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U. S. DEPARTMENT OF AGRICULTURE.

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REPORT FOR MARCH, 1897.

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VIRGINIA SECTION

OF THE

CLIMATE AND CROP SERVICE

OF THE

WEATHER BUREAU,

IN COOPERATION WITH THE

VIRGINIA STATE BOARD OF AGRICULTURE.

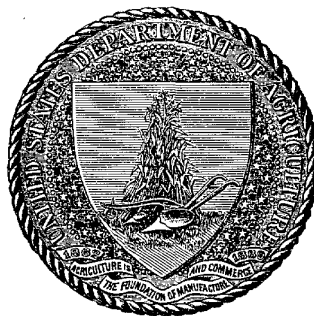
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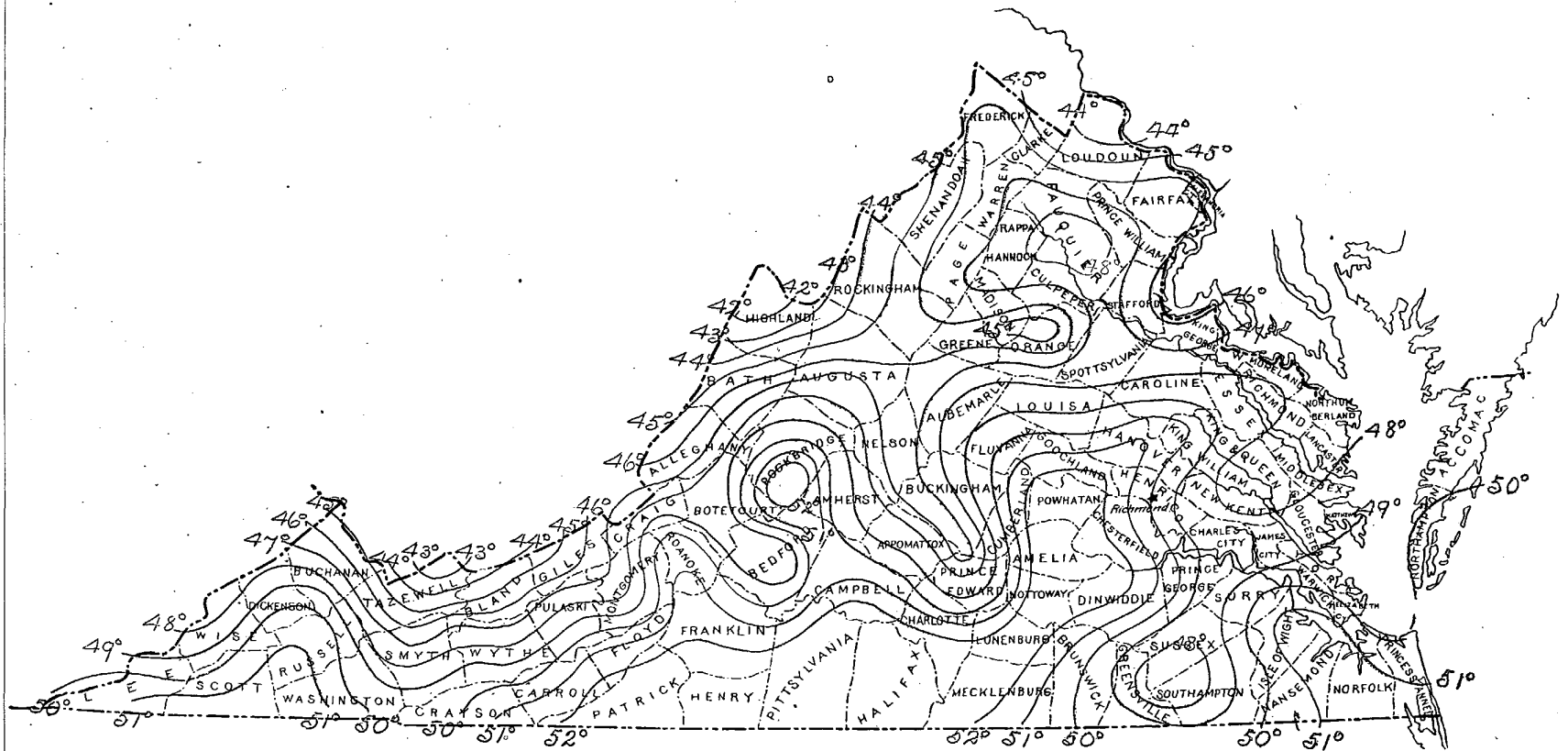
WILLIS L. MOORE,  
CHIEF OF BUREAU.

BY

EDWARD A. EVANS  
SECTION DIRECTOR,  
RICHMOND, VA.



MONTHLY MEAN TEMPERATURE FOR MARCH, 1897.



U. S. DEPARTMENT OF AGRICULTURE,  
**CLIMATE AND CROP SERVICE**  
 OF THE  
**WEATHER BUREAU.**

IN COOPERATION WITH THE VIRGINIA STATE BOARD OF AGRICULTURE.

Central Office,  
 WASHINGTON, D. C. }

WILLIS L. MOORE,  
 Chief.

VIRGINIA SECTION,  
 E. A. EVANS, Section Director,  
 RICHMOND, VA.

VOL. VII.

RICHMOND, VA.

No. 3.

THE PERIODICITY OF GOOD AND BAD SEASONS.

Concluded next month.

A lecture on the above subject, delivered June 3, 1896, by H. C. Russell, director of the astronomical observatory and also of the meteorological service at Sydney, N. S. W., is published in an abridged form in the English journal *Nature*, for August 20, 1896. The importance of long-range predictions to the agricultural interests of the United States demands that we give our careful attention to the discovery announced by Mr. Russell that, in general, there is a periodicity of nineteen years in the occurrence of droughts. He began by studying the statistics of the records in Australia since 1788, the date of the foundation of the colony of New South Wales, and here first found evidence of a 19-year period. He next found that the droughts of India coincided with those of Australia, so far as the records went, and that he could, by means of the Indian record, plausibly locate the greatest of all the droughts in Australia as having occurred in 1769-70. Up to this time he had not studied the ordinary dry years separately from those in which phenomenal droughts occurred, but had found that bad or droughty years usually came in groups of from three to seven. The end of the first and the beginning of the second year of drought was the date used by him in his studies.

Russell now divided the droughts into first and second class, treating each separately, and proceeded to study European statistics. Between the years 900 and 1896, A. D., the interval of nine hundred and ninety-six years embraces about fifty-two periods of nineteen years each; he found that of the fifty-two repetitions of years when droughts should be expected they were actually present on forty-four of these; of the eight missing years six occurred between 900 and 1000, A. D., when the historical record is very incomplete. Starting with 1896, and reckoning backward to 900, Russell found 78 droughts in different countries somewhere in the world that fit into the period of recurrence of droughts of the first class. During the same period he found that there should be fifty-one returns of the year that is characterized by second-class droughts, and that history actually records 89 such droughts in different countries on thirty-six of these periods. There is, therefore, a total of

167 droughts between the years 900 and 1896 that occur on the years when droughts are to be expected, according to Russell's 19-year period, and there remain only 41 other droughts on record, scattered through various discordant years; of these latter, 26 are considered by him to belong to a third class, that is irregular in Australia, but more regular and more important in the Northern Hemisphere. Mr. Russell, therefore claims that out of 208 recorded droughts, 193 fit into his cycle of nineteen years, and that as this cycle has continued for a thousand years, so it may be trusted to justify forecasts based upon it.

Going farther back in history, our author finds that of 20 droughts recorded in B. C. years, 19 fit into his drought cycle, and the fact of such a remarkable agreement is urged as a confirmation of the historical chronology, although it seems reasoning in a circle. The drought predicted to Pharaoh by Joseph apparently belongs to the same period as that predicted by Elijah forty-two cycles (or forty-two times nineteen years) later; the drought predicted by Elisha occurred nineteen years, or one cycle, after that of Elijah, and these ancient predictions seem to Russell to show that the Egyptians and Jews knew of this 19 year period. He even considers it possible that the records kept by the Assyrians since the year 3800 B. C. must have shown them this 19-year period in droughts, as it is known to have also shown them the similar period of eighteen years in eclipses.

Russell further finds that red rains, due to red dust floating in the atmosphere, argue the prevalence of very dusty weather; at least, it is true that in New South Wales red rains and red dust immediately attend severe droughts. He finds that, beginning with the year 738 B. C., there are 69 recorded falls of red rain, every one of which fits into his 19 year cycle. If these were really due to droughts, then they add ten more records of drought years to the one hundred and ninety-three quoted above, and leave only five years on which no droughts are recorded out of two hundred and eight years in which they should have occurred according to Russell's cycle. But, furthermore, Mr. Russell states that great hurricanes, great frosts, and even the wet years and the fluctuations of the great lakes of the world, all fit into this cycle. Finally, he suggests that, as these statistics all point towards a lunar influence, he has therefore, examined this subject with the following results.

1. Great droughts of the first class occur in the years when the dates of eclipses accumulate near March 21 and September 21.

2. Droughts of the second class (of shorter duration; but more intense than those of the first class), together with gales and hurricanes, occur when the dates of eclipses accumulate in February or just before March 21 and in August or just before September 21.

3. Droughts that are less severe in intensity than those of the first class, but last much longer than those of the second class, occur when the dates of eclipses accumulate in April or just after March 21 and in October, or just after September 21.

*Extract, August, 1896, Weather Review.*

## ATMOSPHERIC PRESSURE.

—o—

The mean monthly air pressure as deduced from the U. S. Weather Bureau Stations at Lynchburg, Norfolk and Washington D. C., was 30.14 inches; highest 30.74 inches, at Norfolk, Va., on the 1st; lowest 29.39 inches, at Washington D. C., on the 24th; range 1.35 inches.

## TEMPERATURE (DEG. F)

—o—

TIDEWATER VIRGINIA.—Highest monthly mean, 51.5, at Petersburg; lowest monthly mean, 48.0, at Warsaw; maximum temperature, 87, at Ashland, on the 21st; minimum temperature, 25, at Spottsville, and Warsaw, on the 29th and 17th respectively; greatest daily range, 40, at Ashland.

MIDDLE VIRGINIA.—Highest monthly mean, 51.8, at Maidens; lowest monthly mean, 44.0, at Leesburg; maximum temperature, 91, at Bon Air, on the 11th; minimum temperature, 11, at Quantico, on the 1st, greatest daily range, 60, at Bon Air.

THE GREAT VALLEY. — Highest monthly mean, 51.8, at Sword's Creek; lowest monthly mean, 41.9, at Monterey; maximum temperature, 83, at Woodstock, on the 22d; minimum temperature, 16, at Big Stone Gap, on the 27th; greatest daily range, 47, at Woodstock.

FOR THE STATE.—Average of the monthly mean temperatures, 48.2; average of the maximum temperatures, 76; average of the minimum temperatures, 25; average of the greatest daily range, 34.

While there were many days during March when the temperature was considerably deficient as compared with the normal, yet, on the whole, it averaged in excess to the extent of 3.9 degrees.

This average condition was very beneficial for crops and materially aided in farm work by drying the ground and enabling planting and plowing to be done.

All maximum and minimum temperatures observed were well within the record for the season. As a rule the highest readings occurred on the 21st and 22d, and the lowest on the 22d to 24th.

Early fruit blooms were in evidence towards the close of the month and trees and grass showed a decided tinge of green.

## PRECIPITATION.

—o—

TIDEWATER VIRGINIA.—Greatest monthly precipitation, 6.97 inches, at Spottsville; least monthly, 3.74 inches, at Warsaw; greatest amount in any twenty-four consecutive hours 2.24 inches, at Spottsville, on the 5th and 6th.

MIDDLE VIRGINIA.—Greatest monthly precipitation, 5.88 inches, at Callaville; least monthly, 1.95 inch, at Warrenton, greatest amount in any twenty-four consecutive hours, 1.61 inches, at Callaville, on the 6th.

THE GREAT VALLEY.—Greatest monthly precipitation, 9.82 inches, at Big Stone Gap; least monthly, 1.70 inches, at Stephens City; greatest amount in any twenty-four consecutive hours, 2.60 inches, at Marion, on the 9th and 10th.

FOR THE STATE.—Average total precipitation, 4.04 inches.

The average total precipitation for the state. 4.04 inches, was 0.11 of an inch below normal for eleven years. By sections, Tidewater Virginia was 0.73 of an inch in excess of the normal; Middle Virginia 0.98 of an inch deficient, and the Great Valley, 0.20 of an inch in excess. Good generous showers prevailed in all sections of the State. This was particularly the case with the lower portion of the Great Valley district, where monthly amounts ranging up to over 9 inches were recorded. Crop conditions in this section as affected by rainfall, were consequently retarded and farm work delayed.

Winter wheat and oats have made excellent progress, however, in this section.

Snow occurred in all portions of the state during the month, being heaviest in the Great Valley section.

The average number of days on which 0.01 of an inch or more of rain or snow fell, was 9 in Tidewater Virginia; 9 in Middle Virginia, and 12 in the Great Valley. Average for the State, 10.

WIND.—The prevailing direction of the wind in the different sections was as follows: Tidewater Virginia S. SW. NW.; Middle Virginia, SW.; the Great Valley, W. Prevailing direction for the State; SW.

WEATHER.—Tidewater Virginia, average number of clear days 8; partly cloudy, 8; cloudy, 15. Middle Virginia, average number of clear days, 13; partly cloudy, 8; cloudy, 10. The Great Valley, average number of clear days, 9; partly cloudy, 11; cloudy, 11. For the State, average number of clear days, 10; partly cloudy, 9; cloudy, 12.

## NOTES AND COMMENTS.

—o—

A voluntary observer's station has been established at Warrenton, Va., and the first report therefrom is published in this number. The station is in the hands of Mr. J. T. Preston, of the Southern Railway.

On page 55 of the National Monthly Weather Review for February, 1897, will be found an excellent article under the caption of "Suggestions to observers." It defines the different classes of work done by the regular and voluntary observers, and also the special observers, and invites attention particularly to the importance of carefully recording the various phenomena attendant upon thunderstorms.

With a view to securing a uniform record of all thunderstorms occurring at or near their stations, we would like to have each voluntary observer of the Virginia section go over this article, and if possible make their record conform with it.

Climatological Data for March 1897.

Stations.	Counties.	Elevation, feet.	Length of record, years.	TEMPERATURE, IN DEGREES FAHRENHEIT.						PRECIPITATION, IN INCHES.					SKY.				Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted.)	Number of rainy days.	Number clear days.	Number partly cloudy days.	Number cloudy days.		Prevailing direction of wind.		
<b>TIDEWATER VIRGINIA.</b>																						
Ashland	Hanover	220	5	50.3	+3.9	87	21	26	29	40	4.56	+2.14	1.49	tr	11	1	18	12	s.	E. L. C. Scott.		
Birdsneat (t)	Northampton	40	28	49.3	+5.1	78	20	30	17	31	4.95	-0.27	1.05	tr	7	7	9	15	nw.	C. R. Moore.		
Cape Henry	Princess Anne	17	22	50.5	+5.3	80	20	22	33	1	4.01	-1.12	1.13	...	12	10	10	11	sw.	C. W. Weather Bureau.		
Doswell	Hanover	134	0	51.0	...	75	23	31	17	33	4.10	...	1.00	...	9	6	0	25	n.	C. W. Butterworth.		
Hampton	Elizabeth City	3	9	51.1	+5.0	78	20	34	1	24	4.70	+1.97	1.54	...	9	1	10	20	sw.	C. L. Goodrich.		
Norfolk	Norfolk	3	25	51.0	+4.0	80	22	32	1	29	4.38	-0.20	1.33	...	14	11	5	15	ne.	U. S. Weather Bureau.		
Petersburg	Dinwiddie	11	9	51.5	+6.0	83	21	28	28	29	37	5.71	+1.12	1.35	tr	9	7	9	15	sw.	Prof. Jas. M. Colson.	
Richmond (near)	Henrico	96	21	48.6	+0.7	78	20	21	30	28	36	...	...	...	8	13	3	15	nw.	Capt. J. C. Shafer.		
Spottsville	Surry	7	7	50.0	+7.1	79	22	25	29	37	6.97	+2.77	2.24	tr	10	11	2	18	sw.	B. W. Jones.		
Sunbeam	Southampton	2	2	48.0	+2.3	77	22	28	1	31	5.67	+1.44	1.34	...	9	10	6	15	s.	Dr. W. H. Daughtry.		
Warsaw	Richmond	200	3	48.5	+3.4	81	22	25	17	34	3.74	+1.21	1.10	...	6	3	21	7	s.	C. H. Constable.		
Williamsburg	James City	160	9	...	...	70	20	33	17	26	29	...	...	...	18	5	8	...	nw.	L. S. Williams.		
<b>MIDDLE VIRGINIA.</b>																						
Alexandria	Alexandria	35	37	46.0	+4.2	78	22	27	16	35	2.58	+1.16	.93	tr	12	6	19	6	se.	H. C. Slaymaker		
Barboursville	Orange	0	0	46.6	...	80	22	21	1	35	2.71	...	.65	2.0	13	13	12	6	sw.	Dr. Thos. H. Ellis.		
Bedford City	Bedford	900	6	47.8	+2.0	79	21	25	26	28	4.1	+0.58	1.00	tr	6	11	10	10	e.	J. T. Davidson.		
Bon Air	Chesterfield	130	2	51.5	+3.5	91	11	27	28	60	5.00	+1.63	1.29	...	10	9	6	16	sw.	Wm. H. Pleasants.		
Buckingham	Buckingham	3	3	48.5	+4.3	81	21	22	20	26	5.36	-0.14	.75	tr	11	11	7	13	sw.	Dr. W. E. Pratt.		
Callaville	Brunswick	570	2	50.4	+4.5	79	20	26	1	33	5.88	+1.56	1.61	...	10	9	18	4	s.	F. M. Gage.		
Charlottesville	Albemarle	9	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Prof. A. H. Tuttle.		
Farmville	Prince Edward	0	0	46.6	...	70	3	22	25	1	29	39	4.20	...	1.10	tr	9	16	5	10	sw.	Jno. R. Martin.
Fredericksburg	Spottsylvania	47	1	47.5	+2.7	84	22	25	1	39	3.02	+0.11	.99	...	11	20	0	11	se.	E. C. Rowe.		
Gordonsville	Orange	0	0	45.4	...	70	22	28	29	30	...	...	...	...	17	0	14	...	s.	H. S. Smithers.		
Guinea (m) †	Caroline	100	0	46.0	+12.4	73	10	25	29	39	1.05	-1.69	.65	...	3	8	4	8	sw.	M. A. Nunn.		
Leesburg	Loudoun	0	0	44.0	...	71	22	22	27	36	2.34	...	.54	0.2	12	18	4	9	e.	C. A. English		
Lynchburg	Campbell	525	17	50.0	+4.6	79	21	30	29	32	3.46	-0.21	.82	...	14	6	12	13	sw.	U. S. Weather Bureau.		
Maidens	Gochohand	185	1	51.8	+4.1	78	21	22	1	8	2.50	...	.86	tr	7	12	13	6	sw.	J. R. Hopkins.		
Manassas	Prince William	317	2	47.9	+7.0	82	22	15	1	40	2.99	-1.26	.78	...	9	16	7	8	se.	Thos. H. Lion.		
Quantico	Prince William	7	7	46.0	...	82	22	11	1	50	...	...	...	...	5	19	5	7	nw.	E. V. King.		
Rocky Mount	Franklin	33	0	51.7	+5.1	78	21	30	27	10	29	3.51	-1.82	.80	tr	8	6	17	8	...	J. H. Binford.	
Smithville	Charlotte	1150	2	49.8	+6.4	75	22	29	28	27	3.56	-0.21	1.50	...	5	20	0	11	...	W. G. Williams.		
Stanardsville	Greene	560	2	46.0	+2.0	82	22	23	1	37	2.51	+0.82	.56	...	10	...	...	...	...	W. N. Parrott.		
Warrenton	Fauquier	6	6	47.6	...	78	22	30	1	24	1.95	...	.42	0.5	8	19	2	10	...	J. T. Preston.		
<b>THE GREAT VALLEY.</b>																						
Big Stone Gap	Wise	1966	6	48.4	+6.2	79	21	16	28	41	9.82	+3.96	1.72	...	16	5	10	16	...	John W. Fox, Sr.		
Blacksburg	Montgomery	2100	7	45.8	+3.7	75	22	21	25	36	3.87	+1.15	.90	1.1	15	6	10	15	sw.	Prof. W. B. Alwood.		
Bristol	Sullivan, Tenn.	1676	2	50.4	+9.3	73	21	19	27	35	8.16	+2.23	2.10	tr	11	16	6	9	...	J. Bunting, Jr.		
Burke's Garden †	Tazewell	0	0	48.8	+7.6	69	21	20	28	38	5.55	-0.91	1.06	1.0	10	11	4	15	w.	Rev. E. H. Kohn.		
Christiansburg	Montgomery	2160	9	49.6	...	82	...	...	...	...	3.62	+0.10	.73	0.1	13	14	3	14	w.	H. D. Walters.		
Clifton Forge	Allegheny	1047	2	47.2	...	82	22	21	1	42	3.35	...	.80	0.8	9	11	5	15	nw.	T. P. Halloran.		
Dale Enterprise	Rockingham	1350	10	45.2	+4.5	80	22	20	7	39	2.40	-0.88	.71	3.5	12	8	16	7	s.	L. J. Heatwole.		
Goshen	Rockbridge	1590	1	51.6	+14.7	80	22	24	1	28	2.40	+1.00	1.00	4.0	3	21	0	10	w.	J. B. Wood.		
Graham's Forge	Wythe	3	3	49.1	+8.7	79	23	21	29	40	3.81	-1.67	1.16	0.8	12	3	22	6	sw.	David Graham.		
Hot Springs	Bath	2195	4	43.6	+2.3	70	22	24	24	25	34	2.89	+0.10	.56	1.0	10	6	19	6	...	W. B. Davis.	
Lexington	Rockbridge	946	23	47.8	+4.9	79	22	24	29	38	3.44	+0.28	.82	2.0	16	5	18	8	s.	Prof. H. C. Campbell.		
Marion (D)	Smyth	2124	8	48.2	+7.2	74	22	22	29	40	7.76	+2.41	2.60	3.0	11	3	9	16	...	A. T. Lincoln.		
Monterey	Highland	3008	2	41.9	+7.3	74	22	22	26	10	29	3.82	+0.60	.80	0.6	11	8	11	12	w.	Prof. S. C. Wells.	
Salem	Roanoke	1200	6	50.6	+4.0	79	21	30	28	29	34	3.73	+0.83	.85	1.0	15	...	...	...	Prof. S. C. Wells.		
Saltville	Smyth	1730	2	49.0	+6.6	76	21	22	28	37	7.13	-0.58	2.20	...	13	...	...	...	...	C. M. Perry.		
Stanleyton	Page	1064	0	46.8	...	81	22	25	1	35	2.11	...	.61	...	12	10	14	7	s.	A. K. Grim.		
Staunton	Augusta	1380	6	47.4	+5.0	80	22	25	27	29	4.0	-1.74	.76	1.4	12	4	22	5	ne.	W. C. Hedrick.		
Stephens City	Frederick	4	4	45.5	+4.0	77	21	22	24	1	38	1.70	-0.24	.49	0.8	5	18	10	3	w.	W. B. Steele.	
Sword's Creek	Russell	0	0	51.8	...	80	20	21	29	42	5.77	...	1.30	...	8	12	5	14	...	J. H. Steele.		
Woodstock	Shenandoah	927	0	46.4	...	83	22	25	26	28	31	4.7	...	.50	tr	13	8	18	5	w.	J. H. Steele.	
Wytheville	Wythe	2370	25	46.6	+3.3	74	21	25	23	33	4.69	+2.91	1.0	16	9	7	15	w.	H. F. Miley.			

† Estimated. ‡ Incomplete. tr, trace, or less than 0.01 of an inch. (t) Means from 7 am, 2 and 9 + 9 pm, observations.  
Note— Estimated and incomplete data not considered in means.

MISCELLANEOUS PHENOMENA.

*Fogs:* Quantico, 19, 20, 21; Wytheville, 6, 9, 14, 19, 31; Woodstock, 19, 20, 23; Staunton, 19; Fredericksburg, 19, 20, 21;  
*Gales:* Wytheville, 5, 19, 20, 24, 25, 26, 27; Marion, 5; Clifton Forge, 14, 24; Fredericksburg, 22, 24, 25, 28; Barboursville, 24; Ashland, 24, 25.  
*Hail:* Warrenton, 24; Graham's Forge, 5, 15; Hampton, 13; Manassas, 6; Alexandria, 5, 6, 13; Stanardsville, 14; Monterey, 24; Sword's Creek, 6.

*Halos, Lunar:* Staunton, 22; Salem, 10.  
*Halos, Solar:* Spottsville, 1, 4, 11, 21.  
*Thunder storms:* Warrenton, 24; Graham's Forge, 9, 14; Dale Enterprise, 6, 24; Callaville, 5; Hampton, 12, 17; Wytheville, 22; Woodstock, 23; Stanleyton, 24; Blacksburg, 21; Gordonsville, 23; Fredericksburg, 23; Barboursville, 23; Petersburg, 5, Monterey, 24; Sword's Creek, 11; Stephens City, 24.  
*Lightning Distant:* Graham's Forge, 23; Burke's Garden, 23; Wytheville, 23; Woodstock, 5, 20, 23; Blacksburg, 23; Barboursville, 5; Doswell, 10; Sword's Creek, 23.

Daily Maximum and Minimum temperatures for March, 1897.

Table with columns for Stations, months 1-31, and Monthly Mean. Rows are categorized by region: TIDEWATER VA., MIDDLE VA., and GREAT VALLEY. Each station lists daily Max and Min temperatures.

CLIMATE AND CROPS: VIRGINIA SECTION.

MARCH, 1897.



Daily Precipitation for March, 1897.

Stations.	Day of Month.																															Total.							
	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								
TIDEWATER VIRGINIA.																																							
Ashland					.08	.70	.20		tr	.01	tr	.86		.57				1.49	.32	.23			.05	.05											4.56				
Birdsneat					tr	.75	.30			tr		1.05		.85				.70	.30																	4.95			
Cape Henry					tr	.72	.27		.01	.05		1.15	tr	.75		.68		.63	.25				.04	.03	.03											4.01			
Doswell †							.59					1.00		.80				1.00		.80																4.10			
Hampton					tr		.83	.31		tr	.03		1.54		.64			.87	.44																	.01	4.70		
Norfolk						.02	.64	.22			.11	tr	1.33	tr	.76		.20		.81	.14	.01		.03	.02	.01											.08	4.38		
Petersburg						.05	.84	.42		tr	.02		1.31		.99			1.35	.70	tr																	.03	5.71	
Spottsville					tr	1.00	1.24	.17		tr	.02		1.70		1.20			.81	.40				tr	tr	tr	tr											.07	6.07	
Sunbeam					tr	1.34	.52				.25		1.23		.80		.36		.76	.11			tr	tr														.30	5.67
Warsaw							.88	tr	tr	tr			.64		.65				1.10		.36																	3.74	
MIDDLE VIRGINIA.																																							
Alexandria					.03		.06	.24			tr	.12	.02		.49			.93	.04	.47	.03			.08													2.58		
Barboursville					.02		.10	.15			.15		.01	.26		.65			.10	.42	.37	.15																2.71	
Bedford City					.50						.50		1.00				.50		.20		.40																	3.10	
Bon Air						tr	.39	.98	.01		.02	tr	.61	.29	.71				1.29	.27	.43																	5.00	
Buckingham					tr		.39	.49	.05	tr	.15		.75	.16	.66				.40	.27	.14			.10														3.56	
Callville						1.61	.65				.04	.05		1.41		.96			.05	.85	.24													.02				5.88	
Charlottesville																																							
Farmville						.20	1.00				.20		1.10						1.10		.10	.20				.10												20.4.20	
Fredericksburg					.02		.07	.15			.07	.02		.31		.54			.99	.28	.33				tr	.24													3.02
Guinea (n)						.30					.10		.65																									1.05	
Leesburg ‡					or	.06		.12	.03		.12	.14	.18		.54			.32	.38	.26	.18																	2.34	
Lynchburg						.06		.10	.40	.06		.13	.22	tr	.82			.74	.10	.34	.01	tr		.07	.15													3.40	
Maldens						.12	.25	.52			.03		.86																									2.50	
Manassas						tr		.41			.25	tr		.24		.51			.78	.46	.05	.14			tr	.15												2.99	
Rocky Mount						tr		.12	.45	.42		.45	.35	tr	.62		.80		tr	tr	.78	.46			tr	tr												3.51	
Smithville						tr		.65	.26			.15							1.00	1.30																		3.56	
Standardsville						tr		.15	.44			.18	.03		.20		.56			.37	.38				tr	.10												2.51	
Warrenton						.02		.20					.30		.40					.42	.30			.06														1.95	
THE GREAT VALLEY.																																							
Big Stone Gap						.84		.80	.40		.03	1.72	.88	.06	.54		1.50		.15			.60	1.62	.15		.07											9.82		
Blacksburg						.11		.17	.09		.67	.21	.04	.67		.99		.02		.47																		3.87	
Bristol						.35	.12		.10		.55	2.10	2.13		1.05		.28		.24	.92	tr				.32	tr												8.16	
Burke's Garden						.25		.73			.13	1.06	.56		.88		.93		.16	.75																		5.55	
Christiansburg							.08		.58	.15		.22	.53		.63		.73		.02		.49	.05																3.02	
Clifton Forge						.05		.45				.20				.80		.75		.45		.40																3.35	
Dale Enterprise						.03		.01	.23			.29		.07		.71		.06		.20	.35																	2.40	
Goshen †																																						2.40	
Graham's Forge						.04		.15	.58	tr		1.16	tr	.07	.51		.58	.12		.04	.28				tr	tr	tr											2.00	3.81
Hot Springs						.10		.10	.26				tr	.45	.56				.52		.30																	2.89	
Lexington						.04		.17	.13	.08		.15		tr	.65		.82		.31	.11	.47	.04	tr	.01	.28	.08												3.40	
Marion						.35		.14	.57			1.50	1.10		.85				1.20		tr																	7.76	
Monterey						.24		.15	.18	tr		.20				.80				.60	.80																	3.82	
Salem						.11		.07	.35	.06	tr	.58	.26		.64		.85		.13	.08	.36		.06															3.73	
Saltville						.36		.38	.23			2.20		.10	.67		.95	.16		1.34																		7.13	
Stanleyton						.02		.08	.30	.01		.14	tr	tr	.10		.61		tr	.30	.35	.05		.03	tr	.12												2.11	
Staunton						.06		.03	.40		tr	.13	tr	tr	.23		.76		.28	.06	.27																	2.56	
Stephens City						.17			.15			.30		tr			.49			.33	.26	tr			tr	tr	tr											1.70	
Sword's Creek								.78	tr			1.30	.50		.58		.90																					45.77	
Woodstock						.09		.17	.03	.09		.05	.04		.17		.50		.22	.09	.20	tr		.03	tr	tr												1.81	
Wytheville						.02		.39	.02	.11		.96	.55	.07	.52		.94	.07		.15	.28																	4.69	

+ Rainfall estimated. ‡ Incomplete. tr. Trace, or less than .01 of an inch.