

DEPARTMENT OF AGRICULTURE.
(WEATHER BUREAU.)

VOLUNTARY OBSERVER'S METEOROLOGICAL RECORD, at Salem
County Roanoke, State Virginia, for March, 1892
Latitude 37° 19' 0", Longitude 80° 14' 0", Height above sea 1200 feet.

INSTRUCTIONS FOR FILLING UP THIS FORM.

The mean temperature for the day from to maximum and minimum temperature. The mean temperature for the day from three observations is found as follows:

$\frac{1}{3}(T_1 + T_2 + T_3) = \text{mean temp.}$
 $\frac{1}{3}(60 + 65 + 70) = 65^\circ \text{F.}$

The mean temperature for the month is found by adding all the daily means together and dividing by the number of days in the month. Or the mean for each observation may be made, then a final mean of these means may be taken. Obviously, these two means should agree. In the columns for "precipitation" enter the number of days in the month only the total amount, and do not divide this by the number of days in the month.

It is optional with the observer whether the summary is filled up or not. A "light" frost is one which does no damage to vegetation, a "killing" frost is destructive to vegetation and the staple crops.

5. Strong wind 50 miles per hour.
6. High wind 40 " "
7. Strong gale 30 " "
8. Gale 20 " "
9. Hurricane 10 " "
Under "clouds," if the observer desires, there may be entered the kind as well as amount, thus: (1) Indicating entire clouds covering $\frac{2}{3}$ of the sky.
Under "weather for day," either clear, fair, or cloudy, according as the observer would sum up the clouds for the day; thus, if the sky is clear at the three o'clock observation, but becomes cloudy at five, the day will be recorded as clear, not as twenty-one tenths fair, twenty-two to thirty tenths cloudy.
To name a day as rainy should be at least 40 precipitation.
To give the temperature, write each day the mean temperature for the day will be found by adding the two together and dividing by two. This sum is applied

should invariably be recorded before the instruments are set. Measurements should be taken as soon as possible after the rain, snow, etc., ceases. In the column for "fall" enter only the rain as measured in the gauge, though if heavy snow falls and is not blown out of the gauge, it may be entered as "rainfall." In the column for "snow" enter only the snow as measured in the column for "precipitation," and, in addition, the amount of snow that has melted since the last "morning." Precipitation too small to measure should be entered as "less than .01 inch." If the snow is not melted one tenth of the depth of snow should not be entered. To estimate the force of the wind, it may be best done on the scale 0 to 10 miles per hour.

2. Gentle breeze ----- 4 miles per hour.
3. Fresh breeze ----- 12 " " " "

[illegible]

DAY OF MONTH.	TEMPERATURE.					PRECIPITATION.					WIND.					CLOUDS (Tenths.)			WEATHER FOR DAY.			
	5:30 a.m.		5:30 p.m.		MEAN.	MAX.	MIN.	TIME OF—		RAIN- FALL.	MELTED SNOW.	SNOW- FALL.	T. A. M.		2 P. M.		3 P. M.			T. A. M. 0-10.	2 P. M. 0-10.	3 P. M. 0-10.
	T. A. M.	2 P. M.	3 P. M.	BEGINNING.				ENDING.	DIR. FROM.				FORCE 0-10.	DIR. FROM.	FORCE 0-10.	DIR. FROM.	FORCE 0-10.					
																		DRY BULB.*				
1	45.1		41.5	40.0	46.0	33.3																
2	35.5		35.0	36.0	42.0	30.0																
3	37.5		43.4	42.0	56.0	29.0																
4	42.0		57.5	52.0	66.0	37.5																
5	54.3		54.5	55.0	61.0	42.0																
6	45.3		52.0	48.0	53.1	41.6																
7	42.6		44.5	44.0	48.5	40.0	11.45 a.m.															
8	50.5		51.0	51.0	58.2	43.5		10 p.m.	.59													
9	50.6		49.0	50.0	55.0	45.3																
10	47.5		46.4	46.0	50.1	41.0																
11																						
12																						
13	Max. thermometer out						n.e.s.	n.e.s.														
14	7 order being this time						7 p.m.															
15								2 p.m.	.80		5 in											
16								n.e.s.														
17								night	10 a.m.	.40	1 in											
18	31.1		25.0	28.0	35.0	22.5																
19	22.6		35.5	29.0	37.0	20.6																
20	34.0		38.6	36.0	44.5	27.0	n.e.s.															
21	33.3		36.5	34.0	38.0	29.5	5 1/2 a.m.	12 m.	.11		1 in											
22	36.3		45.0	42.0	52.0	31.0																
23	47.0		54.0	51.0	66.0	36.3	5:30 a.m.	2 p.m.	.20													
24	48.0		47.1	45.0	54.0	42.0																
25	44.0		49.5	47.0	55.5	38.5																
26	46.0		46.5	47.0	50.0	43.8	6 a.m.															
27	49.6		47.0	48.0	56.1	41.3		3 p.m.	.25													
28	47.0		45.5	46.0	53.2	40.6																
29	47.0		56.0	52.0	67.0	36.3																
30	44.6		44.0	45.0	54.0	36.0																
31	44.0		46.5	46.0	55.5	33.5																
Sum.	1032.4		1111.0	1023	1231.1	869.8			2.65		7.00											
Mean.	43.0		45.4	44.3	52.1	36.6			.44		0.226											

SUMMARY.

Highest temperature	9.67° on 29
Lowest temperature	7.20.6 on 19
Mean temperature (7+2+9+9÷4)	
Mean temperature (max. and min. ÷ 2)	44.39
Total precipitation	2.63
Greatest precipitation in 24 consecutive hours	0.89
Prevailing direction of wind	—
Dates of thunder storms	
Dates of hail	
Dates of frost { Light	
Killing	
Dates of auroras	
Dates of halos { Solar	
Lunar	
Number of days clear	
Number of days fair	
Number of days cloudy	
Number of days .01 inch or more rain or melted snow fell	6

INSTRUMENTS.

Dry thermometer, maker		No.
Max.	" "	Green & Co. 1856
Min.	" "	" 1968
Kind of rain gauge		Cy. Owen 990
Height of thermometer above the ground 1.5 feet.		
Height of rain gauge above the ground 2.5 "		

* Sums & means of whole numbers

L. C. Miles
Examiner & Corrected Voluntary Observer.
L.M.R.