care should be bestowed on the Observations of the Wind, and the accuracy of which, both as regards Direction and Force, is so essential towards the right discussion of many of the observations of the Society.

Wind. A Wind-Vane should be placed at least 12 feet above surrounding objects. Wind-Vanes should be taken down immediately when the wind is calm, and the mean direction should be taken from the observations of the day, especially when the Vane is stationary, and when the wind is feeble, reference may be made to the direction of smoke, etc., 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

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 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 thicket-planted Stations over 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 General would recommend the Hemispherical Cup Anemometer—a self-registering instrument which shows the amount of wind that passes it per day; from which Velocity and also the mean Velocity of the Wind at the time of the observation may be ascertained. For indicating the pressure.

Force of the Wind at any particular hour of observation, the Pressure of the Air, and the Direction of the Wind, are recorded by the Anemometers recently brought under the notice of the Society by Mr. T. Stevenson, the Honorary Secretary, and Mr. R. Bellingh, the Secretary at Edinburgh, are recommended as likely to secure uniformity in making observations on the Force of the Wind. Many causes conspire to produce anomalies in Rain Return, and arising partly from the difficulty of obtaining a sufficient quantity of rain, and partly from the defective nature of the rain gauge, the Rain gauge should not be placed on a slope or terrace, but on a level piece of ground, not as open a situation as the Observer can secure for it. As it is often difficult to obtain a position as free and unobstructed by surrounding objects as is desirable, trees, buildings, or other observations, at least as many feet from their base as they are in height. The more important directions, towards which it is most desirable to have a free exposure, are, in the order of their importance, W., N.E., S.E., and W. The rim 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 ground, over grass. In such gauges Fleming's, which are furnished

With a measuring rod attached to a float, the rod ought to be fixed down, and the float rise to its height only at the time instrument is used. It being found that a span 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 9 A.M., and the reading entered in the *Journal* 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 the rain column. After the snow-fall has ceased it should be noted in the *Journal* that the snow-fall is over, and the letter S entered in the rain column.

and the lesser is annexed to the depth or water received in Ganges. The depth of the snow must be measured in some open place where no drift is observed, and registered in addition to, and as a check upon, the indications of the Rain Gauge. For wind, rain, and snow, as is indeed in every column, the Observer cannot be too careful to register observations only; and nothing that pertakes of the nature of deduction or inference.

Convenient abbreviations for the nomenclature of Clouds will be found on the opposite. The amount of Cloud ought to be registered in Clouds.

to be estimated from the greater or less obscuration 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 thus, being unable to judge of their amount, we ought not to take them into account in the Clouds' column, though their appearance and changes may be noted among the Remarks. The amount of head is free from Clouds if it is entered 0; thus, when the sky overhead is free from Clouds it is entered 0, when half-covered by Clouds 5, wholly covered, 10, and so on.

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water, in cases where the observations cannot be taken daily, the observation may be made on the 5th, 15th, and 25th of each month. When convenient, extra Sea Observations might be taken for other days and greater depths, noting always the Temperature of the Air, and the Hour of Observation. It is also very desirable that observations on the daily Maxima and Minima by Thermometers continuously immersed, be instituted at points along the coast, by the method proposed by Mr. T. Stevenson, and already commenced at Fetherhead and Liverpool.

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

Mention what Test-Papers are used, Schönbein's or Mollat's, etc.

Ozone.

The Paper is affixed by a pin to a board in the P.M. moment Box, and the indications registered at 9 A.M. and 9 P.M. are desired, that these indications be registered in the moment Box, as before, and the direction of the wind at the time of observation in the following manner:—Ozone 3rd, as an Ozone entry in the moment Box, and the direction of the wind as 3 on the scale, that the wind is from the N.N.W., and that its force on the scale 1-5 is 4, or blowing fresh.

Two much important remarks, attached to the entire copy:

Too much importance cannot be attached to the electric condition of the atmosphere in connection with terrestrial magnetism, barometrical, thermometrical, and meteorological phenomena generally. A proper Electrometer is, in truth, necessary to every complete meteorological observatory.

The Hematis column is unavoidably too narrow. Some of the most valuable Observations that can be taken are remarks those for which no rules can be given nor hours assigned. The use of contractions ought, therefore, to be taken every advantage of, and a list of such as in general use is given at the foot of the column. Besides special and extraordinary Observations, great prominence ought to be given in this column to Pre-

valent Diseases, differences in character, colour, velocity, and direction between the Lower and Upper Strata of clouds, the Colour of the Sky, etc. Remarks ought to be made on the occurrence of Meteors, Aurors, Boreas, remarkable depressions, elevations, and fluctuations of the Barometer, Thunder-Storms, and remarkable falls of Snow, Hail, or Rain, the Hour of Storms of Wind commencing, attaining their maximum, and ending, as well as such Notes on Storms as have been hinted at above. When lofty fairs 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 abbreviations, the state of the weather at 4 A.M. and 9 P.M. should be registered, either in two columns, otherwise unoccupied, or ruled for the purpose, from the column of 'Remarks.'

Observations in Seasons possess not only great scientific value, and are of considerable importance in connection with the Periodic Register of Agriculture, Horticulture, and Natural History. The Council would direct the special attention of Observers to the registration of such phenomena, so that the published Summaries may fairly represent the whole of Scotland. Observations ought to be confined to individual trees and shrubs; to particular species of birds, and to the case of crops to which

sorts reared 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 is more particularly directed.

The Council recommend Observers, before purchasing new instruments, and in replacing old ones, to communicate with the Meteorological Secretary, in order that every instrument may be examined and improved before being used; and they consider it necessary that he should have full power to reject any instrument which, on being presented for comparison, does not afford him satisfaction.

(By Order) A. B.
БОРНУНДЖИ.

[illegible][illegible]

Leaf.	Divested of Leaves.	CROPS.	Sow Plant.
		Barley,	
		Bere or Bigg,	
		Oats,	
		Wheat,	
		Beans,	
		Peas,	
		Potatoes,	
		Turnips,	
		Rye Grass,	

FOREST TREES.					
Alder,	.	.	.	.	Sycamore or Plane,
Asch,	.	.	.	.	Oak,
Beech,	.	.	.	.	Lime,
Birch,	.	.	.	.	Larch,
Elm,	.	.	.	.
Fern,	.	.	.	.
Gum,	.	.	.	.
Hickory,	.	.	.	.
Pine,	.	.	.	.
Poplar,	.	.	.	.
Rose,	.	.	.	.
Shrub,	.	.	.	.
Tamarac,	.	.	.	.
Walnut,	.	.	.	.
Willow,	.	.	.	.
Yew,	.	.	.	.
Other,	.	.	.	.
In flower.					
In leaf buds					
First appear.					
In					

To the SECRETARY,
Scottish Meteorological Society.

BOOK POST.

EDINBURGH
JUL 2 1891

1877,
Meteorological Society,
122 George Street,

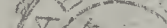
EDINBURGH.

[illegible][illegible][illegible]

SHRUBS, ETC.		First in Blossom.
Barberry,	Apple, Black	
Bourtree or Elder,	Cherry	
Broom,	Gean,	
Hazel,	Goose,	
Holly,	Pear,	
Laburnum,	Plum,	
Lilac,	Strawb.	
Mezereum,		
Mountain Ash or Rowan,		
Red Flowering Currant,		
Rhododendron Ponticum,		
Whin,		

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This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf of a book. The paper has a slightly textured appearance with some minor discoloration and faint, irregular markings, characteristic of old paper. The page is set against a dark background.

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 June 1901.

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, & 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 Wet at depth of feet, No. _____	Temperature at 1 fathom, and Density.	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.	Wet bulb.	Dry bulb.	Wet bulb.				Direction.	Force	Direction.	Force		Velocity (0-6) and Direction.		Amount (0-10), and Species.	Velocity (0-6) and Direction.	Amount (0-10), and Species.									No. 3 inches.	No. 12 inches.	No. 22 inches.
inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°						
1	29.600	59.	29.640	57.	64.0	50.0					55.5	52.0	55.0	50.8	0.00	S	3	S	3			5 ci	3 ci									1					
2	29.575	58.	29.745	59.	64.0	50.6					55.8	54.0	53.4	51.8	0.05	S	3	SW	0.5			6 ci	2 ci									2					
3	29.995	60.	30.020	60.	69.0	44.2					64.0	57.0	55.5	52.4	0.00	SW	1	SW	1			2 ci	8 ci									3					
4	29.995	60.	29.850	59.	65.0	43.0					59.0	54.8	55.0	51.6	0.03	SW	1	SW	2			5 ci	6 ci									4					
5	29.930	59.	30.550	59.	73.0	50.6					60.0	54.0	55.8	50.0	0.00	S	1	W	1			3 ci	3 ci									5					
6	30.260	59.	30.350	60.	68.0	44.0					57.6	49.4	49.0	47.0	0.00	NW	1	S	0.5			4 ci	0									6					
7	30.355	58.	30.305	55.	68.0	42.0					58.0	52.2	51.0	49.8	0.00	SE	1	SE	0.5			0	5 ci									7					
8	30.200	60.	30.050	57.	69.2	44.4					62.2	57.5	51.0	49.8	0.00	SE	1	SE	1			0	0									8					
9	29.825	61.	29.800	56.	67.0	44.2					62.2	57.8	50.0	48.5	0.14	SW	1	NW	1			8 ci	8 ci									9					
10	29.820	57.	29.610	57.	64.0	40.0					56.2	50.0	50.0	45.2	0.00	SW	1	SW	2			4 ci	6 ci									10					
11	29.555	54.	29.700	56.	57.2	40.6					49.8	53.2	45.4	40.2	0.00	W	4	W	4			4 ci	0 ci									11					
12	29.655	58.	29.505	54.	58.0	40.8					53.0	44.5	46.2	44.0	0.15	W	4	NW	3			3 ci	4 ci									12					
13	29.280	54.	29.600	53.	55.6	41.7					57.8	50.0	47.0	45.5	0.06	NW	3	N	0.5			10 ci	2 ci									13					
14	29.755	54.	29.950	54.	56.0	42.4					57.8	48.6	47.2	45.0	0.00	NW	2	NW	2			8 ci	6 ci									14					
15	29.990	53.	29.950	53.	57.5	42.0					57.6	46.0	50.8	49.0	0.04	NW	2	NW	1			6 ci	6 ci									15					
16	29.945	53.	30.030	54.	53.0	42.0					50.0	45.8	44.5	42.2	0.03	NW	2	NW	1			8 ci	3 ci									16					
17	29.890	54.	30.040	52.	50.8	40.6					45.4	42.2	42.0	40.0	0.30	NW	4	NW	3			6 ci	3 ci									17					
18	30.150	52.	30.200	51.	60.0	44.8					52.2	48.2	46.4	45.0	0.00	NW	1	S	0.5			4 ci	3 ci									18					
19	30.100	52.	29.950	53.	56.0	37.4					54.6	50.5	44.8	44.4	0.08	SW	2	S	2			4 ci	10 ci									19					
20	20.900	59.	29.800	50.	60.2	44.0					59.4	56.2	53.8	52.6	0.17	SW	2	S	2			6 ci	10 ci									20					
21	29.810	60.	29.950	58.	69.0	53.0					62.0	57.0	55.5	52.0	0.00	SW	3	SW	1			4 ci	3 ci									21					
22	29.910	61.	29.875	58.	70.4	48.0					62.0	57.0	54.6	52.8	0.22	S	2	S	1			3 ci	6 ci									22					
23	29.550	59.	29.630	61.	61.0	48.0					56.5	53.5	53.4	52.5	0.01	SW	2	W	1			8 ci	6 ci									23					
24	29.990	59.	30.270	58.	65.0	50.0					58.4	57.8	57.0	48.0	0.00	W	1	NW	1			8 ci	2 ci									24					
25	30.400	58.	30.405	59.	62.0	46.2					56.8	57.4	54.4	53.2	0.00	SW	1	SW	0.5			8 ci	8 ci									25					
26	30.400	60.	30.400	59.	67.0	51.4					62.2	55.0	55.8	52.5	0.00	NW	1	SW	1			3 ci	5 ci									26					
27	30.320	57.	30.300	58.	63.5	48.2					53.4	53.2	54.0	52.2	0.00	S	0.5	S	0.5			10 ci	6 ci									27					
28	30.255	60.	30.320	59.	63.8	52.0					57.5	53.8	53.0	51.0	0.00	W	1	SE	1			6 ci	6 ci									28					
29	30.330	58.	30.350	60.	63.8	57.0					53.5	53.4	50.2	49.0	0.00	SE	1	NE	1			6 ci	0									29					
30	30.325	61.	30.250	59.	62.0	47.0					57.8	53.0	54.4	51.8	0.00	SE	1	SE	1			10 ci	10 ci									30					
31																																	31				
Sums.		1825	14	1482	15	145	87				144	149	129	49	4			3																			
Means.		29.003	57.7	29.996	56.6	62.5	45.5				56.6	52.1	51.1	48.7				1.78																			
+ Total Corrections for Instrumental Errors.		-0.010		-0.010																																	
+ Corrections for Diurnal Range.																																					
"Corrected Means."		29.993		29.986																																	
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.		
cu.	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.		
hl.	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.	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	2-3	Fresh breeze	5	Blowing a gale
1	Light air		Very fresh	6	Violent gale

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.	hail.	sq.	squalls.
l.	lightning.	t.	thunder.
h. 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 ++ for Temp. (Col. 2), = 29.917

"Corrected Mean" of Barometer at 9 P.M., minus the Correction ++ for Temp. (Col. 4), = 29.912

Mean at Station, corrected, and at 32°, = 29.914

Correction for height, feet above Mean Sea-level, = 48

Mean, reduced to 32°, and Sea-level, = 29.962

Highest Reading, corrected for Index error, on the 25th, = 30.395

Lowest Do. Do., on the 19th, = 29.240

Difference, or Monthly Range, = 1.155

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 5th, = 73.0

Lowest in Month, corrected for Index errors, on the 19th, = 37.4

Difference, or Monthly Range, = 35.6

"Corrected Mean" of all the Highest, (Col. 5), = 62.5

"Corrected Mean" of all the Lowest, (Col. 6), = 45.5

Difference, or Mean Daily Range, = 17.0

** Calculated Mean Temperature of Month, = 54.0

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 5th, = 73.0

"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 62.5

Lowest at Night, Black Bulb (corrected for Index errors), on the 19th, = 37.4

"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 45.5

Difference of above means or range ("exposed"), = 17.0

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 53.8

Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 50.4

Computed Temperature of Dew-Point, = 47.1

Do. Elastic Force of Vapour, = 32.2

Do. Weight of Vapour in a Cubic Foot of Air, = 77

Relative Humidity (Saturation = 100), = 77

RAIN fell on 12 Days; Amount in Inches, = 1.28

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		0	1	0	4	5	9	3	8	0	1.78
P.M.		1	1	0	4	7	7	3	4	0	1.35
Mean.		1	1	0	4	6	8	3	4	0	1.56 = 2.43

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 - 1901.

The Hours of Observation are of Greenwich Time

[illegible]

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction $\uparrow\uparrow$ =	29.969
for Temp. (Col. 2), = 30.061..... 92 }	
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\uparrow\uparrow$ =	29.986
for Temp. (Col. 4), = 30.069..... 93 }	
Mean at Station, corrected, and at 32°,..... =	29.972
Correction for height, feet above Mean Sea-level,..... =	48
Mean, reduced to 32°, and Sea-level,..... =	30.020
Highest Reading, corrected for Index error, on the 31 th,..... =	30.305
Lowest Do. Do., on the 25 th,..... =	29.675
Difference, or Monthly Range,..... =	0.630

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 30 th	=	80.0
Lowest in Month, corrected for Index errors, on the 1 st th,	=	47.0
Difference, or Monthly Range,	=	33.0
"Corrected Mean" of all the Highest, (Col. 5),	=	68.8
"Corrected Mean" of all the Lowest, (Col. 6),	=	54.0
Difference, or Mean Daily Range,	=	14.0
** Calculated Mean Temperature of Month,	=	61.4

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),	=	60.3
Mean (corrected) A.M. and P.M. Reading of Wet Bulb , (Cols. 10 and 12),	=	57.5
‡‡ Computed Temperature of Dew-Point ,	=	55.0
‡‡ Do. Elastic Force of Vapour ,	=	.434
‡‡ Do. Weight of Vapour in a Cubic Foot of Air ,	=	
‡‡ Relative Humidity (Saturation = 100),	=	83
RAIN fell on 7 Days; Amount in Inches,	=	1.67

RAIN fell on Days, Amount in Inches, = 1.67

WIND.	SUMMARY.

Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable	Mean Force	Mean Velocity in miles per hour
------------	---	----	---	----	---	----	---	----	------------------	------------	---------------------------------

A.M.	5	1	7	6	4	1	2	Variable.	Force.	in miles per day
------	---	---	---	---	---	---	---	-----------	--------	------------------

	-	5	1	7	6	4	6	2	-	1.00	
PM	4	3	1	8	9	3					

P.M.	4	7	1	2	8	3	4	2	-	1:10
M.	1	6	1	1	1	1	1	1	1	1

Mean.	2	6	1	4	7	4	5	2	0	1.05
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1.10

Walter Harper

Observations made and
Return verified by

(Signed) Peter Harper

1.10

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 August 1901.

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.	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 Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max. in Sun's rays.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.				Direction.	Force.	Direction.	Force.		Velocity (0-6) and Direction.		Amount (0-10), and Species.	Velocity (0-6) and Direction.	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), = 29.856
"Corrected Mean" of Barometer at 9 P.M., minus the Correction \ddagger for Temp. (Col. 4), = 29.868
Mean at Station, corrected, and at 32°, = 29.862
Correction for height, 44 feet above Mean Sea-level, = 48
Mean, reduced to 32°, and Sea-level, = 29.910
Highest Reading, corrected for Index error, on the 19th, = 30.490
Lowest Do. Do., on the 20th, = 29.450
Difference, or Monthly Range, = 1.045

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 19th, = 79.0
Lowest in Month, corrected for Index errors, on the 17th, = 42.0
Difference, or Monthly Range, = 37.0
"Corrected Mean" of all the Highest, (Col. 5), = 66.5
"Corrected Mean" of all the Lowest, (Col. 6), = 51.0
Difference, or Mean Daily Range, = 15.5
** Calculated Mean Temperature of Month, = 58.8
S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 19th, = 79.0
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 79.0
Lowest at Night, Black Bulb (corrected for Index errors), on the 17th, = 42.0
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 42.0
Difference of above means or range ("exposed"), = 37.0

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 57.6
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 54.9
†† Computed Temperature of Dew-Point, = 52.5
†† Do. Elastic Force of Vapour, = 139.6
†† Do. Weight of Vapour in a Cubic Foot of Air, = 83
†† Relative Humidity (Saturation = 100), = 83
RAIN fell on 17 Days; Amount in Inches, = 2.74

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		2	1	0	1	4	14	3	6	0	136
P.M.		1	1	1	3	9	7	6	3	0	126
Mean.		1	1	1	2	6	11	4	5	0	131

Observations made and
Return verified by

(Signed)

Peter Harper

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Dunfermline Park, Fife, County of Fife, 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 September 1901.

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 A.M.		P.M.		9 h. A.M.										
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max. in Sun's rays.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.				Direction.	Force.	Direction.	Force.		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.			
		* No.	inches.	* No.	inches.	No.	No.	No.	No.	No.	No.	No.	No.				No.	No.	No.	No.		No.		No.	No.	No.					No.	No.	No.	No.	No.	No.
		No.	inches.	No.	inches.	No.	No.	No.	No.	No.	No.	No.	No.				No.	No.	No.	No.		No.		No.	No.	No.					No.	No.	No.	No.	No.	No.
1	30.115	56.	30.195	56.	58.6	43.8			57.0	47.5	50.0	47.5	0.00	N	2	NW	1			4	ci	0	ci						Fair & fine all day	1						
2	30.250	54.	30.300	54.	58.0	39.0			50.5	47.2	50.0	47.0	0.00	NW	1	N	1			10	ci	10	ci						dull fair all day	2						
3	30.300	54.	30.300	55.	60.4	42.5			57.8	48.8	51.5	50.0	0.00	N	2	NE	2			10	ci	10	ci						do do	3						
4	30.300	54.	30.240	54.	60.6	49.2			53.4	50.1	49.0	47.6	0.00	NW	1	SE	0.5			8	ci	3	st						do do	4						
5	30.165	57.	30.100	57.	63.0	48.0			56.5	54.0	54.0	50.8	0.00	SE	2	SE	1.5			3	ci	7	ci						Fair & fine all day	5						
6	30.020	57.	30.000	58.	60.0	48.0			56.8	54.0	54.0	51.0	0.00	SE	3	SE	3			3	ci	8	ci						do do do	6						
7	29.925	57.	29.950	58.	60.0	52.4			57.6	53.8	56.5	52.0	0.00	SE	1	SE	1			6	ci	8	ci						Fair dull	7						
8	29.800	59.	29.725	58.	58.0	52.0			56.9	52.0	56.5	50.5	0.32	SE	2	SE	2			8	n	10	n						dull some rain	8						
9	29.825	61.	29.870	62.	61.0	52.5			60.0	58.6	56.0	53.8	0.00	S	1	S	0.5			3	ci	2	ci						Fair & fine all day	9						
10	29.870	60.	29.850	62.	66.5	47.6			59.0	57.8	56.6	53.8	0.01	SW	0.5	SW	0.5			6	ci	10	n						Fine mild all day, rain 9 P.M.	10						
11	30.050	57.	30.125	58.	66.0	48.2			57.0	53.6	53.5	54.4	0.00	NW	1	E	1			0		fog							Fair & fine all day	11						
12	30.150	58.	30.100	61.	65.0	47.0			58.2	54.2	52.4	50.0	0.05	SE	1	S	0.5			10	ci	5	ci						dull, fair & fine after 10 A.M.	12						
13	30.155	55.	30.100	56.	57.0	50.0			58.2	52.2	52.5	50.2	0.03	N	1	N	1			10	n	8	ci						dull -	13						
14	30.055	58.	30.075	58.	61.0	51.0			55.0	54.0	50.4	49.0	0.00	NW	1	NE	1			6	n	4	ci						Fair & fine	14						
15	30.085	55.	29.950	55.	60.6	45.0			53.0	50.0	49.0	47.8	0.00	N	1	N	1			4	st	0							Fair & fine	15						
16	29.845	57.	29.705	58.	60.0	44.2			48.5	46.6	41.8	40.5	0.00	N	1	S	0.5			8	ci	0							do do	16						
17	29.470	54.	29.320	56.	58.0	40.2			54.4	50.3	54.0	53.6	0.39	SE	2	SE	1			8	ci	10	n						dull, rain from 3 P.M.	17						
18	29.750	53.	29.800	56.	62.0	44.5			52.5	51.2	54.0	50.5	0.00	SW	1	SW	2			6	st	5	st						Fair & fine all day	18						
19	29.650	53.	29.570	56.	56.5	52.1			54.8	52.6	54.0	53.0	0.23	S	2	S	3			8	ci	10	ci						Fair dull, unsettled.	19						
20	29.305	57.	29.400	59.	59.0	52.0			53.1	54.2	54.0	52.4	0.05	SE	3	SW	0.5			10	n	0							Bum rain, dull some showers	20						
21	29.450	57.	29.455	60.	58.8	46.2			54.4	53.5	53.6	51.5	0.14	SW	1	SE	1			5	ci	8	ci						Fair mild, showers after 2 P.M.	21						
22	29.600	59.	29.675	60.	58.2	53.0			55.2	50.0	55.0	54.0	0.01	SE	1	SE	1			fog		fog							Fair fog	22						
23	29.700	59.	29.710	61.	60.5	53.4			58.0	53.5	53.0	53.8	0.00	SE	0.5	SE	1			fog		fog							damp fog most of day	23						
24	29.800	58.	29.915	57.	62.0	54.0			56.0	53.4	54.0	52.4	0.00	S	1	SW	1			fog		8							dull damp, clear fair after 10 A.M.	24						
25	29.900	58.	29.855	58.	58.0	47.0			53.4	53.0	54.5	54.0	0.04	S	1	S	1			fog		8							close fog most of the day	25						
26	29.850	57.	30.025	60.	61.8	53.0			53.0	52.6	52.0	50.0	0.07	N	1	SW	1			10	ci	6	ci						unsettled some rain, fair after 10 A.M.	26						
27	29.825	59.	29.850	62.	62.2	51.0			59.8	56.5	60.4	58.8	0.00	S	2	SW	2			8	ci	8	ci						Fair dull all day	27						
28	29.900	59.	29.940	61.	62.0	52.5			58.6	56.8	58.4	57.4	0.00	S	2	SE	1			8	ci	8	ci						do do	28						
29	30.025	60.	30.110	62.	63.0	52.8			61.8	59.2	54.0	53.0	0.02	SW	2	SW	0.5			8	ci	10	n						Fair dull all day	29						
30	30.210	58.	30.210	60.	57.5	44.0			48.0	46.8	52.4	57.4	0.00	S	1	SE	0.5			4		6	ci						Fair and fine all day	30						
31																																31				
Sums.	1485	18	1495	13	126	136			1510	1311	127	1010		136		1		4																		
Means.	29.885	21.0	29.800	24.4	19.2	21.1			1381	1010	101.0	62.9		136		41.0		33.5																		
+ Total Corrections for Instru- mental Errors.	-0.10		-0.10																																	
+ Correc- tions for Diurnal Range.																																				
"Cor- rected Means."	29.899		29.903																																	
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-cn.	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.	sleet.		
fr.	frost.	s.	snow.		
h-fr.	hoar-frost.	so.	solar halo.		
h.	haze.	sq.	squall.		
h.d.	heavy dew.	sq.	squalls.		
hl.	hail.	t.	thunder.		
l.	lightning.	w.	wind.		
li.cl.	light clouds.	th.	thunder-storm.		
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	1-2	Light breeze	4	Blowing hard
0.5	Very light air	2-3	Fresh breeze	5	Blowing a gale
1	Light air		Very fresh	6	Violent gale

NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	" cirrus.	ms.	" meteor.
ci-cu.	" cirro-cumulus.	n.	" nimbus.
ci-s.	" cirro-stratus.	r.	" rain.
cu.	" cumulus.	h. r.	" heavy rain.
cu-s.	" cumulo-stratus.	c. h. r.	" continued heavy rain.
d.	" dew.	s.	" stratus.
f.	" 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.
hl.	" hail.	sqg.	" 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	2.5	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 $\dagger\dagger$ for Temp. (Col. 2), = 29.823

"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\dagger\dagger$ for Temp. (Col. 4), = 29.824

Mean at Station, corrected, and at 32°, = 29.824

Correction for height, feet above Mean Sea-level, = 49

Mean, reduced to 32°, and Sea-level, = 29.873

Highest Reading, corrected for Index error, on the 2nd, 3rd, & 4th, = 30.290

Lowest Do. Do., on the 2nd th, = 29.295

Difference, or Monthly Range, = 0.995

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 9th, = 64.0

Lowest in Month, corrected for Index errors, on the 2nd th, = 39.0

Difference, or Monthly Range, = 25.0

"Corrected Mean" of all the Highest, (Col. 5), = 60.6

"Corrected Mean" of all the Lowest, (Col. 6), = 49.0

Difference, or Mean Daily Range, = 11.6

** Calculated Mean Temperature of Month, = 54.8

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), = 54.2

Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 52.0

†† Computed Temperature of Dew-Point, = 50.0

†† Do. Elastic Force of Vapour, = 3.60

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

†† Relative Humidity (Saturation = 100), = 86

RAIN fell on 12 Days; Amount in Inches, = 1.36

WIND.		SUMMARY.				
Direction.		N	NE	E	SE	SW
A.M.		32	09	44	32	0
P.M.		32	11	54	01	0
Mean.		32	10	65	21	0

* Each instrument tested at the Office in Edinburgh bears the stamp "S.M.S."; and a number to be entered in the Heading; or the Number and Initials of the Maker may be here given.

† Embracing corrections for both capillarity and Index Errors.

†† The Diurnal Range for Scotland is as yet unknown.

††† These "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition only.

** While the Diurnal Range is unknown, the Arithmetic Mean of Cols. 5 and 6 will be entered as the "Calculated Mean Temperature."

Any observations not taken under the Conditions specified in the Directions on the other side, or noted at the Top of each column, must be marked as such by the observer, in each Schedule. See over.

Observations made and
Return verified by

(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 October 1901.

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.	9 A.M.		P.M.		9 h. A.M.	No. 3 inches.					No. 12 inches.	No. 22 inches.	Temperature of Well at depth of feet, No.	Temperature at 1 fathom, and Depth.	0-10.	9 A.M.	P.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.	Direction.	Force.	Direction.	Force.			Velocity (0-10), and Direction.	Amount (0-10), and Species.	Velocity (0-10), and Direction.	Amount (0-10), and Species.																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction ++ for Temp. (Col. 2), =	29.746
"Corrected Mean" of Barometer at 9 P.M., minus the Correction ++ for Temp. (Col. 4), =	29.764
Mean at Station, corrected, and at 32°, =	29.755
Correction for height, feet above Mean Sea-level, =	49
Mean, reduced to 32°, and Sea-level, =	29.804
Highest Reading, corrected for Index error, on the 21 th, =	30.640
Lowest Do. Do., on the 8 th, =	29.155
Difference, or Monthly Range, =	1.485

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 28 th, =	61.5
Lowest in Month, corrected for Index errors, on the 24 th, =	29.2
Difference, or Monthly Range, =	32.3
"Corrected Mean" of all the Highest, (Col. 5), =	52.6
"Corrected Mean" of all the Lowest, (Col. 6), =	40.7
Difference, or Mean Daily Range, =	11.9
** Calculated Mean Temperature of Month, =	46.6
S-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =	
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =	
Lowest at Night, Black Bulb (corrected for Index errors), on the th, =	
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =	
Difference of above means or range ("exposed"), =	

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), =	45.7
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), =	43.6
Computed Temperature of Dew-Point, =	41.2
Do. Elastic Force of Vapour, =	2.60
Do. Weight of Vapour in a Cubic Foot of Air, =	
Relative Humidity (Saturation = 100), =	85
RAIN fell on 16 Days; Amount in Inches, =	2.80

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	1	-	3	5	13	3	4	1	1.33	
P.M.	1	1	1	2	5	16	2	3	-	1.08	
Mean.	1	1	1	2	5	14	3	3	1	1.20	

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. 2.64 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 1901

The Hours of Observation are of Greenwich Time.

[illegible]

BAROMETER,	<i>“corrected Mean” at 9 A.M., minus the Correction</i>	$\uparrow \uparrow$	=	30.010
	for Temp. (Col. 2),	=	0.455	
“Corrected Mean” of Barometer at 9 P.M., minus the Correction	$\uparrow \uparrow$	=	29.993	
for Temp. (Col. 4),	=	0.47		
Mean at Station, corrected, and at 32°,			=	30.002
Correction for height,	feet above Mean Sea-level,		=	50
Mean, reduced to 32°, and Sea-level,			=	30.052
Highest Reading, corrected for Index error, on the	23 th ,		=	30.545
Lowest Do.	Do., on the	19 th ,	=	29.450
Difference, or Monthly Range,			=	1.127

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the <u>19</u> th,	=	<u>56.8</u>
Lowest in Month, corrected for Index errors, on the <u>24</u> th,	=	<u>19.5</u>
Difference, or Monthly Range,	=	<u>37.3</u>
"Corrected Mean " of all the Highest, (Col. 5),	=	<u>45.9</u>
"Corrected Mean " of all the Lowest, (Col. 6),	=	<u>35.6</u>
Difference, or Mean Daily Range,	=	<u>10.3</u>
** Calculated Mean Temperature of Month,	=	<u>40.7</u>

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),	=	39.9
Mean (corrected) A.M. and P.M. Reading of Wet Bulb , (Cols. 10 and 12),	=	37.9
‡‡ Computed Temperature of Dew-Point ,	=	35.3
‡‡ Do. Elastic Force of Vapour ,	=	1.207
‡‡ Do. Weight of Vapour in a Cubic Foot of Air ,	=	
‡‡ Relative Humidity (Saturation = 100),	=	84
RAIN fell on 13 Days; Amount in Inches,	=	2.19

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	0	1	5	7	8	6	0	132	
P.M.	1	2	0	0	7	5	8	7	0	117	
Mean.	1	2	0	1	6	6	8	6	0	1.25	1.57

Observations made and
Return verified by

(Signed) Peter Harper

INSTRUCTIONS

FOR TAKING METEOROLOGICAL OBSERVATIONS, WITH REMARKS ON THE USE OF INSTRUMENTS.

ONE of the chief objects that the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1855, was to secure REGULAR UNIFORMITY in the system of observation pursued at all its Stations. Uniformity in the observations is absolutely necessary to justify the publication of Monthly Results from different Stations, and to enable the Society to compare the results of its own observations with those of other Stations. It is therefore of the highest importance that those who kindly furnish Reports to the Society will pay scrupulous attention to the following Instructions, and to the Monthly Returns an accuracy and uniformity in the observations, and to the publication of the Society, an entire compliance with the several Returns, without which the Society's Reports must be considered as incomplete.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich or Railway Time only), as specified in the following remarks, or at the top of the nearest hour, in the time of reading the instruments, and in such instances they are specially required to mark opposite every reading the time at which it was taken, if not at 9 A.M. or 9 P.M.

Weather-Glasses and Aneroids, though well suited to indicate barometric pressure, are not fitted for scientific purposes. No Barometer should be used for Meteorological Observations. No Barometer should be used for any other purpose, and no Barometer should be used for any other purpose, and no Barometer should be used for any other purpose.

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OBSERVATIONS,

correct 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 breakages of Thermometers of similar construction; and as regards Maximum Thermometers, either Negretti and Zambra's, or Phillips's, whether they will act at the highest temperature they may be required to register. By the laws of the Society, Members are obliged to observe at points along the coast, by the method proposed by Mr. T. Stevenson, and already commenced at Peterhead and Liverpool.

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

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BOOK POST.

When convenient, extra Sea Observations might be taken for other and greater depths, noting always the Temperature of the Air, and the Height of the Sea.

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To the SECRETARY,

Scottish Meteorological Society,

122 George Street,

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SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Duthie Park Aberdeen, County of Aberdeen, in Lat. 57° 9' N, Long 2° 6' W, Distance from Sea 3 miles.Height of Cistern of the Barometer above Mean Sea-Level 44 feet, above Ground 4 feet.During the MONTH of December 1901.

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.				As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Barometer. * No. _____	Attached Ther- mometer No. _____	Barometer. No. _____	Attached Ther- mometer No. _____	Max. No. _____	Min. No. _____	Max. in Sun's rays No. _____	Min. on Grass. No. _____	Dry bulb. No. _____	Wet bulb. No. _____	Dry bulb. No. _____	Wet bulb. No. _____			Direction.	Force	Direction.	Force		Velocity (0-10), and Direction.	Amount (0-10), and Species.	Velocity (0-10), and Direction.	Amount (0-10), and Species.	No. 3 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.	Mention the hour at which Storms, including Thunder and Lightning, began and ended.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction \ddagger for Temp. (Col. 2), = 29.393
"Corrected Mean" of Barometer at 9 P.M., minus the Correction \ddagger for Temp. (Col. 4), = 29.406
Mean at Station, corrected, and at 32°, = 29.400
Correction for height, feet above Mean Sea-level, = 5.0
Mean, reduced to 32°, and Sea-level, = 29.450
Highest Reading, corrected for Index error, on the 3 th., = 30.300
Lowest Do. Do., on the 24 th., = 28.625
Difference, or Monthly Range, = 1.675

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 6 th., = 54.0
Lowest in Month, corrected for Index errors, on the 17 th., = 22.5
Difference, or Monthly Range, = 31.5
"Corrected Mean" of all the Highest, (Col. 5), = 40.8
"Corrected Mean" of all the Lowest, (Col. 6), = 32.6
Difference, or Mean Daily Range, = 8.2
** Calculated Mean Temperature of Month, = 36.7
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), = 35.2
†† Computed Temperature of Dew-Point, = 33.1
†† Do. Elastic Force of Vapour, = 1.89
†† Do. Weight of Vapour in a Cubic Foot of Air, = 1
†† Relative Humidity (Saturation = 100), = 87
RAIN fell on 20 Days; Amount in Inches, = 3.87

WIND.		SUMMARY.				
Direction.		N	NE	E	SE	S
A.M.		1	4	1	2	2
P.M.		0	3	1	2	4
Mean.		1	3	1	2	3

2.22

(Signed) Peter HarperObservations made and
Return verified by

