

U. S. DEPARTMENT OF AGRICULTURE.

REPORT FOR OCTOBER, 1901.

MARYLAND AND DELAWARE SECTION

OF THE

CLIMATE AND CROP SERVICE

OF THE

WEATHER BUREAU.

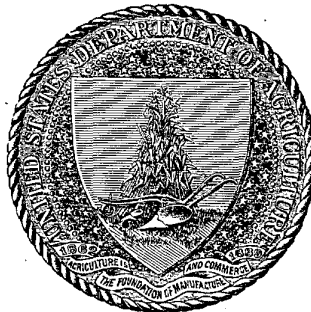
IN COOPERATION WITH THE

MARYLAND STATE WEATHER SERVICE.

PREPARED UNDER DIRECTION OF
WILLIS L. MOORE,
CHIEF OF WEATHER BUREAU.

BY

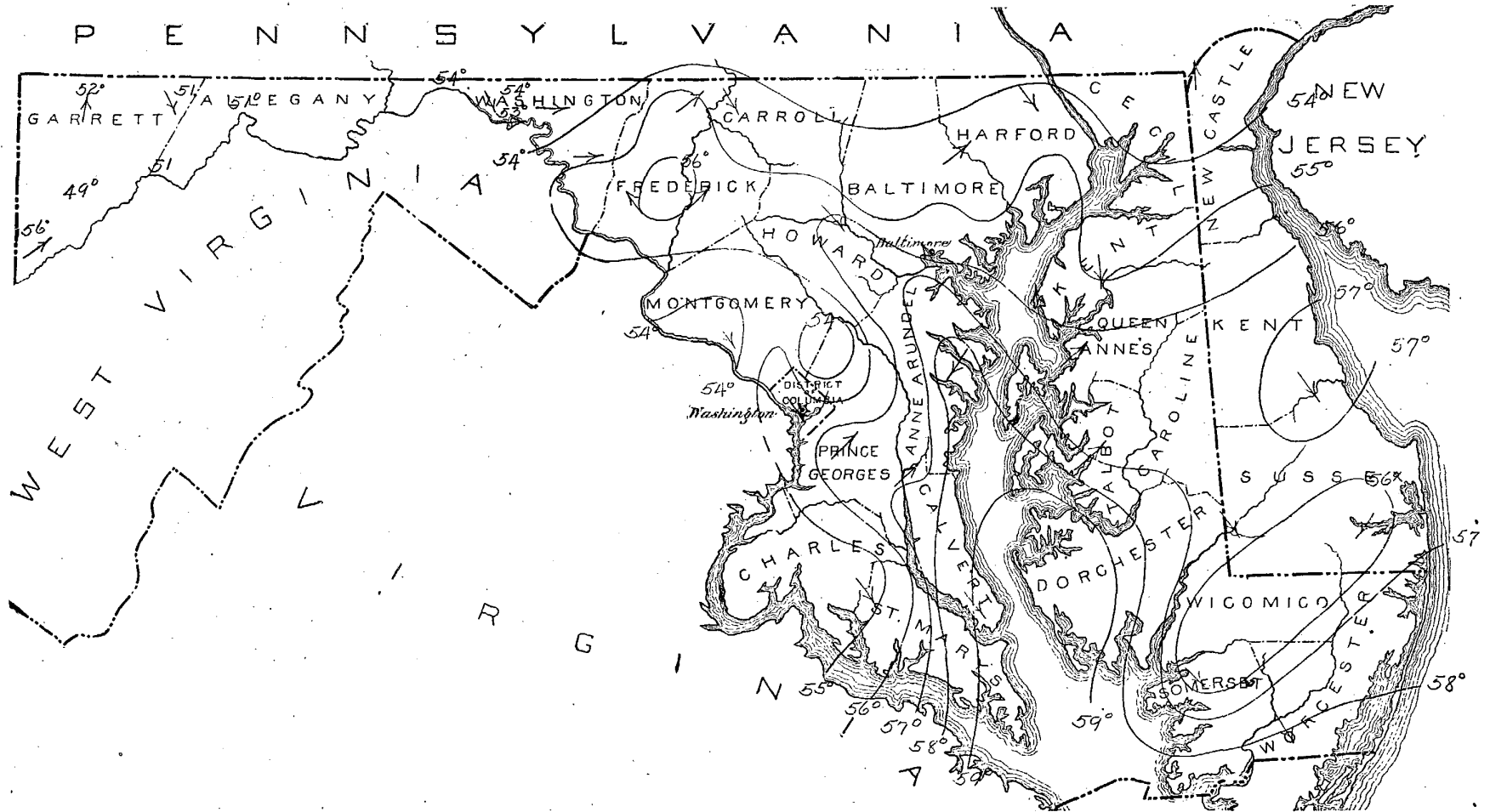
OLIVER L. FASSIG,
SECTION DIRECTOR.



BALTIMORE, MD.:
WEATHER BUREAU OFFICE.
JOHNS HOPKINS UNIVERSITY.
1901.



MONTHLY MEAN ISOTHERMS AND PREVAILING DIRECTION OF WIND, OCTOBER, 1901.



U. S. DEPARTMENT OF AGRICULTURE,
CLIMATE AND CROP SERVICE
 OF THE
WEATHER BUREAU.

CENTRAL OFFICE: WASHINGTON, D. C.

MARYLAND AND DELAWARE SECTION,
 OLIVER L. FASSIG, Section Director.

Vol. VI. BALTIMORE, MD. No. 10.

Fluctuations in the Average Autumn Temperature at Baltimore, Md., since 1817. The diagram at the bottom of the page shows the mean seasonal temperature from year to year for the months of September, October, and November, based upon observations made at different points within the city of Baltimore from the year 1817 to the year 1900, and completes the series of seasonal curves of temperature presented in these pages since January of the current year. The diagrams representing the winter, spring, and summer average temperatures were published respectively in the January, April, and May numbers of this report.

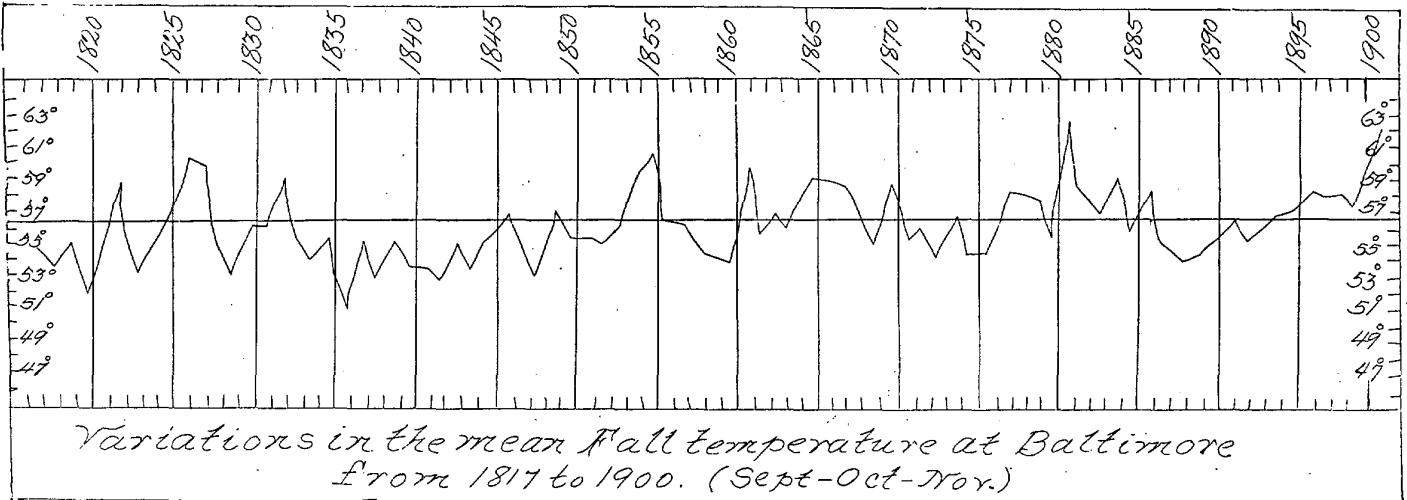
Based upon a record of 84 consecutive years, September has an average temperature of 68°, October 56°, and November 45°, making the average autumn temperature 56°.3. The horizontal line drawn through the irregular curve represents this mean value of 56°.3, and divides the seasons which were warmer than the normal from those which were colder than the normal. The autumn temperature for each year, as well as the deviation from the normal, may be found from the figures at either end of the diagram.

The following seasons were 2° or more warmer than the normal: 1822, 1826, 1827, 1832, 1854, 1855, 1861, 1864, 1865, 1866, 1867, 1870, 1877, 1878, 1881, 1882, 1884, 1886, 1896, 1898, 1900. Those 2° or more colder than the normal were: 1818, 1820, 1823, 1829, 1836, 1838, 1840, 1841, 1842, 1844, 1848, 1859, 1860, 1875, 1876, 1888, 1889. The remaining

seasons were within 2° of the normal temperature. From 1833 to 1852 (excepting 1846 and 1849) the average autumn temperatures were continuously below the normal; they were continuously above the normal from 1861 to 1871 (excepting 1862), from 1877 to 1886 (excepting 1880 and 1885), and from 1894 to 1900. The coldest autumn was that of 1836, with an average temperature of 51°.3; those of 1820, 1823, and 1829 were but little milder. The warmest autumn occurred in 1881, with an average temperature of 63°; next in order of mildness were those of 1900, 1826, 1855, and 1861.

The fluctuations from year to year are very irregular. While the temperature may remain above or below the normal value for many years at a time, there seems to be no regularity in the occurrence of such periods. Deductions as to the probable character of a coming season, based upon the evidence of the accompanying diagram, would have little or no value.

Weather and Crop Conditions. The clear and pleasant weather that prevailed during September continued to a large extent throughout the succeeding month of October. The temperatures as a whole were slightly below normal. The coldest days were the 25th and 26th, when the temperatures went to freezing at nearly all points in the southern and eastern counties, and fell as low as 16° and 17° in the mountain districts of Garrett. The first killing frosts of the season occurred at this time in many districts, although very heavy frosts formed early in the month in parts of the more northern and western counties. The warmest days were generally the 1st, 2d, 13th, 22d, and 23d. The precipitation was everywhere deficient, and for the section as a whole averaged less than half the normal amount. The greatest amounts, over two inches, fell in southern Delaware, but in Western Maryland there were extensive areas over which the total monthly fall was less than half an inch. Rains were general on the 2d, 13th, and 14th, and fairly general but light on the 17th; scattered showers occurred on the 1st, 3d, 10th, 12th, and 15th; for the remainder of the month there was practically no rain. Snow flurries were reported from the extreme western dis-



tricts on the 3d, 4th, and 17th. Thunderstorms occurred at a number of stations on the 2d. High winds were reported locally on the 2d, 3d, 17th to 19th, 22d, and 23d, but little or no damage followed. Fogginess prevailed on the 9th to 11th, 30th, and 31st.

All in all, the weather conditions for October were extremely favorable for the completion of the corn harvest and for the seeding of winter grain, but the large deficiency in moisture was greatly against the proper germination of wheat. The corn crop is a large one, and is saved in splendid condition. Fodder is generally good also, although there was some loss in handling, due to the dry and brittle state of leaf and stalk. Husking was well under way at the close of the month, but only a small percentage of the entire crop had been cribbed. The early sown wheat received enough rain to bring it to a good stand, but the late sown had not sprouted to any extent by the close of the month, and the farmers are now quite apprehensive lest delayed sprouting will bring a thin and tender growth to bear the brunt of the winter's cold. Grass suffered from lack of moisture, but grazing was good in many districts throughout the month. The yields of potatoes improved somewhat over September in many localities. The weather was generally too dry for turnips. Tomatoes were killed by frosts over the upper half of the section early in the month, but the vines were still bearing at the close of the period in some of the southeastern counties. Late tobacco was housed in good condition during the month.

* *

CLIMATOLOGY OF THE MONTH.

ATMOSPHERIC PRESSURE.

Monthly mean at Washington, D. C., 30.19 inches; at Baltimore, 30.17 inches; average, 30.18 inches; highest, 30.60 inches, at Baltimore and Washington, D. C., on the 29th; lowest, 29.66 inches, at Baltimore, on the 2d.

TEMPERATURE.

The monthly mean (entire territory), 54.9°, is 0.9° below the normal.

The highest monthly mean was 59.8°, at Solomons.

The lowest monthly mean was 48.9°, at Deer Park.

The highest temperature recorded during the month was 92°, at McDonogh, on the 13th.

The lowest temperature recorded during the month was 16°, at Deer Park, on the 24th.

The greatest local monthly range was 62°, at McDonogh.

The least local monthly range was 39°, at Cambridge.

The greatest daily range was 53°, at Sunnyside, on the 8th.

The least daily range was 7°, at Taneytown, on the 24th.

PRECIPITATION,
in inches and hundredths.

The monthly average (entire territory) 1.14, was 1.88 below the normal.

The greatest amount was 2.27, at Milford.

The least amount was 0.21, at Boettcherville.

The greatest amount in twenty-four hours was 2.22, at Milford, on the 13th and 14th.

The average number of rainy days, 4.

WIND.

The prevailing direction was from the northwest.

The total movement was 3,074 miles, at Baltimore, and 4,064 miles, at Washington, D. C.

The maximum wind velocity was 26 miles per hour from the northwest, at Washington, D. C., on the 17th.

MISCELLANEOUS PHENOMENA.

Thunderstorms.—Boonsboro, 2; Chewsville, 2; Clear Spring, 2; Fallston, 2; Frederick, 2; Green Spring Furnace, 2; Hancock, 2; Newark, 2; New Market, 2; Sharpsburg, 2; Smithsburg, 2; Solomons, 2, 13; Sunnyside, 2, 17.

Light Frost.—Baltimore, 4, 5, 6, 7, 8, 26; Cheltenham, 4, 5, 16, 17; Chestertown, 4, 5, 24, 25; Clear Spring, 5, 6, 7; Easton, 5, 7, 8; Fallston, 4, 5, 7, 8, 16; Green Spring Furnace, 6, 7, 15; Jewell, 4, 5; Laurel, 4, 5, 6, 7, 8, 16, 17, 18, 22; Longwoods, 2, 5; Mount St. Marys, 26; Pocomoke City, 4; Queenstown, 4, 6, 7, 15; Rock Hall, 8, 16; Seaford, 4, 5, 6, 19; Smithsburg, 4, 5; Solomons, 26; Taneytown, 3, 6, 26; Van Bibber, 5; Woodstock, 5, 6, 7, 16.

Killing Frost.—Boonsboro, 4, 5, 7, 25, 26; Charlotte Hall, 16, 26; Chase, 4, 5, 6, 7, 8, 24, 25, 26; Cheltenham, 25, 26; Chewsville, 3, 4, 5, 6, 24, 25; Clear Spring, 25, 26; Colora, 25; Fallston, 25, 26; Frostburg, 4; Green Spring Furnace, 4, 5, 25; Hancock, 4, 5, 7, 16, 25, 26; Harney, 3, 4, 6, 7, 31; Jewell, 25; Laurel, 18, 25, 26; Millsboro, 26; Newark, 19; New Market, 25, 26; Pocomoke City, 5, 6; Princess Anne, 4, 5, 7, 16, 19, 26; Queenstown, 25; Rock Hall, 7, 26; Seaford, 26; Sharpsburg, 4, 5, 7, 16, 25, 26, 27; Smithsburg, 25; Sunnyside, 3, 7, 8, 16, 18, 25, 26; Taneytown, 4, 5, 27, 29; Van Bibber, 7, 18, 21, 22, 25, 26, 30; Washington, 7; Woodstock, 8, 26.

Ice.—Boonsboro, 25; Chestertown, 4; Laurel, 18, 26; Princess Anne, 5, 25, 26; Rock Hall, 26; Seaford, 26; Smithsburg, 25.

Snow.—Deer Park, 17; Frostburg, 17; Sunnyside, 3, 4, 17.

Fog.—Baltimore, 9, 10, 23, 31; Chase, 9, 10, 11, 31; Cheltenham, 10, 11, 31; Chestertown, 10, 11, 20, 30, 31; Clear Spring, 30, 31; Easton, 9, 10, 31; Green Spring Furnace, 3, 6, 7, 8, 11, 12, 31; Hancock, 1, 7, 9, 10, 11, 16, 21, 31; Jewell, 9, 10, 11, 22, 31; Johns Hopkins Hospital, 9, 31; Laurel, 9, 10, 11, 12, 31; Millsboro, 10, 11, 21, 22; Princess Anne, 10, 11, 21, 22, 23, 27; Queenstown, 9, 10, 11, 20, 21, 30, 31; Rock Hall, 10, 31; Seaford, 10, 11, 16, 28; Sharpsburg, 30, 31; Smithsburg, 12, 30; Solomons, 10, 11, 22, 31; Van Bibber, 31.

Haze.—Smithsburg, 18, 23, 26, 27, 28, 29; Solomons, 27, 28, 30.

Solar Halo.—Green Spring Furnace, 31; Jewell, 27; Solomons, 22, 23.

Lunar Halo.—Chewsville, 21; Clear Spring, 25; Jewell, 22; Washington, 22.

Lunar Corona.—Baltimore, 22; Rock Hall, 23.

High Winds.—Cheltenham, 2; Clear Spring, 3; Frostburg, 19, 22, 23; Green Spring Furnace, 19, 23; Longwoods, 17, 18; Queenstown, 2, 17, 18.

Forest Fires.—Near Grantsville from the 20th to 31st.

High Tide.—Longwoods, 13; Queenstown, 1, 2, 12, 29, 30.

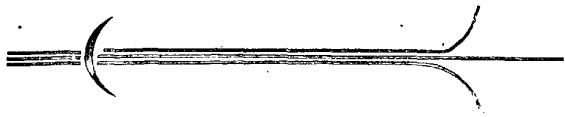
Low Tide.—Queenstown, 6, 20.

Migration of Birds.—Wild geese observed flying southward at Millsboro on the 21st, and at Queenstown on the 22d; purple grackle seen at New Market on the 28th.

Climatological data for Maryland and Delaware, October, 1901.

Table with columns: Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure, Greatest in 24 hours, Total snowfall, Number rainy, Number clear, Number partly cloudy, Number cloudy), Sky, Prevailing direction of wind, Observers. Rows are categorized by region: WESTERN MARYLAND, NORTHERN-CEN. MD., SOUTHERN MARYLAND, EASTERN MARYLAND, and DELAWARE.

NOTE.—All records are used in determining State or district means, but State and district departures are determined by comparison of current data of only such stations as have normals. Letters of the alphabet indicate the number of days missing—e. g. "d" denotes four days missing. † Mean of 7 a. m. + 2 p. m. + 2. ‡ Incomplete record. * Not included in means. † On other dates also. New normals of temperature and precipitation have been computed for all stations having a record of three years or more, from the beginning of observations to include the year 1900. The use of the new normals began in the January report.



TOTAL PRECIPITATION, OCTOBER, 1901.

