

JUN 16 1899

U. S. DEPARTMENT OF AGRICULTURE.

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REPORT FOR MAY, 1899.

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MARYLAND AND DELAWARE SECTION

OF THE

CLIMATE AND CROP SERVICE

OF THE

WEATHER BUREAU.

IN COOPERATION WITH THE

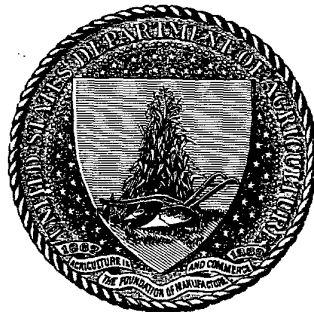
MARYLAND STATE WEATHER SERVICE.

(Prof. Wm. B. Clark, Director; Prof. Milton Whitney, Secretary and Treasurer.)

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

BY

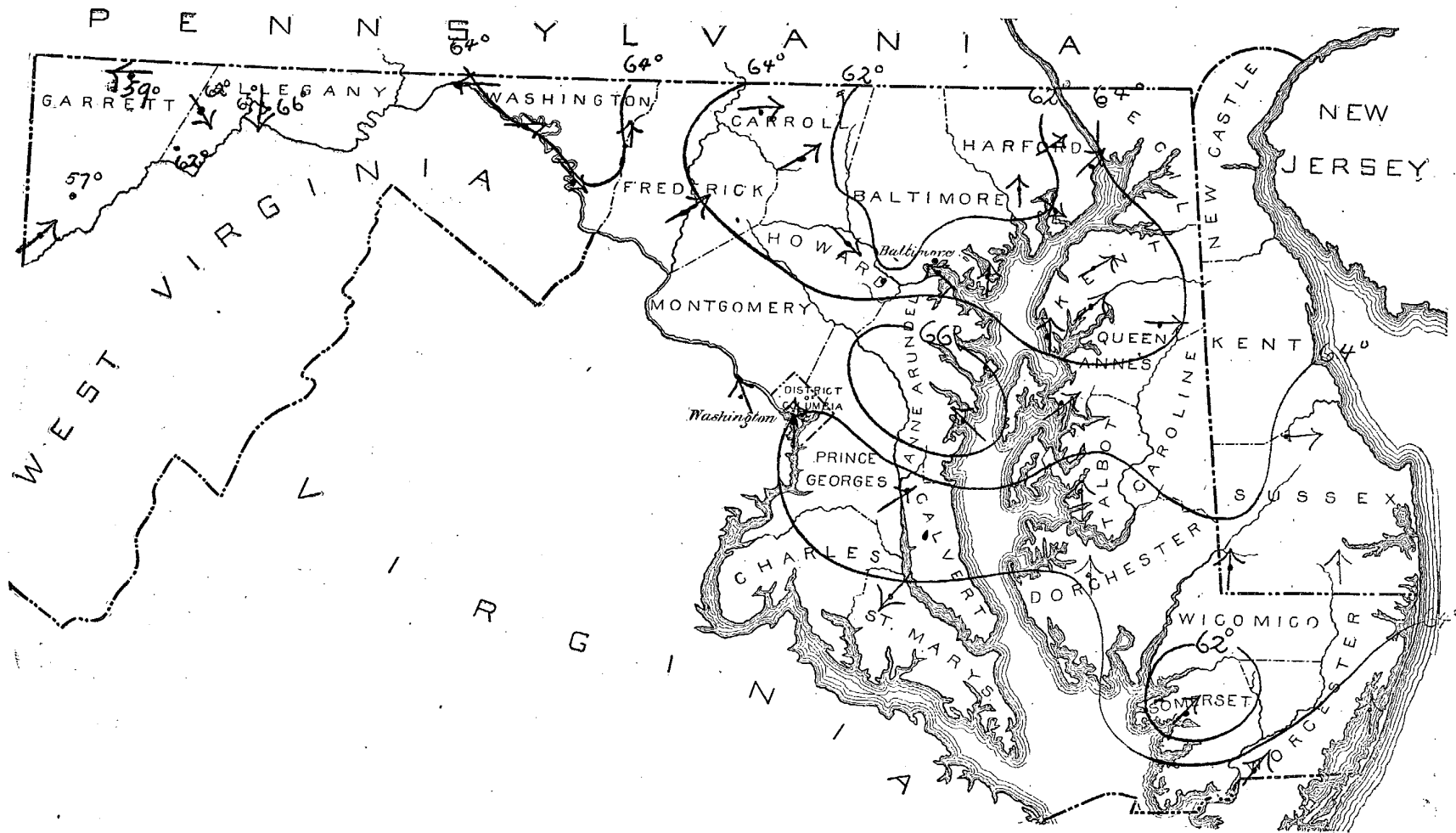
F. J. WALZ,  
SECTION DIRECTOR.



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

1899.

MONTHLY MEAN ISOTHERMS AND PREVAILING WINDS, MAY, 1899.



U. S. DEPARTMENT OF AGRICULTURE,  
**CLIMATE AND CROP SERVICE**

OF THE  
**WEATHER BUREAU.**  
 CENTRAL OFFICE: WASHINGTON, D. C.

BALTIMORE, MD.

VOL. IV.

BALTIMORE, MD.

No. 5.

**WEATHER AND CROP CONDITIONS DURING MAY.**

**FIRST WEEK.** On the whole the temperature of the week throughout the Section was from 3° to 6° above the normal values. Fair weather prevailed during the first half and cloudy weather with frequent showers during the second half. Moderately heavy rains fell in the western portion of Maryland and scattered showers in the northern-central counties. In southern and eastern counties and in Delaware there was little or no rain. There were no injurious frosts during the week.

On the whole the week was favorable for farmwork and for moderate advance in plant growth. In the main wheat-growing counties wheat made a fair advance. On the whole it is looking well, but it will not make an average crop on account of the damage from winter killing. Rye is heading out, but the crop will probably be short. Oats and grass are looking fairly well. In some sections they are beginning to show the effects of dry weather. Corn planting is in progress; some early planted is coming up. Tobacco plants are growing slowly; in Charles County they are reported as abundant. Some reports indicate damage by fly, but not to an unusual extent. Garden truck is doing well. Cabbage and tomato plants are being set out. Strawberries promise a large yield. Potatoes are coming up well and are growing nicely. Peas give promise of a good yield. Excepting in a few favored localities, there will be no peaches. Cherries, pears, plums and apples give promise of good yields.

**SECOND WEEK.** The temperature during the early part of the week was slightly below normal; from the middle to the end of the week it was above. On the whole the Section was about 2° or 3° warmer than the normal for the week. Much needed rains fell in all districts. Those of the 11th were quite heavy in localities. The rain of the 13th was general.

The week was favorable for vegetation throughout the Section. All crops were improved by the rains, and the soil was put into general good working condition. Much corn still remains to be planted. The early planted is growing nicely. Wheat and rye are beginning to head. Oats are in excellent condition. Tobacco plants are ready to set out. The plants seem to be fairly abundant. Peas are in blossom. Cabbage, tomato and potato plants have been transplanted in great numbers. Strawberries are ripening. Some local berries are in the markets. Apples, cherries and pears continue to give promise of good yields.

**THIRD WEEK.** The week was cold throughout the Section, averaging from 3° to 4° below the normal for the season.

Rains were abundant and fairly well distributed over the Section from the 16th to the 19th, falling in the form of thundershowers. A very severe thunderstorm occurred during the afternoon of the 16th, causing the loss of several lives in Maryland and the destruction of considerable property. Near Churchville, Harford County, twenty-five head of cattle were killed, having sought shelter under a tree which was struck by lightning. The storm was accompanied by hail in some places.

On the whole the end of the week showed an improvement in crops, the abundant rains more than balancing the check in growth, owing to cold weather. Corn planting was delayed by wet weather. In Garrett County much still remains to be planted. Cutworms are reported to be abundant. Wheat is heading fairly well. It is generally reported thin. Reports from the Eastern Shore are more favorable than those from other sections. Clover is coming into head, but is short. Not much tobacco was planted during the week. There are reports of injury by fly, but they are not more numerous than usual. The rains have been of much benefit to garden truck. Potatoes are coming up nicely. Fruit is hanging well, and cherries and strawberries are ripening.

**FOURTH WEEK.** The week was dry with unusually low temperatures until near the close. The temperature rose rapidly on Saturday and remained very high during Sunday and Monday. Frosts occurred in all sections, excepting the extreme southern counties, though the injury to crops seems to have been slight. The only rains of the week were the light showers occurring on Tuesday.

Wheat and rye are heading fast. The prospects for wheat have not improved during the week. The ravages of the fly are noticed in nearly all districts. Rye seems to be in better condition. Oats are doing nicely in all sections. Early corn is receiving its first working. Clover is in blossom. Timothy promises well in some localities. In most sections, however, grass is short or thin. The cool nights have been unfavorable for the growth of the tobacco plants. Considerable injury has been done by cutworm and fly. Early potatoes are in flower and are in promising condition. There is a large acreage of tomatoes, and plants are still being set out. Melons are making but slow growth. The frosts have injured some tomatoes and melons. Early-sown peas are being picked in southern and southwestern Maryland. Good yields of strawberries are reported. They are also of good size and fine flavor. Cherries are ripening fast and are plentiful. Apples still promise an abundant yield.

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**CLIMATOLOGY OF THE MONTH.****ATMOSPHERIC PRESSURE—IN INCHES AND HUNDREDTHS.**

Monthly mean at Washington, D. C., 30.05; at Baltimore, 30.05; average, 30.05; highest, 30.35 at Washington, D. C., on the 25th; lowest, 29.68 at Washington, D. C., on the 8th.

**TEMPERATURE—IN DEGREES FAHRENHEIT.**

The monthly mean (entire territory), 63.7, is normal. The highest monthly mean was 66.8, at Distributing Reservoir.

The lowest monthly mean was 57.3, at Deer Park.

The highest temperature recorded during the month was 96, at Chewsville, on the 29th and at Milford, Del., on the 28th.

The lowest temperature recorded during the month was 31, at Deer Park, on the 21st and at Grantsville on the 22d.

The greatest local monthly range was 59, at Chewsville.

The least local monthly range was 42, at Solomon's.

The greatest daily range was 47, at Boetcherville, on the 12th and Hancock on the 29th.

The least daily range was 2, at Cumberland, on the 5th.

#### PRECIPITATION—IN INCHES AND HUNDREDTHS.

The monthly average (entire territory) 3.34, was 0.86 below the normal.

The greatest amount was 7.42, at Grantsville.

The least amount was 1.51, at Princess Anne.

The greatest amount in twenty-four hours was 4.20, at Grantsville, on the 17th and 18th.

The average number of rainy days, 10.

#### WIND.

The prevailing direction was from the southwest.

The total movement was 3,650 miles, at Baltimore, and 4,350 miles, at Washington, D. C.

The maximum wind velocity was 36 miles per hour from the southwest, at Washington, D. C., on the 29th.

#### MISCELLANEOUS.

The following are dates on which miscellaneous phenomena occurred:

*Thunderstorms.*—Bachman's Valley, 2, 9, 16, 17, 18, 19, 29; Baltimore, 2, 4, 9, 16, 17, 29; Boettcherville, 1, 2, 3, 4, 5, 8, 16, 17, 18, 29, 31; Boonsboro a, 2, 8, 16, 17, 18, 29, 31; Boonsboro b, 2, 16, 17, 18, 29, 31; Cambridge, 16, 17, 18, 29; Charlotte Hall, 8, 16, 17, 29, 31; Chase, 16, 17, 18, 29; Chewsville, 9, 17, 18, 29, 31; Clear Spring, 9, 16, 17, 18; Deer Park, 8, 11, 16, 17, 18; Fallston, 6, 9, 16, 17, 27, 29; Frederick, 2, 8, 16, 17, 29, 31; Frostburg, 1, 2, 3, 16, 17, 18, 29, 31; Grantsville, 1, 2, 3, 8, 9, 16, 17, 29, 30, 31; Green Spring Furnace, 2, 8, 16, 31; Hancock, 2; Harney, 2, 12, 17, 29; Jewell, 8, 16, 17, 29, 31; Laurel, 2, 8, 16, 17, 18, 29, 31; Maryland Agricultural College, 16; Millsboro, Del., 16, 17, 30; Mt. St. Mary's, 1, 2, 16, 29; New Market, 2, 8, 16, 17, 29, 31; Pocomoke City, 16; Princess Anne, 8, 16, 18, 30; Queenstown, 16, 17, 29, 31; Rock Hall b, 2, 16, 17, 30; St. Charles College, 16, 17, 29, 31; Seaford, Del., 16, 17, 29, 30; Sharpsburg, 2, 8, 29; Smithsburg a, 2, 8, 9, 16, 17, 29, 31; Smithsburg b, 2, 16, 17, 18, 29, 31; Solomons, 2, 3, 8, 13, 16, 17, 18, 29, 30, 31; Sudlersville, 16, 17, 18, 29, 31; Takoma Park, 2, 9, 31; Taneytown, 2, 8, 9, 16, 31; Washington, 2, 8, 9, 16, 17, 18, 29, 31; Western Md. College, 2, 8, 9, 16, 17, 29; Woodstock, 2, 8, 29, 30, 31; Wyoming, 2, 16, 17.

*Frost, light.*—Annapolis, 25; Charlotte Hall, 26; Chestertown, 24; Easton, 4, 24, 25, 26; Frostburg, 21, 22; Grantsville, 22; Laurel, 26; Millsboro, Del., 24, 25, 26; Pocomoke City, 5, 10, 12, 16, 24, 25, 27; Queenstown, 21, 23, 24; Seaford, Del., 25, 26; Smithsburg b, 22; Solomons, 26; Sudlersville, 24, 25, 26; Wyoming, Del., 24, 25.

*Frost, killing.*—Pocomoke City, 25; Princes Anne, 24, 25, 26.

*Hail.*—Boonsboro a, 2; Cambridge, 16; Darlington, 9; Deer Park, 8, 16; Easton, 16; Millsboro, Del., 16; Smithsburg b, 2; Washington, 8, 16, 17, 18; Woodstock, 16.

*Fog.*—Chase, 25; Green Spring Furnace, 24; Millsboro, Del., 8, 26; Princess Anne, 8, 9, 26; Rock Hall b, 8; Woodstock, 24.

*Halos, solar.*—Green Spring Furnace, 7, 10.

*Coronæ, lunar.*—Millsboro, Del., 14.

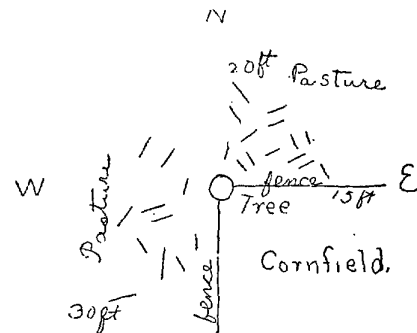
*Mock sun.*—Rock Hall b, 12.

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#### TWENTY-FIVE HEAD OF CATTLE KILLED BY LIGHTNING.

Severe and destructive thunderstorms occurred throughout Maryland and Delaware during the afternoon and evening of May 16th. Newspaper reports and reports from crop correspondents show that lightning caused the death of several persons and set fire to many buildings. Near Churchville, Harford County, twenty-five head of cattle sought shelter under a tree during the storm. The tree was struck by lightning and all the cattle were killed. The tree was only slightly injured, having had a strip of bark about three inches in width torn from the trunk. The soil about the tree is a sandy loam.

We are indebted to Prof. A. F. Galbreath, the voluntary observer at Darlington, for the accompanying diagram, which shows the position of each of the dead bodies with reference to the tree.



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#### LATE REPORTS.

*Milford, Del.:* Mean temperature 63.8°; highest, 96° on the 28th; lowest, 39° on the 25th; mean maximum, 73.0°; mean minimum, 54.7°; greatest daily range, 35° on the 26th and 27th; total rainfall, 2.29 inches; greatest fall in twenty-four hours, 0.88 inch on the 17th and 18th; number of rainy days, 7; clear, 23; partly cloudy, 1; cloudy, 7; prevailing wind direction, west; thunderstorms occurred on the 16th and 17th.

*Sunnyside:* Mean minimum temperature, 47.5°; lowest, 34° on the 21st (maximum thermometer broken on the 15th); total rainfall, 6.82 inches; greatest fall in twenty-four hours, 1.20 inches on the 18th; number of rainy days, 14; clear, 7; partly cloudy, 14; cloudy, 10; prevailing wind direction, southwest; thunderstorms occurred on the 1st, 2d, 3d, 5th, 6th, 8th, 12th, 16th, 17th, 18th, 29th, 31st; light frost occurred on the 21st.





TOTAL PRECIPITATION, MAY, 1899.

