U. S. DEPARTMENT OF AGRICULTURE.

ANNUAL SUMMARY, 1901.

MARYLAND AND DELAWARE SECTION

OF THE

CLIMATE AND CROP SERVICE

OF THE

WEATHER BUREAU.

IN COOPERATION WITH THE

MARYLAND STATE WEATHER SERVICE.

WILLIS L. MOORE,

CHIEF OF WEATHER BUREAU.

ВY

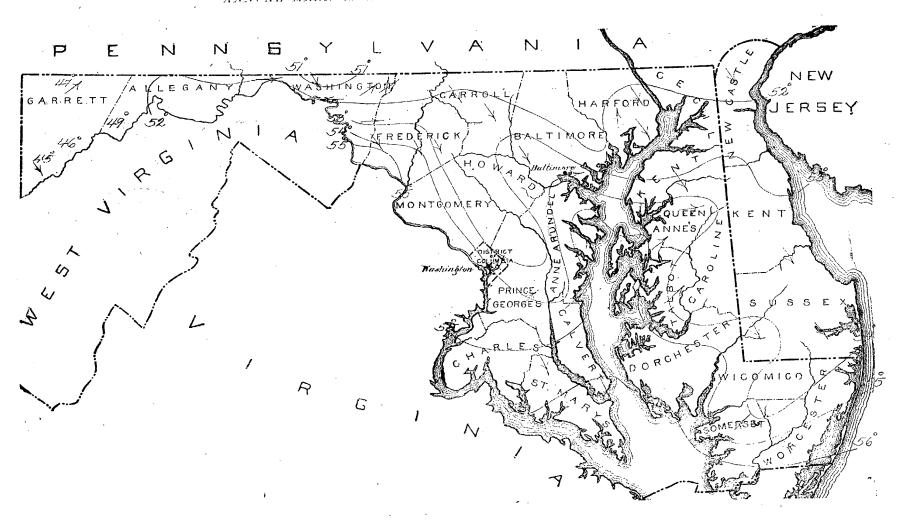
OLIVER L. FASSIG, SECTION DIRECTOR.



BAL/TIMORE, MD.: WEATHER BUREAU OFFICE. JOHNS HOPKINS UNIVERSITY.

1902.

ANNUAL MEAN ISOTHERMS AND PREVAILING WINDS, 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.

BALTIMORE, MD.

Vol. VI.

BALTIMORE, MD.

Annual.

Climate and Crop Review for the Year 1901.

Owing to the heat and drought that prevailed in the autumn of last year there was some delay in plowing and seeding, but rains in early October permitted rapid advance, while heavy showers later in that month hastened germination and favored growth. November conditions were suitable throughout. In December the weather was generally satisfactory, although some injury was wrought during a sharp cold wave that prevailed from the 14th to the 17th. At the beginning of the present year winter grain and grasses were promising in their appearance and outlook.

Temperature and precipitation were about normal during January. There were two cold periods, the 3d-4th and 18th-20th, with lowest temperatures of 14° to 18° along the shore line, falling to 4° below zero in the mountains. On the 20th ice formed in shallow waters and up the narrow inlets of the Bay, but navigation was not interrupted. The snowfall, which occurred for the most part late in the month, was heavy in the mountains, but light in the south and east. In the latter districts wheat was hurt by the cold winds, while elsewhere a covering of snow was beneficial.

Much cold weather during February was only partly relieved by brief periods of warmth. Ice was of sufficient thickness early in the month to interfere with Bay traffic at points on the Eastern Shore, and again on the 14th to 17th many tributaries were frozen over, and large cakes of floating ice filled the path of steamer travel. The moisture received was everywhere insufficient. The heavy January snows remained unmelted until the middle of the month over the upper counties, affording protection to winter grain, but in the southern counties the entire month was unfavorable to growth.

March temperatures were comparatively mild, except for a cold spell in the early part, and the rainfall was ample. The warmth of the latter part of the month gave a decided impetus to all growing crops. Farm work was scarcely begun in the extreme west, but fair progress was made elsewhere in the section. Buds began to swell in fruit trees in the south, but were held back in the extreme west, where early in the month the temperatures were below zero at some stations.

Rigorous weather prevailed in April. Storms and winds, excessive rains, heavy snows in the mountains, and skies overcast for days at a time, gave a March-like aspect to the entire

month. Still there were no severe cold waves to hurt fruit prospects in the interior, while in the west the buds were not out until the close of the month. Farm work was still somewhat behind, but crops were in a good stage of development when the month closed.

May was noted for marked temperature changes within short intervals of time, warm days and cool nights being the rule. Light frosts were observed over extensive areas on the 4th, 6th, and 12th to 14th; they were without damage, but prevailing low temperatures retarded crop growth. The rainfall was irregular in its distribution, although generally sufficient. Thunderstorms were frequent, often accompanied by wind gusts that temporarily flattened the growing grain, which by this time had become quite heavy in straw. All crops did well. Early strawberries and June peas were being marketed during the final ten days of the month.

June temperatures were pleasant until at the close, when a severe hot wave caused suffering and death to men and animals, and was somewhat damaging to crops. The rainfall was considerably in excess at a few points, but for the section as a whole there was a deficiency in moisture. Barring the damage by the closing hot spell, the month was favorable to crops. Harvest began in the fields of rye, wheat, and barley about the 20th, and progressed rapidly thereafter. The straw yield was heavy, but the grain was unsatisfactory in amount and quality. Oats were injured some by rust. Of the fruit crops, peaches alone were promising at the close of the month, but cherries had already given abundant returns. Strawberry and pea shipments ceased after the 20th, the season having been very satisfactory.

The hot wave of the latter part of June continued with unabated severity until the 7th of July. Brief hot periods occurred later in the month, but as a whole the temperatures were moderate for the time of year. Precipitation was again unequally distributed, although generally sufficient for crop requirements. Thunderstorms were frequent, and there was considerable loss by lightning. The rains were hurtful during the harvesting period, but were of benefit to growing crops. Oats were short in all districts. Hay yields showed improvement. Small shipments of peaches began during the month. Most truck was good in yields, the exceptions being potatoes, tomatoes and melons.

About normal temperatures and an excess in rainfall prevailed in August. Conditions were favorable for growth, but the rains interfered with threshing, which was still unfinished in many places at the close of the month. Buckwheat was saved in good condition, with satisfactory yields. Corn continued very promising, and in the southern counties some fodder was pulled. Peaches gave poor to good returns, according to locality. Apples were very scarce. A pest of caterpillars prevailed for awhile during the month, invading fruit, shade, and even forest growth.

Indian summer conditions prevailed during much of September, which was a delightful month throughout, with the exception of a rather severe storm on the 15th in some of the interior counties. Much corn was still green at the close of the month, but a splendid crop seemed assured. Owing to dry

weather fall seeding was delayed. The peach season closed during the month. Tomatoes improved greatly. Tobacco was nearly all housed. Some late hay was still being cut.

October was cool and dry. Killing frosts occurred early in the month in the extreme west, and were more general on the 25th and 26th. The corn harvest was completed, and fine yields were obtained. The continued drought was against fall seeding and the germination of the wheat already in the ground.

November temperatures were considerably below normal. The drought continued until the 23d, when it was broken by heavy and general rains. The wheat prospects revived to a marked extent between this date and the close of the month, although the general condition was still much below the average, especially in the fields sown after the middle of October.

December temperatures were below normal, although there were several warm periods of brief duration. The weather was quite cold on the 5th to 7th, and a marked cold wave prevailed from the evening of the 15th to the 22nd. The rainfall was in excess in all localities, but very little of it occurred as snow outside of the mountain districts. Winter wheat improved slightly, but was still far below an average condition, especially the late sown. The early wheat was better in appearance, having fair stand and good color. The rains were mostly helpful, although some damage was done in lowlands. The general lack of snow protection was seriously felt, however, although periods of freezing and thawing were not frequent.

The more striking meteorological features of the year were the cold and drought of February, low temperatures of early March, heavy mountain snows of April, intense heat of closing June and early July, frequent rains at the time of harvesting, and prevailing drought during the period of fall seeding. Abnormal conditions at other times were not strongly marked.

A careful summary of crop results, based on more than one hundred special reports, shows that wheat was below an average yield, and only fair in quality. Rye was short in amount, but the quality was fair to good. Oats were a poor crop, and of inferior grade. The early cuttings of hay were short, but the late was better; the entire crop was somewhat below average yield, but the quality fair to good. Corn was a magnificent crop; there were very few reports of inferior grade, and these were from some of the more southern localities, where, in a few instances, the yields were also a little below average. A few apple orchards gave fair yields, but the crop as a whole was very disappointing, and many complaints of knotty and otherwise imperfect fruit were received. Peaches were variable in quality and yield; the yield was generally poor to average, but the grade on the whole was fair. The season was very favorable for tobacco; there were no deficient yields, and the entire crop was secured in excellent condition.

ANNUAL SUMMARY.

ATMOSPHERIC PRESSURE—IN INCHES AND HUNDREDTHS. Annual mean at Washington, D. C., 30.02; at Baltimore, 30.01; average, 30.02; highest, 30.76, at Washington, D. C., on January 20th; lowest, 29.10, at Washington, D. C., and Baltimore, on April 3rd.

TEMPERATURE-IN DEGREES FAHRENHEIT.

The annual mean (entire territory), 52.6°, was 1.1° below the normal.

The highest annual mean was 56.0°, at Solomon's.

The lowest annual mean was 45.3°, at Sunnyside.

The highest temperature recorded during the year was 106°, at Hancock, on July 1st.

The lowest temperature recorded during the year was—15°, at Sunnyside, on December 22d.

The annual range of temperature, within the section was 121°. The greatest local annual range was 111°, at Sunnyside.

The least local annual range was 85°, at Solomon's.

The greatest local daily range in the year was 53°, at Hancock, on April 29th.

The least local daily range in the year was 1°, at several stations and on a number of dates.

PRECIPICATION—IN INCHES AND HUNDREDTHS.
The annual average (entire territory), 45.08, was 4.42 alove the normal.

The greatest annual amount was 70.87, at Bachman's Valley, (11 month's record).

The least annual amount was 34.63, at Distributing Reservoir, D. C.

The greatest local monthly fall was 12.05, at Princess Anne, in August.

The least local monthly fall was o.og, at McDonogh, in February.

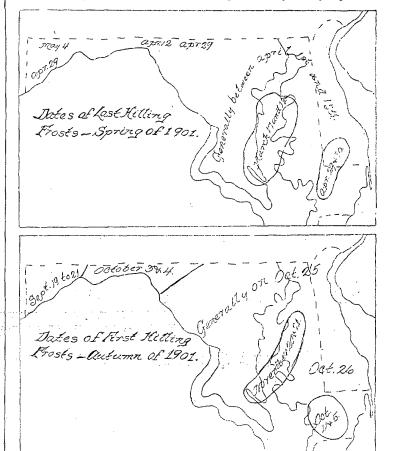
The greatest fall in twenty-four hours was 5.45, at Sudlersville, on July 12th-13th.

WIND.

The prevailing wind direction for the year was from the northwest, but southerly winds were the rule in the summer.

The total annual wind movement was 47,050 miles at Baltimore, and 63,551 miles at Washington, D. C.

The maximum wind velocity for the year was 39 miles per hour from the northwest, at Washington, on January 25th.



Climatological data for the year 1901.

			T	emper:	ature	(degrees l	Fahren	heit).		Pr	ecipitat	lou (ir	ches).					Sky.		n of
Stations.	Counties.	Elevation, feet.	Length of record, years.	Annual mean.	Highest.	Date.	Lowest.	Date.	Length of record, years.	Total for the year.	Greatest monthly.	Month.	Least monthly.	Month.	Total snowfall.	Number rainy days.	Number clear days.	Number partly cloudy days.	Number cloudy days.	Prevailing direction
WESTERN MARYLAND. Boettcherville. Boonsboro. Chewsville. Clear Spring. Cumberland.	Allegany Washington Washington Washington Allegany	780 600 530 500 722	11 4 4 4 4	52.3 52.4 51.0	103 101 100 96	July 2 July 1 July 1 July 2	- 2 4 5	Dec. 22 Dec. 21† Mch. 6†	11 - 4 - 4 - 4 - 31	45.38 45.03 42.27	9.13 6.64 5.83 7.12 7.29	Aug. Aug. Dec. May Aug.	0, 21 0, 57 0, 63 0, 57 0, 30 0, 87	Oct. Feb. Feb. Oct.	18.5 13.5 18.5 18.1	101 86 100 107	215 140	'64 174	86 51	W SV NV
Deer Park	Garrett	2,457 2,200 2,400 450 I,412 552	9 4 8 9 1 8	45.7 47.1 52.0	94 96 93 100	July 1 July 1 July 1 July 1 July 1	-13 -8 -6	Dec. 20 Dec. 22 Dec. 22 Dec. 20	9 4 8 . 9 1	44.21 44.90 46.48	6.22 9.56 8.32 7.63	Jan. May May May	0.87 0.54 0.76 0.60	Oct. Oct. Oct. Feb. Feb.	69.2	109 115 101	88 205	116 67	151 93	SV
Hagerstown Hancock Sharpsburg Smithsburg A Smithsburg B Sunnyside Westernport	Washington Washington Washington Washington Garrett	455 420 750 900 2,440 1,000	5 5 5 4 9 8	52.0 55.0 51.9 45.3 49.0	105 100 100 100 96 98	July 1	- 2 1 0 2 -15	Dec. 22 Dec. 22 Feb. 1 Dec. 21 Dec. 22 Dec. 20†	4 8 5 4 9	45.95 45.49 40.63 61.01 40.77	7.83 6.98 6.44 8.71 8.57 7.37	Aug. Dec. Apr. Dec. Dec. May	0.43 0.63 0.71 1.12	Feb. Feb. Oct. Feb.	8.0 19.8 13.0 21.3 125.3 17.8	92 109 95 169 115	106 189 ^b 144 ^b	161 97 ^b 131 ^b	97 77 ^b 88 ^b 161	NV S SV NV
Entire Section	Allegany			50.6	106	July 1		Dec. 22		45.89	9.56	May	0, 21	Oct.	42.6	108	154	102	169	N
NORTHERN-CEN. MD.																				
Bachman's Valley. Baltimore J. H. Hos. Baltimore J. H. Hos. Chase. Darlington Academy Fallston School. Frederick. Great Falls. Harney. McDonogh. Mt. St. Mary's Colleg. New Market. Takoma Park Taneytown Van Bibber. Woodstock College.	Baltimore Baltimore Baltimore Harford Harford Frederick Montgomery Frederick Baltimore Frederick Frederick Montgomery Garroll Harford	500 720	9 36 8 4 11 32 27 11 3 26 36 16 36 16 7	54.4 52.7 51.5 52.2 52.1 54.3 	98 103 102 104 100 101 102 101 99 100 98 99 101	July 1 July 2 July 2 July 2 July 2 July 2 July 1 July 2 July 1 July 2 July 1 July 2 July 1	3 5 7 4 2 6 5 4 4 7	Feb. 2 Dec. 22 Mch. 6† Feb. 1† Dec. 22	4 11 32 27 12 3 21 33	-70.87* 43.04 45.10 44.59 49.38 52.96 46.48 42.76 39.17	12.04 7.07 8.78 7.39 9.16 8.43 6.81 8.06 6.66 7.46 7.45 7.50 9.29	Aug. Dec. Dec. July Aug. Dec. Dec. Dec. Dec. Dec. Dec. Dec. Dec	0.65 0.40 0.10 0.67	Feb. Feb. Feb. Feb. Feb. Feb. Feb. Feb.	16.0 9.4 7.2 22.2 14.4 11.9 13.5 12.1 12.3 12.5 8.1 15.7	112 167 69 77 120 115 94 85 109 126 98 116 108	122 182 195 196 f 67 185 246 168 203 ^d 117	119 34 82 84 223 - 94 0 112 83 ^d 136	124 149 88 79 ⁷ 75 86 86 119 85 75 ⁶ 112	SV SV NV NV NV NV NV
Entire Section				52.4	104	July 2	0	Feb. 2		46.90	12.04	Ang.	0.69	Feb.	12.9	98	173	90	102	N
Annapolis	Anne Arundel St. Marys Prince George's. Dist. of Columbia. Anne Arundel Prince George's. Dist. of Columbia.	45 167 225 120 165 150 170 160 20	29 9 1 11 13 7 11 11 10 31	55.6 54.9 54.0 52.6 52.2 54.2 56.0 54.1	105 100 103 102 99 102	July 1 July 1 July 1 July 1 July 1 July 2 July 1 July 2	. 0 . 7 . 0 . 2 . 14 . 7	Dec. 22 Dec. 22 Dec. 22 Feb. 1 Dec. 22 Dec. 22 Dec. 21 Tec. 22 Feb. 1	25 9 1 10 13 7 11 10 10 31	53.62 34.63 43.89 49.11 48.78 39.08 40.94 41.75	10.40 6.38 6.79 6.80 8.48 6.72 7.55 7.14 7.56	Dec. Dec. June Dec. July Dec. Aug.	1,20 0,10 1.08 0.35 0.65 0.62 0.90 0.40 0.37 0.62	Oct. Feb. Oct. Feb. Feb. Feb. Feb. Feb.	6.1 4.5 5.0 6.5 8.5 8.9	89 78 86 66 84 108 110	229 140 103 148	65 132 114 96	71 93 148 121	SI
EASTERN MARYLAND							i—	100. 1		43.07						===		93	101	
Cambridge Chestertown Coleman Denton Easton Pocomoke City Princess Anne Queenstown Rock Hall Sudlersville	Kent. Kent. Caroline Talbot. Worcester Somerset Queen Anne Kent.	20 20 25	16 3 9 11 8 28 4 4	53.9 55.8 54.1 53.7 54.4	100. 104 105 99- 100 99- 100 102- 104	July 1 July 2 July 1 July 2 July 1 July 2 July 1 July 1 July 1 July 1 July 1 July 1	† 10 † 9 † 7 3 † 10 8	Dec. 22 Feb. 25 Feb. 25 Jan. 19 Dec. 22	4 16 4 9 11 8 8 4 4	39. 26 41. 00 38. 61 48. 20 42. 15	8. 48 7. 42 6. 13 5. 52 12. 05 5. 69 8. 31 8. 01	Apr. Aug. Aug. Dec. July	0,79 0,22 0,31 0,85 0,89	Oct. Feb. Feb. Feb. Feb. Feb.	8.6 7.6 10.6		202 90 207 186	95 195 106	68 80 102 68	SV
Entire Section				54-4	105	July 1	1 3	Feb. 25		42.91	12,05	Aug.	0.22	Feb.	10.0	92	171	110	84	N
Milford	Sussex	20 23 136 40 40	18 9 8 10 2	53·3 51.6 54·9	104 100 100 102	July 2 July 2 July 2 July 1	6	Dec. 22 Feb. 25 Dec. 22 Dec. 22	19 9 8 10	43.48 45.78 36.75	5.81 7.81 9.78 5.29 10.81	Aug Aug Aug	0.93	Feb. Oct. Feb. Feb.	6.0	86	193 174 176	70 84 56	102 107 133	N N N N
				¦	104	July 2	ı	Feb. 25	. j	43.62		-¦	0. 22	Feb.	8.3	81	184	71	. 110	N
. Entire Territory	·[52.6	106	July 1	-15	Lec. 22		45,68	12.05	Aug	0.09	Feb.	18.7	99	166	96	103	N

Note.—A few stations having incomplete annual records are omitted from the body of this table, but all obtainable reports have been considered in the entries of averages and extremes.

*Il month's record. † And other dates also.

Monthly and annual temperatures for the year 1901, with departures from the normal.

· · · · · · · · · · · · · · · · · · ·			LOI	піу а	nu a	mnua	i tex	upera	ture	s IOF	me :	year	1901	, wit	n de	partu	resi	rom t	me n	огша						
	Jai	uary.	Feb	ruary.	Ma	rch.	A	pril.	N	lay.	J	une.	J	uly.	A	ugust.	Sep	tembe	Oc	tober.	No	vembe	rDec	embe	Ar	inual.
Stations.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature,	Departure.	Temperature.	Departure.
WESTERN MARYLAND.		l	-	1	ŀ					1.										.		}			ŀ	
Boettcherville Boonsboro Chewsville Clear Spring Cumberland Deer Park Frostburg Grantsville Green Spring Furnace Guard Hagerstown Hancock Sharpsburg Smithsburg a Smithsburg a Sunnyside Westernport	32.5 31.2 33.7 27.7 30.5 29.4 32.8 31.6 32.4 32.4 32.6 32.4	+3.1 +3.1 +3.0 +0.7 +2.1 +3.7 +0.2 +1.4 -0.4	26.8 26.1 26.1 19.8 22.0 20.8 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	-6.4 -4.2 -3.6 +1.5 +0.9 -2.4	43.4 42.8 b40.0 36.4 38.7 36.4 41.0 45.5 43.1 36.2 37.5	+1.5 +1.1 +2.0 +2.5 +2.4 +5.2 +0.7 -0.1	49. 2 48. 8 47. 2 	-3.5 -3.1 -3.1 -3.3 -3.4 +0.5 -1.4	55. 2 57. 5 56. 1 61. 6 63. 4 60. 8 65. 8 61. 6 54. 9 58. 9	-2.2 -1.7 -2.1 -0.8 -4.4 +2.7 -1.2	71.7 70.4 69.2 a64.4 66.3 65.4 e72.5 72.6 71.2 70.4 71.2 64.3 68.4	-0.1 -0.1 -0.1 -0.1 -0.1	78. 1 78. 0 76. 0 74. 2 73. 2 78. 2 79. 3 a78. 6 82. 7 77. 6 77. 8 71. 4	+4.3 +2.0 +4.3 +2.0 +4.1 +4.0 +4.0 +4.0 +4.0 +4.0 +4.0	74. 9 73. 68. 9 74. 3 75. 2 75. 2 75. 2 75. 2 75. 2 75. 2 77. 9 66. 9	6	65. 5 64. 4 458. 2 62. 8 60. 0 665. 8 66. 0 69. 6 465. 1 58. 0	-2.5 -3.5 -2.7 -2.9 -2.2 -3.0 +2.6 -3.4	54.2 54.0 54.2 48.9 51.4 51.6	-3.5 -2.9 -1.6 +0.5 -0.7 -1.8 +1.4 -3.6 -3.4 +1.3 -1.2	38.2 38.6 38.2 38.6 38.6 38.6 38.6 38.6 38.6 38.6	5	32.2 30.3 30.3 26.5 28.6 31.0 29.4 31.0 31.9 31.6	-1.9 -1.8 -2.3 -1.7 -2.4 -2.2 -2.2 -2.9	45.8 47.1 52.0 55.0 55.0 51.9	-1.3 -0.9 -1.0 -1.2 +1.6
Average NORTHERN-CENTRAL MD.	31.3	=	-3.0	===	44.5			===	===	===	===		==				===	==	32.0		30.3	3.0	29.0	===	30.0	
Bachman's Valley Baltimore J. H. Hosp'l. Chase Darlington Academy. Fallston School Frederick Great Falls McDonogh Mt. St. Mary's College. New Market St. Charles College Takoma Park Taneytown Van Bibber Western Md. College Woodstock College	32.4	+0.9 -0.2 +1.3 +1.9 +2.5 +0.1 -1.7 +1.2 -1.9 +0.1 +0.1	29.5 28.4 25.6 25.8 26.4 29.6 26.8 23.9 26.4 26.6 27. I 26.4 24.4	-6.7 -2.6 -4.0 -5.7 -3.9 -5.5 -5.8 -5.9 -2.8 -4.7 -6.0	43.8 41.5 39.5 42.0 45.3 42.5 39.8 42.6 41.6	+3.7 +4.7 +1.1 +3.5 +2.9	50.7 49.4 47.8 50.2 49.0 50.6 48.4 48.6 49.8 7 50.1 49.2 50.4 48.2	-2.4 -3.2 -1.1 -1.5 -4.7 -2.6 -1.4 -1.5 -2.8 -1.7	61.8	-2.4 -2.6 -1.4 -1.3 +0.3 -2.3 +0.2 -1.5 -0.5 -1.8 -4.3	72.6 71.0 69.8 71.1 70.1 72.6 72.5 70.8 69.6 71.2 70.4 71.4 71.3 69.5	-0.8 -0.1 -0.0 -1.0 -0.3 -1.9 -0.6 -0.2 -3.2	78.8 79.6 °78.2 77.8 80.2 '78.6 78.4 78.7 78.2 78.0	+2.2 +3.2 +2.0 +3.1 +3.5 +4.1 +1.5 -0.1 +2.2 +5.8	76. 7 75. 4 77. 2 74. 5 74. 3 75. 9 73. 4 73. 8	+1.8 -0.4 +1.8 +0.9 +2.2 +2.1 -1.5 +0.7 -0.1 -1.0 +1.0	63.5 68.4 68.2 66.3 65.98 67.5 66.6 66.0 66.6 66.4 67.2	-1.3 -2.1 -1.0 +1.0 +0.3 -2.2 -0.7 +1.5 -0.4 	52. 5 56. 7 55. 4 53. 6 54. 4 54. 7 56. 5 52. 4 55. 2 55. 2 55. 2 55. 2 55. 2 55. 2	-0.1 -0.2 -1.2 -4.1 +0.2 +1.5 -2.3 +1.5 -2.3 -0.0 -2.3 -0.7	39.8 36.2 39.3 39.4 41.4	-7.4 -4.5 -3.6 -2.5 -6.5 -6.7 -3.4 -4.2 	30.2 35.2 31.4 31.8 32.4 32.7 34.7 31.2 32.2 32.2 32.0 32.0		54.4 52.7 51.5 52.2 52.1 54.3 52.0 52.4 52.6 52.1 52.7	-0.8 -1.6 -0.6 0.0 +0.6 -1.0 -1.0 -2.0 -0.7
Average	31.7	+0.5	26,6	-5.2	42.2	+2.3	49-3	-2.4	61.4	-1.5	71.0	—0. 5	78.8	+2.9	74.9	+1.1	66.4	-0.6	54.8	-o.5	39. 1	-4.8	32.3	—ī.9	52.4	-0.9
SOUTHERN MARYLAND.																		- -								
Annapolls. Charlotte Hall School. Cheltenham. Distributing Reservoir¹ Jewellaurel. Md. Agricultural Coll. Prince Fredericktown. Recelving Reservoir¹. Solomon's. Washington, D. C.	35. 4 34. 4 34. 3 35. 5 32. 4 35. 6 33. 8 37. 2 34. 4	+1.1 -0.1 +1.9 +1.2 -1.4 -1.4 -1.5 +2.4 +1.5	30.4 30.0 27.3 28.0 30.4 28.9 32.2	-2.3 -2.9 -4.7 -5.1 -6.4 -4.1 -2.7	45.1 45.0 43.6 44.2 45.4 44.2		50.4 49.8 52.0 49.8 50.0 49.9 50.0 51.3 51.1 50.6	-3.8 -2.4 -4.7 -3.2 -2.9 -2.5 -2.2	64.1 d63.0 62.1 64.6 61.9 61.6 60.8 63.1 64.1 62.7 62.5	—I. o	71.4 74.4 71.6 71.4 69.3 b72.0 74.0 72.8	+0.2 -0.3 -1.7 -0.2 -3.0 -1.8 -0.8	83.0 79.2 81.2 79.2 79.4 79.0 80.6 81.0 79.8	+4.4 +3.8 +3.3 +3.6 +4.0 +3.2 +2.4 +3.0	75.3 76.6 75.5 75.1 ^b 74.4 76.5 78.4	+0.1 -0.3 -0.5	67.3 67.7 67.4 66.5	-1.6 -1.0 -3.0 -4.6	58. 9 54. 6 56. 2 57. 6 56. 2 53. 8 53. 8 55. 9 59. 8 55. 6	+1.3 -3.0 +0.7 +0.2 -2.4 -2.3 -0.5 -0.5 -0.6	42.8 39.7 40.5 40.7 41.3 39.0 38.3 40.2 44.0 40.6	-3.6 -7.4 -5.1 -5.6 -7.2 -7.7 -5.1 -5.3 -3.9	35.0 d33.8 33.0 34.1 35.2 31.4 31.6 32.8 36.6 34.7	- 2.9	54.9 54.0 52.6 52.2 54.2 56.0	-0.2 -0.6 -1.2 -2.0 -2.7 -0.9 -1.1 -0.6
Average	34.5	+0.7	29.9	-4.3	44-7	+2.1	50.5	<u>_3. o</u>	62.8	—1.6	72.4	-1.0	80.3	+3.5	76.3	+0.4	67.8	-r.5	56.2	-о. 8	40.7	-5.7	33.8	-3-4	54.2	-1.2
EASTERN MARYLAND.	1				ĺ												_									
Cambridge Chestertown Denton Easton Pocomoke City Princess Anne Queenstown Rock Hall Sudiersville	34.6 37.8 35.6 32.2 34.6	+2.6 -0.1 -1.1 -1.9	28. 5 29. 6 31. 8 29. 8	-2.0 -5.0 -4.3 -4.9 -8.5	44.9 44.6 47.2 45.9	+3.2 +1.6 -0.1	50.4 50.2 50.6 49.8 50.9 50.2	-1, I -2, 4 -3, 3 -5, 0 -5, 6	62.0 61.4 62.1 60.8	-1.4 -2.1 -3.7 -3.3	72.7 68.8 872.7 70.8 874.6	-0.5 -3.5 -1.3 -1.5	79.0 80.0 79.8 81.2 79.2 80.4	+2.9 +3.0 +3.1 +2.8 +2.0	75.6 76.8	+1.5 +0.9 0.0 0.0	69. 1 470. 0 68. 0 68. 6	+0.8 -1.9 -1.6	55. 0 56. 4 58. 0 55. 8 56. 6	-1.0 -1.0 -2.9 -1.3 -3.0 -3.8	44.2 39.6 41.9 42.6 41.4 40.6 41.0 40.6	-6.3 -3.9 -9.4 -7.3 -5.5 -5.4	33.4 35.6 38.5 36.8 34.6	-1.6 -4.1 -3.6	53.9 55.8 54.1	—I.I —2.6 —2.8
Average	34.5	-o, r	29.8	-4.9	45.1	+1.1	50.4	-3.5	61.4	-2.7	72.2	—1.7	80, 1	+2.6	76.8	+0.5	68.9	—I.2	56.6	-2.0	41.5	-6.3	35.7	3.0	54 - 4	-1.8
DELAWARE.	34.9	-1.1	20.7	-5.1			51.6	-0.6	61.8	-0.3	74.0		81.0	+4.4	77 7	+2,8	68, 6	+1.2	57 6	418	41.7		27.0	_, ,		
Milford Millsboro Newark (Del.College) Seaford	33.2 30.8 35.0	-0.3 +0.4 +0.9	26.2 29.6	-3.4 -4.8	43.0 40.1 45.0	0.0 +0.6 +1.9	48.3 49.0 50.7	-4.1 -1.6 -2.9	60.6 59.4 63.2	-0.2 -2.7 -2.6 -0.4	70.4 70.2 73.7	-0.3 +1.7	80.0 78.5 81.2	+4.4 +3.6 +3.0 +4.7	76.8 74.6 77.6	+1.6 +0.7 +1.9	68.3 66.7 68.8	-0.6 -0.8 -0.3	55.8 53.2 56.4	-1.4 -1.7 -0.2	41.7 40.4 38.9 41.6	-7.1 -5.3 -5.1	37.0 34.9 31.5 36.2	-3.6 -1.3	51.6 54.9	-1.8 -1.2 -0.3
Average	33.5	+0.7	===	-4.8			49.9	-2.3		-1.5	72.1		=====	+3.9	76.7	===	68, 1		===	===	40.6		34.9		===	-0.8
General average.	3∡,0	T9./	-/-4	-4.4	42.6	+1.9	49.2	-2.8	01.3	-1.7	71.3	-0.5	78.8	+3.1	75.0	+0.7	66.5	-1.3	54.9	-0.9	39.2	-5-5	32.7	-2.6	52.6	—1. t

Mean of 7 a.m. + 2 p.m. + 2. Superior letters of the alphabet indicate the number of days missing.

Monthly maximum temperatures for the year 1901, with dates.

tur.	Jant	ary.	Febr	nary.	Mar	ch.	Apı	il.	Ма	y.	Jur	е	Jn	ly.	Aug	ust.	Septe	mber.	Octo	ber.	Nove	mber.	Dece	mber.
Stations.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.
WESTERN MARYLAND.	<u> </u>							-							.	,								
Boettcherville	59	9 16 16 17	50 54 52 50	17 16 16 17	80 75 72 74	20 19 19 20	88 88 83 80	30 30 30 30	95 87 84 90f	25 24 24 1	99 96 97 92	30 30 30 30	103 100 100 96	2 I I 2	97 92 90 90	3 3 4	92 87 91 85	8 6 7 7	81 78 82 80	12 19 1 23	72 65 67 65	12 1 1	70 65 65 65	15 2 2 3
Deer Park	53° 57 53 59	8 21 9 16	47 48 .46 .50	17 16 16 16	69 68 71	19 19 24 19	81 82 79 86	30 30 29 30	84 86 82 88	24 24 24 24 24	89 91 89 95	30 30 30 29	94 96 93 100	1 1 1 1	87 88 88 94	9 9 9 3	83 83 84 88	7 7 5 15	77 76 77 80	I 2 I 2	66 64 65 64	2 2 1	64 64 66 64	14 14 14
Hagerstown Hancock Sharpsburg Smithsburg A Smithsburg B Sunnyside Westernport	61 57 58	16 16 16 16 16 16	- 55 56 69 - 54 - 53 45 50	16 16 16 16 16 16 16	74 77 81 74 73 76 70	19 24 19 19 19 24	88 90 87 85 85 80 84	30 29 29 30 30 30 30	90 92 91 86 87 82 87	24 24 24 24 24 24 24	99 102 102 96 96 90 95	30 30 29 30 30 30 5	102 106 105 100 100 96	1 1 1 1	95 98 95 97 90 92	3 10 21 11 3 10	92 94 89 87 84 85	5 6 15 7 7	82 80 80 78 78 76	22 2 23 22 8 2	69 67 65 65 69 65	1 1 1 1 3	68 67 65 64 65 64	14 14 2 14 14
NORTHERN-CENTRAL MD																						.2	-	
Bachman's Valley Baltimore, J. H. Hosp'l. Chase Darlington Academy. Fallston School. Frederick Great Falls McDonogh Mt. St. Marry's College. New Market. St. Charles College.	56 56 62 59 63 63 58	16 16 16 16 17 16 16 17 16 16 16	44 49 49 43 46 47 50 55 43 45	16 18 16 26 16 16 17 18 17	70 74 74 67 72 72 73 74 72 71	19 19 19 19 19 19 20 19	83 86 86 73 85 84 86 82 84 86 85	30 30 30 30 30 30 30 30 30	83 83 83 77 84 80 85 88 82 84 85	24 5 5 23 23 23 23 1 1 24 24	96 99 96 100 97 98 97 98 97	29 30 30 30 30 30 30 30 30 30	98 103 102 104 104 100 101 102 101 99	1 2 1 2 2 2 1 2 2 3 1	89 93 93 91 89 89 91 92 90 89	10 10 9 12 10 10 3 11 11	87 92 92 90 88 89 89 92 90 87 88	1 15 15 15 15 15 16 15 17	75 81 82 77 79 79 81 92 78 79	23 23 22 23 23 23 23 24 13 20 23	65 65 68 63 65 65 65 65	2 2 8 1 1 2 1	60 65 67 59 66 61 66 66 66	14 2 13 14 14 14 15
Takoma Park	68 55 53 60	15 16 16 16 16	55 54 47 47 51	17 17 18 16 16	77 75 69 73 73	20 19 19 19 19	82 86 75 84 85	30 30 29 30 30	88 86 80 83 85	1 24 5 24 24	93 95 97 95 98	30 30 30 30 30	98 99 101	2 2 2	89 89 89	10 10 3	90 89 88	16 15 13	83 79 78 79	23 13 22 23	69 64 62 65	1 1	65	14 14 14
SOUTHERN MARYLAND.														-										
Annapolis. Charlotte Hall School. Cheltenham Jewell Laurel Md. Agricultural Coll. Prince Fredericktown. Solomon's. Washington, D. C	65 64 64 63	16 9 9 9 9 9	52 61 56 55 57 56 56 56	18 16 16 16 16 16 16	70 78 75 77 76 74 73 75	19 19 19 19 19 19	75 82 83 88 84 83 81 87	30 30 30 30 30 30 30 30	85 88 84 81 89 85 86 85 84	5 24 24 1 24 24 24 1 24	96 97 95 99 99 99	30 30 30 30 30 30	105 100 100 103 102 99 102	1 1 1 1 1 2	93 90 88 92 97 92 91	9 10 9 8 	91 90	15 15 15 15 15 15	82 83 85 82 84 83 80	23 23 23 23 23 23 23 23 23	66 74 72 66 72 69	1 1 1 1 1	60 66 65 65 67 64 66	9 14 2 2 14 14
EASTERN MARYLAND.	ĺ.	ŀ										ļ.								:				
Cambridge	58 . 62 . 60 . 63 . 62 . 59	16 10 16 11 11 16 10	52	16 16 16 16 16 16	70 72 77 72 74 74 73 78	19 19 19 19 19 19	77 82 79 77 77 77 79 78 86	30 30 30 30 30 30 30 30 30	79 82 80 82 81 79 79 86	5 5 1 1 22 5 24	96 100 94 96 94 97 97	30 30 30 30 30 30 30 30 30	100 104 105 99 100 99 100 102	1 1 2 1 2 1 1 1 1 2	90 88 98 91 93 88 91 91 94	16 11 23 9 11 4 11 20 9	89 90 89	15 7 15 15 15 15	79 76 80 81 79 78 79 81	23 23 10 13 13 23 23 10	65 63 65 73 72 65 65 65	2 I I I 1 2 2	67 68 66 70	14 14 14 14 14 14 14
DELAWARE.												-							ĺ			7.5		
Milford Millsboro Newark (Del. College). Seaford		17 17 16 16	51 52 46 50	28 17 16 16	74 70 73	20 19 19	81 73 81 81	30 30 30 30	86 84 82 85	5 1 24 24	101 94 97 100	30 13 30 30	104 100 100 102	2 2 2 . I	95 94 88 92	11 22 3 10	88	15 16. 15 15	82 81 78 79	23 I 23 23	76 72 62 70	1 2 2 1	66	14 15 14

Note.—In some cases the extreme of temperature here recorded occurred on more than one date; only the first date of such occurrence is given.

Superior letters of the alphabet indicate the number of days missing.

TABLE OF KILLING FROSTS.

Stations.	First in autumn.	Stations.	Last in spring.	First in autumn.	Stations.	Last in spring.	First in autumn
Chettenham Cambridge Chestertown Colora Deer Park	Nov. 11 Oct. 3 Oct. 25 Oct. 4 Oct. 16 Oct. 25 Nov. 9 Nov. 21 Oct. 25 Sept. 19	FrederickGrantsville Green Spring Furnace HancockHarney Jewell	Mch 18 May 4 April 12	Oet. 4 Oct. 3 Oct. 25 Oct. 18 Oct. 26 Oct. 19 Oct. 25	Pocomoke City. Queenstown Rock Hall Seaford, Del Sharpsburg Smithsburg Sunnyside Solomons Taneytown Van Bibber. Woodstock College Washington, D. C	April 2t Mch. 18 April 29	Oct. 26 Oct. 26 Oct. 26 Oct. 27 Sept. 27 Nov. 26 Oct. 4 Oct. 4

Monthly minimum temperatures for the year 1901, with dates.

		·			1		1				8 10r		1				ī ,		1		1		1	
	Janu	iary.	Febr	uary.	Mai	rch.	Ap	ril.	Mı	ŧУ.	Ju	ne.	Ju	ıly.	Aug	ust.	Sepet	mber.	Oct	ober.	Nove	mber.	Dece	mber. -
Stations.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum,	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.
WESTERN MARYLAND.																								
Boettcherville Boonsboro Chewsville Clear Spring Cumberland Deer Park	4 9 8 8 • 13 — 4	20 20 20 20 20 4 20	6 7 2 7 6	7 1 1 7 	3 5 10 5 6	6 7 6	27 28 27 33	12 12 12 1 1	37 40 36 41 f	5 4 4 17	40 44 40 40 32	10 9 8 	53 58 58 57 57	9 9 10 26	53 57 54 57	1 3 1 8	38 40 35 41	20 26 22 25 	27 29 25 30	25 25 25 25 25 25	15 12 18	22 28 28 28	- 2 4 5 	21 21 22
Frostburg Grantsville Green Spring Furnace.	2 2 8	20 20 . 20	0 2 6	7 23 7	- 5 6	7 6 6	24 25 28	12 I 12	36 33 38	14 4 14	38 35 42	10 10	52 48 57	9	51 48 56	2 2 2	35 32 38	20 20 26	28 25 29	5 25 25	· 14 16	28 22	- 8 3	20
Guard Hagerstown Hancock Sharpsburg Smithsburg a Smithsburg a Sunnyside Westernport	8 4 11 8 8 - 3 6	20 4 4 20 20 3 19	7 3 10 0 4 - 5 8	7 7 7 1 14 13 7	6 1 8 5 4 9 3	6 7 6 6 6 6	30 25 34 26 26 17 25	12 12 1 1 12 1 12 1 12 11	39 35 41 35 41 28 36	4 14 30 4 4 4 3	40 40 47 41 43 33 39	9 10 10 10 9 10	58 54 64 55 58 40 52	9 9 10 9 7	57 54 60 53 57 42 51	2 2 23 2 2 2 11	35 41 36 42 29 37	20 26 21 19 21 21	24 29 25 29 17 26	26 7 25 25 25 25 25	14 13 14 17 4	29 22 29 20 28 29 22	- 3 - 2 I 3 -15 I	20 22 22 22 21 21 22 20
MORTHERN-CENTRAL MD.																						•		
Bachman's Valley. Baltimore J. H. Hosp'l. Chase. Darlington Academy. Fallston School. Frederick Great Falls. McDonogh. Mt. St. Mary's College. New Market. St. Charles College.	8 14 14 5 7 8 13 8 5 10 8	20 20 4 19 20 20 20 4 19 20 20	0 14 11 3 6 8 6 7 6 10 6	2 14 1 1 1 23 1 2 7	8 13 8 8 9 10 10 7 8 7	6 6 7 7 7 6 7 0 6 6	30 37 32 32 35 34 33 33 32 34 32	1 1 27 1 1 12 16 10 1	38 47 43 36 41 41 42 38 40 45 41	14 6 6 14 6 14 14 13 14	41 52 41 48 45 47 49 46 49 42	10 1 5 9 10 9 9 9	59 64 59 62 61 60 63 61 59 61	26 27 6 26 27 9 26 8 10	55 57 58 56 56 59 59 59 55 59	30 30 29 30 30 2 29 29 29	36 46 43 38 41 41 42 43 39 43 40	26 21 21 26 26 26 21 25 26 26 21	28 37 33 26 30 31 32 28 30 33 31	26 25 25 26 25 26 26 26 26 25 26	24 20 9 18 20 20 17 19 20	29 29 20 29 29 20 20 20 19 28	2 11 8 3 5 7 4 2 2 6 5	22 22 27 22 22 22 22 22 22 21 29 20
Takoma Park Taneytown Van Bibber Western Md: College Woodstock College	12 8 9 7 9	4 20 19 20 20	10 7 11 8 8	1 2 2 1 1	10 9 11 7 10	7 6 6 6	34 31 37 30 26	1 2 3 1 3	43 41 43 41 41	14 14 14 6 14	48 45 50 44 47	9 10 1 17 10	63 62 63 63	27 27 26 	59 56 58 59	29 26 30 	. 42 38 44 	26 26 22 26	32 31 32 32	25 ·7 25 26	19 18 21 18	20 20 20 20 	4 4 7	22 22 22 22
BOUTHERN MARTLAND.						Ì											!						Ì	
Annapolis	18 8 10 7 6	20 20 20 20 19	12 10 14	7 25 I I	11 18 11 7 6	6 6 7 7 7	29 29 34 30 31	29 I 5 20	46 39 39 41 37 36	14 15 14 7 14	52 48 51 43 47	17 1 1 11 8	67 64 65 63 61	8 8 8 10	57 60 55 55	30 30	47 42 46 37 37	21 26 26 21 26	35 30 30 34 26 25	25 26 26 25 26 25	23 19 17 19 14	28 20 20 29 20 20	10 2 0 7 3	22 22 22 22 22 22
Prince Fredericktown. Solomon's Washington, D.C	9 17 13	20 20 4	7 12 18 13	24 13	9 15 11	7 6 6	34 38 36	27 I I I	43 47 42	13 7 7 14	50 6 52	1 9 1	66 64	27	66 59	30 30	52 43	21 26	40 32	25 26	25 20	28 20	14	21 22
EASTERN MARYLAND.	·														•	[
Cambridge Chestertown Denton Easton Focomoke City Princess Anne Queenstown Rock Hall Suddersville	10 9 11 14 10 10 11	3 20 20 20 20 19 20 20	12 12 14 7 3	6 25 25 25 25 25 25	14 11 14 13 *10	6 7 7 7 6	35 35 35 34 30 38 36 32	4 · 5 · 12 · 13 · 12 · 11 · 29 · 4	43 40 43 43 38 43 41 40	5 7 5 7 7 7 5 14 7	52 50 50 54 51 54 48 47	10 S 1 10 9 9	67 63 62 66 65 64 64 64 63	27 26 27 8 27 27 26 27 27	65 57 55 55 60 57 57 54 60	2 29 28 30 30 30 29 30	54 44 45 49 45 45 40 40	22 25 22 22 22 22 25 26 26	35 32 32 32 29 33 29 32	26 25 26 26 26 25 26 26 26	27 12 21 17 17 21 17 20	21 19 21 29 21 20 21 20	25 11 9 10 7 12 8	20 21 22 22 22 21 22 22
DELAWARE.																								
Milford	11 6 8 11	19 20 20 20	17 1 7 12	1 1 24	10 8 12	7 7 7 7	33 31 35 36	29 12 12 12	41 38 39 44	7 7 7	53 50 48 - 53	8 9 1 1	63 65 59 66	10 8 27 27	58 57 58 59	30 30 30 30	45 45 42 46	22 22 26 22	31 29 30 34	26 26 26 26	19 17 19 20	29 21 29 29	8 7 6 9	22 22 22 02

Note.—In some cases the extreme of temperature here recorded occurred on more than one date; only the first date of such occurrence is given. Superior letters of the alphabet indicate the number of days missing.

Monthly	and annual	precinitation	for the vear	1901, with	departures fro	om the normal.

* .	Jai	nuary.	Feb	ruary	. M	arch.	A	pril.	М	ay.	J1	une.	J	uly.		ugust,	Sept	tember	Oct	tober.	Nov	em bei	Dec	 ember	. Ar	nual.
Stations.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.
WESTERN MARYLAND. Buettcherville Boonsboro Cnewsville Clear Spring Cumbern nd Deer Park	1.66 2.66 2.16 1.66 1.14	1 —1. I; 2 +3. 2	0. 57 0. 63 0. 57	3 —2, 11 7 3	3.60 3.92 2.78 2.03	-0.30 -1.57	5. 16 5. 73 5. 96 4. 54 6. 04	+2.28 +3.49	6.01 5.71 f7.12 6.31 5.40	+3.21 +2.84 +0.91	3. 16 4. 43 3. 93 2. 89 3. 88	-0.44	3.77 3.47 2.70 a3.33	-0.01 +1.57 +1.35 +0.00 -0.5h -2.29	4.3. 5.88 7.29	3 -0.03 8 +1.60 9 +4.26	3.37 2.87	-0.22 -0.04 +1.47 +0.14 -0.76 +0.13	0.89 0.85 0.30	-1.65 -2,60	3. 17 2. 30 2. 59 2. 12	-0.52 -0.28	6.49 5.83 6.14 6.32 4.39	+3.29 +3.29 +4.11 +1.26	45.03 42.27 44.21	+11.16
Frostburg Grantsville Green Spring Farnace Guard Hancock Shar sburg Smithsburg A Smithsburg B	2.52 1.63	-0.83 -0.75 -0.54 -0.54	0.86 0.66 0.58 0.43	-3.04 -2.64 -3.25 -3.25	4.99 3.71 4.06 3.28 3.75	+0.61	6.08 6.29 4.60 6.07 6.02 6.44	+3.29	8.32 7.63 5.47 4.87 5.59	+3.78	2.79 3.15 3.89 3.94 1.86	-1.11 +0.18 +0.02 +0.11 -1.46 +0.70	2.63 4.48 3.51 5.92 4.73 2.53	+2.03 -3.63 +1.08 -1.03 +3.17 +1.19 -0.34 +0.43	5. 20 7. 83 5. 34 3. 93	4 +1.22 2 +3.42 3 +2.40 3 +4.03 4 +2 51 5 -0.82 -1.39	2, 24 2, 38 	-0.43 -0.40 +1.17 +0.71 +1.23	0.70 0.77 0.91 1.42 0.71	-1.60 -2.03 -2.91 -0.89	2, 56 3, 13 3, 12 2, 69 3, 80 3, 23	-0.89 +0.26 +0.23 +1.26	6.87 5.29 5.47 5.69 6.98 6.09	+3.11	44.96 46.48 45.95 45.49 40.63	+ 1.40 +11.62 +11.03
Sunnyside	2.43	-0.18	0.29	-2.42	3.24	-0.35 +0.12 -0.04	7.70 5.68	+3.77 +3.48 +3.60	6.94 7-37	+1.78	5.72 3.90	+0.65	5.42	-0.32 -1.64 +0.00	5. 17 5. 59	+1.55 +2.62 +2.14	2.85	-0.25	0.98		1.76	+0.8c -0.7b	5.92	+4.12	40.77	+ 7.96 + 8.32 + 7.81
Bachman's Valley Baltimore Baltimore,J. H. Hosp'l. Chase Darlington Academy. Franco. School Fre ler'ck Great Falls.	2, 45 2, 60 2, 23 2, 75 2, 52 2, 14 2, 43	-0.96 -0.49	0.65 0.40 0.10 0.67 0.80 0.80	-2.85 -4.76 -2.98 -3.39 -2.35 -2.77	3.55 1.13 4.81 4.21 4.68 4.34	-0.52 -2.43 +0.94 +0.39 +1.23 -0.10	5.53 7.05 5.91 4.83 5.65 5.88 5.99	+4.40 +1.86 +2.34 +2.55 +3.51	3.67 3.65 2.95 2.62 2.88 4.07 3.82	-0.11 -0.17 -1.60 -1.34 +0.23	0.90 0.70 0.83 1.31 1.76 6.04 2.47	-1.94 -1.96	6. 18 7. 10 6. 43 9. 16 7. 56 3. 83 6. 05	+1.48 +3.57 +3.40 +5.07 +3.22	6.73 7.14 5.29 7.39 8.43 5.38 5.55	+2.08 +2.40 +1.13 +3.55 +3.55 +2.52 +3.63	2.50 2.77 4.49 03.54 5.36	-0.28 +0.95 -0.04 -0.75	1.52 1.63 0.53 1.20 1.89 1.22 0.28	-1.46 -1.57 -2.53 -1.79 -1.58	2.26 2.15 3.63 3.29 3.26 2.71 2.18	-1.07 +0.66 -0.21 -0.56	7.07 8.78 7.39 8.41 8.14 6.8:	+3.92 +5.98 +5.07 +5.86 +4.81 +3.99 +5.43	43.04 45.10 44.59 49.38 52.96 46.48 42.76	十 9.21
Harney McDonogh Mt. St. Mary's College. New Market. Takoma Park Taneytown Van Bibber. Western Md. College. Woodstock College.	2.85 3.10 2.71 3.57 2.08 2.28 2.87	+0.22	0.09 0.20 0.77 0.76 0.91 0.85 0.90	-3.12 -3.10 -2.68 -2.82 -3.92 -3.18 -2.98	1.90 .5.40 3.15 3.32 4.42 4.54 3.50	-1.77 +1.36 -0.62 +1.01 +0.28 -0.38	5.18 7.60 5.47 7.05 3.73 5.85 3.74	+3.02 +4.63 +2.34 +0.73 +3.30 +1.03 +2.09	5.12 6.10 3.86 4.01 3.19 3.29	+1.72 +1.54 +0.14 	2.33 3.20 4.68 5.85 2.73 1.28 2.47	-1.59 -0.60	6.80 6.68 7.50 6.80	+0.42 -0.35 +2.55 +2.52 +2.89 +1.32	7.36 4.70 5.90 5.40		3.13 2.11 3.40 3.57 3.78 4.41	-0.64 -1.52 -0.35 +0.40 +0.04	1.22 1.21 1.80	-1.47 -2.51 -0.94 -2.10 -1.77	2.43 3.05 2.68 2.89 2.14 2.74	-0.52 -0.76 -1.58 -1.79 -1.12	6, 39 7, 45 7, 45 5, 62 7, 24	+3.42 +4.99 +2.66 +4.51	45. 27 50. 14 51. 09 43. 54 46. 38	+ 2.39 + 8.54 + 1.62 + 1.84 + 2.22
Average		-0.27	0,64	<u>3. 18</u>	.3.89	-0.02	5.51	+2.60	3.97	-0,01	2.70	0.79	6, 2,1	+2.43	6.02	+2,42	3:54	_o, 28	1,27	—I.75	2.6×	_o. 73	7.73	+5.02	46.90	+ 5.44
SOUTHERN MARYLAND.	2 05				2.76	-o. 56	~ .0	10.75	4 22	0.25	7 85	_2 70	6.80	±2.10	10.40	±6 c2	4 50	+0.64	. 20	-2.60	ر ن	_, 76	6 15	100=	52.60	+ 5.77
Annapolis Charlotte Hall School Cheltenham Distrib'g Reserv'r, b. C. Jewell Jaurel Md. Agricaltural Coll Prince Fredericktown Receiv'g Reserv'r, b. C. Sulcinon's	3.43 2.38 3.04 3.02 1.75 2.99 2.62 3.93	+0.45 -0.18 +0.24 +0.48 -1.34 -0.25 +1.18	0.10 0.35 0.05 0.62 0.90 0.47 0.40	-3. 10 -3. 13 -3. 67 -3. 73 -2. 85 -3. 61	2.40 2.02 3.52 3.50 3.53 3.83 2.05 3.06	-0.76 -1.13 -1.02 +0.10 +0.41 -0.98 -0.30	7. 08 5. 51 6. 80 6. 13 6. 40 6. 47 6. 36 4. 42	+3.57 +2.87 +3.21 +3.43 +2.71 +3.02 +1.21	4.70 2.50 2.17 2.35 4.05 4.17 2.85 3.33 2.65	+0.72 -1.45 -2.24 +0.25 -0.36 -0.70 -0.84	3. 32 2. 74 4. 17 3. 17 0. 72 2. 00 2. 47 2. 75	+0.34 +0.40 -0.53 +2.82 -0.61 -0.56	5.59 3.97 5.53 7.49 5.74 5.41 7.14	+0.44 -1.68 +2.85 +1.47 +1.69 +3.15	5. 22 3. 85 5. 08 4. 36 4. 93 3. 70 4. 93	+1.14 +1.42 +0.83 +1.56 +0.34 +1.31	2.83 1.83 2.72 2.98 3.69	-0.91 -1.27 -0.33 +0.57 -1.03 +0.40	0.98 1.68 0.84 1.34 1.33 1.47	-2.80 -1.15 -2.37 -1.85 -1.12 -1.45 -1.66	1.53 2.63 2.18 3.17 3.98 2.78 	-0.44 -0.52 +0.17 +1.24 -0.78 -0.45 -0.94	14.10 6.38 6.79 5.52 8.48 6.70 7.55 5.46	+4.10 +4.06 +2.71 +6.19 +4.59 +4.74 +3.01	34.63 43.89 49.11 48.78 39.68 40.94	+ 0.41 - 2.96 + 8.99 + 6.80 - 2.07 + 2.43
Washington, D. C		-0.58 +0.01		-2.75 -3.22	3.03	-1.52 0.64						+0.66			·	+1.60	2.78	-	1.15		2.53					- 1.71 + 2.84
EASTERN MARYLAND.							_																	====i		
Cambridge	2.74 3.31	0.23	1.35 0.79	-1.55	2.67	-0.90	5.70	42 07	3.95 3.53	-0.39 	1.47	-2 261	7. 071	+4.3bl	. 5. Xo	-+ 3. 57 l	2.70 2.03 4.12		1.06 1.60 1.15	-1.841 -1.55	2.60 1.72 3.63	-0.37 -1.15	7.44 5.81 8.44	+4.85 +2.41		
Denton Easton Longwood Pocomoke City Princess Anne Queenstown Roc* Hall	3.78 2.44 2.70	+1.00	0.31 0.85 0.89	-4.07 -3.29 -3.21	2. 19 3. 83 4. 18	+0.30 +0.54	6; 13 4.02 4.52 5.03 5.18	+3.35 +0.50 +1.67	3. 63 3. 16 3. 86 3. 34	-0.09	2.96 3.88 4.58 3.80 3.24	+0.19 +2.31 +0.89	5.39 6.32 2.51 3.10 4.66	+1.21 -2.03 -1.96	5.10 4.07 5.52 2.05 5.48	+1.47 +1.92 +8.33	1.65 2.00 4.37 4.38 2.61	+1.68	1.68	1, 42 2.07	2.42 2.73 1.85	-0.40 -1.04	5.76 6.56 4.15	+3.26	41.00 38.61	+ 1.97 - - 0.21
Sudlersville	3.12		0.64		2,68	·····	5. 11		2.83		1.30					-1.71 +1.71		-0.39								
DELAWARE.		===	_	==											==					j=						
Wyoming	3.05 2.54 3.44 2.58	+0.15 -0.70 +0.33	0.97 0.82 1.84	—3. 22 —3. 37	3.80 3.52 3.01 4.09	+0.25 +0.02 -0.79	5.69 5.84 4.41 5.81	+2.T[+3.10 +0.65	2.90 - 3.30 - 3.02 - 5.16 .	-1, 23 -1, 58 -1, 16	2.67 1.61 2.52 2.13	-0, 29 -1, 50 -0, 38	5.24 3.82 3.52 10.81	+0.10 -0.36 -1.27	7.81 9.78 5.29 7.48	+3.91 +6.36 +1.74	2. 35 3. 79 1. 51	-2.17 -c.83 -0.04 -1.43	0.93 0.98 2.18	-3.76 -1.63 -1.14	2, 18 2, 37 1, 81	-0.86 -0.77 -1.28	5.73 7.26 5.22	+2.83 +4.36 +2.69	43.48 45.78 36.75	- 0.94 + 4.04 - 5.41
"						!_												-1.12 -0.26						!		

Note.—In some cases the extreme temperature here recorded occurred on more than one date; only the first date of such occurrence is given.

Superior letters of the alphabet indicate the number of days missing.

Executive Operations of the Year.

The year closed with sixty voluntary stations in active operation. Ellicott City was the only one discontinued during the twelve months. After the death of Mr. Howard Shriver the temperature observations at Cumberland ceased, but rainfall reports still continue. A rainfall station was established at Carmichael in March, and was transferred to Longwoods in May upon the removal of the observer to the latter place. A fully equipped voluntary station was established at Cheltenham in April. Rainfall reports were begun at Colora in September, by Mr. Lloyd Balderston, who was one of the earlier corps of observers that reported for the Meteorologist Espy. Guard was equipped as a point of temperature and rainfall observa tion in October. The observers that had charge of the work last year resigned at Cambridge, Hagerstown, McDonogh, Sharpsburg, Smithburg (b), and Woodstock, but competent successors were obtained in each instance. The names of those now serving will be found in the later monthly bulletins. The issue of instrument shelters was continued during the year until all stations were supplied.

The system of forecast distribution by mail was extended during the year as opportunities offered, the principal expansion being along the newly opened routes of rural free delivery. The centers of distribution established during the period were, Taneytown (restored), Centerville, Delmar, Del., Easton,

Princess Anne and Whaleysville, while the service was greatly enlarged at a number of centers previously in operation.

The storm-warning displays for the Section have been improved by the establishment of a station at Cove Point, displaying day warnings only, and by the erection of one of the new steel towers at Baltimore. The voluntary storm-warning station at Drum Point was discontinued, but the one at Solomon's answers satisfactorily for both points.

The general plan of weekly and monthly publications has continued unchanged during the year. The weekly crop reports were issued weekly from April 9th to September 30th, and agricultural operations for the rest of the year were reviewed in the monthly reports.

Considerable progress has been made during the year in the preparation of material for Volume II of the Maryland State Weather Service Report. The volume will be devoted mostly to the discussion of the weather and climate of Baltimore and vicinity. Normal values have been computed for most of the elements of temperature, and some progress has been made in the reduction of rainfall data. The purchase, by the Maryland State Weather Service, of a Burrough's adding machine has made it possible to reduce the great mass of observations to normal values within a reasonable time. It is probable that the report upon the weather and climate of Baltimore will be ready for publication before the close of the year 1902.

