

visible. Wheat came in head, ripened and harvest was begun during the month. Some fields of winter oats were also cut, but for the most part this crop was a failure. Considerable haying was done with light yields being the rule in most counties. The prospects for fruit were poor throughout the month, except as to plums, pears and grapes, the last of which promised an abundant yield.

July.—Crop progress, while in the main favorable, was somewhat retarded on account of the droughty weather prevailing during the last ten days or two weeks of the month. Particularly was this true in several of the Southside counties and locally in other parts of the State. Corn seems to have been most affected by the want of rain, though pastures and gardens suffered considerably also. Many fields of early corn in the more droughty localities were beyond relief when the rain came at the close of the month, but the later plantings generally were much benefited and responded immediately to the quickening effects of the warm and abundant showers.

Tobacco, like corn, also suffered considerably, though not to the same extent, the crop as a whole being rather more backward and in a stage of growth somewhat more favorable to its resisting the burning effects of the dry weather. Topping of the early-planted fields was carried on during the month, and at its close all of this work, except in the case of the very late plantings, was practically finished and the crops laid by. Opportunities for work were almost uninterrupted during the month, and as a consequence all fields were kept clean and free from grass and weeds, while haymaking and the threshing and housing of wheat and the cutting and stacking of oats were carried to a conclusion. Returns from the winter grains—that is, winter oats and wheat—were poor, but spring oats, so far as reports to hand indicated, were about an average crop.

August.—As a rule, the weather of the month was quite favorable for both crop growth and maturity, and work in the field. The rains that prevailed were sufficient for the needs of growing crops, while the temperatures, though lower than normally, were not enough so to check a seasonal advance. There were, however, some counties in the Valley division, and the southern portion of the Middle division, where the rainfall was scanty, causing a droughty condition that was serious in its effects on crops.

The bulk of the field work done consisted in the hauling and threshing of wheat, stacking oats, gardening, seeding turnips, and putting out the second crop of Irish potatoes, fall fallowing, etc., and good progress was made. Early corn matured, yielding an average crop, both in grain and fodder, and the late corn, though injured by drought locally in the districts above noted, advanced favorably, being promising at the close of the month, and, with the exception of some very late fields, practically safe. The outlook for tobacco became and remained encouraging, and in many of the early fields cutting, housing and curing was begun in the last fifteen days. Though there were quite a number of irregular crops caused by replanting early in the season, the consensus of opinion among growers was that a better than average yield in both quantity and quality would be had.

Pastures which were in poor condition at the beginning of the month were much benefited by the rains occurring, and generally excellent grazing obtained in all sections except the droughty districts, where they were brown and burnt. The fruit crop of the State, so far as pears and grapes were concerned, was a promising one, but all varieties of apples fell steadily from the trees, and a poor yield was indicated. Peaches did not do well, there being much rotting and falling from the trees. The condition of the soil over the major part of the State was favorable for fall plowing and other preparation for the seeding of winter grains, and a great deal of this work was done. In the droughty districts, however, it

was backward, on account of the dry and hard state of the land.

September.—In the Tidewater division and in the greater portion of the Middle division the weather during September was favorable for crop growth and maturity, and for farm work. In the Valley division and in a few counties of the Middle division, however, the month opened with rather unfavorable conditions, due to deficiency in rainfall. This condition became more marked as the month advanced, being relieved only in a few localities by local showers. A cool period during the first decade checked the growth of crops temporarily; otherwise the temperature was moderate, though with very few warm days.

The general condition of the corn crop over the State was promising early in the month and continued so, maturing well, and with a good yield reported generally, except in those counties affected by the drought. Cutting and shocking was under way throughout the month, the yield of fodder large and the crop saved in good condition. In those counties comprising the tobacco belt, fine rains fell early in the month, and this, with the favorable temperatures following, caused a rapid advance in the late fields of this crop, and a gradual improvement was noted until the stage for cutting was reached. Cutting, housing and curing progressed under favorable conditions, the only hindrance being some local irregularity in the crop, due to replanting. The late potato crop made satisfactory growth in the Tidewater and Middle divisions, but was cut short in the Valley division by the drought.

There was, generally, an abundance of pasturage for stock except in the droughty counties, but in these the grass began to fail early in the month, and in some localities it was completely dried up the third week. Where the rain was sufficient to keep the ground softened, fall plowing and the work of preparing the ground for wheat seeding made rapid progress, and considerable seeding was done during the latter part of the month.

A large portion of the tomato crop was gathered and taken to the canneries during the month. There was an abundance of pears in market, but most other fruits, especially apples, were poor.

The issue of the Weekly Crop Bulletin for the season was discontinued with that for September 23, 1902.

KILLING FROSTS.

Table of Dates of Last Killing Frost in the Spring and the First Killing Frost in the Autumn.

Station.	Last killing frost in Spring.	First killing frost in Autumn.	Station.	Last killing frost in Spring.	First killing frost in Autumn.
TIDEWATER VIRGINIA.			MIDDLE VIRGINIA—Continued.		
Ashland	Apr. 14	Oct. 15	Lincoln	Apr. 16	Oct. 22
Cape Henry	Mar. 17	Dec. 8	Lynchburg	Mar. 19	Oct. 30
Hampton	Mar. 19	Dec. 2	Manassas	Apr. 20	Oct. 23
Newport News	Apr. 19	Dec. 7	Rocky Mount	Apr. 20	Oct. 30
Norfolk	Mar. 19	Dec. 6	Saxe	Apr. 28	Oct. 15
Petersburg	Mar. 26	Oct. 30	Stanhardsville	Apr. 4	Oct. 22
Richmond	Mar. 26	Oct. 30	Washington	Apr. 4	Oct. 22
Spottsville (near)	Apr. 14	Oct. 15			
Warsaw	Mar. 26	Oct. 30	THE GREAT VALLEY.		
West Point	Mar. 27	Oct. 30	Big Stone Gap	Apr. 13	Oct. 15
Wilkesboro	Mar. 27	Oct. 30	Blackburg	Apr. 18	Sept. 14
Williamsburg	Mar. 26	Oct. 15	Bristol	Apr. 18	Oct. 14
			Burkes Garden	Apr. 18	Sept. 14
MIDDLE VIRGINIA.			Clifton Forge	Apr. 20	Oct. 15
Alexandria	Mar. 26	Oct. 22	Dale Enterprise	Apr. 14	Sept. 14
Barboursville	Mar. 26	Oct. 15	Graham Forge	Apr. 14	Oct. 15
Bedford City	Apr. 4	Nov. 28	Hott Springs	May 9	Sept. 13
Bluemont	Apr. 4	Oct. 22	Lexington	Apr. 16	Oct. 15
Boon Air	Apr. 19	Nov. 2	Marion	Apr. 16	Sept. 15
Buckingham	Apr. 19	Oct. 14	Romoke	May 9	Nov. 24
Callsville	Apr. 2	Oct. 30	Staunton	Apr. 16	Oct. 15
Charlottesville	Apr. 9	Nov. 2	Stephens City	Apr. 16	Oct. 17
Columbia	Mar. 21	Oct. 22	Woodstock	Apr. 14	Sept. 14
Farmville	Mar. 21	Oct. 22	Wytheville	Mar. 13	Sept. 14
Fredericksburg	Mar. 20	Oct. 30			

GENERAL SUMMARY FOR THE YEAR 1902.

January was generally bright and pleasant, though colder than normally. The deficiency in temperature averaged 2.5 degrees daily, and the month was the sixth consecutive one with temperatures below normal. The coldest weather prevailed about the 4-5th, when readings of from 5 degrees in the Great Valley section to 22 degrees in Tidewater counties were made. The warmest weather occurred on various dates, most stations, however, giving the 10th as the warmest day. Readings of from 48 to 69 degrees were recorded. Compared with January of other years, the maximums did not reach as high absolute values as usual. On the other hand, absolute minimum values were hardly as low as the record for many other years. Yet really cold weather held sway during most of the month, tempered fortunately by abundant sunshine. Beginning with the 26th, as above noted, a protracted period of foul, cloudy weather set in, which continued throughout the rest of the month. There was a practical absence of precipitation, if light local showers of rain or snow flurries be excepted, until the 21st, when amounts ranging from rather less than an inch in the Valley section to as much as nearly two inches in the Middle and Tidewater divisions were had. This date marked the beginning of a rainy period, for it was followed by fairly heavy local precipitation until the 25th, excepting the 23d, and a succession of days of general precipitation thereafter throughout the month, during which the amounts received were moderately heavy each day and came mainly in the form of sleet. Some of this melted, but most of it froze. The wires of the telephone and telegraph companies in all sections, also police and fire-alarm service in cities, suffered some interruption of business, and damage was done locally to trees and vines. There were no freshets occurring in James river during the month. Thunderstorms occurred locally on the 21st and 27th.

Prevailing wind direction, NW.

February hardly equaled its record in previous years in respect to extremes registered, the departure noted, —6.2 degrees, being significant as showing how constantly below the normal the general daily temperatures obtaining were. Comparing its extremes with the average of the absolute maximum and minimum readings for the same month of the ten years last past, the maximum was 2 degrees lower and the minimum 8 degrees higher. It is the seventh consecutive month with a mean temperature below normal. Its closing days were marked by decidedly warmer weather, and the monthly maximums recorded occurred generally on either the 27th or 28th. The minimum for the month at the various stations occurred mostly between the 3-6th and 14-20th. Considerable cloudiness prevailed throughout the month. Precipitation was general and heavy over the State. The number of days with rain or snow was not in excess, however, and there was a period of about eleven days, beginning with the 4th, during which there was practically no precipitation, if local and generally light showers or snow flurries at the more elevated stations in west portion of the State be excepted. The amount of precipitation falling as snow was about average for the month. Days with general precipitation were: 1st and 2d, 15th to 17th, 20th to 22d, 25th, 26th and 28th. The rains occurring on the 25th and dates immediately preceding were productive of freshest conditions in the James and other rivers of the State. In the James the rise caused had not subsided when the heavy rains of the 28th fell, and all its tributaries overflowed, resulting in a similar condition in the main stream. The usual warnings covering these floods were issued by the Bureau. The rain of the 20-21st froze as it

fell over a large part of the State, and considerable damage was done to telegraph and telephone lines and fruit and forest trees. Thunderstorms occurred over the State on the 27th and 28th.

Prevailing wind direction, NW.

March.—The month opened with mild weather. Falling temperature began on the 3d, giving a cool period until the 6th, when it again became warmer. Two days later a slight fall in temperature occurred, and thereafter the variations were within moderate limits until the 19th, when a sharp, cold wave passed over the State, during the prevalence of which the monthly minimum at nearly all stations was registered. Readings of from 8° to 32° were recorded. A slow rise in temperature followed the cold wave, culminating on the 29th in maximum readings of from 65 to 80 degrees—the warmest day of the month. Light to heavy and killing frosts occurred in all sections, as usual, and considerable ice made in sheltered water on the 18-19th. The month was windy and had about the average amount of cloudiness. The Great Valley division of the State was the only one having precipitation in excess of the normal. In the Middle division the deficiency was comparatively small and unimportant, but in the Tidewater division the average amount deposited was nearly three inches less than normal. The first five days of the month were showery. Thereafter there were three rainy periods, viz., the 8-9th, the 15-17th and the 28-31st. On the last-named date, however, the precipitation was light and local. Snow fell during the month in all sections of the State, the least amounts occurring in the Tidewater section and the greatest in the Great Valley, where the stations of Dale Enterprise and Stephens City had a total of 18 inches each. Freshet water was present in the James river from the 1st to the 3d, due to rains occurring in the latter part of February. Forewarnings had been issued and no damage resulted. Thunderstorms occurred over the State on various dates.

Prevailing wind direction, W.

April, in respect to temperature, averaged rather cooler than normally. It was notable for its large number of bright, pleasant days. Although the temperatures were below the average, there were some warm days, particularly the 22d, when the highest 8 a. m. readings for April, since the establishment of the station, were recorded. The growth of vegetation during the day and night of this date was wonderful. On the other hand, there were numerous cool days, on some of which frosts occurred, while the nocturnal temperatures were, with but few exceptions, below those usually prevailing during the month. The highest observed readings over the State occurred, for the most part, on the 22d, and the lowest on the 2-3d. Compared with other Aprils of which there is record, the month averaged cooler than any since 1892, excepting the years 1898 and 1901. The warmest April on record is that of 1896, 59.0 degrees, and the coolest, 1901, 50.0 degrees. During the first three days of the month light and very local showers fell in Middle and Valley divisions counties, followed from the 4th to the 8th by general and well-distributed, though for the most part moderate, rains. The 9th gave precipitation of a local nature in the Middle and Valley counties. Thereafter, infrequent and scattered showers fell, except on the 15th and 29-30th, when general rains again occurred. The greatest deficiency noted appears in the Valley division, where conditions became rather droughty after the middle of the month. The various rivers of the State were rather lower than the usual April stage.

Prevailing wind direction, NW.

May.—The impression obtaining that this month was cooler than ordinarily is not borne out by the records, which, on the contrary, show the average for the month to have been 1.9 degrees above the normal. Yet, notwithstanding this, there were a number of days on which the temperature was much lower than usual for the season, the reports received showing minimum readings of from 29 to 38 degrees, and it was probably owing to the occurrence of these cool periods that the opinion noted gained ground. Comparing these minimums with those of the same month for the preceding five years, however, it is found that they are not unusual, May 1897 and 1900 each having lower readings. On the other hand, the maximum temperatures occurring were the highest reported in the period mentioned excepting in May, 1898, which in this respect equaled the current month, and in May, 1900, which exceeded it. Heavy frosts occurred on several dates at stations in the Valley section, and light frosts were reported in nearly all parts of the State on one or more dates between the 9th and 30th. The rainfall occurring, though nearly an inch less than the normal, would have been sufficient probably for a rapid and vigorous crop growth had its distribution been at all uniform. As it was, however, there were only four days having general rains. There were numerous days on which light showers fell here and there—in fact, rain fell in some portion of the State on every day of the month, but it was generally so light in amount and so poorly distributed that vegetation did not receive the full benefit. The dates having fairly heavy and general rains were the 7th, 24th and 25th, while the least occurred on the 30-31st. No changes of any importance in stream heights took place, though all the rivers were more or less muddy throughout the month. Hail occurred locally on several dates.

Prevailing wind direction, W.

June was quite constantly cooler than normally, and on some dates, notably the 9-10th and 23-24th, decidedly so. Indeed, there was practically no seasonable weather prevailing in any portion of the State until after the 25th of the month if the dates 12-14th inclusive be excepted. At this time there was a reaction from the cool weather noted as prevailing on the 9-10th, and at most stations the highest temperature readings were recorded. These readings are in close agreement with those of previous Junes during which record has been kept. On the other hand, the minimum temperatures reported were much lower than those usually occurring in the month, approaching the frost line on some dates. While in Tidewater division the temperatures more nearly approximated the normal, yet even there minimum readings as low as 42 degrees were observed. In the Middle and Valley divisions, where the deficiency was the greatest, the unusually low readings of 36° and 34° respectively occurred, on the 26th in one instance and on the 9th and other dates in the other. Grate fires were not uncomfortable during the prevalence of this cool weather. Precipitation for the month was slightly below the average for the State at large. Generally, rainfall was decidedly deficient for the first six days in all sections. On the 7th and 8th moderate showers fell, though in Middle Virginia on the last-named date they were light and local in character. Occasional showers fell between the 8th and 15th, being most frequent in the Middle and Valley sections. On the 15-16th good, soaking rains occurred, and thereafter showers more or less general fell in all sections on nearly every day. Partially droughty conditions prevailed during the first half of the month, and this, combined with temperatures mostly lower than the average for the season, had an unfavorable effect on

growing crops. The streams of the State carried a considerable volume of water after the 15th, but at no time did they approach freshet stages except on the 16-17th, when the heavy rains immediately preceding gave moderate flood stages in those located in the south half of the State. Light frosts occurred in the western and northern portions of the State on the 9th, 22d, 23d and 24th.

Prevailing wind direction, W.

July, in respect to temperature, presented marked contrasts with those of the years 1899, 1900 and 1901. Then the weather was hot, prolonged periods of maximum temperatures ranging between 95 and 106 degrees being recorded, while in this month it was below the normal, and with the exception of a few days at the first of the month, and again about the 17-20th, when the maximum readings for the State were observed, so much so that it was a matter of general remark. In respect to extremes, some rather low minimums were reported, particularly in the Valley division of the State, where readings as low as 41 degrees were taken. As a rule, the coolest weather of the month came in immediately upon the heels of the heated period, 17-20th. Though there were a number of stations in each of the three grand divisions of the State that had large monthly amounts of precipitation, yet the mean was about a quarter of an inch below the normal, while in some individual instances the monthly amount was as much as 2.41 inches below. In point of distribution by days the 1st, 6th to 10th, 15th, 19th to 21st and 29th to 31st had generally good rains, while as to distribution by area the northern-central, portions of the central and west central and of the southwest counties were the only parts of the State where moisture was decidedly lacking during the month. Some heavy 24-hour rainfalls were recorded, viz.: 2.21 inches at Callaville, 2.25 inches at Blacksburg and 3.59 inches at Richmond. No freshets of any consequence prevailed in any of the rivers of the State in the month. Hail occurred locally on several dates.

Prevailing wind direction, SW.

August.—The temperatures prevailing over the State throughout the month were, for the most part, sufficiently cool to be termed unseasonable; the weather, in this respect, more resembling late September than that of the usual August in this region. Beginning with the 1st the thermometer ranged consistently lower than normal (excepting the 3d-4th) until about the 11th, when a season of variable weather set in, during which the highest and lowest readings at nearly all stations were recorded. This lasted until about the 20th, when uniformly cool weather again prevailed, and continued practically without noteworthy intermission until the close of the month. The temperature deficiency, 4.4 degrees, was quite notable, there being no equal or nearly equal minus departure for any previous August since 1891—the beginning of published record. The precipitation occurring was fairly well distributed, but rather deficient in quantity, especially in the Tidewater section. There were numerous moderate to heavy showers in each of the three divisions of the State between the 1st to the 6th, 10th to 16th, and on the 21st, but with these exceptions, the rainfalls, though frequent, were generally light in character. In the last decade of the month, beginning with the 23d, a dry period set in during which precipitation was infrequent, light and very local. The dates of heaviest rainfalls were the 14th to 16th, and the 20-21st, while the least rainfall is recorded on the 7-8th, 12-13th, 17th to 19th, and the last eight days of the month. Thunderstorms occurred on various dates. Generally they were of moderate energy. Hailstorms were reported on

several dates, between the 1st and 11th, and again on the 15th, 21st and 28th, occurring mostly in the Piedmont region and at scattered points in Southside counties. Fogs were also prevalent in the valleys and lowlands in all sections. Hail occurred on various dates.

Prevailing wind direction, W.

September was the fourth successive month with a mean temperature for the State below the normal. There was no marked period of warm weather and but one of cool, but the temperature was rather uniformly near or below normal. The coolest period was from the 14th to 18th, and the highest temperature recorded occurred at nearly all stations on the 1st. A minimum of 32° or below occurred at three stations, and frost was reported at a number of others in the Valley, and at one in the Middle division. A maximum of 90° or above was recorded at most stations east of the Blue Ridge, and at several to the westward. Compared with the record of the same month for the past six years, this September was the coolest by 0.6 of a degree, and 6.8 degrees cooler than September, 1900, which was the warmest of the period. Taking the State over, the precipitation for the month was not far from the normal amount. But this statement does not convey an accurate impression of the conditions with respect to rainfall, since there was an abundance for all needs in the Tidewater and a majority of the middle counties, but a marked deficiency in the Valley division. In the latter section only one station reports an excess for the month. The lowest September average during the preceding five years was 1.01 inches 1897, and the highest was 3.82 inches in 1901, and there have been three Septembers during the same period in which there was lighter precipitation than that of 1902. Light to killing frosts occurred in the various sections of the State in the first and second decades.

Prevailing wind direction, W.

October.—Beginning with the 1st and continuing until its close, the days, with but few exceptions, were mild and sunny. For the most part the temperatures ranged between normal limits, though there were some cool days early in the first decade, when light frosts were common in all portions of the State except the coast districts, and again about the middle of the last decade, when light to killing frosts occurred. The maximum temperatures ranged generally between 75 and 85 degrees, occurring as a rule on the 23d. The mean temperature, 56.5 degrees, departed only 0.1 of a degree from the normal, and as compared with the three preceding Octobers, which were all warmer than normally, was 5.4 degrees below that of 1900, 2.0 degrees less than in 1899, and 1.9 degrees less than in 1898. In the matter of clear days, the number recorded, 22, largely exceeded those of any October during the past ten years except those of 1892 and 1895, and these it exceeded by one and two days respectively. There was an average of only three cloudy days during the month, a quite unusual record. As regards precipitation the month was lacking decidedly. Over by far the major portion of the State the amounts deposited were less than an inch, and in some counties in the northern part were only one-quarter of an inch. Tidewater counties and the extreme southwest part of the Valley division received the greatest amounts occurring. While October is often deficient in precipitation, it is seldom that the amount occurring is as small as in the present month. In the past ten years there have been seven Octobers with less than normal precipitation, yet two of them only, viz., 1892 and 1895, had less than the current month.

General precipitation in light to moderate amounts occurred on the 2d, 13th and 14th. Fogs were frequent in the early morning in lowlands and along watercourses, and occasional fogs occurred after sunset. The volume of water in the various rivers of the State was much reduced by the dry weather. Light to killing frosts were frequent and general. Thunderstorms occurred locally on the 11th, 12th and 28th.

Prevailing wind direction, W.

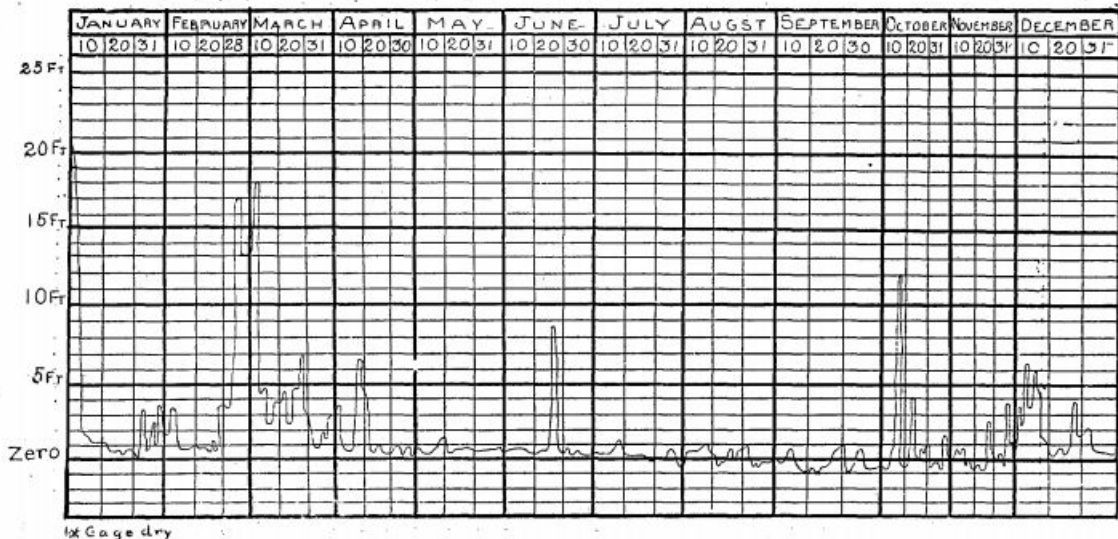
November.—The fine weather that was so marked a feature of the preceding month continued well into November, giving a large number of bright, balmy days. The temperatures remained quite consistently warmer than normal, the excess in this respect being 5.1 degrees. The mean temperature for the State, 52.8 degrees, was the highest on record for the month. The highest absolute readings occurred between the 12-16th. Following the passage of this warm period, the temperatures fell slowly to about normal, where they remained until the 25th. On this date cooler weather set in, which continued until the close of the month, and during its prevalence the minimum temperatures at nearly all stations in the State were recorded. Light to heavy and killing frosts were reported on various dates. The average precipitation occurring over the State during the month was about three-quarters of an inch above the normal. As a rule, the amounts falling came as general rains, and of these there were four well-defined periods, viz., the 5-7th, 17-18th, 24-26th and the 30th. The exceptions were cases of local precipitation occurring on the 8th, 9th, 16th, 22d, 23d, 27th and 29th. The general rains occurring on the 18th, 25th and 30th were productive of some increase in the amounts of water carried by the various streams of the State, but in no case was it sufficient to render the issue of flood warnings necessary. Some heavy 24-hour falls occurred, notably at Richmond and Fredericksburg on the 18th and Roanoke on the 17th, the amounts being 2.76 inches, 2.23 inches and 2.00 inches respectively. Fogs were frequent and general.

Prevailing wind direction, SW.

December was, for the most part, characterized by overcast skies, an excess of moisture and a condition of generally gloomy and depressing weather. The range of temperatures in the several divisions of the State was, on the whole, rather below that usually occurring in December, which may be attributed in part to the more than normal amount of cloudiness. The departure of the mean temperature for the month from the normal was -1.3 degrees. The highest recorded temperatures occurred on the 4th, 11th and 20th, and the lowest on the 27-28th. The precipitation occurring during the month was considerably above the normal, the departure being +0.70, or within .06 of an inch of the excess occurring in the month of November. As a rule the precipitation came as rain, especially where heavy amounts were deposited, but snow fell on several dates in all sections. The month opened with general precipitation prevailing, and this continued during a period of five days. It was followed by an interval of dry weather, except for light local showers in the Valley division, until the 12th, when another rainy spell set in that held until the 17th. Between the 21st, 25th and 29th, on each of which dates general rains fell, there were numerous days with local precipitation. The river stages over the State, though rather higher than usual in December, nowhere approached freshet heights. Thunderstorms occurred locally on the 16th and 21st.

Prevailing wind direction, W.

HYDROGRAPH OF JAMES RIVER AT RICHMOND, VA., YEAR 1902.



NOTE.—The precipitation occurring over the James watershed causing freshets, produced flood heights that were in general correspondence with those resulting from approximately equal amounts of precipitation in other years, except in the first decade of October. The flood shown on January 1 was preceded by a general rain over the basin averaging 3.40 inches, with the ground cold and wet and absorption and evaporation greatly retarded, and hence the run-off augmented. The rises occurring in the last of February and early in March resulted from general rains averaging 1.46 inches and 1.64 inches respectively, and the soil still favorable to a high percentage of run-off. In June evaporation and absorption had largely increased, and we find that although an average rainfall of 2.59 inches over the basin preceded the only flood rise occurring, the maximum stage

was but 8.5 feet, or less than half of either of those resulting from the much smaller precipitation producing the February and March freshets. Finally in October, with a general rain averaging 4.45 inches over the basin, only a 12-foot stage was had. This is less than the usual run-off occurring in October, and may be attributed to the mild weather, which allowed the processes of evaporation and absorption to proceed more freely than usual, and thus materially reduce the quantity of water reaching the draining streams as run-off.

ERRATA.—Annual Report for 1901: Page 7, Newport News highest temperature, 103, should be 102; page 8, Stanardsville mean temperature for March, 45.6, should be 45.3; page 11, West point precipitation for December, 4.00 inches, should be 4.21 inches; total for the year, 43.98, should be 44.19.