

# Maryland State Weather Service

(INCLUDING MARYLAND AND DELAWARE).

CO-OPERATING WITH THE U. S. WEATHER BUREAU.

*Central Office, Johns Hopkins University, Baltimore, Md.*

## MONTHLY SUMMARY.

JULY, 1891.

**Temperature** (degrees).—Mean monthly, 71.5. Highest monthly mean, 74.8, at Kirkwood, Del. Lowest monthly mean, 68.7, at Cumberland, (E. T. Shriver). Highest temperature, 92, at Kirkwood on the 14th. Lowest temperature, 51, at Cumberland on the 12th, (Howard Shriver). Greatest local monthly range, 39, at Cumberland, (H. Shriver). Least local monthly range, 20, at Jewell. Mean monthly range, 31.1. Mean maximum, 78.8. Mean minimum, 61.4.

**Precipitation** (in inches).—Average, 8.68. Greatest amount, 12.38, at Barron Creek Springs. Least amount, 5.17, at Cumberland, (E. T. Shriver).

**Wind**.—Prevailing direction, southwest.

**Thunderstorms**.—At Baltimore, on the 3d, 15th, 24th, and 28th; at Barron Creek Springs, on the 3d, 7th, 15th, 16th, 18th, 20th, 21st, 23d, 24th, 28th, 29th, and 30th; at Frederick, on the 14th and 20th; at Jewell, on the 3d, 15th, 18th, 28th, and 30th; at Leonardtown, on the 3d, 7th, 15th, and 20th; at Mt. St. Mary's, on the 3d, 14th, 18th, 20th, 24th, 28th, and 30th; at Summit Hall, on the 4th, 15th, 18th, 19th, 20th, 23d, 24th, and 25th; at Taneytown, on the 3d, 14th, 24th, and 28th; at Woodstock College, on the 18th, 20th, 24th, 28th, and 30th.

**Tornado**.—On the 18th, about 5 p. m., Southern Maryland was visited by a tornado. It originated in the northern portion of Charles county and passed northeast across Prince George's, Calvert, and a portion of Anne Arundel counties, disappearing near the Bay coast, two or three miles north of Fair Haven, Anne Arundel county. Five people were seriously injured, one house was blown away, another was almost destroyed, while six others were considerably damaged; nine barns were destroyed and their contents, including vehicles and housed crops, generally ruined; three horses were badly hurt; growing crops were much damaged, and a great number of fruit and forest trees were prostrated. A careful, unexaggerated estimate, places the money value of the damage done at \$12,000.

**Halos**.—At Baltimore, on the 13th, and at Barron Creek Springs, on the 10th, 11th, 17th, 19th, and 26th.

**Hail**.—At Leonardtown on the 3d.

**Meteors**.—Observed at Barron Creek Springs, on the 9th and 26th.

Average number of cloudless days, 15; partly cloudy days, 7; cloudy days, 9; rainy days, (.01 of an inch or more,) 13.

Verification of forecasts; (signals displayed at Delaware City, Del., Milford, Del., and Wilmington, Del.):

Weather, . . . . .	83.3 per cent.
Temperature, . . . . .	93.7 " "
Average, . . . . .	88.5 " "

# MONTHLY SUMMARY OF REPORTS, JULY, 1891.

STATIONS.	COUNTIES.	Altitude.	Latitude.	Longitude.	† BAROMETER.				TEMPERATURE.										Total precipitation.	Clear days.	Fair days.	Cloudy days.	Number of rainy days (01 or more.)	Prevailing Wind.	OBSERVERS' NAMES.
					Monthly mean.	Maximum.		Minimum.		Monthly mean.	Mean of maxi- mum.	Mean of mini- mum.	Maxim.		Minim.		Monthly range.								
						Height.	Date.	Height.	Date.				Degrees.	Date.	Degrees.	Date.									
Baltimore.....		179	39° 17'	76° 36'	30.034	30.333	22	29.759	18	71.6°	79.5°	63.7°	89	14	55	8	34°	7.79	7	14	10	14	S.W.	{ G. N. Wilson, W. D. White, G. H. Rogers. Albert E. Acworth.	
Barron Cr'k } Springs....}	Wicomico.....	40	38° 30'	75° 39'	...	...	...	...	...	71.2°	79.6°	64.8°	85	15	55	10	30°	12.38	7	15	9	18	S.E.		
Cumberland...	Alleghany.....	...	39° 39'	78° 45'	30.014	30.249	10 11	29.770	18	72.8°	83.6°	62.9°	90	14 23	51	12	39°	6.29	...	...	...	12	W.		H. Shriver.
Cumberland...	Alleghany.....	700	39° 39'	78° 45'	...	...	...	...	...	68.7°	79.7°	60.9°	84	14 28	54	9	30°	5.17	16	8	7	12	...	E. T. Shriver.	
Frederick.....	Frederick.....	...	...	...	...	...	...	...	...	72.1°	80.4°	63.1°	88	14	55	9	33°	6.15	...	...	...	13	...	McClintock Young.	
Jewell.....	Anne Arundel	...	...	...	...	...	...	...	...	74.7°	...	...	82	14	62	8	20°	12.15	...	...	...	9	...	Jos. Plummer.	
Kirkwood.....	New Castle, } Del.....}	...	...	...	...	...	...	...	...	74.8°	...	...	92	14	58	8	34°	...	16	1	14	...	...	W. C. L. Carnagy.	
Leonardtown.	St. Mary's.....	...	...	...	...	...	...	...	...	70.2°	...	...	90	15	58	8	32°	10.32	...	...	...	19	S.W.	G. W. Joy.	
McDonogh.....	Baltimore.....	535	39° 23'	76° 44'	...	...	...	...	...	69.9°	78.1°	61.7°	85	16	54	9	31°	8.58	...	...	...	12	...	G. M. Carvill.	
Mt. St. Mary's	Frederick.....	720	36° 41'	77° 21'	...	...	...	...	...	72.0°	70.8°	52.7°	87	15	56	8	31°	8.45	26	1	4	12	...	J. A. Mitchell, M. A.	
Summit Hall..	Montgomery..	...	...	...	...	...	...	...	...	70.5°	...	...	88	14	55	8	33°	8.00	17	4	10	...	...	J. T. DeSellum.	
Taneytown....	Carroll.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.20	...	...	...	12	...	C. W. Weaver.	
Woodstock } College....}	Howard.....	392	39° 20'	76° 49'	30.067	30.322	11	29.719	30	70.0°	...	...	84	14	58	8 9	26°	...	...	...	...	...	...	T. J. A. Freeman, S. J.	
Averages.....					30.038					71.5°	78.8°	61.4°					31.1	8.68	14.8	7.2	9.0	13.3		W. D. W., 8-11-91.	

† Readings reduced to sea level.