

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

In Cooperation with Maryland State Weather Service

# CLIMATOLOGICAL DATA

15 MARYLAND AND DELAWARE SECTION

JOHN R. WEEKS, Meteorologist and Section Director

PRICE: 5 CENTS A COPY; 50 CENTS A YEAR

VOL. XXXVI BALTIMORE, MD., JUNE, 1931 No. 6

**GENERAL SUMMARY**

June was sunshiny, with normal mean temperature. Rainfall was deficient, except somewhat greater than normal over most of north-central Maryland, in northern Delaware, and in St. Marys, Talbot, Wicomico, and Somerset Counties. Light to moderate northeast rain fell on the 1st and 10th; otherwise rain fell in the form of thundershowers, which produced variable amounts within short distances, and were the cause of the uneven monthly rainfall distribution over the section. Distribution of showers during the month was fairly good. The 14-16th was humid and mostly cloudy. Clear sky and almost uninterrupted sunshine featured the 2d-4th, 17th-21st, and 29-30th. Monthly sunshine was the greatest in June since 1923. Relative humidity averaged less than normal. Thunderstorm accompaniments—lightning, heavy rain, and high windgusts—were damaging locally on several dates (see Miscellaneous Phenomena).

Cool periods were 1st-3d, 8-11th, 14-18th, 24-25th; the warm spells were 4-7th, 12-13th, 19th-23d, 26-30th. The warmest day was the 20th, with maximum temperatures around 100°. Other outstanding warm days were the 19th and 30th. Lowest temperatures occurred on the 2d, 3d, 9th, or 10th.

Monthly rainfall averaged 87 per cent of normal. Monthly totals were slightly under 2 inches in Allegany, southern Baltimore, southern Hartford, northern Cecil, and southern Worcester Counties; elsewhere they were 2 to 4 inches, except 4 to 5 inches in northeastern New Castle, Wicomico, and northern Somerset Counties, and 4 to 6 inches locally in north-central Maryland and in central Talbot and northern St. Marys Counties.

Thundershowers were heavy at night of May 31 in southern Maryland and in the northern and west-central portions of the Eastern Shore; at night of 7-8th over most of the Eastern Shore; on the 14th at Sines; on the 15th in extreme western Washington and northern St. Marys Counties; on the 16th locally in north-central Maryland and on the Eastern Shore; on the 23d and 26th locally in the western and eastern portions of the section.

Vegetation made good progress, but continued somewhat backward for the season. Crops, grasses, and pastures were fair to excellent and nicely green. Farm work was up to or slightly ahead of normal. Planting of corn in the Allegheny Mountain region was finished during the first decade. Setting out of sweet potato, tomato, and tobacco plants was completed during the second decade. Harvesting of peas and strawberries on the Eastern Shore ended during the third week; both crops were good, but the strawberry acreage was cut down by the drought of last year. Haying was in progress. During the closing week: In the Allegheny Mountain region, wheat was filling out and corn was 8 to 14 inches high and was being cultivated. Elsewhere over the section, grains were ripening or had ripened; early potatoes were maturing and late potatoes were being planted; tobacco, truck, and gardens were doing well; and tree fruit was developing nicely.—*J.B., jr.*

**PRESSURE**

The monthly mean sea-level pressure at Washington, D. C., and at Aberdeen was 29.98; at Baltimore, 29.97 inches. The highest at Washington, D. C., was 30.26; at Baltimore, 30.24; at Aberdeen, 30.27 inches—all on the 25th. The lowest at Washington, D. C., was 29.39; at Baltimore and Aberdeen, 29.41 inches—all on the 7th.

**TEMPERATURE**

The monthly mean for the section, 70.8°, is normal. The highest monthly mean was 74.5° at Baltimore; the lowest, 62.7°, at Sines. The highest temperature, 102°, occurred at Cumberland on the 20th; the lowest, 35°, at Sines on the 10th. The greatest local monthly range was 55° at Cumberland, Frostburg, and Sines; the least, 36°, at Crisfield. The greatest daily range was 44° at Friendsville on the 12th and Lutherville and Woodstock on the 19th.

**PRECIPITATION**

The monthly average for the section, 3.43 inches, is 0.50 inch below normal. The greatest monthly amount was 5.93 inches at Westminster; the least, 1.37 inches, at Cumberland. The greatest 24-hour amount was 4.00 inches at Laurel on May 31st-June 1. The number of days with 0.01 inch or more, 8, is 2 below normal.

**RELATIVE HUMIDITY**

The average percentages were: Washington, D. C., 8 a. m., 71; 12 noon, 53; 8 p. m., 61. Baltimore, Md., 8 a. m., 66; 12 noon, 52; 8 p. m., 59. Aberdeen, Md., 8 a. m., 75; 4 p. m., 55. Philadelphia, Pa., 8 a. m., 67; 12 noon, 50; 8 p. m., 57.

**WIND**

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

The prevailing direction for the section was southwest. The total movement at Washington, D. C., was 3,473; at Baltimore, 6,436; at Aberdeen, 4,541 miles. The maximum velocity at Washington, D. C., was 27 miles from the north on the 26th; at Baltimore, 30 miles from the southwest, and at Aberdeen, 30 miles from the west—both on the 7th.

**SUNSHINE AND CLOUDINESS**

At Washington, D. C., 71 per cent of the possible sunshine was recorded; at Baltimore, 70 per cent; at Aberdeen, 64 per cent. For the whole section the average number of clear days was 15; partly cloudy, 10; cloudy, 5.

**MISCELLANEOUS PHENOMENA (WITH DATES)**

*Fogs, dense.*—Chewsville and Easton, 16; La Plata and Princess Anne, 25; Oakland, 2.

*Frost, light.*—Allegheny Mountain highlands, 2, 10.

*Hail, light.*—Ferry Landing, 23.

*Sun dog.*—Grantsville, 17.

*Thunderstorms.*—4, 5, 7, 15, 16, 20, 23, 26, 27 (D. C.).

*Winds, high (thundergusts).*—7, 14, 23, 26.

*Lightning.*—On 15th: Struck and damaged home near Cresaptown. On 23d: Struck and killed man walking on road 2 miles from Middleburg and man in wagon at Morgansville; struck and fired two barns at Clear Spring; struck and damaged Lutheran Church at Creagerstown; struck and damaged six homes, four being set afire and woman in one being injured, at Washington, D. C. On 26th: Struck and damaged two homes and barbecue stand at Big Spring; struck and damaged two homes and barn at Stevensville; struck and destroyed barn and stables near Trappe; struck 13,000 volt meter on Benning Road, Washington, D. C.

(Continued on page 22)

Climatological Data for June, 1931

Table with columns: Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Total snowfall), Number of days (With precip., Clear, Partly cloudy, Cloudy), Prevailing direction of wind, Observers.

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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Winds (thundergusts), damage by.—On 7th: Severe straight-line blow of terrific force, preceding a thunderstorm, swept at 3:30 p. m. from the Potomac River of south-central Frederick County northeastward through central Frederick and northwestern Carroll Counties into Pennsylvania at 4:30 p. m.; damage was neither general nor heavy; in the Ballenger Creek section of Frederick County, 3 miles southeast of Feagaville, a home was unroofed, a barn was damaged, and two silos, two chicken houses, and one hog pen were destroyed, loss \$2,500; a barn was unroofed at Lime Kiln; a school house was unroofed and otherwise damaged 3 miles

east of Woodsboro; a windmill and shed were blown down near Walkersville; roofs of homes and small buildings and barns were damaged in northwestern Carroll County; many trees and a few poles were blown down along the path of the windstorm, which varies from 1/2 to 6 miles in width; storm appeared to southwest of Sugar Loaf Mountain; funnel-shaped cloud was reported observed at Union Bridge. On 14th: Slight damage at Sines. On 23d: Number of trees and high-tension wire pole felled at Washington, D. C. On 26th: Several trees blown down in Anacostia, Benning, and Washington sections of District of Columbia.—J. B., jr.

Daily Precipitation for June, 1931

Stations	Watersheds	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			
<i>Maryland</i>																																				
Aberdeen**	Atlantic	.62			T.	T.		.46	.10		.11					.01	.85								.22	.01		.11						1.99		
Annapolis	do	2.30				.20		.09	.09		.10	T.				T.	.43								.22	.80			.86					4.55		
Baltimore***	do	.79			.01			.06	.03		.06	T.				.01	.20							T.	.22	.11		.28		T.				1.89		
Bell	do	1.90				T.		.14	.08		.08	T.				T.	.66							T.	.68			.72		T.				4.08		
Boys	do	.51	.12			.01		.40	.26		T.	T.				T.	1.86							T.	1.05	.04		.47		.11	.01			4.84		
Cambridge (near)	do							.78	.20		T.	T.					.23							T.	1.05	.04				T.				2.99		
Cecilton	do	1.47	T.			T.		.80	.28		T.	T.					.13							T.	.02	.24				T.				3.55		
Cheltenham	do	2.03				.25		.10			T.	T.					.46							T.	.02	.24				T.				3.28		
Chewsville	do	.61	.08		T.	.04	T.	.23	.07		T.					.10								T.	.50			1.31	.02					2.92		
Clear Spring	do																1.28							T.	.87					T.					3.10	
Coleman	do	2.04	.03			.02		.08	.04		T.	T.				T.	.19							T.	.87	.25				T.	.52	T.			4.61	
College Park	do	.44				T.		.91	.17	.04							.64							T.	.25					T.					2.45	
Crisfield	do	.08	T.			.12	.22	.09	.38							.02	.12						T.	.02	.09			.01	.22						1.87	
Cumberland	do	.84				T.		1.17	.19								1.07							T.	.98				T.	.05					4.80	
Darlington	do	.92				T.		.99	.19	T.							2.00							T.	.83				T.	.86					5.84	
Easton	do	.70				T.		.52	.12	T.							.02							T.	.33				T.						1.69	
Elkton	do																																			
Emmitsburg	do	.60				T.		.13	.11	.01							2.93								.02	.89		.06	.16							4.85
Fallston	do	1.88				T.		.13	.06								.33							T.	.44											3.10
Ferry Landing	do	.96				.01		.41	.21		T.						.37							T.	.25	.32		.61	.10							3.75
Frederick	do	.40		T.		.32	.44		T.								.15	.44						T.	.38			.34	.20							2.43
Friendsville	Ohio					.10	.16	.16	.12								.30	.02						T.	T.	T.	.41		.16	.19						1.72
Frostburg	Atlantic	.06			T.	.34	T.	.11	.35	.09						.04	.10	.05						T.	T.	T.	1.32		.81	.03						3.30
Grantsville	Ohio	.53	.45			T.		.36			T.	T.					.16	.10						T.	T.	.83		.46	.26						3.14	
Great Falls	do	.58				T.		.53	.02							1.39	T.	.97						T.	T.	.49	.03		.38	.03						3.88
Hancock (Tonoloway)	do	.50	.02			.08	T.	.55	T.		T.						.25	T.						T.	T.	.98										2.82
Hancock (City)	do	1.09	.01			T.		.09			T.						1.10	T.						T.	T.	.18										3.89
Keedysville	do	2.88				.01		.15	.05								.12							T.	.82	.32		1.05	.03	T.						2.89
La Plata	do	.72				.01		.23	.11								2.55							T.	.04	.22		.44								4.32
Laurel	do	.92				T.		.23	.30								.32							T.	.00	.60										3.45
Lutherville	do	2.55				T.		.23	.23		T.	T.				2.50	.14							T.	.02	.18										5.47
Maryland Line	do	1.04	T.			T.		.62	.28	T.							1.02							T.	T.	.12	.18		.20							3.30
Mechanicsville	do	.39		.52		.78	T.	.15	.15	.25						.05	.15	.03						T.	T.	.78	.06									2.84
Millington	Ohio	.49				T.		.07	.35		T.						.09	T.						T.	T.	.78	.06									1.78
Oakland	Atlantic	.21				T.		.08	.08	.06							.93							T.	T.	.20										1.59
Pearcy	do	.62				T.		.76	.30	T.							.17	.90						T.	T.	1.45	T.									4.20
Pleasant Hill	do	1.17				T.		.92	.27	T.							.75							T.	.28											3.51
Pocomoke City	do	1.46				T.		.19	.10	T.							.08							T.	.71											2.80
Princess Anne	do	.51				.02		1.40	.32	T.							.57								.40	1.30		.45								4.97
Ridgely	do	.03		.22		T.		.20	.58							.28	1.38	.06	.02					T.	.36			.26	.26							4.01
Rock Hall	Ohio	1.50				T.		.70		T.							.75							T.	T.	.27										2.95
Salisbury	Atlantic	.75				T.		.31		T.							.34							T.	.09	.57		.80	.09							2.95
Sines**	do	1.25				T.		.30	T.	T.							.30							T.	T.	.27		.95	T.							3.07
Solomons	do	1.03	.09			T.		.16	T.	T.							.11	.10						T.	T.	.74		.31	.06							2.60
State Sanatorium	do	.79				.01		.29	.02								2.00								T.	.05	.20		.30							3.48
Stevensville	do	1.10				T.		.23	.08							.83	.03	.01						T.	T.	.30		.02	.08							1.96
Takoma	do	.76				T.		.54	.47	.04							2.57							T.	T.	.90	.27	.30	.08							5.93
Takoma	do	.83				.01		.04	.37	.04							1.43								T.	.18	.22		.85							4.47
Townson	do	.76				T.		.13	T.		.01						.03	.14							T.	.73	.01		.14	.03	.08					2.12
Western Port	do	.73				T.																														
Westminster	do	1.88				T.																														
Woodstock	do	.27				T.		1.66	.38	.03							.46								T.	.52			.17							3.49
Washington***	Atlantic	1.35				T.		.95	.30	T.							1.25								T.	.38										4.23
Delaware	do	.74	.03			T.		.82	.40	.16							1.49	.02							T.	.20			.06							3.92
Bridgeville	do	.42				T.		1.25	.63	.11							.02	.24							T.	.11			.10							2.88
Dover	do	.40				T.		1.20	.50	.07							.42								T.	.25	.20		.25							3.29
Millboro	do	1.38				T.		1.08	.11	.07							1.85								T.	.20			.03							4.72
Wilmington	do																																			

Except as otherwise indicated, observations are generally made late in afternoon, near sunset, and precipitation recorded is for the 24 hours ending at time of observation.  
 \*\*\*Regular Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight.  
 \*\*Precipitation is for 24-hour period, midnight to midnight.  
 |||||Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.  
 \*Precipitation included in the next following measurement.  
 T. Trace, or less than 0.01 inch. Data in italics determined from surrounding stations.

COMPARATIVE DATA FOR MARYLAND AND DELAWARE FOR JUNE

Year	Temperature				Precipitation							Year	Temperature				Precipitation						
	Mean	Departure from the normal	Highest	Lowest	Average	Departure from the normal	Greatest local	Least local	Greatest in 24 hours	Snowfall	Number of days with 0.01 inch or more		Mean	Departure from the normal	Highest	Lowest	Average	Departure from the normal	Greatest local	Least local	Greatest in 24 hours	Snowfall	Number of days with 0.01 inch or more
1895	73.2	+2.4	102	37	3.92	-0.01	7.86	0.75	2.20	0.0	8	1915	68.5	-2.3	98	31	5.07	+1.14	7.97	1.53	4.21	0.0	10
1896	65.8	-5.0	96	31	8.20	-0.73	6.44	0.87	2.70	0.0	10	1916	67.2	-3.6	95	33	5.91	+1.98	11.74	2.46	4.22	0.0	10
1897	68.6	-2.2																					

Daily Temperatures for June, 1931

Table with columns for Stations, days 1-31, and Mean. Rows list stations in Maryland and Delaware, including Aberdeen, Annapolis, Baltimore, etc., with their respective temperature readings 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, Sines, and Washington are from midnight to midnight; other stations, except Cumberland and Takoma, are for 24-hour period ending late in afternoon, near sunset. Data in italics determined from surrounding stations. (WB-9-30-31-930)