

U. S. DEPARTMENT OF AGRICULTURE.

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REPORT FOR JULY, 1897.

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VIRGINIA SECTION

OF THE

CLIMATE AND CROP SERVICE

OF THE

WEATHER BUREAU.

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PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

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UNDER DIRECTION OF

WILLIS L. MOORE

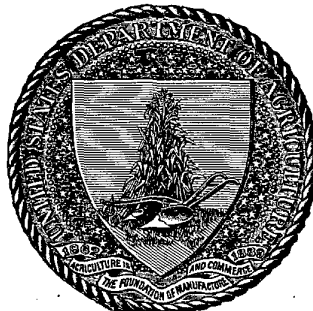
CHIEF OF WEATHER BUREAU

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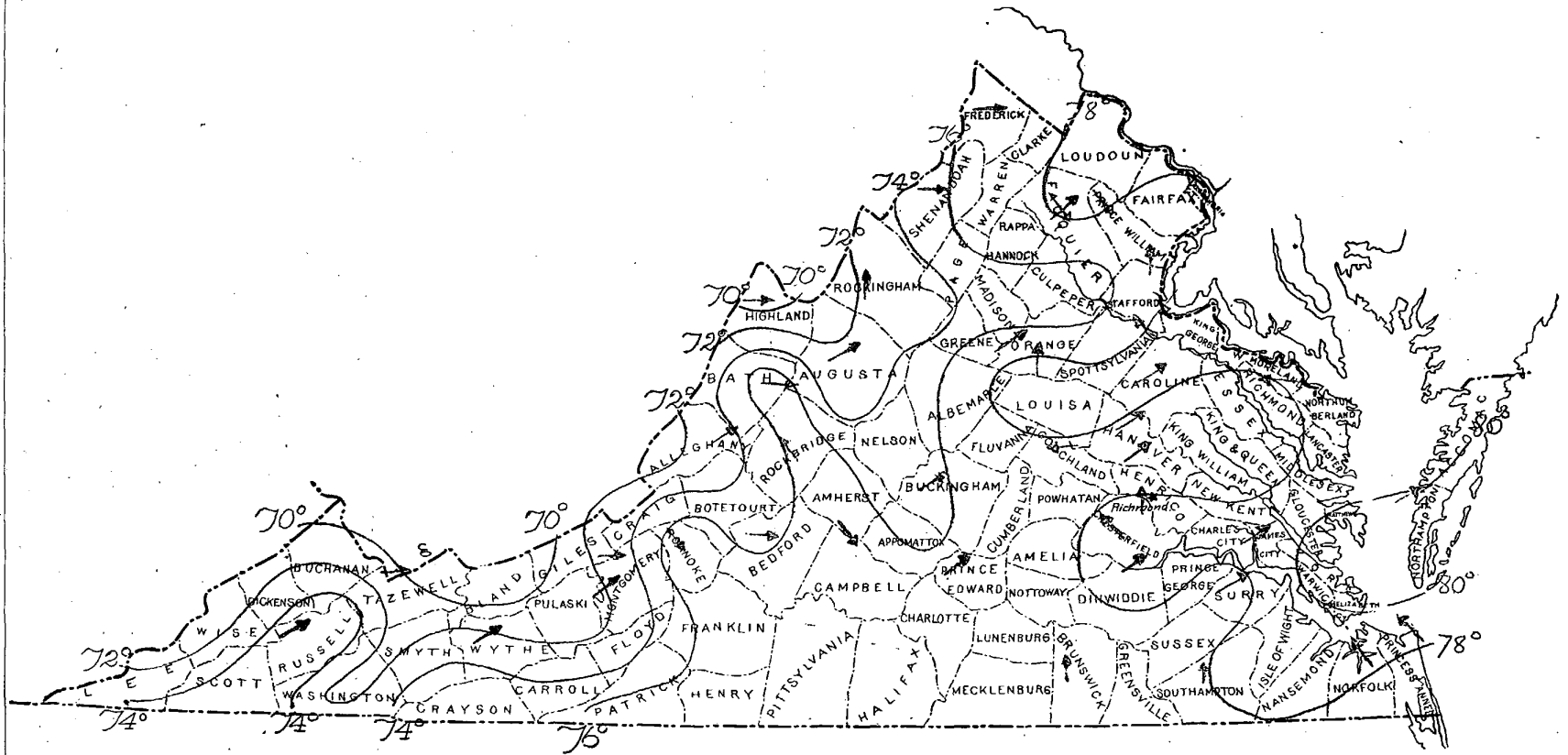
EDWARD A. EVANS

SECTION DIRECTOR.

RICHMOND, VA.



MONTHLY MEAN TEMPERATURE FOR JULY, 1897.



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

Central Office,  
 WASHINGTON, D. C. }

WILLIS L. MOORE,  
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VIRGINIA SECTION,  
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 RICHMOND, VA.

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### JULY CROP CONDITIONS.

On the whole July was a very favorable one for the growth and maturity of crops. The month opened with rather droughty weather in all portions of the State, and this condition obtained until the second week when moderate showers occurred in the Middle and Valley divisions which freshened up all of the standing crops. It still continued dry, though, in the Tidewater Section. The third week gave abundant and general showers and very seasonable temperatures, and crop growth was rapid. This was also the case with close of the month. Such staples as corn and tobacco suffered during the dry weather, but with the advent of rain and favorable temperatures, a rapid and vigorous growth set in which again put them abreast of the season in condition. The second decade saw about all of the winter-wheat harvested, and a most excellent yield in quantity and quality is reported. The bulk of haymaking was finished with the month. Cotton, peanuts and pastures gained. Topping of tobacco was begun, and during the last decade considerable fall plowing was done.

### CYCLES IN METEOROLOGY.

*Concluded next month.*

An esteemed correspondent, the well-known voluntary observer at North Lewisburg, Ohio, Mr. H. D. Govey, calls our attention to the fact that according to the year book of the Department of Agriculture for 1895, page 161, the severe freezes in Florida occurred in the winters of 1747, 1766, 1774, 1799, 1828, 1835, 1850, 1857, 1880, 1884, 1886, 1894-95, and that furthermore a cycle of about seventeen years is indicated by these numbers, that is to say, any one of these dates removed from some other date by some multiple of seventeen years. He also asks whether high waters and low waters do not recur in similar periods. Our reply must be, that all depends on which temperature or high water, or frosts we choose to select for our study and which we reject as unimportant. The above list of severe freezes in Florida (see MONTHLY WEATHER REVIEW, 1895, pp. 336-337) may be supplemented by many other years when the frosts were less severe or more local, and the cycles will depend upon the dates that we study.

As Mr. Govey states that he is not much of a believer in cycles of weather we may, without giving offense, quote this 17-year cycle as another illustration of the ease with

which artificial and empirical numerical relations can be discovered in the complex phenomena of meteorology. These relations are usually not very exact but they look mysterious to the wondering eye, and always suggest an inquiry as to whether there is anything in them, that is to say whether they represent a natural law and can be utilized for weather predictions. So many such cycles have been worked out and they are, one and all, so useless for the purposes of weather prediction that we cannot encourage any one in giving much attention to them; and yet as Kepler with his planetary laws and Schwabe with his 11-year sun spot cycle, and Chandler with his 423-day period in latitude, have each respectively discovered important natural cycles, so we suppose it not impossible that cycles of corresponding importance may be discovered in meteorology. On the other hand the ground has been worked over so well in the past three hundred years that there seems no probability of discovering any *simple* natural cycle; in fact, meteorological conditions are so complex that no simple cycle can possibly exist for any long time with any reasonable degree of accuracy. For instance, if we have a daily cycle of temperature in the temperate regions, it will repeat itself for two or three days only before some disturbance breaks it up; if we have a weekly cycle of rainy days and fair weather it may last four or five weeks at the most before being broken up, and it will be several weeks before it starts over again; if we have an annual cycle of cold and hot weather, or rainy weather and drought, or stormy weather and pleasant, it will continue for only two or three years before being so entirely changed as to be unrecognizable. Even the long cycles of eleven, seventeen, nineteen, thirty-five, and fifty-five years that have been "demonstrated" by their respective advocates, disappear after two or three repetitions, only to start up again by and by. These all remind one of the great ocean waves that advance across the Atlantic with perfect regularity but when they reach their limit die away, soon to be replaced by another set of similar waves, so that the whole ocean is covered with waves superposed upon each other, each having its own periodicity, and each set dying out as another replaces it. Within each group of waves there is the periodicity that the cyclist is seeking after, and yet there is also therein an element of dissolution that soon brings the cycle to naught. The cycle like the wave was evolved by a temporary combination of minor elements, and like it soon dissolves into other combinations.

As bearing upon this same subject, the Editor has just received a most instructive pamphlet, *Wetterperioden*, by Guido Lamprecht, published as a scientific appendix to the annual report for 1897 of the gymnasium or college at Bautzen. In this work Lamprecht gives the result of computations that have occupied his time for the past ten years, and he hopes that he has demonstrated that there are short periodicities in the weather. We must, however, distinguish between those periodicities that we have some reason for expecting, such as the lunar tidal periods and those that are purely empirical; we must also distinguish between apparent periodicities whose uncertainty, as shown by the disagreement with observations, is large, and those whose agreement is very close.

*Extract, February, 1897, Weather Review.*

### ATMOSPHERIC PRESSURE.

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The mean monthly air pressure as deduced from the U. S. Weather Bureau Stations at Lynchburg, Norfolk and Washington, D. C., was 29.99 inches; highest 30.31 inches, at Norfolk, on the 19th; lowest 29.66 inches, at Washington, D. C., on the 12th; range 0.65 of an inch.

### TEMPERATURE. (DEG. F)

—o—

**TIDEWATER VIRGINIA.**—Highest monthly mean, 83.2, at Doswell; lowest monthly mean, 74.3, at Williamsburg; maximum temperature, 98, at Doswell, on the 10th; minimum temperature, 58, at Doswell, on the 30th; greatest daily range, 40, at Doswell.

**MIDDLE VIRGINIA.**—Highest monthly mean, 81.4, at Farmville; lowest monthly mean, 74.0, at Stanardsville; maximum temperature, 100, at Bon Air, on the 3d, and at Farmville on the 3d, 5th and 7th; minimum temperature, 54, at Buckingham on the 14th and Stanardsville, on the 15th and 16th; greatest daily range, 34, at Rocky Mount.

**THE GREAT VALLEY.**—Highest monthly mean, 79.5, at Goshen; lowest monthly mean, 68.7, at Monterey; maximum temperature, 100, at Woodstock, on the 7th; minimum temperature, 46, at Big Stone Gap, on the 14th; greatest daily range, 40, at Dale Enterprise.

**FOR THE STATE.**—Average of the monthly mean temperatures, 76.4; average of the maximum temperatures, 94; average of the minimum temperatures, 57; average of the greatest daily range, 29.

While the mean temperature for July for the State closely approximated the normal, as obtained from an 11-year record, yet there was a decided range in each of the different sections. The month opened with temperatures above the normal and a general rising tendency which culminated on the 3d with maximums ranging from 92 to 100 degrees over the State. This was followed by a general, though moderate decline, the weather being cool until the 14th when most of the minimum temperatures for the month were reported. During the last decade warmer weather again prevailed and the month closed with temperatures somewhat higher than the average.

The conditions as to extremes and means were well within the record.

### PRECIPITATION.

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**TIDEWATER VIRGINIA.**—Greatest monthly precipitation, 6.45 inches, at Birdsnest; least monthly, 2.09 inches, at Doswell; greatest amount in any twenty-four consecutive hours, 2.39 inches, at Ashland, on the 27th.

**MIDDLE VIRGINIA.**—Greatest monthly precipitation, 7.70 inches, at Stanardsville; least monthly, 1.70 inches, at Bed-

ford City; greatest amount in any twenty-four consecutive hours, 3.25 inches, at Farmville, on the 20th.

**THE GREAT VALLEY.**—Greatest monthly precipitation, 7.25 inches, at Goshen; least monthly, 3.26 inches, at Hot Springs; greatest amount in any twenty-four consecutive hours, 2.50 inches, at Goshen, on the 21st.

**FOR THE STATE.**—Average total precipitation, 4.46 inches.

The average total precipitation for the State, 4.46 inches, was 0.85 of an inch above the normal for the month.

By sections Tidewater Virginia was 0.51 of an inch above the normal; Middle Virginia, 0.71 of an inch above, and the Great Valley, 1.12 inches above.

There was quite a general and uniform distribution of the rainfall during the month in the different sections, though the Tidewater division received less than either of the other sections. As usual at this time of the year, the rainfall was deposited in the form of local showers of more or less intensity, and hence, while the monthly quantity received was in excess of the normal in all portions of the State, there was some injury to crops, notably corn, from drought, the intervals between rains, combined with hot weather drying the ground rapidly.

A general increase in the amount of precipitation is noted from the coast counties westward to the Alleghanies.

The average number of days on which 0.01 of an inch or more of rain or snow fell, was 10 in Tidewater Virginia; 10 in Middle Virginia, and 11 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 SW.; Middle Virginia, SW.; the Great Valley, W. Prevailing direction for the State, SW.

**WEATHER.**—Tidewater Virginia, average number of clear days, 12; partly cloudy, 10; cloudy, 8. Middle Virginia, average number of clear days, 16; partly cloudy, 9; cloudy, 5. The Great Valley, average number of clear days, 13; partly cloudy, 10; cloudy, 8. For the State, average number of clear days, 14; partly cloudy, 10; cloudy, 7.

### NOTES AND COMMENTS.

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Attention is invited to the importance of a proper exposure for instruments. Several instances have recently occurred when the value of the record has been much impaired by a faulty exposure. Unusually high or low temperatures should be carefully verified before making a record of them. Recent instructions cover this point fully, and are commended to the Voluntary Observers.

The season when light frosts are likely is rapidly approaching, and it is particularly desirable that their occurrence should be carefully looked for and noted.

Climatological Data for July, 1897.

Stations.	Counties.	Elevation, feet.	Length of record, years.	TEMPERATURE, IN DEGREES FAHRENHEIT.							PRECIPITATION, IN INCHES.					SKY.			Prevailing direction of wind.	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.		
<b>TIDEWATER VIRGINIA.</b>																				
Ashland	Hanover	220	5	77.3	+0.6	97	3	57	15	29	4.93	-0.12	2.39	10	8	11	12	sw.	E. L. C. Scott.	
Birdsnest (r)	Northampton	40	28	79.6	+0.4	91	23	70	15	25	6.45	+1.73	2.35	11	6	17	8	sw.	C. R. Moore.	
Cape Henry	Princess Anne	17	22	78.3	+1.3	96	23	67	16	24	5.63	0.00	1.63	11	9	11	11	sw.	U. S. Weather Bureau.	
Doswell	Hanover	134	0	82.3	.....	98	10	58	30	40	2.09	.....	1.01	4	13	2	16	sw.	C. W. Butterworth.	
Hampton	Elizabeth City	3	9	79.5	+1.0	91	26	65	15	18	3.27	-2.28	0.55	11	10	9	12	sw.	C. L. Goodrich.	
Norfolk	Norfolk	3	25	79.3	+0.2	92	3	68	28	20	4.42	-1.50	1.12	14	11	13	7	sw.	U. S. Weather Bureau.	
Petersburg	Dinwiddie	11	9	78.7	+2.0	96	3	59	13	31	2.72	-2.19	0.73	9	15	9	7	sw.	Prof. Jas. M. Colson	
Richmond (near)	Henrico	96	21	77.2	-0.6	97	4	62	16	30	.....	.....	.....	23	0	0	8	sw.	Capt. J. C. Shafer.	
Spottsville	Surry	15	7	78.3	+1.1	95	3 12	26 57	15	34	3.99	-2.41	1.12	10	16	6	9	sw.	B. W. Jones.	
Sunbeam	Southampton	60	2	78.5	-0.6	94	1 2 3	4 60	15	25	4.13	-3.29	1.26	9	13	15	3	sw.	Dr. W. H. Daughtry.	
Warsaw	Richmond	15	3	78.3	+0.9	94	12	56	15	29	3.54	-2.12	1.88	6	3	26	2	sw.	C. H. Constable.	
Williamsburg	James City	200	0	74.3	.....	90	25	60	3 13	18 19	.....	.....	.....	6	21	7	3	sw.	L. S. Williams.	
<b>MIDDLE VIRGINIA.</b>																				
Alexandria	Alexandria	35	37	77.7	-0.7	94	25	59	14	26	4.65	+1.88	1.49	13	6	22	3	se.	H. C. Slaymaker	
Barboursville	Orange	0	0	76.0	.....	90	3 10	31 58	15	27	4.50	.....	1.10	16	15	14	2	sw.	Dr. Thos. H. Ellis.	
Bedford City	Bedford	900	6	76.3	-0.1	98	3	56	14	33	1.70	-0.82	0.59	8	16	14	1	w.	J. T. Davidson.	
Bon Air	Chesterfield	130	2	79.1	+0.6	100	3	60	15	32	3.74	-0.77	1.35	14	16	2	13	se.	Wm. H. Pleasants.	
Buckingham	Buckingham	550	3	75.8	-1.0	94	3	54	14	31	2.92	-1.09	1.10	9	25	3	3	sw.	Dr. W. E. Pratt.	
Callawille	Brunswick	570	2	77.4	-0.6	94	3	57	15	30	5.03	-1.30	1.60	11	9	22	0	sw.	F. M. Gage.	
Carrollville	Prince Edward	0	8	81.4	+4.3	100	3 5 7	62 31	31	36	6.93	+2.60	3.25	8	16	8	7	sw.	Jno. R. Martin.	
Fredericksburg	Spottsylvania	47	3	77.7	+0.8	95	3	57	15	31	5.04	-0.65	1.76	14	18	4	9	sw.	E. C. Rowe.	
Gordonsville	Orange	0	0	77.7	.....	92	1	58	11 14	31 17	.....	.....	.....	22	0	9	s.	H. S. Smithers.		
Guinea	Caroline	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	26	3	2	sw.	M. A. Nunn.	
Leesburg	Loudoun	100	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	19	13	9	sw.	C. A. English.	
Lynchburg	Campbell	17	17	76.6	-1.2	94	3	61	11 17	20 25	3.72	+2.85	2.73	9	15	9	7	nw.	U. S. Weather Bureau.	
Maidens a.	Goodland	525	1	.....	.....	96	23	72	11 17	20 25	3.72	.....	0.94	9	15	9	7	sw.	J. R. Hopkins.	
Manassas	Prince William	185	2	77.1	+1.7	95	10	56	15	29	4.14	+1.23	1.35	6	19	11	1	nw.	Thos. H. Lion.	
Quantico	Prince William	317	7	77.4	-0.1	93	23	55	15	30	.....	.....	.....	20	6	5	5	s.	E. V. King.	
Rocky Mount	Franklin	0	0	76.9	+0.9	95	2 3 4	57 15	15	34	1.91	-1.81	0.40	6	10	19	2	.....	J. H. Binford.	
Stamardsville	Greene	1150	2	74.0	-0.9	92	6	54	15 16	31 7	7.70	+2.21	2.05	9	.....	.....	.....	.....	W. N. Parrott.	
Warrenton	Fauquier	560	6	78.4	.....	91	2 6	64 15	15	20	4.00	.....	0.98	12	17	8	6	swnw	J. T. Preston.	
<b>THE GREAT VALLEY.</b>																				
Big Stone Gap	Wise	1966	6	71.2	0.0	94	4	46	14	35	6.78	+0.10	2.20	10	11	8	12	.....	John W. Fox, Sr.	
Blacksburg	Montgomery	2100	7	70.9	-0.2	94	3	49	14 15	37 6	6.17	+1.38	1.80	13	15	8	8	sw.	Prof. W. B. Alwood.	
Bristol	Sullivan, Tenn.	1676	2	72.9	+1.9	94	4	50	13	27	6.13	+0.09	1.68	11	17	8	8	sw.	J. Bunting, Jr.	
Burke's Garden	Tazewell	0	0	70.4	+0.4	88	3 4	47 14	14	33	4.61	+0.31	0.93	11	8	13	10	w.	C. H. Greever.	
Christiansburg d	Montgomery	2160	9	.....	.....	.....	.....	.....	.....	.....	4.34	.....	1.61	9	9	9	9	w.	H. D. Walters.	
Clifton Forge	Allegheny	1047	2	73.7	.....	97	5	51	13 15	34 3	3.78	.....	0.87	13	16	1	14	sw.	T. P. Halloran.	
Dale Enterprise	Rockingham	1350	10	72.9	-1.4	96	2 3 4	47 15	15	40	4.15	-0.29	1.02	13	15	11	5	s.	L. J. Heatwole.	
Dwale	Dickenson	0	0	.....	.....	.....	.....	.....	.....	.....	4.09	.....	1.40	12	8	19	4	nw.	Frank M. Beverly.	
Goshen	Rockbridge	1590	1	79.5	-0.3	93	4 7	25 60	14 31	29 7	2.25	-2.13	2.50	5	24	2	5	w.	J. B. Wood.	
Graham's Forge	Wythe	3	3	71.1	-0.9	92	4	47	15	26	4.75	+0.73	2.00	11	6	22	3	sw.	David Graham.	
Hot Springs	Bath	2195	4	75.8	+5.2	92	4	58	14 15	36 3	3.26	+0.12	0.85	8	11	14	6	.....	A. M. Stimson.	
Lexington	Rockbridge	946	23	73.9	-0.3	90	3	54	15	29	3.99	-0.09	1.06	12	11	13	7	se.	Prof. H. C. Campbell.	
Marion e	Smith	2124	8	73.8	+1.0	94	4 6	48 14	14	36	4.97	+0.32	0.92	11	9	13	9	w.	A. T. Lincoln.	
Monterey	Highland	3008	2	68.7	+2.1	86	7 9	10 48	14	32	4.23	-0.69	0.90	10	15	9	7	sw.	Jos. Jones.	
Salem	Roanoke	1200	6	77.0	+1.1	95	3	61	14	25	3.64	-1.58	1.18	12	.....	.....	.....	sw.	Prof. S. C. Wells.	
Stanleyton	Page	1064	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. K. Grim.	
Staunton	Augusta	1380	6	74.3	+0.2	93	3	56	15 30	32 3	3.70	+0.12	1.52	9	18	6	7	sw.	W. C. Hedrick.	
Stephens City a	Frederick	4	4	76.6	+0.8	98	7	57	15	31	4.49	+0.19	1.38	14	13	10	7	w.	W. B. Steele.	
Sword's Creek	Russell	0	0	76.4	.....	92	4	60	13	18	6.81	.....	2.20	11	14	0	17	sw.	J. H. Steele.	
Woodstock	Shenandoah	927	0	76.5	.....	100	7	55	14	30	4.38	.....	1.18	12	4	24	3	w.	H. F. Miley.	
Wytheville	Wythe	2370	25	72.2	+0.7	92	3 4	52 14	15 30	3 7.2	-1.06	0.93	.....	14	14	9	8	w.	Dr. P. B. Green.	

+ Estimated. † Incomplete. tr. trace, or less than 0.01 of an inch. (r) Means from 7 am, 2 and 9 + 9 pm. observations. Letters following name of station indicate number of days missing from the report, as b=2 days, etc.

MISCELLANEOUS PHENOMENA.

**Thunderstorms:** Ashland, 11, 19, 27; Petersburg, 14; Alexandria, 6, 12, 13, 18, 23; Barboursville, 1, 7, 10, 11, 12, 13, 17, 19, 23, 27, 28; Bon Air, 11; Buckingham, 1, 7, 8, 11; Fredericksburg, 7, 11, 18, 19; Gordonsville, 9, 11, 12; Burke's Garden, 6, 10, 24; Bristol, 5, 6, 21; Christiansburg, 23; Clifton Forge, 6; Dale Enterprise, 1, 7, 11, 17, 18; Staunton, 1, 7, 11, 18, 28; Stephens City, 7, 11, 18, 21, 26, 27, 28, 31; Wood-

stock, 1, 6; Wytheville, 13, 14.  
**Hail:** Petersburg, Spottsville, Graham's Forge, 14; Wytheville, 4, 5, 6, 7, 8, 9.  
**Halos, Solar:** Spottsville, 16.  
**Fogs:** Spottsville, 2, 3, 4, 5, 28; Alexandria, 6; Buckingham, 3, 6; Fredericksburg, 6, 19; Staunton, 8; Woodstock, 8, 12, 17, 21, 28; Wytheville, 2, 19.  
**Gales:** Fredericksburg, 7; Spottsville, Wytheville, 24.





Daily Precipitation for July, 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					
<b>TIDEWATER VIRGINIA.</b>																																				
Ashland	tr						tr				.21	.63	.06	.11			.12	.20	.45	.47	tr							.29	2.39					4.93		
Birdsnest	.10							.30										tr	.55	2.15	.20	.75					1.60	.10					6.45			
Cape Henry								.21			.57		1.00	.55			.15			.14	.30	.68					.40	1.00	.63				5.63			
Doswell †											tr	.07	.01				tr			1.00														2.09		
Hampton							tr	.02	tr	tr	tr		.29	.43			.04		.01	.34	.41	.30	.44					.55	.44				3.27			
Norfolk	tr						tr	.06	tr		.02	.06	.12	.34			.70	.08	.02	.16	.24	.62	.44			tr	1.12	.87	or				4.82			
Petersburg	.08					tr					.67		.56			.03	.10	.10	.73	.16								.29					4.72			
Spottsville	.03	.76									tr	1.12	tr	.08			tr	tr	.08	.52	.86		.14				.10	.30	tr				3.99			
Sunbeam							tr	tr	.55			.70	.13	tr			tr	tr	.21	.31	.67						.12	.18					4.13			
Warsaw	tr						.05				tr	tr	.45			tr	tr	.15	1.88				tr					.86	.15					3.54		
<b>MIDDLE VIRGINIA.</b>																																				
Alexandria	.05	.01				.03		tr		tr		1.49	tr				.08	.76	.65	.11	.21		.03				1.09	.13	tr	or			4.65			
Barboursville	.79	.04		tr			.25	tr			tr	1.10	.20	.06		tr	.11	.15	.17	.32	.08	.03	.10				.08	.82	.25				4.50			
Bedford City	.01											.59					.12		.37	.15	.14		.21				.11	tr					1.70			
Bon Air	.05								.02	.01	tr	.01	1.35	.29			tr	.30	.07	.14	.94		.02					.37			.07			3.74		
Buckingham	.27						.10	.31		.03		.10	.12			tr	tr	tr	1.10	.68							tr	tr	tr					2.92		
Callville	.10								tr	.92		1.00	.60				.25	.03	.77		.38					.02		.86						5.03		
Danville																																				
Farmville						.33						1.00	.50				.25	1.00	3.25	.50	tr														6.93	
Fredericksburg	.06	tr					1.01	.07				.64	.06	.27		tr	tr	.38	1.76	.16	.12	.03		.03			.36	tr	tr					5.04		
Guinea							.09					.10																							0.19	
Leesburg							.06										.26	.22		.18							1.32								2.04	
Lynchburg	2.21	.01		tr							tr	.82	.16			tr	.07	.02	tr	.69	1.30	1.43		tr			.01	.01						6.75		
Maidens							.29	.21				.60	.30				.55	.08		.75							.14	.80						3.72		
Manassas							.55					tr	.76	.30				.28	.97	tr	tr	.23		tr		1.35									4.14	
Rocky Mount	tr			tr				.20				.30					tr	tr		.40	.35						.26								1.91	
Stanardsville	.67							.10				tr	.55			.16		2.05	.95	1.40	.45	.20			tr		1.33							7.70		
Warrenton			.43				.15					.11	.70	.12				.23	.98		.22	.35		.10				.43	.18					4.00		
<b>THE GREAT VALLEY.</b>																																				
Big Stone Gap	.43	.06		tr		.28	.58				.17		tr	tr			.63	tr	.04	.71	1.68	2.20				tr		tr	tr					6.78		
Blacksburg	.03			1.80		.21						.66	.42				.10			.15	.16	.16	.42	.29	1.12		.65							6.17		
Bristol	.73				.28	.94		.32			tr	.10					.28	tr		tr	1.68	.35													6.13	
Burke's Garden	tr				.63	.93		.16				.08		.61			.12		.60		tr	.32	.66		tr	.15	tr	.07	.05	tr					4.61	
Christiansburg					.31							.22	.10						tr	.34	.63	.32	1.00	1.61	tr	.04		.29							4.32	
Clifton Forge	.80					.77					.09								.24	.13	.87	.32	.12					.29							3.78	
Dale Enterprise	.57					.10						.16	.26				tr	.06	1.02	.38	.75	.14		.11				.10	.35	.15					4.15	
Dwale	.40	tr				.15	.03	.28			tr	tr	.40				.30		2.00	tr	.31	1.40	.30				.36	tr	.10						4.09	
Goshen †	2.00												.50																						7.25	
Graham's Forge	.32	tr				.72	tr	tr				.08	.13				.02	.16	tr	.03	.08							.80							4.75	
Hot Springs	.85					.27						.25						.40			.43	.68													3.26	
Lexington	1.06					.25	.21				.10	.14	.52				tr	.17	.12	tr	.63	.59			tr		.18								3.99	
Marion	.62	.30			.50		.15	tr	.60				.50	tr			.08			tr	.57	.80					.20	.05							4.97	
Monterey	.75				tr	tr	tr	tr				.65	tr	.50				.10	.90	.10	.02	.85		.32			tr								3.63	
Salem	tr			tr			tr	.16	.02				.52	.26	tr			.03	.15	.02		1.18	.23				.54		.35	.18					3.64	
Saltville																																				
Stanleyton																																				
Staunton	1.18	tr					1.52					.21	.18				tr	tr	.06		.22	.15						.08							3.70	
Stephens City												.13	.28	.09			1.05	.11	.17	.03	tr	.49		.06			.67	.52	1.38	.08		tr			4.49	
Sword's Creek	.57	tr	.52		.50	.22	.43	.80		1.30		.20						tr	1.20	1.00						.20	.30	tr	tr						6.81	
Woodstock	.14						.14					.43	.10	tr		tr		.05	.55	1.18	.18	.15			tr	tr	.36		.68	.42	tr				4.38	
Wytheville		.04	tr			.05	.08	.22				.26	tr				.05	.02	.77	.02	.17	.28	tr	.02	.81		.93								3.72	

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