

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

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In Cooperation with Maryland State Weather Service

CLIMATOLOGICAL DATA

15 MARYLAND AND DELAWARE SECTION

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VOL. XXXVI BALTIMORE, MD., NOVEMBER, 1931 No. 11

GENERAL SUMMARY

This was the mildest November of record. Rainfall was light and was confined to the second decade and the last four days of the month. Frequency of fog was unusual. Under influence of easterly winds, mostly southeast, fog formed and prevailed from 9th to 13th, 15th to 20th, 22d to 25th, and 27th to 30th, with dense fog on the 16th and 17th, 19th and 20th, and 22d to 24th, interrupting water, land, and air transportation, fishing, and oystering. Monthly sunshine was slightly below normal. Relative humidity averaged 5 per cent above normal. Clear, sunshiny periods were 3d-10th and 22d-24th; the 17-19th was cloudy; while the 27-30th was overcast. Thanksgiving Day was fair and cool, with moderate to fresh northwest winds. There were no damaging winds. The prevailing direction of the wind for the month was southwest.

The 1st-2d and 26-28th were cool. The 6-7th was moderately cold. Mild weather prevailed during the 3d-5th. Reaction to warmer on the 8th and 9th developed into a long spell of warm weather, unprecedented for duration and intensity in November, from the 10th to the 25th. The mean temperature of the 7-day period of 18-24th averaged 20° above normal. The 29th was mild and the 30th was warm. High humidity, frequency of easterly winds, and prevalence of fog during the 8-25th prevented the occurrence of maximum temperatures exceeding the highest temperatures previously recorded in any November.

The first general killing frost of the season over the eastern half of the section occurred on the 5th over the southern portion and on the 7th over the northern portion.

Monthly rainfall averaged 37 per cent of normal. Totals were mostly less than 1 inch, except slightly in excess thereof over the central Eastern Shore and between 1 and 2.5 inches in the Allegheny Mountain region.

Snow flurries occurred in the Allegheny Mountain region on the 1st and over western Maryland on the 2d, 5th, and 8th.

The first snowfall of the season occurred on the 27th in the northern-border counties, with depths of 1 to 2 inches generally, except 2 to 5 inches in the northern portions of the Allegheny and Blue Ridge Mountain regions.

The unusual mildness caused autumn foliage to hold on exceptionally late and prolonged the life of late vegetation. Dandelions and roses bloomed during the month and tree buds were swelling.

The rains of the second decade were beneficial to grains already up, which were fair to good, and caused late-sown grains to germinate. The rains on the 27-30th caused grains to green nicely and improve to good, and pastures to improve from poor and fair to fair and good.

During the first decade harvesting keiffer pears, cowpeas and soy beans for hay, gardens, and sweet potatoes ended; and sowing grains in southern Maryland and on the Eastern Shore was finished. Other activities were husking and cribbing corn, harvesting truck, stripping tobacco, digging late potatoes, hauling fodder, picking apples, cutting wood, butchering, hunting, repairing, and cleaning up.

Springs and wells were low; in some localities they were very low, and water had to be hauled.—J. B., jr.

TEMPERATURE

The monthly mean for the section, 51.8°, is 6.7° above normal. The highest monthly mean was 54.7°, at Stevensville; the lowest, 46.0°, at Sines. The highest was 80° at Cumberland on the 12th, at Hancock on the 12th and 22d, at Lutherville on the 16th, and at Stevensville on the 21st; the lowest 16°, at Oakland on the 7th. The greatest monthly range was 60° at Hancock and Lutherville; the least, 42°, at Baltimore. The greatest daily range was 48° at Lutherville on the 10th.

PRECIPITATION

The monthly average for the section, 0.94 inch, is 1.61 inches below normal. The greatest monthly amount was 2.48 inches at Sines; the least, 0.34 inch, at Hancock (City). The greatest 24-hour amount was 1.02 inches at Cambridge on the 10th. The monthly average snowfall for the section, 0.8 inch, is 0.3 inch below normal. The greatest monthly snowfall was 5.0 inches at State Sanatorium. The number of days with 0.01 inch or more, 6; is 1 below normal. For the whole section the average number of clear days were 11; partly cloudy, 10; cloudy, 9.

MISCELLANEOUS PHENOMENA (WITH DATES)

Fogs, dense.—16, 17, 19, 20, 22, 23, and 24.

Rainbows.—Aberdeen, 20; Frostburg, 13.

Sleet, light.—North-central and southern Maryland, and northern Eastern Shore, 27.

Winds, high.—Northwest, 5, 6, 25; southeast, 20; southwest, 30.

PRESSURE, HUMIDITY, SUNSHINE AND WIND†

Stations	Atmospheric pressure reduced to sea level					Mean relative humidity		Sunshine Hours	Sunshine Percentage	Wind†					
	Average	Highest	Date	Lowest	Date	8 a. m.	Local n h			8 p. m.	Average hourly velocity	Direction	Highest gales	Direction	Date
Aberdeen, Md.	30.21	30.64	26	29.72	30	88	65	175	56	5.6	ne.	24	sw.	5	
Baltimore Md.	30.20	30.60	26	29.72	30	78	66	176	58	7.4	sw.	32	nw.	5	
Elkins, W. Va.	30.25	30.65	26	29.80	30	88	60	72	41	4.5	w.	22	s.	20	
Harrisburg, Pa.	30.26	30.58	26	29.70	30	82	64	67	114	38	5.2	w.	27	nw.	5
Norfolk, Va.	30.24	30.56	27	29.85	30	81	55	73	21	7.1	s.	24	w.	5	
Philadelphia, Pa.	30.22	30.62	26	29.71	30	7	62	67	16	3	10.5	sw.	34	nw.	5
Pittsburgh, Pa.	30.21	30.65	26	29.72	30	81	60	66	14	4	9.0	w.	36	w.	5
Wash'ton, D. C.	30.23	30.62	26	29.72	30	84	58	63	13	4	4	s.	24	nw.	5

† Velocity of wind in miles per hour, by 3-cup anemometer, except 4-cup at Aberdeen, Md.

Climatological Data, November, 1931

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 in. or more	Clear	Partly cloudy			Cloudy
<i>Maryland</i>																				
Aberdeen	Harford	80	13	50.8	+6.0	75	21	18	7	33	0.88	-1.49	0.34	T.	4	5	14	11	ne.	U. S. Army.
Annapolis	Anne Arundel	45	66	53.0	+6.1	70	13	29	7	26	1.09	-1.81	0.44	T.	9	10	9	11	se.	Louis E. Foster.
Baltimore*		115	61	54.7	+8.4	76	21	34	7	24	1.13	-1.43	0.55	T.	6	11	10	9	sw.	U. S. Weather Bureau.
Bell†	Prince Georges	151	11	50.9	+6.1	78	16	19	7	43	0.88	-1.89	0.40	T.	3	12	8	10	se.	Bureau Plant Industry.
Boysd.	Montgomery	375	12	50.6	+5.7	79	16	20	7	43	0.87	-1.55	0.42	0.2	5	12	11	7	s.	Ralph F. Staley.
Cambridge (near)	Dorchester	25	38	53.3	+5.7	77	22	25	7	36	1.59	-1.04	1.02	0.0	5	16	5	9	sw.	Matt Harding.
Cecilton.	Cecil	85	13	51.9	+5.4	76	20	23	7	31	0.67	-2.03	0.27	T.	4	11	10	9	sw.	James Reese Short.
Cheltenham.	Prince Georges	230	31	52.8	+7.0	78	16	22	7	36	1.04	-1.44	0.40	T.	7	13	7	10	sw.	Geo. Hartnell.
Chewsville	Washington	530	34	50.0	+7.1	76	18	23	7	38	0.59	-1.44	0.29	2.0	4	8	13	9	se.	D. Paul Oswald.
Clear Spring	do	600	34																	Mrs. Anna B. Cohill.
Coleman†	Kent	80	34	53.2	+6.8	77	21	30	7	29	0.81	-1.69	0.31	T.	3	11	11	8	sw.	Walter B. Harris.
College Park	Prince Georges	87	45	52.2	+7.5	78	16	21	7	46	1.55	-0.97	0.74	T.	7	12	8	10	sw.	Prof. Thos. H. White.
Crisfield.	Somerset	5	12	53.2	+3.2	75	21	30	7	28	0.60	-2.03	0.46	0.0	5	15	7	8	sw.	A. B. Cochran.
Cumberland	Allegany	623	59	52.2	+6.6	80	12	23	7	40	0.56	-1.57	0.33	3.5	16	11	14	5	sw.	Harvey H. Weiss.
Darlington	Harford	300	41	50.4	+6.6	74	20	19	7	37	0.80	-1.96	0.2	4	8	12	10	se.	Fred. C. Jones.	
Easton	Talbot	35	41	53.0	+6.5	78	21	24	7	31	0.81	-1.76	0.25	T.	6	14	8	8	s.	Clement E. Bray.
Elkton	Cecil	28	5	50.6		76	21	18	7	38	0.70		0.30	T.	3	11	10	9	sw.	H. W. Beuchelle.
Emmitsburg	Frederick	720	63	52.0	+3.8	74	110	30	7	32	0.85	-2.36	0.50	4.0	5	10	11	9	w.	Mt. St. Mary's College.
Fallston†	Harford	450	62	51.2	+7.6	76	116	24	7	35	1.00	-2.16	0.34	1.0	6	8	14	8	se.	Miss Dora Curtiss.
Ferry Landing†	Calvert	110	15	53.4	+6.7	76	118	26	7	32	0.80	-1.86	0.34	T.	5	15	8	7	sw.	Thos. J. Bourne.
Frederick	Frederick	325	57	52.5	+8.3	78	16	29	7	40	0.83	-1.70	0.35	0.5	4	11	11	8	sw.	August T. Brust.
Friendsville.	Garrett	1,501	13	48.9	+8.3	73	22	19	7	35	1.94	-1.11	0.75	1.0	8	7	13	10	w.	Joab J. Friend.
Frostburg	Allegany	1,929	30	50.6	+8.8	74	12	23	7	33	0.98	-1.52	0.53	3.0	8	10	14	6	w.	T. F. Lewis.
Grantsville.	Garrett	2,351	38	46.6	+7.7	72	17	17	7	36	1.84	-0.91	0.51	3.5	10	6	15	9	w.	Floyd J. Miller.
Great Falls†	Montgomery	200	42	52.2	+7.9	78	112	22	7	44	0.47	-1.75	0.30	T.	5	10	11	9	w.	Chas. E. Sullivan.
Hancock (Tonoloway)	Washington	455	21	51.0	+7.5	80	112	20	7	44	0.53	-1.79	0.42	2.0	3	9	14	7	sw.	American Fruit Growers.
Hancock (City)	do	421	7								0.34	-1.98	0.34	2.0	2					William R. Murray.
Kedysville.	do	400	27	52.0	+7.9	78	12	23	7	38	1.52	-1.54	0.24	2.0	5	9	12	9	s.	J. A. Miller.
La Plata	Charles	190	11	52.8	+6.1	78	18	22	7	26	1.00	-1.56	0.42	T.	8	15	7	8	sw.	Walter M. Page.
Laurel	Prince Georges	320	37	52.0	+7.3	79	16	24	7	42	1.45	-0.99	0.60	T.	10	12	8	8	sw.	Evan G. Chaney.
Lutherville.	Baltimore	340	5	51.2		79	16	20	7	48	0.86		0.35	T.	6	7	15	8	sw.	August W. Clark, P. M.
Maryland Line.	do	840	7	51.1		76	16	23	7	33	0.62		0.37	2.0	2	8	13	9	sw.	Chester L. Fulton.
Mechanicville.	St. Marys	165	5								0.97			T.	5	15	7	8	sw.	Zach S. Graves.
Millington	Kent	27	34	52.4	+6.8	76	20	21	7	36	0.99	-1.55	0.34	T.	6	11	9	10	sw.	Henry L. Higman.
Oakland	Garrett	2,461	32	46.9	+8.8	73	15	24	7	43	2.07	-0.68	0.53	2.0	12	8	11	11	w.	R. E. Weber.
Parkton§	Baltimore	780	1	50.6		75	15	24	7	32	0.62		0.27	1.5	5	7	12	11	w.	C. B. Cornell.
Pearcy.	Allegany	900	5	51.5		77	112	23	7	40	0.54		0.19	2.0	6	10	14	6	w.	American Fruit Growers.
Pleasant Hill †	Baltimore	660	7								0.82		0.35	1.0	3	9	13	8	se.	J. E. Henry.
Pocomoke City.	Worcester	37	26								0.71	-1.65	0.40	0.0	5	16	6	8	sw.	Wm. H. Dryden.
Princess Anne.	Somerset	17	56	52.2	+4.8	79	21	23	7	37	0.52	-1.86	0.25	0.0	5	13	8	9	sw.	James R. Stewart.
Ridgely.	Caroline	57	10	52.4	+6.3	76	20	22	7	34	1.20	-1.40	0.55	T.	6	12	9	9	sw.	Albert White.
Rock Hall.	Kent	25	17	53.0	+6.4	78	20	22	7	35	1.03	-1.64	0.35	T.	7	11	11	8	w.	Charles Judefind.
Salisbury.	Wicomico.	23	26	54.4	+7.1	78	22	23	7	34	0.75	-1.97	0.27	0.0	6	16	6	8	w.	Homestead Dairy Farms.
Sines (Deep Creek)	Garrett	2,040	4	46.0		71	122	17	7	38	2.48		0.80	1.0	11	6	13	11		C. E. MacMurray.
Solomons§	Calvert.	20	40																	Wm. H. Goeshy.
State Sanatorium	Frederick	1,460	23	51.5	+8.3	74	12	27	7	29	0.86	-1.65	0.37	5.0	6	9	12	9		Dr. V. F. Cullen.
Stevensville.	Queen Annes	12	5	54.8		80	21	33	7	31	1.18		0.54	T.	7	11	11	8	s.	T. R. Price.
Takoma.	Montgomery	320	33																	L. M. Mooers.
Towson.	Baltimore	465	19								0.94	-1.46	0.30	T.	5	11	10	9		Metropolitan District.
Western Port.	Allegany	1,000	38	52.6	+8.4	79	112	21	7	44	0.81	-1.12	0.32	1.0	10					Norris Bruce.
Westminster.	Carroll	770	22	49.5	+4.7	76	16	24	7	41	0.52	-2.23	0.26	2.0	4	11	10	9		Stewart N. Dutterer.
Woodstock.	Baltimore	415	61	51.7	+8.3	77	16	21	7	45	0.89	-1.90	0.34	1.0	9	12	11	7	se.	Woodstock College.
<i>Dist. of Columbia</i>																				
Washington**.		112	61	54.0	+8.8	77	18	30	7	29	1.01	-1.36	0.41	T.	5	7	11	12	s.	U. S. Weather Bureau.
<i>Delaware</i>																				
Bridgeville.	Sussex	45	8	53.0	+6.6	74	22	23	7	36	0.91	-1.77	0.43	0.0	6	14	10	6	sw.	George Ray.
Delaware City.	New Castle	12	45	52.5	+6.6	74	23	24	7	32	0.65	-1.58	0.30	T.	3	11	9	10	sw.	James E. Maden.
Dover.	Kent	34	42	52.8	+7.0	78	22	26	7	29	1.12	-1.97	0.55	T.	5	11	12	7	sw.	Arthur G. Livingston.
Milford.	Sussex	20	49	53.3	+6.0	79	22	23	7	34	0.97	-2.00	0.48	0.0	6	12	12	6	s.	Chas. J. Holzmuller.
Millsboro.	do	20	39	54.0	+7.3	79	22	25	7	37	0.85	-1.79	0.30	0.0	5	14	10	6	sw.	Rev. Geo. W. Daugherty.
Wilmington.	New Castle	86	38	52.0	+6.6	73	21	27	7	28	0.68	-2.19	0.24	0.5	6	11	8	11	sw.	Street and Water Depts.
<i>Means and extremes</i>																				
For Maryland and District of Columbia.				51.6	+6.8	80	112	16	7	48	0.95	-1.57	1.02	0.9	6	11	10	9	sw.	
For Delaware.				52.9	+6.2	79	22	23	7	37	0.86	-1.89	0.55	0.1	5	12	10	8	sw.	
For entire section.				51.8	+6.7	80	112	16	7	48	0.94	-1.61	1.02	0.8	6	11	10	9	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 stations. †Precipitation is less than 0.01 inch rain or melted snow.

§Prettyboy Dam. ¶Drum Point Light station. ††Post 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. †Also on other dates. *Custom House, Gay and Water Sts. **Weather Bureau Building, 24th and M Sts.

Daily Temperatures for November, 1931

Table with columns for Station, Day (1-31), and Mean. Rows list various Maryland and Delaware stations such as Aberdeen, Annapolis, Baltimore, etc., with their respective daily maximum and minimum temperatures.

§§ Instruments are read in morning; maximum temperature then read is charged to preceding day, on which it almost always occurs. Temperatures at Aberdeen, Baltimore, Sines, and Washington are from midnight to midnight; other stations, except Cumberland are for 24-hour period ending late in afternoon, near sunrise. Data in italics determined from surrounding stations.