STATE WEATHER SERVICE DIVISION,
WEATHER BUREAU.
RECEIVED AUG 12, 1895

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU,

CO-OPERATING WITH THE

MARYLAND STATE WEATHER SERVICE

Established by an Act of the General Assembly of the State of Maryland, 1892,
and Maintained in Connection with

The Johns Hopkins University and the Maryland Agricultural College.

CENTRAL OFFICE, JOHNS HOPKINS UNIVERSITY, BALTIMORE, MD.

PROF. WM. B. CLARK, Johns Hopkins University, Director.

PROF. MILTON WHITNEY, Maryland Agricultural College, Secretary and Treasurer.

DR. C. P. CRONK, U. S. Weather Bureau, Meteorologist in Charge.

VOL. V, NO. 4. MONTHLY REPORT. AUGUST 8, 1895.

Contains Review for the Month of July.

The Climate of Cumberland, Md.

In a letter recently received at the central office, Mr. Howard Shriver gives the following interesting information concerning the Climate of Cumberland:

An analysis of the climate of Cumberland will dissipate the idea of singularity. In the first place, the city is located in a basin surrounded by mountains. The third station at Cumberland (more properly, Boettcherville), is separated from the other two by a ridge 1000 feet high, and is situated in a valley through which flows Braddock's Run. Notwithstanding all this I wish to draw attention to the wide difference between the thermometers on several occasions.

The constant difference between the stations (1 and 2), in the city, is about 4°. My station is on a low peak, and is separated from the other by a valley; the two stations having nearly the same altitude. But there is a great difference in other respects. My place is comparatively destitute of trees, while the vicinity of the other city station is covered with trees, some of them remaining from the old forest. The ground falls off, north and south, making the place a sort of wooded ridge. It does not seem strange to me that the instruments should differ 4°; in short, that locality is one of the coolest in town, while mine represents, more nearly, the large, unshaded portion, so that I find my markings the same, or lower than those of the town thermometers. The Boettcherville station, you would expect from my description, and correctly, to give lower markings than mine.

It is on account of these very discrepancies that I regard it important to have duplicate observations. In my judgment, the readings of the other city station would misrepresent the climate of Cumberland; mine would likewise misrepresent, taken *per se*. The average between the two stations would much better represent the true temperature, erring (if at all) by making it too low.

The above mentioned differences in situation apply still more forcibly in regard to humidity. I noticed the same thing when living at the south; being struck by the change in the wet and dry thermometers, consequent upon my removal from one of the lowest to one of the highest localities in the town. It should be so. Thermometer observations, however near each other, showing identical results are *prima facie* evidence that something or somebody is wrong. I have not inquired of the other city observer the exact hours at which he takes his observations; they probably differ enough from mine to cause part of the discrepancy. My observations are taken as near 7 A. M., 2 P. M. and 9 P. M. as is possible for me to take them; the morning observation, however, is often towards 8 o'clock, and though I note each irregularity, I get my averages without making the allowance.

I run two sets of observations, one on the north and one on the south side of the house; the monthly average, however, differs so little that I am much surprised at it. It only goes to show that a moderately correct set of regular observations will give final results, *i. e.* averages, corresponding very closely. My own personal feelings are sufficiently satisfactory evidence, however, of the fact that my station is a good deal warmer than the other. I append observations taken by the observer of the Boettcherville station and myself. I was looking up some items on cold waves when these heavy discrep-

ancies met my eye. I drew Mr. Brown's attention to it, but his recollection of the occasions caused him to feel assured that he had made no mistake.

		SHRIVER.	BROWN.	D.
1894.	Feb. 17,	+8	—2	10
	Dec. 28,	15	10	5
	" 29,	4	Zero	4
1893,	Jan. 10,	10	5	5
	" 16,	5	Zero	5
	" 17,	10	—2	12
	" 18,	2	—14	16
	Feb. 21,	2	—5	7
	Dec. 21,	16	12	4
	" 21, 9 p. m.	28	20	8
1892,	Feb. 6,	4	—8	12
	Dec. 25,	21	16	5
	" 25, 9 p. m.	26	12	14
	" 28,	12	6	6
	" 29,	12	7	5
	" 31,	25	22	3

You may think that some of this difference was in the thermometer. Perhaps; Mr. Brown's is a common instument which I compared with my own (made by Green), but only for medium points above zero. I am aware that the common instrument is seldom corrected for points near zero; but I presume this would by no means account for these differences. It would be very gratifying to me to hear that you are so sure the bad results come from the quality of his instruments, as to induce you to send him better ones.

I have been keeping a register of the humidity, air tension, &c., (wet and dry bulbs), and think they (like the thermometer readings) will be misleading. My place is high and dry. Had I a corresponding set of readings from a low, moist spot like Mr. Brown's, at Boettcherville, the average of the two places would exhibit a fairer view of our humidity, &c., as derived from the psychrometer.

This letter you see has been drawn out by your reference to our records; I hope it will clear up the matter, somewhat.

COPY OF LETTER PUBLISHED IN THE UNITED STATES OFFICIAL POSTAL GUIDE, JUNE, 1895.

Important Notice to Postmasters Concerning Weather Forecasts.

POSTOFFICE DEPARTMENT,
WASHINGTON, D. C., May 1, 1895.

The Honorable Secretary of Agriculture, desiring to give the public the fullest possible advantages to be derived from the daily weather forecasts, has brought to my attention a plan by which a much wider dissemination of the daily predictions of the Weather Bureau might be secured through the co-operation of this department.

It is proposed to telegraph daily to postmasters at distributing offices the weather forecasts, to be bulletined in their offices for the benefit of the public, and also to be mailed to outlying postoffices which can be reached in time to make the forecasts of value. A simple device by which the forecasts can be readily and easily duplicated and stamped upon postal cards will be furnished co-operating postmasters by the Weather Bureau, as well as the necessary postal cards for use in this connection.

In view of the importance of this service and the special benefits to be derived therefrom, I trust that each postmaster invited to co-operate in this work will take an interest in the matter and devote to it the few minutes necessary daily to prepare the cards and give them proper distribution.

WM. L. WILSON,
Postmaster General.

Review of the Month—July.

WEATHER.

Temperature (degrees). Monthly mean (entire territory), 71.4, being 4.4 below the normal; highest monthly mean, 76.8, at Pope's Creek; lowest monthly mean, 62.3, at Deer Park. Highest temperature, 102, at Westernport, on the 20th; lowest temperature, 32, at Deer Park, on the 31st. Greatest local monthly range, 57, at Deer Park; least local monthly range, 20, at Cherryfields. Monthly mean range (entire territory), 42.1; monthly mean maximum, 81.3; monthly mean minimum, 61.4.

Precipitation (in inches).—Average (entire territory), 3.29, being .96 below the normal. Greatest amount, 7.68, at Cherryfields; least amount, .81, at St. Charles College.

Thunderstorms.—At Bachman's Valley, on the 5th, 20th, 27th; at Baltimore, on the 16th, 27th; at Charlotte Hall, on the 16th, 20th; at Cherryfields, on the 16th; at Frederick, on the 5th, 16th, 19th, 21st, 25th, 27th; at Garrison, on the 5th, 28th; at Glyndon, on 20th, 27th; at Grantsville, on the 5th, 8th, 15th, 16th, 17th, 19th, 20th, 21st, 22nd, 23rd, 27th; at Green Spring Furnace, on 27th; at Hancock, on 20th, 21st, 27th; at Jewell, on 5th, 16th, 20th, 30th; at Laurel, on 20th; at Mardela Springs, on 15th, 16th, 17th, 20th, 22nd, 25th, 27th, 30th; t Millsboro, on the 4th, 5th, 15th, 16th, 20th, 21st, 22nd, 27th, 30th, 31st; at Mt. St. Mary's, on the 27th, 28th; at Oakland, 5th, 8th, 15th, 19th, 20th, 27th; at Oldtown, on the 21st; at Philadelphia, on 5th, 16th, 21st, 25th, 27th, 30th; at Princess Anne, on the 1st, 5th, 30th; at Seaford, on the 5th, 30th; at Sharpsburg, on the 20th, 21st, 27th; at Solomon's, on the 5th, 9th, 15th, 16th, 20th, 25th, 30th; at Sunnyside, on the 5th, 15th, 19th, 21st, 27th; at Wilmington, on the 25th, 27th.

Fogs.—At Jewell, on the 12th; at Mardela Springs, on 7th, 8th, 17th, 26th; at Oakland, on the 2nd, 3rd, 17th, 30th; at Oldtown, on the 30th; at Sunnyside, on the 2nd, 10th, 29th; at Wilmington, on July 1st, 6th, 8th, 12th, 13th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 25th, 26th, 27th, 29th, 30th, 31st.

Halos, Solar.—At Philadelphia, on the 24th.

Halos, Lunar.—At Bachman's Valley, on the 12th; at Mardela Springs, on the 28th, 29th, 30th; at Millsboro, on the 30th.

Corona, Lunar.—

Meteor.—At Bachman's Valley, on the 17th; at Jewell, on the 17th; at Solomon's, on the 25th.

CROPS.

Week ending July 8th.

Wheat harvest was about over, except in extreme western sections, and threshing was in progress. Corn was doing well generally. Tobacco showed a rapid growth, but needed dry, cool weather. Oats were ripening, with prospects of a heavy yield. Haymaking progressed slowly, on account of the wet weather; pastures were excellent. Tomato planting was over, and the plants looked well. Early potatoes were being dug in Western Maryland, and peas and beans were being marketed. Small fruits were plentiful. A few peaches and apples were being shipped from Eastern Maryland.

Week ending July 15th.

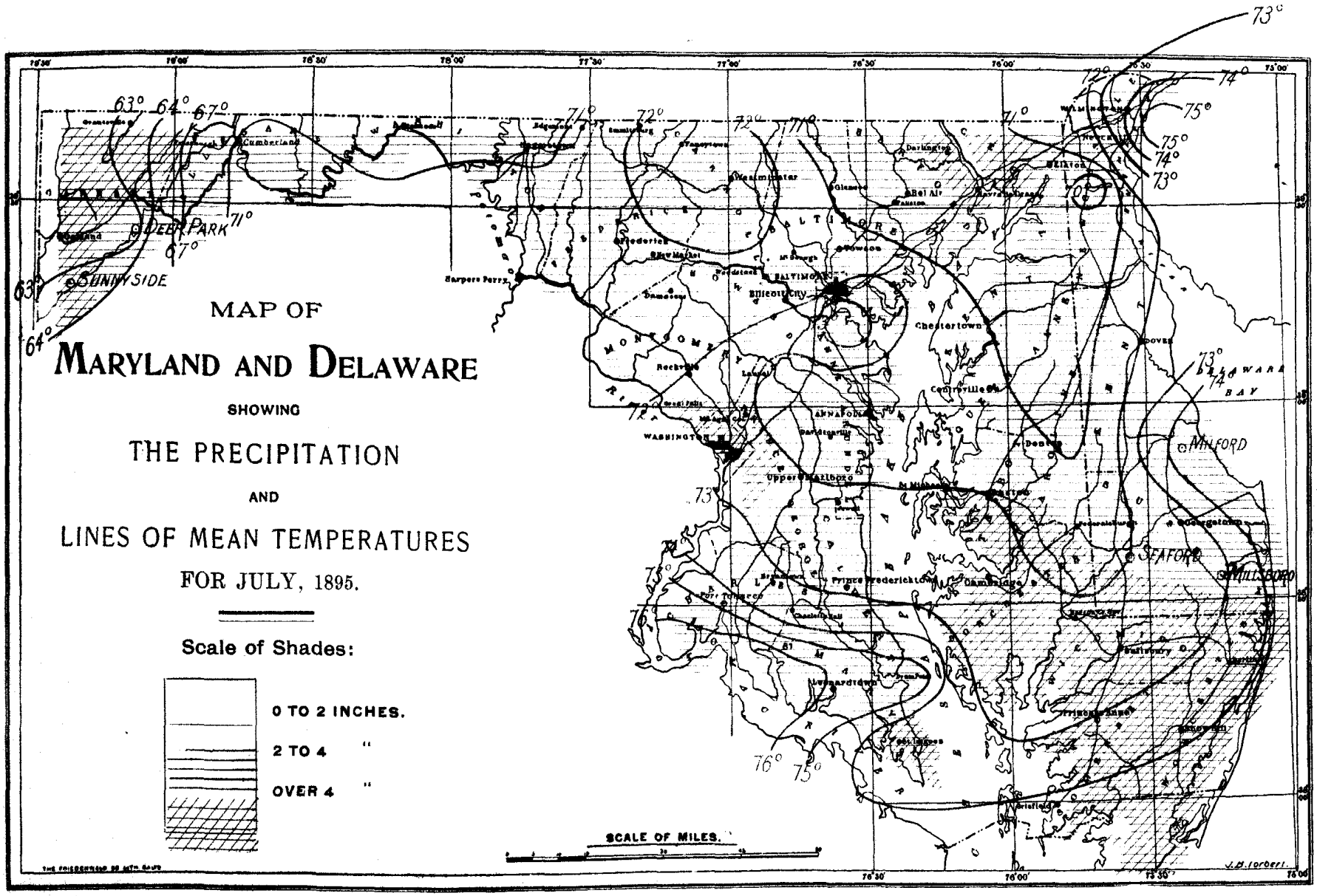
Wheat and rye harvesting were over, except in Garrett county, where they were just beginning. Some threshing had been done, with varying yields. Oats were heavy and about ready for cutting. Haymaking was progressing with favorable weather and excellent results. Corn was beginning to tassel, and looked remarkably well. Potatoes were excellent, and garden truck was thriving. Tomatoes were making a good growth. Some early peaches were shipped from Western Maryland, and heavy shipments were being made from Delaware. Apples promised well and small fruits were abundant.

Week ending July 22nd.

Some large yields of wheat were reported, but on the whole the returns were below the average. Oats were an excellent crop, and being cut. The prospects for a good crop of corn were never better. Millet was making a good showing and scarlet clover was being sown. Pastures were good in western sections, but getting short in southern. Truck, generally, was in fair condition, but tomatoes and melons were affected by "blight" in portions of Southern Maryland. The apple prospects were excellent, and early apples and pears were ripening. The shipping of peaches continued from western and eastern sections. An immense yield of huckleberries was reported from Western Maryland.

Week ending July 29th.

Corn was much benefited by the rains of the previous week and made a wonderful growth. Oats were being cut, and some were threshed, yielding exceedingly well. Pastures were improved and stock was doing well. Buckwheat was in bloom and promised well. Tobacco was in excellent condition, particularly on heavy land. Potatoes were yielding well, and sweet potatoes were promising. Apples were a good crop generally, but peaches were not abundant. Grapes were a heavy crop, but affected by "rot." Berries were still plenty in western and eastern sections.


MAP OF
MARYLAND AND DELAWARE
SHOWING
THE PRECIPITATION
AND
LINES OF MEAN TEMPERATURES
FOR JULY, 1895.
Scale of Shades:
0 TO 2 INCHES.
2 TO 4 "
OVER 4 "
SCALE OF MILES.
SUNNYSIDE
QUEEN PARK
MILFORD
SEAFORD
MILLSBORO
BALTIMORE
WASHINGTON
ANNAPOLIS
Cumberland
Frederick
Westminster
Chestertown
Centreville
Prince Frederick
Salisbury
Snow Hill
Rockville
Laurel
Bel Air
Darlington
Elkton
Oxford
Dover
Georgetown
Harpers Ferry
63°
64°
67°
71°
72°
73°
74°
75°
76°

Meteorological and Weather Signal Display Stations of the Maryland State Weather Service.

Stations.	County.	Meteorological Observer.	Displayman.
Annapolis	Anne Arundel	J. E. Abbott	W. M. Abbott.
Appleton	Cecil		W. C. Henderson.
Bachman's Valley	Carroll	J. M. Myers.	
Baltimore		J. B. Marbury. G. N. Wilson. A. T. Brewer. F. S. Coale.	Weather Bureau.
Baltimore, (The Anchorage)			Thos. Hansen.
Bel Air	Harford		N. N. Nock.
Bel Alton	Charles	Walter Cox.	
Boettcherville	Allegany	F. F. Brown.	
Bradshaw	Baltimore		B. F. Taylor.
Buckeystown	Frederick		A. W. Nicodemus.
Burkittsville	Frederick	J. P. Slifer.	
Cambridge	Dorchester		Samuel Lehman.
Charlotte Hall School	St. Mary's	J. Francis Coad.	
Cherryfields	St. Mary's	J. Edwin Coad.	
Chestertown	Kent	Hon. M. deK. Smith.	
Cumberland	Allegany	Shriver and Rizer. E. T. Shriver.	
Darlington Academy	Harford	Prof. A. F. Galbreath.	
Deer Park	Garrett	S. P. Specht.	
Delaware City, Del	New Castle		W. E. Reybold.
Denton	Caroline	F. C. Ramsdell.	
Dickerson	Montgomery		W. H. Dickerson.
Distributing Reservoir, D. C		Maj. J. G. D. Knight.	
Dover, Del	Kent	Jno. S. Jester	Philip Burnet.
Easton	Talbot	Henry Shreve	Henry Shreve.
Fallston School	Harford	G. G. Curtiss, A. M.	
Flintstone	Allegany		N. T. Downes.
Frederick	Frederick	McClintock Young,	"The News."
Frostburg	Allegany		J. N. Benson.
Frederica, Del	Kent		Miss E. V. Newnom. Miss L. T. Frazier.
Garey P. O.	Howard		Walter Dorsey.
Garrison	Baltimore	A. W. Nyce.	
Glyndon	Baltimore	J. E. Henry	J. J. Dyer.
Grantsville	Garrett	J. S. Miller	T. H. Bittinger.
Great Falls	Montgomery	Maj. J. G. D. Knight.	
Green Spring Furnace	Washington	E. G. Kinsell.	
Hagerstown	Washington	Prof. C. E. Carl.	
Hampstead	Carroll		H. H. Meals.
Hancock	Washington	Dr. J. S. Diehl.	
Hartly, Del	Kent		Miss C. A. Forde.
Havre de Grace	Harford		W. S. McCombs.
Jewell	Anne Arundel Co	Jos. Plummer.	
Johns Hopkins Hospital, Baltimore		W. L. Woods.	
Kenton, Del	Kent		W. S. Arthurs.
Kirkwood, Del	New Castle	J. S. Carnagy.	
La Plata	Charles	J. S. Turner	J. S. Turner.
Laurel,	Prince George's	Dr. T. M. Baldwin.	
Laurel, Del	Sussex		E. D. C. Hegeman.
Lonaconing	Allegany		J. J. Robinson.
Mardela Springs	Wicomico	A. E. Acworth	L. A. Wilson.
Marshall Hall	Charles	F. H. Deal.	
Maryland Agricultural College	Prince George's	Prof. J. H. Patterson.	
McDonogh School	Baltimore	H. Norwig.	
Middletown	Frederick		G. C. Rhoderick, Jr.
Milford, Del	Kent	J. Y. Foulk	J. Y. Foulk.
Millsboro, Del	Sussex	Rev. L. W. Wells.	
Mt. St. Mary's College	Frederick	J. A. Mitchell, Ph. D.	Jos. H. Martin.
Newark College, Del	New Castle	Prof. Wm. H. Bishop.	
Oakland	Garrett	J. Lee McComas, M. D.	J. L. McComas, M. D.
Odenton	Anne Arundel		E. B. Watts.
Oldtown	Allegany	Dr. H. C. Shipley.	
Princess Anne	Somerset	Jas. R. Stewart	L. F. Wilson.
Pocomoke City	Worcester	R. M. Stevenson	R. M. Stevenson.
Pope's Creek	Charles	George Dent.	
Receiving Reservoir, D. C.		Maj. J. G. D. Knight.	
Rising Sun	Cecil		Dr. L. R. Kirk.
Salisbury	Wicomico		W. Benjamin. L. W. Gunby.
Seaford, Del	Sussex	H. L. Wallace	H. L. Wallace.
Sharpsburg	Washington	R. L. Hiberger.	
Snow Hill	Worcester		Purnell & Vincent.
Solomon's	Calvert	W. H. Marsh, M. D.	
†Sparrow's Point	Baltimore		Md. Steel Co.
St. Charles Coll., nr. Ellicott City	Howard	Rev. H. M. Chapuis, S. S.	
Sunnyside	Garrett	John G. Knauer.	
Sykesville	Carroll		J. S. Hyatt.
Upper Marlboro	Prince George's	J. B. Perrie.	
Washington, D. C		S. W. Beall.	
Western Port	Allegany	Prof. O. H. Bruce.	
West Friendship	Howard		Postmaster.
Westminster	Carroll	Prof. Roland Watts.	
Westover	Somerset		E. D. Long.
Wilmington, Del	New Castle	F. C. D. McKay	Wm. Lawton.
Woodsboro	Frederick		G. F. Smith.
Woodstock College	Baltimore	T. J. A. Freeman, S. J.	
Woman's College, Frederick	Frederick	Miss W. A. Lantz.	
*Birdsnest, Va	Northampton	C. R. Moore.	
*Norfolk, Va	Norfolk	Jas. J. Gray.	
*Warsaw, Va	Richmond	C. H. Constable.	

*Stations of the Virginia State Weather Service. †Whistle signals only.

DAILY PRECIPITATION FOR JULY, 1895.

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	Tot
Sunnyside	.16	....	...	....	1.36	....	...	.38	T	...	T	....	....	....	.38	.15	....	....	....	.33	.11	.02	.10	.09	....	....	.83	....	....	.30	....	4.21
Oakland	.18	....	...	....	2.11	....	...	.26	....	...	T	....	....	....	.35	.07	....	....	T	.16	.01	....	.31	.05	....	....	.39	.02	.10	....	.01	4.03
Deer Park	.10	....	....	....	1.32	....	...	1.15	....	....	....	....	....	....	.32	....	....	....	....	....	....	....	.42	....	....	....	.24	....	....	....	....	3.55
Grantsville	....	....	....	....	1.30	.10	...	.82	....	....	....	....	....	....	.33	....	....	....	....	.30	.20	....	.18	.15	....	....	1.00	....	....	.30	....	4.41
West'nport.	T	....	....	....	.60	T	..	.50	.10	....	....	....	....	....	.14	....	....	....	....	....	.30	.10	....	.05	....	....	.20	....	....	....	....	1.99
Boettcherv.	T	....	....	....	.70	.30	....	1.00	....	....	....	....	....	....	.20	.10	....	....	....	....	....	....	....	.10	....	....	.70	....	....	....	....	3.10
Cumb. (*a*)	....	....	....	.13	.71	....	....	.65	....	....	....	....	....	....	.25	....	....	....	....	....	....	....	....	.08	....	....	.67	....	....	....	....	2.49
Cumb. (*b*)	....	....	....	....	1.05	....	....	.82	....	....	....	....	....	....	.20	.02	....	....	....	....	....	....	....	.06	....	....	.70	....	....	....	....	2.85
Oldtown	.41	..	....	....	....	....	....	1.10	....	....	....	....	....	....	.10	.48	....	....	....	....	.65	....	....	....	....	....	....	....	.35	....	....	3.09
Hancock	....	....	....	....	.97	....	....	.58	....	....	....	....	....	....	.05	.03	....	....	....	.40	.52	.06	T	T	....	....	1.15	....	....	....	....	3.76
Gr'nSp.Fur.	.14	....	....	....	.55	....	....	.29	....	....	....	....	....	T	T	.49	....	....	....	.04	....	T	T	T	....	T	.67	....	....	....	....	2.18
Hagersto'n.	.05	....	....	.68	....	....	....	.17	....	....	....	....	....	....	....	....	....	....	....	.22	.14	....	....	....	....	....	1.20	....	....	....	....	2.46
Sharpsburg	.13	....	....	.46	T	.05	....	.03	....	....	....	....	....	....	T T	.36	....	....	....	.61	.02	T	T	.02	.06	....	.64	....	....	T	....	2.38
Burk'tsvle	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mt.St.M'y's Col	....	....	....	....	1.83	....	....	....	....	....	....	....	....	....	.05	.04	....	....	....	.21	....	....	....	....	.01	....	.59	.30	....	....	....	2.98
Fred'k	....	....	....	....	.71	....	....	.35	....	....	T	....	....	....	....	.10	....	....	....	1.29	....	....	....	....	.06	T	.71	....	....	T	....	3.22
Woman's Col	..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Taneytown	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Bach. V'y	....	...	..	.40	.89	.03	...	T	....	....	T	....	....	....	....	.02	....	....	....	.35	....	T	T	....	....	T	1.08	....	....	....	....	2.77
WestMd.Col	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Glyndon	....	...	..	T	1.13	....	....	....	....	....	....	....	....	....	T	.09	....	....	....	T	....	....	T	T	.06	....	.45	....	....	....	....	1.73
Garrison	....	...	...	.21	1.76	.03	....	....	....	....	....	....	....	....	.01	.50	....	....	....	.02	....	....	..	.02	T	..	1.00	....	....	....	....	3.55
Woodst. Col	....	...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Baltimore	.15	....	..	.11	1.65	.05	T	....	....	....	.02	..	....	....	T	.75	....	....	....	.01	...	T	T	T	T	...	.26	.40	...	T	...	3.40
St.Chas.Col	....	....	....	....	.03	.07	....	....	....	....	.06	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.65	....	....	....	....	.81
Great Falls	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Falls'n Sch.	.04	....	....	....	1.03	T	....	....	....	....	.01	....	....	....	T	.56	....	....	....	.01	....	....	T	.03	....	T	....	.79	....	T	....	2.47
Dan'g'n Aca'y	....	...	....	.53	....	....	....	....	....	....	.07	....	....	....	....	.53	....	....	....	....	....	....	....	1.25	.50	....	1.86	....	....	....	....	4.74
Annapolis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Jewell	....	....	....	....	1.25	....	....	....	....	....	T	....	....	....	....	T	....	....	....	.35	....	....	....	1.25	T	....	.38	....	....	T	....	3.23
Dist. R.,D.C	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Rec. R., D.C	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wash., D. C.	1.49	....	....	.08	.58	.04	...	T	.02	....	.01	....	....	....	T	.63	....	....	....	.01	..	T	T	.82	.21	.06	.45	.04	....	.06	....	4.50
Md. Agr. Cl / Colg. Park	.15	....	..	.10	.53	T	...	T	T	....	....	....	....	....	....	....	....	....	....	....	....	....	T	.38	.32	T	.43	.11	....	....	....	2.27
Laurel	...	....	....	.81	.91	....	....	....	....	....	....	....	....	....	....	.45	....	....	....	.38	....	....	....	....	.15	....	.20	....	....	....	....	2.90
Up. Marlb.	.92	....	....	.04	.76	....	....	.06	....	....	....	....	....	....	....	.09	....	....	....	.29	....	....	T	.90	.23	..	.35	....	....	.08	....	3.72
La Plata	..	....	....	....	.65	....	....	....	....	....	....	....	....	....	.20	....	....	....	....	1.00	....	....	....	.50	....	.30	....	....	....	....	....	2.65
Bel Alton	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pope's Cr'k	.10	....	...	.25	....	....	....	.10	..	....	....	....	....	....	....	.85	....	....	....	....	....	....	....	....	.70	....	.20	....	....	....	....	2.20
Solomon's	.88	....	T	T	1.16	....	....	T	.08	....	.10	....	....	....	.24	.20	....	....	....	T	....	T	T	.12	.67	....	.09	....	....	.04	....	3.58
Chart. Ha l Sch	.07	....	....	.24	.50	....	....	T	T	....	.04	....	....	....	.54	.28	....	....	....	.64	....	....	....	.90	....	....	....	T	....	.04	....	3.25
Cherryfie ds	3.55	.07	.11	.35	.12	....	....	.41	....	....	.20	....	....	....	.05	.52	....	....	....	....	....	....	....	1.21	.06	....	.11	....	....	.92	....	7.68
Chestert'n	....	....	....	.30	1.30	.02	....	.63	....	....	T	....	....	....	T	.10	....	....	....	....	....	....	.23	....	....	....	1.10	....	....	....	....	3.45
Denton	....	....	....	.73	.90	....	....	....	....	....	T	....	....	....	....	....	....	....	....	....	....	....	.17	.43	....	....	.36	....	....	....	....	2.59
Easton	1.75	...	T	....	.98	.07	...	T	....	....	.05	....	....	....	....	.04	....	....	....	.04	....	....	....	....	.95	....	.44	....	....	....	....	4.32
Mardela Sp.	2.26	....	....	.50	.54	.50	....	.06	.06	....	....	.02	.03	....	.34	.37	....	....	....	....	....	....	.25	.50	.30	....	.35	....	....	.45	....	6.53
Pri'cess An.	1.06	....	....	T	.64	.11	....	....	....	.15	.09	....	....	....	T	.14	....	....	....	....	....	....	.46	1.17	....	.03	....	....	....	.40	....	4.25
Poc'm'k Cit	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wilm't.Del.	.07	....	..	.50	1.09	....	....	T T	....	....	.02	....	....	....	....	.03	....	....	....	T	....	....	T	....	.24	..	.73	.02	....	T	....	2.70
Del.Col.Del / Newark, D.l	....	....	..	.14	1.27	....	....	....	....	....	.02	....	....	....	....	.03	....	....	....	....	....	....	....	....	....	..	1.27	....	....	....	....	2.73
Dover, Del.	.19	....	....	....	....	.84	....	....	....	....	....	....	....	....	.07	....	....	....	....	....	....	....	....	....	....	..	.84	....	....	....	....	1.94
Milford,Del	.59	....	....	....	1.01	.68	....	....	....	....	.05	....	....	....	.09	....	....	....	....	....	....	....	....	....	.33	..	.42	....	....	....	....	3.17
Seaford,Del	1.44	....	....	....	.70	.24	...	T	.05	....	.06	....	....	....	.16	....	T	....	....	....	....	....	....	.40	.71	..	.14	....	....	.08	..	3.98
Millsb'o,Del	1.43	....	....	....	.75	.12	....	....	....	....	.05	....	....	....	....	.13	....	....	....	....	....	....	....	.47	.53	..	.15	.01	....	.09	..	3.73
Phila, Pa	.05	....	....	.26	1.11	.46	....	....	....	....	.01	....	T	....	....	.06	.04	..	....	....	....	.68	....	T	T	..	.25	.26	....	.05	....	3.23
Norfolk, Va	.43	.13	....	.11	.01	....	....	.14	.07	....	.01	.01	....	....	.01	.53	.43	....	....	....	....	....	....	T	1.44	..	....	T	....	.31	....	4.36
Warsaw, Va	1.90	....	....	....	....	....	....	....	....	.53	....	.26	....	....	....	.55	..	....	....	....	....	.05	....	....	1.20	..	....	.18	....	.18	....	4.85

NOTE.—"T" indicates a trace of rain or melted snow.

MONTHLY SUMMARY OF REPORTS FOR JULY, 1895.

STATIONS.	COUNTIES.	Altitude above sea in ft.	Latitude.	Longitude.	TEMPERATURE.							Total Precipitation.	Total Snow-fall.	Clear Days.	Partly Cloudy Days.	Cloudy Days.	Rainy Days. (.01 in. or more)	Prevailing Winds.
					Monthly Mean.	Mean of Max.	Mean of Min.	Max.		Min.		Monthly Range.								
								Degrees	Date.	Degrees	Date.									
WESTERN MARYLAND.																				
Sunnyside	Garrett	2440	39°20′	79°21′	63.4	75.0	51.9	90	19	39	31	51	4.21	....	12	15	4	12	S. W.	
Oakland	Garrett	2380	39 24	79 18	63.3	74.2	52.4	88	19	38	31	50	4.03	....	9	18	4	13	S. W.	
Deer Park	Garrett	2457	39 25	79 13	62.3	76.1	48.5	89	20	32	31	57	3.55	....	....	....	....	....	.....	
Grantsville	Garrett	....	39 45	79 10	64.0	74.9	53.2	88	19	41	31	47	4.41	....	7	19	5	10	N.W. S. W.	
Westernport	Allegany	....	39 28	78 2	70.3	87.2	53.4	102	20	41	30	61	1.99	....	...	....	....	8	.....	
Boettcherville	Allegany	....	39 39	78 48	71.4	81.4	61.5	96	21	48	31	48	3.10	...	....	....	....	7	.....	
Cumberland, Shriver & Rizer.	Allegany	650	39 39	78 46	74.8	85.0	64.6	97	21	55	31	42	2.85	...	....	....	...	6	N.W.	
Cumberland, E. T. Shriver.	Allegany	700	39 39	78 45	70.3	79.3	61.3	92	21, 22	50	31	42	2 49	....	16	10	5	6	.....	
Oldtown	Allegany	....	39 33	78 37	63.6	65.2	62.0	87	23	53	12	34	3.09	....	14	5	....	6	N.W.	
Hancock	Washington.	....	39 40	78 10	70.2	81.7	58.8	95	20	48	14	47	3.76	....	17	10	4	8	W.	
Green Sp. Furnace.	Washington..	500	39 39	77 55	71.2	84.7	57.8	100	20	46	31	54	2.18	....	....	14	10	6	W.	
Hagerstown	Washington..	...	39 39	77 43	71.0	83.8	58.3	98	20	49	31	49	2.46	....	13	5	13	6	.....	
Sharpsburg	Washington..	....	39 25	77 45	71.2	81.9	60.5	96	20	49	31	47	2.38	....	17	9	5	10	N.W.	
NORTHERN-CENTRAL MD.																				
Burkittsville	Frederick	....	39 25	77 35	.....	.....	...	...	.....	....	...	41	....	....	....	....	....	....	.....	
Mt. St. Mary's Col. *b.*	Frederick	720	39 43	77 20	72.6	81.8	63.4	92	21	51	13	41	2.98	....	10	7	14	6	N.W.	
Frederick	Frederick	280	39 24	77 18	71.6	82.3	60.9	96	20	50	31	46	3.22	....	7	19	3	8	.....	
Woman's College	Frederick	280	39 24	77 18	.....	.....	.....	...	.....	..	.. .	....	.....	....	..	....	..	..	.....	
Taneytown	Carroll	....	39 40	77 9	....	.....	.....	....	.....	....	....	....	.....	....	..	....	....	....	.....	
Bachman's Val.	Carroll	.. .	39 37	76 55	72.4	.....	.....	98	20	58	25	40	2.77	...	17	9	5	6	N.W. S.W. S.	
Western Md. Col. Westminster.	Carroll	....	39 25	77 0	.....	.....	...	...	.....	....	.....	....	.....	...	....	....	....	....	.....	
Glyndon	Baltimore	650	39 27	76 45	71.6	83.5	59.8	96	21, 22	50	31	46	1.73	....	17	8	6	4	S.W.	
Garrison	Baltimore	....	39 23	76 49	69.8	80.5	59.1	93	21	47	31	46	3.55	....	18	9	4	8	W.	
McDonogh School, *b*	Baltimore	535	39 23	76 44	71.6	79.5	63.7	92	20	56	31	36	.....	....	....	....	....	....	.....	
Woodstock Col. *c*	Baltimore	392	39 20	76 49	....	.....	.....	....	.....	....	.....	....	.....	....	....	....	....	....	.....	
Baltimore	.....	179	39 17	76 36	73.1	81.7	64.5	95	21	55	31	40	3.40	....	14	9	8	9	N.W.	
Johns Hopkins Hos	.....	...	39 17	76 36	72.8	81.5	64.0	95	21	55	31	40	.....	....	19	....	12	....	N.W.	
St. Charles Coll. nr Ellicott City.	Howard	300	39 16	76 44	72.8	78.2	67.4	89	20	59	31	30	.81	....	16	14	1	4	N.W.	
Great Falls	Montgomery.	....	39 0	77 14	....	.....	... ..	....	.....	....	.....	....	.....	....	....	....	....	....	.....	
Fallston School,	Harford	450	39 31	76 24	70.8	.....	.....	91	21	58	31	33	2.47	...	6	21	4	9	N.W.	
Darlington Acad'y.	Harford	300	39 39	76 14	70.5	80.0	61.0	92	21	52	15,31	40	4.74	...	23	4	4	6	N.W.	
SOUTHERN MARYLAND.																				
Annapolis	Anne Arund'l	20	39 58	76 30	.....	.....	.....	....	.....	....	.....	....	.....	....	....	....	....	....	.....	
Jewell	Anne Arund'l	....	38 44	76 36	71.6	80.0	63.2	91	18	54	31	37	3.23	....	20	8	3	5	W.	
Dist. Res., D. C.	.....	....	38 52	77 0	.....	.....	.....	...	.....	....	.....	....	.....	....	....	....	....	....	.....	
Rec. Res., D. C.	.....	....	38 52	77 0	.....	.....	.....	....	.....	....	.....	....	.....	....	....	....	....	....	.....	
Washington, D. C.	.....	112	38 52	77 0	72.8	.....	.....	94	20, 21	52	31	42	4.50	...	....	....	....	....	S.	
Md. Agricult. Col. College Park.	Pr. George's	....	38 58	76 56	71.1	82.1	60.1	99	22	50	31	49	2.27	....	...	...	....	8	.....	
Laurel	Pr. George's	....	39 5	76 45	71.2	82.1	60.4	94	21	49	12	45	2.90	....	21	3	7	16	.....	
Upper Marlboro	Pr. George's	....	38 47	76 45	72.0	82.4	61.5	96	20	51	31	45	3.72	..	19	9	3	10	S. W.	
Marshall Hall	Charles	...	38 42	77 8	.....	.....	.....	....	.....	....	.....	....	.....	....	....	....	....	....	.....	
La Plata	Charles	. ..	38 32	77 0	73.8	85.5	62.2	98	22	52	31	46	2.65	....	....	..	....	....	.....	
Bel Alton	Charles	....	38 26	77 1	....	.....	.....	....	.....	....	.....	....	.....	....	....	....	....	....	.....	
Pope's Creek	Charles	..	38 22	77 1	76.8	85.0	63.7	98	21	50	31	48	2.20	....	....	....	....	7	.....	
Solomon's	Calvert	20	38 19	76 27	75.8	84.3	67.3	94	21, 22	57	31	37	3.58	....	9	5	17	10	N.W.	
Charlotte Hall Sch'l	St. Mary's	....	38 28	76 48	73.4	84.6	62.2	94	20, 21	53	12, 31	41	3.25	....	12	13	5	9	S.	
Cherryfields	St. Mary's	....	38 11	76 24	73.2	.....	. ...	83	21	63	:5	20	7.68	...	11	17	3	13	S. W. N.W.	
EASTERN MD. AND DELAWARE.																				
Chestertown	Kent	80	39 13	76 4	72.0	80.8	63.3	90	18, 21,	55	31	35	3.45	....	18	10	3	6	S. W.	
Denton	Caroline	42	38 47	75 41	71.0	80.5	61.4	95	20, 21,	52	15	43	2.59	....	....	....	....	5	.....	
Easton	Talbot	35	38 42	76 6	72.0	81.3	62.6	93	20, 21,	54	11	39	4.32	...	14	7	10	10	W.	
Mardela Spr.	Wicomico ..	25	38 30	75 39	71.8	80.2	63.5	93	21	54	15	39	6.53	....	9	14	7	15	S. W.	
Princess Anne	Somerset	....	38 10	75 36	73.7	81.3	66.1	92	18,20,21,22,	55	3	37	4.25	..	10	13	8	10	NW SW	
Pocomoke City	Worcester	37	38 5	75 34	.....	.....	.....	....	.....	....	.....	....	.....	....	....	....	....	....	.....	
Wilmington, Del.	Newcastle	115	39 44	75 33	75.0	85.4	64.5	100	20	55	12	45	2.70	....	5	24	2	8	N.W.	
Newark Delaware College Del.	Newcastle	....	39 40	75 37	71.4	81.2	61.6	93.5	21	52.5	31	41	2.73	....	17	6	8	6	N.W.	
Kirkwood, Del.	Newcastle	....	39 35	75 41	69.2	....	.....	89	18	61	11	28	.....	....	....	....	....	....	.....	
Dover, Del.	Kent	40	39 10	75 30	72.3	80.4	64.2	93	20, 21,	56	12,15,31	37	1.94	....	18	9	4	6	S. W.	
Milford, Del.	Kent	....	38 45	75 25	74.7	85.0	64.4	97	20, 21,	53	12	44	3.17	....	23	4	3	8	W.	
Seaford, Del.	Sussex	....	38 40	75 36	72.0	81.3	62.6	95	21	54	15	42	3.98	....	....	....	....	12	.....	
Millsboro, Del.	Sussex	....	38 44	75 15	72.9	82.6	63.2	97	21	55	12	42	3.73	....	14	10	7	11	N.W.	
‡PENNSYLVANIA.																				
Philadelphia	.....	....	.....	.. ...	73.2	81.8	64.7	94	20, 21	57	31	37	3.23	....	11	10	10	11	N.W.	
‡VIRGINIA.																				
Norfolk	.....	..	.....	.....	76.4	83.8	68.9	95	18	63	26	32	4.36	....	13	7	11	14	N. E.	
Warsaw	Richmond	....	.....	.....	74.4	84.2	64.5	95	21	55	11	40	4.85	....	12	14	5	8	S.	
AVERAGES	Western Maryland	....	.....	.....	68.2	79.3	57.2	....	.....	....	.....	48.4	3.12	....	13.1	11.7	6.2	8.2	N.W.	
	Northern-Cent'l Md.	....	.....	.....	71.8	81.0	62.6	...	.....	...	.....	39.8	2.85	....	14.7	11.1	6.1	6.7	N.W.	
	Southern Maryland	....	.....	.....	73.1	83.2	62.6	...	.....	....	.....	41.0	3.60	....	15.3	9.2	6.3	8.5	S. W. S.	
	East. Md. and Del	....	.....	.....	72.3	81.8	63.4	....	.....	..	.....	39.3	3.58	....	14.2	10.8	5.8	8.8	NW SW	
	Entire territory	....	.....	.....	71.4	81.3	61.4	....	.....	....	.....	42.1	3.29	....	14.3	10.7	6.1	8.1	N.W.	

* Extremes of temperature from observed readings of dry thermometer. A numeral following the name of a station indicates the hours of observation from which the mean temperature was obtained, thus:
[1] Mean of 7 a. m. + 2 p. m. + 9 p. m. + 9 p. m. ÷ 4. [2] Mean of 8 a. m. + 8 p. m. ÷ 2. [3] Mean of 7 a. m. + 2 p. m. ÷ 2.
The absence of a numeral indicates that the mean temperature has been obtained from daily readings of the maximum and minimum thermometers. Letters of the alphabet are used to denote the number of days that are missing from record; for instance, "a" denotes 1 day missing. An italic letter following the name of a station indicates that two or more observers, as the case may be, are reporting from the same station. ‡ Omitted in computing averages. †Received after report had gone to press and therefore omitted in computing averages and in preparing map.