

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

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In Cooperation with Maryland State Weather Service

CLIMATOLOGICAL DATA

MARYLAND AND DELAWARE SECTION

ROSCOE NUNN, Meteorologist and Section Director

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VOL. XXXIV BALTIMORE, MD., APRIL, 1929 No. 4

GENERAL SUMMARY

April was unusually mild and wet. It was the first mild April since 1925 and the third successive wet April. The monthly precipitation was the greatest of record for April, being 0.61 inch greater than in April, 1928, the previous wettest April. The number of days with rain equaled the previous greatest average, 14 in April, 1926. Sunshine was abundant, except during the 9-17th, which was a cloudy and wet period. Relative humidity averaged about 5 per cent above normal.

The outstanding feature of the month was the 6-day period of very warm weather from the 4th to the 9th, with maximum temperatures close to 90° between the Allegheny Mountains and the Atlantic coast. For intensity and duration this warm spell was unprecedented for so early in the year. The mean temperature for the six days averaged between 20° and 25° above normal.

Precipitation averaged nearly twice the normal, monthly amounts as a rule being between 6 and 7 inches.

Light snow occurred on the 16-17th in the Allegheny Mountain region after the heavy rain of the 15-16th in that division.

The northeast storm of the 15-16th caused high winds and heavy rains over the section, the winds being of gale force on the Eastern Shore. On the 16th the tide was high along the western shore of Chesapeake Bay and unusually high in Delaware Bay and along the coast; movements of vessels on Chesapeake Bay were interrupted; and high water resulted in all streams, especially in western Maryland. The upper Potomac River threatened a flood, but it did not materialize. Some damage from high water did occur in the low sections of Cumberland, Hancock, and Williamsport.

Wheat, rye, barley, oats, and grasses were good to excellent and continued ahead of normal, though growth was retarded by the cool, wet weather of the second and third decades. Early potatoes, peas, truck crops, and gardens came up over the eastern half of the section and were ahead of normal. Fruits and strawberries were also unusually advanced. The wet weather interrupted and delayed corn planting; some corn, however, was planted during the first decade on the southern Eastern Shore.

Frost of the 23d killed some early strawberry blossoms on the southern Eastern Shore, while hard-freezing temperatures of the 23d and 24th in the Allegheny Mountain region killed many apple blossoms.—*J. B., jr.*

PRESSURE

The monthly mean sea-level pressure at Washington, Baltimore, and Aberdeen was 29.91 inches. The highest at Washington was 30.45; at Baltimore, 30.47; at Aberdeen, 30.46 inches—all on the 3d. The lowest at Washington was 29.10; at Baltimore, 29.07; at Aberdeen, 29.03 inches—all on the 16th.

TEMPERATURE

The monthly mean for the section, 55.4°, is 2.9° above normal. The highest monthly mean was 59.7° at Newburg; the

lowest, 49.6°, at Oakland and Sines. The highest temperature, 95°, occurred at Millsboro on the 8th; the lowest, 25°, at Oakland on the 23d and 24th. The greatest local monthly range was 64° at Great Falls; the least, 47°, at Sines. The greatest daily range was 50° at Great Falls on the 20th.

PRECIPITATION

The monthly average for the section, 6.47 inches, is 3.11 inches above normal. The greatest monthly amount was 8.43 inches at Frostburg; the least, 4.61 inches, at Public Landing. The greatest 24-hour amount was 3.50 inches at Ferry Landing on the 15-16th. The average monthly snowfall, 0.2 inch, is 1.1 inches below normal. The greatest monthly snowfall was 5.0 inches at Oakland; the least, a trace, over northern Maryland, between the Allegheny Mountains and Delaware. The number of days with 0.01 inch or more of precipitation, 14, is 4 above normal.

RELATIVE HUMIDITY

The average percentages were: Washington, D. C., 8 a. m., 73; 12 noon, 54; 8 p. m., 56. Baltimore, Md., 8 a. m., 70; 12 noon, 55; 8 p. m., 62. Aberdeen, Md., 8 a. m., 80; 4 p. m., 63. Philadelphia, Pa., 8 a. m., 76; 12 noon, 65; 8 p. m., 70.

WIND

(By 3-cup anemometer, except 4-cup at Aberdeen, Md.)

The prevailing wind direction for the section was southwest. The total movement at Washington was 5,307; at Baltimore, 7,952; at Aberdeen, 7,167 miles. The maximum velocity at Washington was 30 miles from the northwest; at Baltimore, 42 miles from southwest; at Aberdeen, 48 miles from west—all on the 1st.

SUNSHINE AND CLOUDINESS

At Washington 55 per cent of the possible sunshine was recorded; at Baltimore, 52 per cent; at Aberdeen, 50 per cent. For the whole section the average number of clear days was 12; partly cloudy, 8; cloudy, 10.

CHARLES S. BIRELY

In the death of Mr. Charles S. Birely, of Frederick, on April 22, 1929, the Weather Bureau and the Maryland State Weather Service lose one of their most faithful observers. Mr. Birely began as cooperative observer on August 1, 1910, and his excellent reports came to the section center, without fail, month by month. In nearly 19 years not a day's record was missing. A semi-invalid for many years, Mr. Birely kept up a lively interest in things around him, especially his flowers and his observations of the weather. He took pride in making his weather reports full and accurate. He not only contributed valuable meteorological records to the State and National weather services, but was quite useful as a local disseminator of information regarding the weather and climate of his city and county. In such service he established a memorial that will be lasting. Mr. Birely lived his whole life, nearly 64 years, in Frederick.—*R. N.*

MISCELLANEOUS PHENOMENA (WITH DATES)

Fogs, dense.—Aberdeen, 5, 21; Frederick, 10, 13, 15; Newburg, 13; Princess Anne, 10; Sines, 11; Washington, D. C., 5; on coast, 5, 10.

Freezing temperatures.—Western and north-central Maryland, 2, 3, 20, 23, 30; western Maryland, 13, 18, 19, 24; Allegheny Mountain region, 16, 17; southern Eastern Shore, 23.

Frost, killing, last of month.—Southern Eastern Shore, north-central Maryland, and Washington County, 23; Allegheny Mountain region, 24.

Hail, light.—Baltimore and Harford Counties, 1; eastern half of section, 21; Mechanicsville, Millsboro, Sines, and Solomons, 25.

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Climatological Data for April, 1929

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches			Number of days				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)	With precip. 0.01 inch or more	Clear			Partly cloudy	Cloudy
<i>Maryland</i>																				
Aberdeen	Harford	80	11	54.0	+2.6	90	7	33	38	6.38	+2.55	2.59	T.	17	9	6	15	s.	U. S. Army.	
Annapolis	Anne Arundel	45	64	55.9	+2.4	88	16	86	17	37	+3.78	3.50	T.	13	12	8	9	sw.	Louis E. Foster.	
Baltimore*		115	59	57.4	+3.8	93	7	36	16	55	+3.39	3.33	T.	17	11	11	11	sw.	U. S. Weather Bureau.	
Bell II	Prince Georges	151	9	55.7		93	7	30	30	123	50	6.45	T.	11	12	9	9	sw.	Bureau Plant Industry.	
Boyd's	Montgomery	424	10	55.0	+2.3	91	17	29	23	3	49	5.45	T.	13	12	9	9	s.	Thomas B. Daymude.	
Cambridge (near)	Dorchester	35	36	57.8	+2.8	91	17	34	23	37	+4.54	2.85	T.	11	12	9	9	s.	Matt Harding.	
Cecilton	Cecil	25	11	55.8	+2.9	90	8	36	12	39	+3.13	3.00	T.	14	12	10	9	sw.	Wm. F. Coale.	
Chestonham	Prince Georges	230	29	58.0	+3.3	92	17	33	23	41	+3.23	2.62	T.	13	11	10	7	sw.	Geo. Hartnell.	
Chewsville	Washington	530	32	53.5	+2.6	87	17	29	23	40	+2.45	2.55	T.	16	12	11	7	sw.	D. Paul Oswald.	
Clear Spring	do	600	32	54.8	+4.4	91	8	29	23	41	+4.11	1.81	T.	16	12	11	7	w.	Mrs. Leo. A. Cobhill.	
Coleman II	Kent	80	32	56.2	+2.8	91	8	36	17	37	+2.25	...	T.	13	12	9	9	sw.	Walter B. Harris.	
College Park	Prince Georges	87	43	56.6	+3.5	92	7	31	23	47	+3.01	2.15	T.	13	12	9	9	sw.	Prof. Thos. H. White.	
Crisfield	Somerset	5	10										T.						A. B. Cochrane.	
Cumberland	Allegany	623	57	56.2	+4.1	90	7	34	2	45	+4.25	2.19	T.	15	12	8	10	...	Harvey H. Weiss.	
Darlington	Harford	300	39	54.4	+2.6	91	8	32	123	45	+2.49	2.05	T.	14	12	7	11	w.	Fred. C. Jones.	
Easton	Talbot	35	39	55.8	+2.2	91	7	33	23	36	+3.65	2.83	0.0	14	12	9	9	sw.	Clement E. Bray.	
Elkton	Cecil	28	3	54.6		92	16	32	23	43	6.19	...	T.	13	12	8	10	w.	H. W. Bouchelle.	
Emmitsburg	Frederick	720	61	55.2	+3.3	88	17	31	2	33	+2.76	...	T.	16	12	8	10	w.	Mt. St. Mary's College.	
Fallston II	Harford	450	60	54.3	+3.5	88	8	31	2	37	+3.43	2.95	T.	14	11	9	10	sw.	Miss Dora Curtiss.	
Ferry Landing II	Calvert	110	13	56.7	+2.8	92	7	33	17	36	+2.31	3.50	0.0	14	11	9	10	sw.	Thos. J. Bourne.	
Frederick	Frederick	275	55	57.2	+4.3	92	17	35	12	39	+2.74	2.50	T.	16	12	7	11	sw.	Lillian E. Birely.	
Friendville	Garrett	1,501	11	51.0	+3.0	80	16	26	2	42	+5.89	1.05	2.0	12	11	8	11	...	Joab J. Friend.	
Frostburg	Allegany	1,929	28	52.2	+2.0	81	8	27	2	43	+4.82	2.05	T.	13	12	8	10	w.	T. F. Lewis.	
Grantsville	Garrett	2,351	36										T.							
Great Falls II	Montgomery	200	40	56.8	+3.6	94	8	30	23	50	+2.80	1.70	T.	11	12	7	11	sw.	Chas. E. Sullivan.	
Hancock (Tonoloway)	Washington	455	19	54.2	+1.6	90	8	29	23	47	+6.95	+4.24	2.61	T.	14	12	11	7	...	American Fruit Growers.
Keedysville	do	400	25	55.6	+2.3	92	17	29	23	42	+2.05	2.52	T.	15	12	11	7	sw.	J. A. Miller.	
Laurel	Prince Georges	320	35	55.6	+2.8	91	7	34	17	42	+2.40	...	T.	16	12	8	10	...	Evan G. Chaney.	
Lutherville	Baltimore	340	3	54.4		89	17	28	23	41	6.36	...	T.	14	12	7	11	sw.	August W. Clark, P. M.	
Maryland Line	do	840	5	53.5		86	17	31	2	34	6.40	...	T.	14	12	8	10	w.	Chester L. Fritton.	
Mechanicville	St. Marys	165	3								6.69	...	0.0	11	10	10	10	sw.	Zach. S. Graves.	
Millington	Kent	27	32	56.2	+2.7	90	17	34	23	36	+2.98	2.26	T.	14	12	7	11	s.	Henry L. Higman.	
Newburg	Charles	110	4	59.7		92	7	37	17	39	5.43	...	0.0	14	12	8	10	sw.	John P. Burdette.	
Oakland	Garrett	2,461	30	49.6	+3.4	80	7	25	123	45	+7.60	+3.61	1.50	13	10	10	10	w.	R. E. Weber.	
Picardy	Allegany	900	3	54.6		86	17	31	2	41	6.56	...	T.	14	12	10	8	w.	D. E. Catlett.	
Pleasant Hill II	Baltimore	660	5								5.53	...	2.20	15	12	7	11	sw.	J. E. Henry.	
Pocomoke City	Worcester	37	24								5.12	+1.92	1.40	0.0	11	11	9	10	...	Wm. H. Dryden.
Princess Anne	Somerset	17	54	56.7	+2.3	91	7	32	23	38	7.54	+4.12	2.00	0.0	12	12	8	10	sw.	James R. Stewart.
Public Landing II	Worcester	10	14	56.0	+3.5	90	6	32	23	34	+0.99	1.07	0.0	11	11	9	10	s.	Louis C. de Guibert.	
Ridgely	Caroline	57	8	56.2	+3.0	89	17	34	23	38	6.00	+2.69	1.82	0.0	12	12	7	11	sw.	Albert White.
Rock Hall	Kent	25	15	55.7	+2.6	90	17	35	17	38	7.80	+4.47	2.90	T.	13	12	9	9	s.	Charles Judefind.
Salisbury	Wicomico	23	24	56.6	+2.0	92	7	32	23	34	5.64	+2.23	2.00	0.0	11	13	7	10	s.	Homestead Dairy Farms.
Sines (Deep Creek)	Garrett	2,040	2	49.6		78	7	31	12	35	6.73	...	1.13	2.0	15	10	10	10	sw.	C. E. Mac Murray.
Solomons	Calvert	20	38	57.6	+3.4	87	6	36	17	35	6.61	+3.69	2.46	0.0	13	10	10	10	se.	Dr. W. F. Marsh.
State Sanatorium	Frederick	1,460	21	51.3	+3.0	87	17	30	2	31	6.41	+2.92	2.65	T.	15	12	7	11	sw.	Dr. V. F. Cullen.
Stevensville	Queen Annes	12	3	55.4		88	16	37	17	35	8.01	...	0.0	12	12	7	11	sw.	T. R. Price.	
Takoma	Montgomery	320	31	57.0	+4.0	94	7	33	2	39	5.19	+1.72	1.40	T.	11	9	10	11	...	L. M. Mooers.
Towson	Baltimore	465	17								5.78	+2.12	2.40	T.	15	11	8	11	...	Metropolitan District.
Western Port	Allegany	1,000	36	55.4	+3.6	90	7	31	24	46	7.84	+5.26	1.90	T.	15	Norris Bruce.
Westminster	Carroll	770	20	54.6	+1.9	87	7	31	2	36	5.35	+2.33	2.40	T.	17	12	8	10	...	Prof. S. P. Catrider.
Woodstock	Baltimore	415	59	55.6	+3.2	90	17	31	123	43	5.05	+1.89	1.75	T.	12	12	9	9	sw.	Woodstock College.
<i>Dist. of Columbia</i>																				
Washington**		112	59	57.6	+4.3	94	7	38	2	36	6.10	+2.83	2.39	0.0	13	9	10	11	s.	U. S. Weather Bureau.
<i>Delaware</i>																				
Bridgeville	Sussex	45	6	56.8	+3.6	91	7	34	23	39	5.95	+2.47	2.41	0.0	12	13	8	9	sw.	George Ray.
Delaware City	New Castle	12	43	55.0	+2.7	89	8	34	17	42	6.20	+2.88	1.75	0.0	13	12	5	13	s.	James E. Maden.
Dover	Kent	34	40	56.0	+2.7	90	17	36	113	35	6.51	+3.05	2.00	0.0	15	12	8	10	sw.	Arthur G. Livingston.
Milford	Sussex	20	47	56.4	+2.3	90	7	32	23	38	7.06	+3.56	2.48	0.0	13	12	9	9	w.	Chas. J. Holzmueller.
Millsboro	do	20	37	57.4	+4.6	95	8	32	23	41	8.17	+4.57	2.77	0.0	14	12	8	10	s.	Rev. M. P. S. Huntington.
Wilmington	New Castle	86	36	54.4	+1.5	87	17	34	12	39	6.51	+3.09	2.25	0.0	13	12	5	13	sw.	Street and Water Depts.
<i>Means and extremes:</i>																				
For Maryland and District of Columbia				55.4	+3.0	94	7	25	123	50	6.44	+3.10	3.50	0.2	14	11	9	10	sw.	
For Delaware				56.0	+2.9	95	8	32	23	42	6.74	+3.27	2.77	0.0	13	12	7	11	sw.	
For entire section				55.4	+2.9	95	8	25	123	50	6.47	+3.11	3.50	0.2	14	12	8	10	sw.	

The departures from normal temperature and precipitation are computed only for such stations as have 10 or more years of record, but all complete reports are used in determining section or division means. Data in italics determined from surrounding sections. T. Precipitation is less than 0.01 inch rain or melted snow. Reference letters, a, b, c, appearing in the table indicate number of days missing: For example, b represents two days, etc. ** Post office addresses of these stations are as follows: Of Bell, Glendale; of Coleman, Worton; of Fallston, Bagley; of Ferry Landing, Owings; of Great Falls, Bethesda; of Pleasant Hill, Owings Mills; of Public Landing, Snow Hill. † Also on other dates. * Custom House, Gay and Water Streets. ** Weather Bureau Building, 24th and M Streets.

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Hail, moderate.—On 21st: Easton, 10 minutes, between 5:30 p. m. and 6 p. m.; size of marbles; path one mile wide; some window panes broken; no damage to crops. On 25th: Millsboro; no damage. *Sleet.*—Western Maryland, 16; north-central Maryland, 16-17. *Thunderstorms.*—Baltimore, Harford, Cecil, and Kent (Md.) Counties,

1; western Maryland, 4; northern half of section, 5; Allegheny Mountain region, 8, 9; southern half of section, 9; Baltimore and Harford Counties, 13; entire section, 21, 25; Eastern Shore, 26. *Winds, high.*—Southwest, 1 (gale over north portion), 18, 26; north-east, 16 (gale on Eastern Shore); northwest, 16-17, 21 (thundergust). Also on coast: Northeast, 10-11, 15; south, 25, 8.

Daily Temperatures for April, 1929

Table with columns for Stations, days 1-31, and Mean. Rows list stations from Annapolis to Wilmington, with maximum and minimum temperatures for each day.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from record. § Instruments are read in morning; maximum temperature then read is charged to preceding day. In which it almost always occurs. Temperatures at Aberdeen, Baltimore, and Washington are from midnight to midnight; those of stations, except Cumberland, are for 24-hour period ending late in afternoon, near sunset. Data in italics determined from surrounding stations. (WB-5-29-820)