

## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Ballate, County of Aberdeen, in Lat 57° 22' N, Long 2° 12' W, Distance from Sea 4.5 miles.  
Height of Cistern of the Barometer above Mean Sea-level 660 feet, above Ground 4 feet. During the MONTH of January 1872.  
The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETER.		HYGROMETER.		WIND.		RAIN.	CLOUDS.		THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.	Days of Month.												
		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.			9 h. A.M.		9 h. P.M.		9 h. A.M.																
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. in Shade.	Min. on Grass.	Max. in Shade.	Min. on Grass.		Direction.	Force.	Direction.	Force.	No. 1.					No. 2.	No. 3.										
	1	28.50045	28.65045	47	37.5	44.5	43	41	39	SW	6	SW	4					a. fine stormy with	1												
	2	28.65044	28.75045	44	37	41.5	39	39	37	W	2							chilly gloomy quiet	2												
	3	28.85044	28.65043	40.5	30	37	34.5	40	37	W	0.5							freshy quiet again	3												
	4	28.17042	28.25043	42	32	36	34	35	33		2							very cold calm damp	4												
	5	27.90044	28.10040	39	30	38	35	36	34			W	2					calm chilly freshy	5												
	6	28.30040	28.45040	39	34	37	35	37	35	W	2			2 W	8			chilly calm	6												
	7	28.45041	28.35043	38	27	30	28	36	35	W	1.5			2 W	5			clear frosty morning	7												
	8	28.45039	28.55040	38	28.5	26		28		W	0.5			2 W	5			clear frosty morning	8												
	9	28.95041	29.15041	38	26	36.5	35	37	36									calm off again	9												
	10	29.15038	29.00040	39	22	34.5	33.5	39	37	W	0.5			2 W	5			last part - morning	10												
	11	28.80041	29.05043	41	31	38.5	38	38	37	W	1.5							li showers frosty	11												
	12	29.20042	29.00044	44	27	30.5	30	44	42.5	W	2							very cold gloomy	12												
	13	28.80045	28.80044	46	37.5	45	44	43	41	SE								off again very heavy	13												
	14	28.85044	29.10046	45	31	41.5	38	38	36									fine bright morning	14												
	15	29.05043	29.00044	46	32	39.5	37	41.5	40	W	2			2 W	10			cold wind li showers	15												
	16	28.97043	28.85044	43	34	36	35	41	38		0.5							clear calm mild	16												
	17	28.35044	27.85046	48	36	41.5	41	49	46									withy quiet li showers	17												
	18	27.50046	27.90045	48	37	42	41.5	40	38	SW	2							cold blowing hard	18												
	19	28.15043	28.50043	48	35	40	37.5	40.5	38	W	4							very cold stormy	19												
	20	28.65044	28.75044	44	35	38.5	37.5	38	36.5		1.5							clear frosty frosty	20												
	21	28.90046	28.95043	44	27.5	40	36	38	28									quiet off again	21												
	22	28.90040	28.70042	37	22			37	36	W	0.5			5.5	2 W	5		clear very frosty	22												
	23	28.30045	27.80043	42	37	37	37							1.5	3 E	10		very heavy rain	23												
	24	27.95044	27.95045	41.5	36	39	38	39	38					26				quiet dull quiet	24												
	25	28.25044	28.50043	41	32	35.5	35	39.5	39	W	1.5			2.5	2 W	10		gloomy with dull	25												
	26	28.75044	29.00044	43	37	42	40	40.5	38	W	0.5			32	2 W	10		quiet frosty	26												
	27	29.15045	29.20045	42	30	40	38	32	31.5									clear frosty frost	27												
	28	29.23041	29.15044	39.5	24			39.5	38	W	0.5							cloudy dull	28												
	29	28.90043	28.70045	43	37	43.5	41.5	42.5	41									quiet off again gloomy	29												
	30	28.70047	28.70046	50	40	50	48	47	45		2			3	W	10		fresh breeze chilly	30												
	31	28.65048	28.50049	50.5	40.5	47	46	49	47									quiet - calm	31												
Sum.		179 123 587.370 1025	183 116 587.650 1186	1338 9973	18	126 142 153 161	2560 2175 224 5225	355	200																						
Means.		28.625433	28.640435	33.0360		38.9378	39.2377	1.6	1.5																						
† Total Corrections for Instrumental Errors.																															
† Corrections for Diurnal Range.																															
"Corrected Means."																															
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction†† = 28.586  
for Temp. (Col. 2), = 28.625 - 0.039  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction†† = 28.600  
for Temp. (Col. 4), = 28.640 - 0.040  
Mean at Station, corrected, and at 32°, = 28.593  
Correction for height, feet above Mean Sea-level, = 723  
Mean, reduced to 32°, and Sea-level, = 28.316  
Highest Reading, corrected for Index error, on the 28th, = 29.230  
Lowest Do. Do., on the 18th, = 27.500  
Difference, or Monthly Range, = 1.730

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 31st, = 52.5  
Lowest in Month, corrected for Index errors, on the 10th, = 22.0  
Difference, or Monthly Range, = 30.5  
"Corrected Mean" of all the Highest, (Col. 5), = 43.0  
"Corrected Mean" of all the Lowest, (Col. 6), = 36.0  
Difference, or Mean Daily Range, = 7.0  
\*\* Calculated Mean Temperature of Month, = 39.5

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 31st, = 52.5  
"Corrected Mean," (Col. 7), of Black Bulb. Max. in Sun, = 43.0  
Lowest at Night, Black Bulb, (corrected for Index errors), on the 10th, = 22.0  
"Corrected Mean," (Col. 8), of Black Bulb. Min. on grass, = 36.0  
Difference of above Means or Range ("exposed"), = 7.0

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 39.2  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 37.7  
†† Computed Temperature of Dew-Point, = 35.7  
†† Do. Elastic Force of Vapour, = 1.210  
†† Do. Weight of Vapour in a Cubic Foot of Air, = 88  
†† Relative Humidity, (Saturation = 100), = 88  
RAIN fell on 14 Days; Amount in Inches, = 0.88

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	1	1	3	11	4				
P.M.		1	1			1	10					
Mean.												

N.B.—The Sums to be correctly added and the Means deduced. Returns from the "Principal Towns" should be in Edinburgh not later than the 3d; those from Other Places, not later if possible than the 6th. This Schedule not to be Gunned or Fastened, and Forwarded by Book Post, prepaid.

Observations made and  
Return verified by

J. W. Paterson  
Ballate

(Signed)

J. W. Paterson







During the MONTH of February 187 2

The Hours of Observation are of Greenwich Time.

NOTATION USED IN GENERAL REMARKS.					
a.	denotes		m.	denotes	meter.
cl.		cirrus.	n.		nature.
ci-cu		cirro-cumulus.	nimb.		nimbus.
cu-s.		cirro-stratus.	r.		rain.
cu-s.		cumulo-stratus.	h. r.		heavy rain.
d.		dew.	c. h. r.		continued heavy rain.
f.		fog.	s.		stratus.
fr.		frost.	sc.		send.
hi-fr.		hoar-frost.	sl.		sleet.
h.		haze.	sn.		snow.
h. d.		heavy dew.	so. ha.		solar halo.
h.		hall.	sq.		squall.
l.		lightning.	sq.		squalls.
li. cl.		light clouds.	t.		thunder.
li. sh.		light showers.	t. s.		thunder storm.
lu. ca.		lunar coronæ.	w.		wind.
lu. ha.		lunar halo.	ig.		gate of wind.

<b>HYGROMETER, Mean</b> (corrected) A.M. and P.M. Reading of <b>Dry Bulb</b> , (Cols. 9 and 11), .....	=	37.5
<b>Mean</b> (corrected) A.M. and P.M. Reading of <b>Wet Bulb</b> , (Cols. 10 and 12), .....	=	38.0
‡ Computed <b>Temperature of Dew-Point</b> , .....	=	36.1
‡ Do. <b>Elastic Force of Vapour</b> , .....	=	.212
‡ Do. <b>Weight of Vapour in a Cubic Foot of Air</b> , ...	=	
‡ <b>Relative Humidity</b> , (Saturation = 100), .....	=	88
<b>RAIN</b> fell on / 3 Days; Amount in Inches, .....	=	8.74

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

[illegible]

Observations made and  
Return verified by

James W. Paterson  
Ballater

(Signed)

*Dr. Peterson*



