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CENTRAL OFFICE: WASHINGTON, D. C.

VIRGINIA SECTION

EDWARD A. EVANS, Section Director
RICHMOND, VA.

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GENERAL SUMMARY.

In the Hampton Roads district, and along the James River from Richmond to Lynchburg, the average temperature of the year was slightly above the normal, while elsewhere throughout the State the year was comparatively cool. There was also a widespread, and decidedly more marked, deficiency in precipitation, the drought being severe and destructive to growing crops in the southern Tidewater section and along the Eastern Shore. Within this area successive monthly deficiencies were recorded from April to August, inclusive, and locally the summer was the driest in the past forty years. Over much of the southern Blue Ridge; also in the extreme southwestern section of the State, there was more than the normal precipitation. The year's records also show a large number of important storms, three of which appear to have been true tornadoes.

The mean annual temperature of the State, 54.5° , was 0.7° below normal. Hampton, with an annual mean temperature of 59.6° , was the warmest station, and Mountain Lake, with an annual mean of 47.3° , the coldest. The highest and lowest temperatures were 100° , on July 18th and September 1st, and -25° on January 14th, the former occurring at Callville and Lincoln, and the latter at Lincoln and Dale Enterprise.

The last killing frost of the spring occurred in the Appalachian and Blue Ridge portions, on the 18th of May; in Middle Virginia, on the 24th of April and in Tidewater Virginia, on the 24th of April, while the first killing of the autumn was recorded in these divisions on September 20th, October 17th, and October 17th, respectively.

The annual amounts of precipitation show the year to have been dry except locally in the northern portion of Middle Virginia, in parts of the southern Blue Ridge and in the Clinch and Holston valleys. March, with an average of 6.74 inches, and October, with an average of 1.22 inches, were the wettest and the driest months, respectively, of the year. The annual precipitation ranged from a maximum of 52.45 inches at Speers Ferry, in Scott County, to a minimum of 28.95 inches at Cape Henry, in Princess Anne County. The greatest local monthly rainfall, 11.54 inches, occurred at Charlottesville, Albemarle County, in May, and the least, 0.20 inch, at Williamsburg, James City County, in July. Snow, in varying amounts, fell in all parts of the State in the first, second, third, and last two months of the year; also locally in April and October in the mountain portions. By months, the greatest local monthly snowfalls were: January, 17.1 inches; February, 8.6 inches; March, 18.6 inches; April, trace; October, trace; November, 4.0 inches and December, 8.0 inches.

There were 165, or 45 per cent of clear days; 106, or 29 per cent of partly cloudy days; and 95, or 26 per cent of cloudy days during the year. The prevailing wind direction for the State was southwest.

THE WEATHER BY MONTHS.

JANUARY.—The mean monthly temperature of January was about seven degrees below the normal, or an amount sufficiently great to class the opening month of 1912 as one of the coldest of which there is authentic record. Stations that have been maintained continuously for more than forty years compare this month with January, 1893, which still holds the record for low average, although in the present month the actual temperature went as low as it did in the famous cold spell of nineteen years ago. On the 14th, which was the coldest day of the year 1912, readings of 25° below zero were made at a number of stations in the northern mountain section, while the line of zero temperature swept the State almost to the coast. There was a general deficiency in precipitation in the upland sections, and slightly less than normal in all other sections except that in the neighborhood of Hampton Roads where a little more than the normal amount was measured. From five to seventeen inches of snow fell during the month, and, coming as it did with low temperatures, an unusually long period of good sleighing was enjoyed.

FEBRUARY.—Throughout the State the abnormally low temperatures of January continued until the middle of February, completing one of the most remarkable cold periods experienced in Virginia for the third of a century. The latter part of the month was much milder and by the 20th Irish potato planting was in progress on the Eastern Shore. On the 21st, a storm of great severity moved eastward across the State causing violent local storms in the central counties and gales of exceptional force off the coast. At Bremobluff, Fluvanna County, this storm took on the characteristics of a tornado.

MARCH.—The progress of spring was much retarded by snows during the first week in March and by unseasonably cold weather which lasted until the middle of the month. On the 15th, a general storm set in, and by night twenty counties in central Virginia recorded from 3 to 5 inches of rain. High winds also accompanied this disturbance, and at Farmville, Prince Edward County, several buildings were demolished. This rain also caused severe freshets in the rivers of southern Virginia. Toward the middle of the month the temperatures began to reach into the 50's, and later into the 60's, the warmest period being from the 18th to the 21st when thermometer readings above 40 at night and from 70 to 80 in the day occurred. Another heavy rain fell on the 29th, and the closing days of the month were marked by the second flood within a fortnight. Killing frosts were reported on the coast and generally in the Tidewater section on the 10th, 11th, 17th, and 26th.

APRIL.—Early in the month a storm from the southwest crossed northern Virginia bringing high temperatures and general rains. This mild condition was followed early in the night of the 2-3d by a change to clear and colder, and by the morning of the 4th, killing frosts were recorded in many localities. A second frost-bearing cold wave swept the State on the 8-9th and in the Norfolk district the monthly minimum temperature was then recorded. On the 18th, there were thunderstorms in all sections, and in the James River Valley between Williamsburg and Lynchburg these storms were accompanied by hail. Killing frosts formed at some tidewater stations as late as April 9th, while elsewhere there were destructive frosts on the 4th, 8th, 9th, 23d, and 24th.

MAY.—This month was unusual only during part of the first half of the second decade, when a storm of great importance passed over the State. On the 12th, this storm caused violent local disturbances and at least two tornadoes: one at Brookneal, Campbell County, and the other in the vicinity of Richmond. Heavy general rains fell with the storm, and on the 13th and 14th, destructive floods occurred in the rivers of southern Virginia. Killing frosts, the last of the season, occurred locally in the mountains on the 14th and 18th.

JUNE.—This month closed with a deficiency in precipitation, but since, as a rule, the rain came in a series of small well distributed showers there was no general complaint of drought. The month also averaged cool, due to a period of low temperatures that occurred about the middle of the first fortnight. On the 9th or 10th, many stations reported temperatures below 45°, and lower than the lowest previously recorded June reading. There were also light frosts locally in the mountains. On the 16th, severe local storms and squalls were reported from the Shenandoah Valley and from Hampton Roads.

JULY.—In Southwest Virginia this month was one of moderate temperature and nearly normal precipitation, while other sections of the State suffered from unusual stress of weather. Over the eastern and northern watersheds there was a hot spell that lasted through the first two weeks. The temperatures reached into the lower 90's daily, at which readings they were checked by the partly cloudy and showery weather that prevailed after the 9th. Unfortunately for the more easterly counties, the precipitation received during this time was meager, and droughty conditions were seriously felt there by the end of the month. Some stations in the western counties reported more than the July normal amount of precipitation, but in all other sections an insufficient amount was received.

AUGUST.—During the first decade of this month the temperatures were low and, although there was much hot weather after this, the month closed with the average below normal. The change to warmer set in with the opening of the second decade, and from that time until the close of the month there was but little relief from the heat. In the extreme southwest there was an abundance of rain, one station reporting twenty of the thirty-one days with measurable precipitation, while at some stations in the east, notably Richmond, the month was the driest August with but one exception since 1872. Before the month closed the drought had become severe in some of the eastern and southern counties and great deterioration was noted in pastures, late gardens and corn. On the 21st, there was a severe storm of the tornado class in the neighborhood of Avalon, Northumberland County, and on the 27th, an exceptionally heavy hailstorm occurred near Vinita, Goochland County.

SEPTEMBER.—After an unusually severe and trying hot spell that lasted through most of the first decade, the weather became cooler on the 11th and this date seems fairly well to mark the close of summer. There were some hot days in the second decade, but on the 20th killing frosts formed at some of the mountain stations, and near the close of the month temperatures of 40° were quite widely recorded. Scattered showers, mostly light, occurred prior to the 18th, on which date there was a general rain, and the drought, which may be said to have begun in the latter part of May, was broken. Another and much heavier storm prevailed from the 23d to the 25th, during which from five to seven inches of rain fell on the eastern slope of the Blue Ridge and over northern Middle Virginia. This downpour caused only moderate freshets.

OCTOBER.—Nearly all stations in the State had less than two inches of precipitation during the month and many had less than one inch. This condition greatly facilitated the gathering and marketing of crops. The month opened with cool weather, and frosts formed even to the seacoast on the 3d. A change to warmer then set in, the temperature reaching 80° in many localities on the 4th, and from 90° to 93° on the 10th. These unusual readings were the highest of the month, and at a number of stations they were higher than any previously recorded in October. A change to unsettled weather occurred at the opening of the second decade, followed on the 13th by showers, and thereafter by frequent changes until the close of the month. Killing frosts occurred in the mountain sections on the 1st and

2d, and at a number of stations as far east as upper tidewater on the 17th, 27th, and 28th.

NOVEMBER.—Almost the only unusual feature of this month's weather was the snow-storm of the 27-28th. Snow began falling in the extreme southwestern section at 1 p. m. of the 27th, and reached Wytheville that afternoon at 5 p. m., and at 7 p. m. it set in at Blacksburg. Later that night the storm spread over the eastern counties, and on the following morning (Thanksgiving) a blanket of from 2 to 4 inches lay over most of the counties in southwest and in tidewater Virginia. Otherwise the month was nearly free from storms, observers quite generally recording it as unusually pleasant. Killing frosts were recorded on the 2d, 3d and 4th.

DECEMBER.—The closing month of the year opened with unsettled weather, and on the 5th a general rain fell over the State. In the Norfolk section, where the rain was heaviest, measurements of from 2 to 3 inches were recorded. Another important storm occurred on the 23d-24th, during which time snow fell above tidewater to a depth of from 1 to 7 inches. Otherwise there was a considerable number of days with unsettled weather and the temperature averaged above normal; but the month was in no way unseasonable.

KILLING FROSTS.

Stations.	Last killing frost in spring.	First killing frost in autumn.	Stations.	Last killing frost in spring.	First killing frost in autumn.
TIDEWATER VIRGINIA			MIDDLE VIRGINIA—continued.		
Ashland	April 8	Nov. 3	Mount Weather	April 8	Nov. 3
Cape Henry	Mar. 17	Nov. 17	Quantico	April 24	Oct. 25
Diamond Springs	April 9	Nov. 4	Rocky Mount	April 24	Oct. 17
Eastville	Mar. 26	Nov. 4	Washington, D. C.	April 8	Nov. 3
Hampton	Mar. 11	Nov. 4	THE GREAT VALLEY		
Ivor	Oct. 28	Nov. 4	Blacksburg	April 24	Oct. 27
Newport News	April 9	Nov. 4	Burkes Garden	May 14	Sept. 20
Norfolk	Mar. 10	Nov. 17	Catawba	May 14	Oct. 2
Onancock	April 9	Nov. 4	Dale Enterprise	April 23	Oct. 17
Richmond	Mar. 26	Nov. 3	Elk Knob	April 8	Nov. 2
Spottsville	April 24	Oct. 17	Hot Springs	May 18	Sept. 20
Warsaw	April 9	Oct. 17	Ivanhoe	April 9	Oct. 27
Williamsburg	April 4	Oct. 28	Lebanon	April 23	Sept. 20
MIDDLE VIRGINIA			Lexington	April 24	Oct. 17
Arvonnia	April 4	Oct. 27	Max Meadows	April 24	Oct. 27
Callville	April 24	Oct. 17	Mountain Lake	April 4	Oct. 1
Charlottesville	Mar. 26	Nov. 3	Roanoke	April 9	Nov. 3
Columbia	April 9	Nov. 3	Staunton	April 8	Nov. 3
Culpeper	April 9	Oct. 17	Winchester	April 8	Nov. 3
Fredericksburg	April 9	Nov. 4	Woodstock	April 24	Oct. 27
Lincoln	April 11	Oct. 17	Wytheville	April 9	Oct. 27
Lynchburg	Mar. 26	Nov. 4			

NOTES.

Tables giving the daily temperature extremes and the daily precipitation, and also charts showing the differences between the normals and the monthly averages of temperature and the total monthly amounts of precipitation, at the several stations, have been published regularly during the year in the Monthly Weather Review, separates of which containing the data for Virginia will be furnished on application at the Local Office of the Weather Bureau, Richmond, Va.

ERRATA, ANNUAL SUMMARY, 1911.

Page 6: Richmond, April and May means 54.2° and 68.9° should be 52.4° and 69.8° respectively; Williamsburg, April mean 53.8° should be 52.8°; Quantico, May mean 69.2° should be 69.0°; Blacksburg, October mean 58.4° should be 56.4°; annual mean and departure 53.5° and +1.9° should be 53.3° and +1.7°; Catawba, October and annual means omitted should be 59.8° and 56.2° respectively; Wytheville, March and November means 42.3° and 38.9° should be 41.2° and 39.0° respectively.

Page 9: Norfolk, August total 5.96 should be 5.93; Charlottesville, May and October departures -3.54 and +0.01 should be -3.64 and +0.59 respectively; Clarksville, March and annual totals, 2.14 and 37.92, should be 4.17 and 39.95, departure -6.41 should be -4.38; Danville, August total 5.46 should be 5.43, annual total and departure 36.24 and -4.06 should be 36.21 and -4.09; Mount Weather, December total 3.74 should be 2.56.