

(FORM H.)

To be filled up and sent on the first of each month, in an envelope addressed to "The Chief Signal Officer, U. S. Army, Washington, D. C."

WAR DEPARTMENT, SIGNAL SERVICE U. S. ARMY,

DIVISION OF TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE

265 343

VOLUNTARY OBSERVER'S METEOROLOGICAL RECORD for the month of Aug, 1879.

Place of Observation: Anawilla, County of Pulaski, State of Va
Latitude 37, Longitude 80, Height of ground above the Sea, 1500 feet.
Name and Post-Office address of Observer: Alvin D. Drake, Shenandoah

THERMOMETER IN THE OPEN AIR.				RAIN AND SNOW.				CLOUDS.												WINDS.						DAY OF MONTH.
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.	Total amount of rain and melted snow, in inches.	Average depth of snow-fall, in inches.	7 A. M.		2 P. M.		9 P. M.		7 A. M.		2 P. M.		9 P. M.							
									UPPER CLOUDS.	LOWER CLOUDS.	UPPER CLOUDS.	LOWER CLOUDS.	UPPER CLOUDS.	LOWER CLOUDS.	Direction.	Force.	Direction.	Force.	Direction.	Force.						
1	68	78	68			rain	3/10		10	10	10														1	
2	68	80	66			rain			10	10	10														2	
3	64	86	70						cc	5	5	cc	5												3	
4	65	88	72				2/10																		4	
5	70	90	80			rain	10			5															5	
6	70	92	78						10	5															6	
7	70	90	78			rain	6/10				5														7	
8	70	89	70			rain	10		10	10	10														8	
9	71	89	78			rain			10	10	10														9	
10	79	92	80																						10	
11	75	94	82																						11	
12	78	90	82						5	10															12	
13	78	90	82						6	10															13	
14	80	92	85			rain	3/10		5	10															14	
15	80	92	80			rain	10		10	10	6														15	
16	80	92	80			rain			10	10	10														16	
17	80	92	80			rain	4		10	10	10														17	
18	80	92	80			rain	10		10	10	10														18	
19	80	92	80			rain	3/10		10	10	10														19	
20	80	92	80			rain	10		10	10	10														20	
21	80	92	80			rain	4/10		10	10	10														21	
22	80	92	80			rain	4/10		10	10	10														22	
23	80	92	80			rain	10		10	10	10														23	
24	80	92	80			rain	10		10	10	10														24	
25	80	92	80			rain	10		10	10	10														25	
26	80	92	80			rain	10		10	10	10														26	
27	80	92	80			rain	10		10	10	10														27	
28	80	92	80			rain	10		10	10	10														28	
29	80	92	80			rain	10		10	10	10														29	
30	80	92	80			rain	10		10	10	10														30	
31	80	92	80			rain	10		10	10	10														31	
Sum.	1934	2504	2141																						Sum.	
Mean.	62.4	80.8	69.1	70.4																					Mean.	

THE OBJECT of these observations is to enable the Chief Signal Officer, U. S. Army, 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 will be supplied with full directions for using all the instruments, on application to the Chief Signal Officer, Washington, D. C.

EXPLANATION OF THE ABOVE COLUMNS.

THERMOMETER IN THE OPEN AIR.

This is intended for the register of the thermometer and temperature of the air. The daily mean is to be found by the formula $\frac{1}{4}(7+2+9+9)$. Fractions of degrees should be recorded in tenths, thus 72°.1, &c.

RAIN AND SNOW.

Under this head are entered the time of beginning and ending of the fall of rain or snow, and the true depth, in inches and hundredths, of the fall of rain or melted snow; 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. Amount of rain or melted snow should be recorded in inches, tenths, and hundredths, thus: 1.25, 6.03, 0.01, &c. If the measuring tube or stick gives figures 2, 5, or 10 times larger than the true depth, then these figures should be properly reduced before entering in the above columns.

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. The direction from which the clouds move, distinguishing between the upper and lower strata of clouds. This observation is important, as the course of the clouds is generally 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: S.—Stratus; Cu.—Cumulus; C.—Cirrus; N.—Nimbus; C. s.—Cirro-stratus; Cu. s.—Cumulo-stratus; C. cu.—Cirro-cumulus.

AURORAS.

Auroras should be looked for every night, and if possible several times. The detailed description should be given on the next page, but in this column should be entered the words Aurora when one is visible; None when

clear enough to see that no aurora is present; Obscured when the sky is covered so as to hide aurora; Blank when no observation was made and nothing is positively known.

WINDS.

This is for the record of the direction from which the wind is blowing, and its force. The direction is to be entered in eight points of the compass: N., N.E., E., S.E., S., S.W., W., N.W., and if practicable the intermediate half points. 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. A little practice will enable Observers to make use of the figures in the first column, corresponding to light, gentle, fresh, strong, &c., with accuracy, and it is very important that such should be the case to make the record reliable. Observers having anemometers should, in addition to these estimates, also record the velocities given by the instrumental record; they should also add the total daily and monthly movement given by the anemometer dials.

0. Calm.					
1. Very light breeze,	varies between	1	and	2	miles per hour.
2. Gentle breeze,	"	3	"	5	"
3. Fresh breeze,	"	6	"	14	"
4. Strong wind,	"	15	"	29	"
5. High wind,	"	30	"	39	"
6. Gale,	"	40	"	59	"
7. Strong gale,	"	60	"	69	"
8. Violent gale,	"	70	"	79	"
9. Hurricane,	"	80	"	99	"
10. Most violent hurricane,	"	from	100	upward.	