

REGISTER OF METEOROLOGICAL OBSERVATIONS,

UNDER THE DIRECTION OF THE SMITHSONIAN INSTITUTION, ADOPTED BY THE COMMISSIONER OF AGRICULTURE FOR HIS ANNUAL REPORT.

Place of Observation: Prohater Hill, County of King George, State of Virginia

Latitude 38° 13'; Longitude 77° 12'; Height above the sea: 100 feet

Name and address of Observer: Edward S. Payson, Com. King Geo. Co. Va. For the month of January, 1873.

DAY OF MONTH.	THERMOMETER IN THE OPEN AIR.				RAIN AND SNOW.				CLOUDS.												WINDS.						DAY OF MONTH.
	7 A. M.	2 P. M.	9 P. M.	Mean.	Time of beginning of rain or snow.	Time of ending of rain or snow.	Amount of rain and melted snow in gauge, in inches.	Depth of snow, in inches.	7 A. M.			2 P. M.			9 P. M.			7 A. M.		2 P. M.		9 P. M.					
									Amount of cloudiness.	Kind of clouds.	MOTION OF HIGHER CLOUDS.	Amount of cloudiness.	Kind of clouds.	MOTION OF HIGHER CLOUDS.	Amount of cloudiness.	Kind of clouds.	MOTION OF HIGHER CLOUDS.	Direction.	Force.	Direction.	Force.	Direction.	Force.				
1	37	36	33							Cloudy								NE	NE	E						1	
2	37		30							Partly haze, mist									E							2	
3	37	31	34		during the night		0.205			Partly haze								SW	SW	W						3	
4	33	31	30							Heavy frost								NE	N	SE						4	
5	37	33	30		light day	m	1.12											N	N	W						5	
6	35	30	32							1st week favorable					1.325			NW	N	N						6	
7	33	30	29							Heavy frost								N	E	SE						7	
8	26	26	30							Windy in P. M.								N								8	
9	26	30	29							Very heavy frost ice time								SW	NW	SW						9	
10	23	35	26							Bright day									W	W	NW						10
11	16	29	26															N	SW	E						11	
12	24	37	30																E	SE						12	
13	27	43	38																W	W						13	
14	45	60	48																							14	
15	33	44	32							Cloudy & thawing								NE	E	NE						15	
16	40	62	45		in the night		0.045			Partly 2nd week cold					0.045				W	W	W						16
17	36	31	30		partly midnight		7.15											N	N	N						17	
18	31	31	29							Bright & haze last night. Cloudy day								N	N	N						18	
19	24	28	25							Faint squalls								N		N						19	
20	22	36	34							Very heavy frost								SW	W	W						20	
21	36	30	38		partly m.		.01			Breeze								SW	SW	SW						21	
22	34	33	36							Frost, bright day								N	N							22	
23	30	33	24		2. P. M. m.					Snow, hail, drizzle									NE	NE						23	
24	30	33	30		2. P. M. night	during the night	2.6	1/2											NW							24	
25	21	35	29							3rd week not so inclement bright day					7.25				SW	N						25	
26	26	35	33		partly m. rain, bright					Cloudy snow at night								N	NE							26	
27	34	33	31		light m. 11 P. M.		1.25	1/2		Snow last night. Snow last morn. 1/2 P. M. to 4 P. M.							NE	NE	NW						27		
28	24	36	33																NW	N						28	
29	7	13	11							Coldest day of the winter to date								NW	NW							29	
30	7	27	19							Partly again foggy								NW	SW							30	
31	16	37	30							11th m. day cold					1.25			SW	NW	E						31	
Sum.	901	1144	1048				2.54																			Sum.	
Means	29.1	36.9	33.8	33.5°																						Means	

THE OBJECT of these observations is to enable the Smithsonian Institution, in connection with the Department of Agriculture, to prepare a series of maps to illustrate the face of the sky, &c., over the United States, for each day in the year, and thus to study the rise, progress, and course of American storms. Observers who have a Barometer, Psychrometer, etc., will be supplied with other blanks, and also full directions for using all the instruments, by the Smithsonian Institution.

EXPLANATION OF THE ABOVE COLUMNS.

THERMOMETER IN THE OPEN AIR.

This is intended for the register of the thermometer, and for the daily mean or average of the three observations.

RAIN AND SNOW.

Under this head are entered the time of beginning and ending of the fall of rain or snow, and the amount, in inches and hundredths, of rain or melted snow collected in a gauge at the surface of the ground; also the depth of the snow. Rain to be indicated by R, and snow by S. When there is no rain or snow, mark 0.

CLOUDS.

Under this general head are entered three daily observations on the aspect of the sky, &c. 1st. The "Amount of cloudiness," designated by figures, 10 being entire cloudiness; 5 half cloudiness; 0 entire clearness; and intermediate numbers in proportion. 2d. "Motion of the higher clouds," which pass directly over the head of the observer, as given to eight points of the compass. The direction from which they move is to be given. This observation is important, as the course of the higher clouds is sometimes different from that of the surface wind, which is given in another column. 3d. The "Velocity," or rate of motion, 10 being the highest, and 0 apparent rest. 4th. The description or "Kind of clouds," to be entered by means of the following abbreviations: St. Stratus; Cu. Cumulus; Cir. Cirrus; Nim. Nimbus; Cir. st. Cirro-stratus; Cu. st. Cumulo-stratus; Cir. cu. Cirro-cumulus.

WINDS.

This is for the record of the direction from which the wind is blowing as indicated by a vane, and its force by estimation. The direction is entered in eight points of the compass: N., N.E., E., S.E., S., S.W., W., N.W. The force is to be estimated and registered by figures from 1 to 10, as in the first column of the following table. The figures in the last column, expressing the number of miles per hour, are not to be used in the register:

1. Very light breeze	2 miles per hour.
2. Gentle breeze	4 do. do.
3. Fresh breeze	12 do. do.
4. Strong wind	25 do. do.
5. High wind	35 do. do.
6. Gale	45 do. do.
7. Strong gale	60 do. do.
8. Violent gale	75 do. do.
9. Hurricane	90 do. do.
10. Most violent hurricane	100 do. do.

SEE OTHER SIDE.