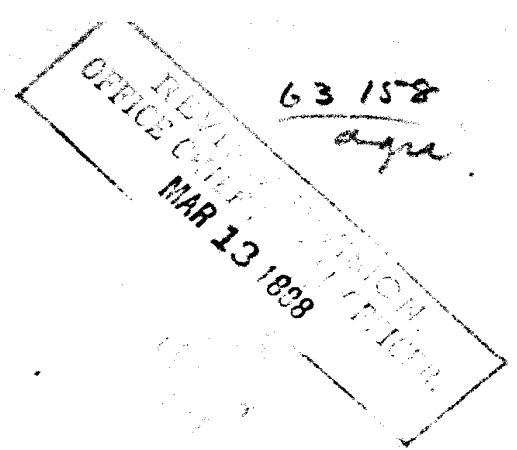


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# BULLETIN

OF THE

## Colorado Meteorological Association.

### 22

### JANUARY, 1888.

The annual meeting of the Association took place at Denver, January 28th. The usual reports of officers were read, and an oral report was offered by the Director of Observations on the work of the year, covering substantially the same points which have since appeared in the annual bulletin. A committee was appointed to prepare a map from the statistics of the year 1887. In such work, the importance of continuous observations and reports will become conspicuous. The annual bulletin for last year shows, for many stations, a record with so many gaps that the climate of the year as a whole can hardly be inferred. The work now being done by observers will be increased in value by each successive month during which it is maintained, and will be vastly more important than at present, if the student of meteorology ten or fifty years hence shall find a steady record kept at the same point down to his own time.

At the meeting of directors which followed that of the Association, the privileges of membership were extended to all observers, the payment of the usual initiation fee being not required so long as observations are taken. It is earnestly hoped that all observers will avail themselves of the rights conferred, and attend the annual meetings. Papers—whether elaborate memoirs or merely brief notes—by observers on special phenomena which have come under their notice, will be highly appreciated.

The names of the directors for the current year, are as follows: Mr. C. F. Wilson, of Denver, president; S. E. Solly, M. D., of Colorado Springs, first vice president; Prof. E. Mead, Fort Collins, second vice president; Dr. W. A. Jayne, Georgetown, third vice president; F. H. Loud, Colorado Springs, director of observations; S. A. Fisk, M. D., Denver; Charles Denison, M. D., Denver; E. S. Nettleton, Denver; Joseph Cornforth, Denver.

Dr. S. A. Fisk declined to be re-elected secretary, much to the general regret, since his painstaking care in this capacity during the whole history of the Association, which his efforts had a leading part in organizing, have been of great value. Corporal T. W. Sherwood was elected secretary and treasurer in his place.

#### THE WEATHER OF JANUARY, 1888.

The beginning of the month was comparatively mild, and the last ten days were, on the eastern side of the mountains, remarkably warm. The intervening period, embracing about half the month, was cold, and was marked by a succession of waves of high barometer. One of these passed south of us, on the 19th, and showed interesting diversities in its effects from the usual wave from Montana, which brings the severe cold weather. Of the latter type, the most marked instance occurred on the 13th, 14th and 15th. The warm weather near the close of the month appears to have been due largely to the passage of waves of low barometer through Wyoming, so that western and southwestern winds—"Chinooks"—were drawn across the mountains. The 26th of the month was a marked instance of this kind.

In general, the temperature appears to have been about normal—in the west, probably below the normal—and the precipitation somewhat defective in amount.

**MONTHLY SUMMARY OF METEOROLOGICAL REPORTS BY VOLUNTARY OBSERVERS OF THE  
COLORADO METEOROLOGICAL ASSOCIATION FOR JANUARY, 1888.**

STATIONS.	TEMPERATURE.													PRECIPITAT'N.			NO. OF DAYS.			PREVAIL'G WIND.													
	MEANS AT			MONTHLY MEANS.	EXTREMES.										AMOUNT.	No. days on which .01 inch or more fell.	Snow fall in inches & tenths.	CLEAR.	FAIR.	CLOUDY.	MONTHLY MEAN CLOUDINESS.	DIRECTION.											
	7 A. M.	2 P. M.	9 P. M.		MONTHLY MEANS OF			FROM SELF-REGISTERING THERM.				FROM DRY THERMOMETERS.										7 A. M.	2 P. M.	9 P. M.	MON'N								
					Max.	Min.	Range.	Highest	Date.	Lowest.	Date.	Highest at 2 P. M.	Date.	Lowest at 7 A. M.												Date.							
Aspen .....	11.7	32.2	17.0	19.5								52.0	3	-18.0	9		12	20.0	14	4	13	5.4											
Canon City .....	26.8	44.5	29.2	32.4								71.5	30	-18.0	15	1.87	4		21*	5*	1*	1.7*	W,NW	W	W	W	W						
Climax.....	6.0	18.8	7.1	9.7								42.0	27,30	-20.0	8		5	8.0	14	11	6	4.3											
Forest Glen Farm	14.4	41.5	14.6	21.3								82.0	30	-32.0	14				20	10	1	2.3	W	SW	SW	SW							
Fort Morgan†....	-1.4	26.8	8.2	10.4		-3.2						63.5	26	-36.0	15								W	W	N	W							
Georgetown .....	21.8	31.5	24.3	25.5	33.1	17.8	15.3	51.5	30	-18.0	15	51.0	31	-15.0	15	.36	5		20	9	2	2.6	W,SW, SE	SE	W	W,SE							
Grand Junction...	18.2	29.5	22.2	21.8								47.0	4	-18.0	17																		
Greeley .....	6.6	36.0	15.4	18.3	36.8	1.3	35.5	70.0	27	-34.0	15	68.0	28	-34.0	15	.05	2		19	10	2	2.5	N	N,S,W	W	W,N							
Husted .....					41.1	5.1	36.1	64.0	26,30	-34.0	15					.50	2		24	6	1	2.0											
Longmont .....	9.4	34.3	16.2	19.1								64.0	26	-34.0	15		5		14	13	4	3.9	NW	E	NE	NW, E,NE							
Loveland.....	8.4	33.3	16.6	18.7								66.0	26	-33.0	15	.17	3	1.0	16	13	2	3.2	W	NE	NW	W,NE, NW							
Minneapolis.....	12.3	33.7	12.6	19.1								64.0	27	-14.0	14,15		1	2.0	7	22	2	4.6	NW	NW	SE	NW							
Monte Vista .....	2.7	31.8	12.9	15.1	32.5	-0.5	33.0	50.0	4,31	-23.0	15	50.0	4	-22.0	15	.50	1	2.5	22	8	1	1.9	W	SW	SW	SW							
Pandora .....					38.2	1.1	37.1	59.0	27	-22.0	8						8	1.2															
Pine .....	11.9	43.0	18.3	22.9								70.0	31	-24.0	15		1	2.0	25*	1*	1*	0.6*											
Ranch near Como	14.2	27.3	18.3	19.5	29.4	9.9	19.5	47.1	30	-16.0	14,15	47.1	30	-14.1	15	.33	8	4.4	18	12	1	2.8	W	W	W	W							
Saguache.....	5.6	31.7	14.4	16.5		2.8						51.0	30,31	-15.0	8,15	.10	3	0.7	18	11	2	2.6	NW	NW	NW	NW							
T. S. Ranch .....	18.1	29.9	21.2	22.6								49.2	4	-11.3	15	.16	1	0.5	13	14	4	4.1	S	NW	NE	S,NW, NE							
Trinidad .....	20.8	44.3	32.2	32.4								62.0	4,28	-23.0	15		3		25	6	0	1.4	SW	N	SW	SW							
Walden.....	8.8	30.2	13.6	16.5								44.0	27,29	-32.0	15	.15	6																

\* For 37 days.

† Last 25 days of the month.

STATIONS.	BAROMETER.		TEMPERATURE.				EXTREME TEMPERATURES.						HUMIDITY.		WIND.			PRECIPITATION.			NO. OF DAYS			AVERAGE CLOUDINESS.	
	ACTUAL PRESSURE.	REDUCED TO SEA-LEVEL.	MEANS AT			MONTHLY MEAN.	MEANS OF DAILY EXTREMES.			HIGHEST.	DATE.	LOWEST.	DATE.	HUMIDITY.	DEWPOINT.	TOTAL MOVEMENT (Miles)	MEAN HOURLY VELOCITY (Miles)	PREVAILING DIRECTION FOR MONTH.	AMOUNT.	NO. DAYS ON WHICH 0.1 INCH OR MORE FELL	AMOUNT SNOW IN INCHES AND TENTHS.	CLEAR.	FAIR.		CLOUDY.
			5 A. M.	1 P. M.	8 P. M.		Max.	Min.	Range.																
Cheyenne, Wyo ..	28.912	30.088	19.7	31.2	21.1	24.0	36.1	9.0	27.1	63.6	27	-27.2	14	50.8	2.4	9758	13.1	N W	.29	8	2.9	16	14	1	3.2
Colo. Springs .....	28.955	.....	18.0	38.1	24.6	26.9	42.7	10.6	32.1	62.9	26	-23.0	15	55.3	9.5	7001	9.4	.....	.10	6	2.0	17	13	1	2.5
Denver .....	24.704	30.097	18.8	37.8	25.4	27.3	48.4	12.9	30.5	76.0	27	-20.3	15	54.0	11.3	5903	7.9	.....	.11	4	...	...	...	...	2.6
Dodge City, Ks...	27.517	30.277	18.6	34.3	20.4	22.8	36.9	9.8	27.1	69.0	30	-18.0	15	69.5	12.8	6251	8.4	N E	.23	5	1.8	19	11	1	2.3
Las Animas.....	26.062	30.155	12.5	38.5	22.7	24.6	43.1	8.8	34.3	70.7	26	-17.8	15	55.2	7.0	4966	6.7	W	.06	5	0.8	15	12	4	3.7
Montrose.....	24.813	30.207	15.0	30.5	19.6	21.7	34.6	8.3	26.3	53.6	3	-20.0	17	60.7	9.7	2583	3.4	S E	.45	3	4.1	13	13	5	3.5
Pike's Peak.....	17.519	30.042	2.8	6.6	5.1	4.8	10.7	-0.8	11.5	23.5	30	-22.8	17	59.1	-8.8	20882	28.1	W	.26	4	1.6	16	15	0	2.6
Santa Fe, N. M...	23.251	30.138	24.7	36.1	30.0	30.3	39.7	20.7	19.0	57.5	27	-2.0	15	59.5	-16.6	4875	6.6	N E	.44	6	1.9	16	14	1	3.2

NUMBER HOURS SUNSHINE DURING JANUARY, 1888.

(From Continuous Sunshine Record.)

STATIONS.	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	31
Colorado Springs ...	8.0	7.15	2.45	4.20	7.0	0.0	6.20	3.30	6.20	8.15	4.20	8.15	8.30	3.00	7.50	7.15	8.15	8.15	4.30	6.40	8.20	8.20	4.00	8.38	3.35	8.25	8.55	5.25	8.40	8.48	8.50
Longmont.....	6.0	4.35	4.00	0.0	0.0	0.0	7.55	7.50	8.05	8.05	7.00	8.00	4.15	0.05	8.00	4.40	8.30	8.00	5.00	5.15	8.15	7.15	1.35	8.20	5.00	7.30	8.45	8.50	8.45	8.30	7.15

MEAN TEMPERATURE FROM THERMOGRAPH RECORD.

STATIONS.	2 A. M.	8 A. M.	2 P. M.	8 P. M.	MEAN.
Colorado Springs.....	17.3	19.6	38.3	24.8	25.0
Pandora.....	12.8*	18.2†	22.9*	12.9	16.2†

\* For 30 days.

† For 29 days.

PHENOMENA, JANUARY, 1888.

SNOW.—Aspen, 1, 3, 4, 5, 6, 7, 11, 12, 13, 14, 16, 21, 23; Climax, 1, 3, 4, 12, 24; Georgetown, 1, 2, 4, 6, 7, 11, 12, 13, 14, 16, 22, 24; Greeley, 6, 12, 13; Husted, 6, 7, 12, 20; Idaho Springs, 24; Longmont, 4, 5, 6, 13, 14, 19; Loveland, 4, 5, 6, 13, 14, 19; Monte Vista, 11; Pine, 14; Pandora, 4, 5, 6; Ranch near Como, 1, 4, 5, 6, 7, 11, 12, 13, 14, 16, 21; Saguache, 4, 6, 11; T. S. Rancho, 5, 7, 13, 14, 21, 22, 24; Trinidad, 7, 8, 11; Walden, 3, 4, 6, 11, 12, 13, 14, 22, 23; Forest Glen Farm, 6, 14, 15; Canon City, 4, 5, 6, 7, 14, 20.

SLEET.—Loveland, 4.

RAIN.—T. S. Ranch, 24.

PARHELIA.—Colorado Springs, 14.

FROST.—Greeley, 5; Longmont, 1, 7, 8, 9, 10, 11, 13, 16, 17, 18, 20, 21, 22, 23, 27, 28, 29, 30; T. S. Ranch, 27, 28, 29; Trinidad, 9, 19.

FOG.—Husted, 6, 7, 8, 19, 20.

Observers are specially desired to note and report to this office all phenomena bearing upon the advance of the season as manifested in animal and vegetable life—the first appearance of different species of birds, insects and other animals, the leafing and blossoming of common trees and herbs, etc., etc. Such notes will also be welcomed from any persons who may not be regular observers.

Any observer who lacks a maximum or minimum thermometer, or a rain-gauge, can have such instruments, if desired, on application to this office, provided he will guarantee suitable exposure and care.

Volunteer observers wanted in every county.

Observers will notice the change in form of tables to be used during 1888. They are requested to furnish the data to make their reports as full as practicable.

Observers are particularly requested to be prompt in sending in their records of observations, especially those which comprise the closing days of the month, in order that the bulletin may be prepared without unnecessary delay.

Correspondence in regard to observations, or to the display of weather signals, on the subject of membership in the Colorado Meteorological Association, or of contributions to its treasury, should be addressed to this office.

F. H. LOUD, Director of Observations.

T. W. SHERWOOD, Signal Corps, Assistant.

COLORADO COLLEGE METEOROLOGICAL OBSERVATORY, }  
 COLORADO SPRINGS, COLO., JANUARY, 1888. }