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STATE WEATHER SERVICE DIVISION
WEATHER BUREAU.
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U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU,

CO-OPERATING WITH THE

MARYLAND STATE WEATHER SERVICE

Established by an Act of the General Assembly of the State of Maryland, 1892,
and Maintained in Connection with



The Johns Hopkins University and the Maryland Agricultural College.
CENTRAL OFFICE, JOHNS HOPKINS UNIVERSITY, BALTIMORE, MD.

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JOHNS HOPKINS UNIVERSITY,
Director.

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U. S. WEATHER BUREAU,
Meteorologist in Charge.

VOL. IV, No. 1.

MONTHLY REPORT.

MAY, 1894.

Review of the Month—April.

WEATHER.

From the 1st to the 12th, inclusive, not a day passed but rain fell in some portion of Maryland, and on the 1st, 4th, 7th, 10th, and 11th, the showers were quite heavy and general. The heavier rains on the days given above were due to the passage of low area storms from west to east, and the days of heaviest showers corresponded closely with the transit of the centers of depression across the meridians intercepted by Maryland and Delaware. The first two storms crossed a long distance north of Maryland, and the showers, therefore, were light and not general. The accompanying temperatures were above the normal on account of the southerly winds that necessarily prevailed.

On the 7th a storm from the west passed across Maryland, and the diminished pressure over the State gave the cold north wind a chance to push its way into the superincumbent atmosphere and lower its temperature several degrees below the normal. The depression was not a marked one, however, and the showers were not generally heavy. The succeeding storm, from the southwest, was the most severe one of the month. It reached the Lakes and assumed the V-shape at the same time that a high area in its front pushed a wedge southward along the coast; there was formed, as a consequence, off the mouth of the Chesapeake, a secondary storm, which had the most of Maryland and Delaware in its west side quadrants. Cold northerly winds resulted on the 10th and 11th, with a temperature from 15°

to 17° below the normal, and a snow-storm, general over Maryland, Delaware, and the District of Columbia. In the northern part of Maryland the snow fell to a depth of 2 feet, and from drifting caused much interruption to travel.

We now come to a period of fair weather extending from the 13th to the 18th, inclusive, if we except very light showers at Wilmington on the 17th and at Oakland and Sunnyside on the 18th. Two high areas passed in this time with a very slight depression between them, but there was not enough strength in it to form a storm. The temperature averaged close to the normal.

From the 19th to the 22nd showers were frequent and general, due to a slow-moving low area which passed over the Lake region and down the St. Lawrence Valley. As would be expected, the temperature during this period was considerably above the normal.

The interval of fair, cooler weather, from the 23rd to the 26th, was plainly due to one extensive high area which came eastward over the northern half of the country. It traveled slowly, and upon reaching the Atlantic coast settled slowly southward, being central on the morning of the 27th east of the Carolinas. From the 27th to the 29th quite general showers occurred and the weather was warmer. Looking for the cause, we find on the weather maps of the 27th and 28th a "col," or neck of relatively low pressure, lying between the high area still on the south Atlantic coast and a like area central north of Lake Superior. On the 29th the northernmost high area reached the Atlantic, and the showers were succeeded by fair weather, which continued on the 30th.

CROPS.

Week ending April 2d, 1894.

In Western Maryland the damage to early fruit from the severe freezing weather is reported to be very great, peaches and apricots being badly frozen. Apples, however, withstood the cold weather without injury. The prospects of a good wheat crop are excellent; oats nearly all sown; large percentage of early potatoes planted; early gardening well under way; considerable ground has been plowed for corn.

In Northern-Central Maryland the peach crop is believed to have been greatly injured by the cold, freezing weather, but the extent of the damage is not yet known. Grass and grain are far advanced, the wheat looking better than ever before known. Spring plowing well under way; some potatoes planted and oats sown; farmers getting ready to plant corn; farm and garden work, generally, greatly advanced.

In Southern Maryland farm work and all vegetation, especially fruit and vegetables, were greatly advanced by the mild weather of the first two-thirds of the month. After this, until the month closed, the severe cold weather checked farm operations and seriously damaged fruit and early vegetables. Early-sown tobacco and clover, early planted potatoes, young cabbage and strawberries considerably damaged.

In Eastern Maryland crops and fruit were greatly advanced up to the 25th, when the severe cold weather checked the growth of crops and seriously damaged peaches, plums, early cherries and vegetables. Plowing well under way. About all potatoes and some corn planted. Wheat not far advanced for season.

Week ending April 9th, 1894.

Western Maryland.—It is the general opinion that peaches, pears and cherries have been seriously injured. Apples have been kept back by the cold weather and it is thought are uninjured. Wheat is looking well, but grass is backward. Oats that have been sown are reported as coming up poorly. Early planted potatoes have been badly frozen in the ground. Farmers are plowing for corn, but the ground is still very cold.

Northern-Central Maryland.—Vegetation has made but little growth during the past week, owing to the continued low temperature. Peach crop stated ruined in some sections, but more encouraging reports come from Frederick county. Apricots have suffered much damage. Apples probably unhurt. Potatoes are being planted in some places. Wheat is said to show in spots the effects of the recent "cold snap," but generally looks well, and the prospects for a good crop are very encouraging. Rye is prom-

ising. Ground being prepared for planting corn. Large amount of lime being used. Oats have been damaged to considerable extent by the past freezing weather; some farmers are thinking of resowing. Grass backward; some clover frozen.

Southern Maryland.—The past week, though warmer than the week preceding, has not been favorable to vegetation, and the freezing temperatures of Friday and Saturday nights have resulted in positive damage to fruit and vegetables. The condition of the peach crop is still considered to be very poor, and as to other fruits, no favorable reports have been received. Some strawberries have been planted. Tobacco plants killed in some places, but uninjured in others; new beds being made. Early potatoes reported planted. Land being plowed for corn. Oats and young clover were injured by the cold weather.

Eastern Maryland.—Reports of the condition of the peach crop are rather more favorable than those a week ago. That much damage has been done is undoubtedly the case, but the extent of it cannot yet be determined. Reports from Talbot and Kent counties speak favorably of the prospects, and a report from Wicomico county states that the injury is probably not so great as supposed. Unfavorable reports come from the remaining sections. Other fruits—pears, apples, cherries, etc.—are believed to have still better chances. Strawberries and blackberries suffered some damage, doubtless, but no definite reports have been received. A large acreage of tomatoes will be planted. Wheat, generally, is in excellent condition, though in some places it is said to show the effects of the freezing weather.

Week ending April 16th, 1894.

Western Maryland.—The fruit prospects were rendered still more unfavorable by the snows of Tuesday and Wednesday and by the heavy frost on Thursday morning; yet there are some hopes that the peaches and apples are not all killed. Grapes are reported as apparently uninjured. Wheat looks well, and oats are coming up. Much land is being plowed for corn. Some potatoes planted.

Northern-Central Maryland.—The heavy snow from the 10th to the 12th delayed farm operations and caused many limbs of fruit and evergreen trees to break; otherwise no material damage resulted, except, perhaps, a little to forward wheat. The general destruction of fruit seems to be assured. Wheat, generally, is in excellent condition, although it is thought that in some places the most forward may have been injured by the heavy weight of snow. Some fields are reported as turning yellow, but this is

not supposed to be indicative of damage to the crop. Oats are coming up thin; in some places will be resown. Early planted potatoes frozen in many cases. Grass not growing well; young clover frozen.

Southern Maryland.—All farming operations put back; ground too wet to plow in some localities. More land will be under cultivation than during past years, considerable new land having been cleared. Fruit uncertain. Strawberries in bloom; they have apparently been considerably injured by the cold. Pears also have been damaged by the severe weather. Tobacco beds not injured in the south along tidewater, but the plants look poor in some sections. The "fly" has made its appearance in Anne Arundel county. Winter wheat growing well, though some shows effect of past freezing weather. Oats slow showing; early sown considerably damaged. Grass poor.

Eastern Maryland and Delaware.—Farming operations delayed by storms and cold weather of past week. Crops in general look poor. Inland peaches mostly destroyed; in tidewater districts prospects good for a half crop or more. Pear and apple trees in bloom. Young garden truck must be replanted in many sections. Early potatoes coming up. Wheat shows effect of cold spell, but is improving. Rye and oats were damaged. In northern part plowing for corn will be resumed during the coming week; in southern portion planting well advanced. Clover was injured, but shows improvement.

Week ending April 23rd, 1894.

Western Maryland.—Wheat continues to look well; oats sowing in progress and nearly finished; corn planting not begun; potatoes being planted; grass getting good growth. Apple trees are blooming, and the present indications are for an average yield. Peaches and cherries are reported as generally killed; a report from Grantsville, Garrett county, states that a few cherries are in bloom. Strawberry prospects rather poor.

Northern-Central Maryland.—Farming operations active and crops, generally, growing rapidly. Wheat doing well everywhere, and rye promising. Oats rather backward in places; in others, improved and doing well. Corn land is being prepared and planting has begun in some localities. Some early-planted potatoes are coming up. Grass is well set, and prospects excellent for a good crop of hay. Pears, apples, and cherries apparently not injured by the recent frosts. Ground is being prepared for tomatoes.

Southern Maryland.—On the whole the week was a favorable one for work and crops. Plowing for tobacco in progress and approaching completion; plants reported safe in Prince

George's county, but damaged by "fly" in Calvert county. Corn land is being prepared for planting. Wheat, generally, is in an improved condition and promises fair. Rye growing rapidly; oats getting a good start; truck planting in progress; many sweet potato beds being prepared; early vegetables growing quite rapidly; clover improved. The prospects are quite good for fair yields of apples, pears, cherries, and small fruits.

Eastern Maryland.—A good week for farm work. Wheat has made good growth and an early harvest is anticipated. Oats coming up slowly; somewhat injured by cold weather. Corn planting commenced. Garden truck is beginning to grow; melon, tomato, and cucumber seed being put in ground. Pears are now growing finely. There will be an increased acreage of peas and tomatoes. Asparagus is being cut. Potatoes coming up; sweet potatoes being bedded. Grass improved. Reports as to peaches rather better than those received last week; a prospect of part crop of early varieties. Should no further damage result, fair crops of pears, cherries, apples and small fruits may be expected.

Week ending April 30th, 1894.

Western Maryland.—From present appearances apple orchards will bear an average crop. Strawberries promise a fair yield. Wheat is forward for the season, and grass is in good condition. Rye is heading and oats look fair. Early planted potatoes rotted in the ground, necessitating replanting. Onions and lettuce are ready for market. Farmers are busy preparing ground for corn planting, which has begun in some localities.

Northern-Central Maryland.—During the past week general farm work has suffered no interruption and all crops have made a decided improvement. As regards fruit, pears and cherries promise well, but peaches will be scarce. From present indications strawberries will be abundant. Many fields of potatoes will require replanting. The planting of corn is going on in most sections and will be finished, generally, during the ensuing week. Wheat continues to improve, and late-sown oats are growing nicely. Rye is heading and in good condition. Winter barley has been injured in some sections.

Southern Maryland.—The outlook for peaches has not brightened. Tobacco plants, in some localities, have been destroyed by the "fly," and it has been necessary to resow in such cases; but more favorable reports have been received from other sections. The planting of corn has commenced, and truckers are setting out tomato and cabbage plants. An increased acreage of potatoes will be planted in Prince George's

county. Wheat is looking fairly well, though blackened by recent frosts. Early sown oats are backward from the effects of the past cold weather, and grass does not show a complete recovery.

Eastern Maryland and Delaware.—The past week was a very favorable one for general farm work and also for the growth of crops. Of the various fruits, the prospects for apples, cherries and berries are undoubtedly the best; there will be a part of a crop of peaches. Tomato plants are looking well; a large acreage will be set for canning interests. Peas in blossom. Potatoes coming up. Corn planting well advanced; none yet up. Wheat continues to look well, and rye is in head. Oats and grass are improving; scarlet clover heading.

Temperature (degrees).—Monthly mean (for entire territory covered), 50.8, being .9 below the normal; highest monthly mean, 55.2, at Pocomoke City; lowest monthly mean, 44.2, at Sunnyside; highest temperature, 84, at Charlotte Hall, on the 28th and at Benedict on the 29th; lowest temperature, 9, at Sunnyside; mean monthly range, 54.2; greatest monthly local range, 69, at Sunnyside; least local monthly range, 48, at Woodstock College, Darlington and Solomon's; monthly mean maximum, 60.8; monthly mean minimum, 40.8.

The temperature of the Bay and its shores is still higher than adjacent sections. The cold area extending from New Market northeast and the cool strip intermediate between the Chesapeake and the Atlantic are worthy of notice.

Precipitation (in inches).—Average, 3.75, being .16 below the normal; greatest amount, 5.79, at Oakland; least amount, 1.59, at Cumberland (a).

The greatest fall of snow during the month in Maryland, 24 inches, is reported by the observers at Darlington and at Fallston. The next greatest fall, 17 inches, is at Bachman's Valley.

The map shows the rainfall to have been well distributed. The sections receiving most precipitation, however, were the northeast, central, and extreme western.

Wind.—Prevailing direction, northwest. Total movement in miles, Baltimore, 6351; Norfolk, Va., 7264; Washington, D. C., 6283.

Hail.—At Bachman's Valley, on the 20th; at Boettcherville, on the 10th, 19th; at Charlotte Hall, on the 11th; at Cumberland, on the 20th, 28th; at College Park, on the 20th; at Fenby, on the 10th; at Frederick, on the 20th; at Millsboro, Del., on the 10th; at Milford, Del., on the 10th; at New Market, on the 10th, 20th; at Oakland, on the 10th, 19th; at Wilmington, Del., on the 4th.

Sleet.—At Millsboro, Del., on the 10th, 12th; at Oakland, on the 10th; at Sunnyside, on the 10th.

Thunderstorms.—At Baltimore, on the 20th, 27th, 28th; at Benedict, on the 28th; at Cumberland, on the 20th, 27th, 28th; at Fallston, on the 20th; at Fenby, on the 20th, 27th, 28th; at Frederick, on the 28th; at Millsboro, Del., on the 21st, 27th, 28th, 29th; at Milford, Del., on the 27th, 28th; at Mt. St. Mary's, on the 5th, 7th, 20th, 28th; at New Market, on the 20th, 28th; at Newark, Del., on the 28th; at Oakland, on the 19th, 28th; at Solomon's, on the 20th, 21st, 27th, 28th; at Sunnyside, on the 19th, 20th, 28th; at Taneytown, on the 19th, 20th, 27th, 28th; at Upper Marlboro, on the 21st; at Woodstock College, on the 28th.

Frost, killing.—At Bachman's Valley, on the 7th, 16th, 26th; at Charlotte Hall, on the 9th; at Mardela Springs, on the 3rd, 7th, 9th; at Millsboro, Del., on the 3rd, 7th, 9th, 14th, 15th; at Milford, Del., on the 3rd, 7th, 8th, 11th, 15th, 17th; at Mt. St. Mary's, on the 3rd, 10th, 11th; at New Market, on the 9th; at Oakland, on the 3rd, 9th; at Pocomoke City, on the 9th; at Taneytown, on the 7th.

Polar Bands.—At Cumberland, on the 9th, 16th.

Halos.—Solar, at Pocomoke City, on the 3rd.

Corona.—Lunar, at Mardela Springs, on the 14th, 15th.

Notes by Observers.

Bachman's Valley.—10th, 11th, 12th, the most severe snow-storm of the season, the total amount of snow being 17 inches. The heavy drifts made the roads almost impassable. 20th, severe wind-storm accompanied by rain and hail. Houses were unroofed and fences blown down. The hail, which was the size of hazel-nuts, did great damage to young leaves and fruit buds. At the close of the month crops looked well.

Fallston.—3d, ice $\frac{3}{16}$ of an inch thick. 10th, 11th, heavy snow fell to the amount of 2 feet.

Mean temperature of April for 23 years, 49.8°; the highest monthly mean during 23 years, 55.7°, in 1871. Average rainfall for 23 years, 3.31 inches; greatest amount during 23 years, 8.11 inches, in 1874.

Mardela Springs.—3d, 9th, 14th, 15th, 16th, ice. 5th, pear, peach, and cherry trees in bloom. 16th to 28th, many birds returned. 16th, 26th, 27th, fog. 2nd, 17th, 20th, 21st, 27th, 28th, distant thunder. 27th, 28th, zig-zag lightning. Mean relative humidity for April, 72.4 per cent.

Millsboro, Del.—Best opening for crops since 1890. Cutworm has done much damage to gardens. Early planted gardens a failure.

The Great Snow-Storm of April 10th and 11th, 1894, in Northern Maryland.

Under date of May 1st, Prof. G. G. Curtiss, principal of Oakland School, writes as follows: "I enclose some scraps that will give you an idea of our great snow-storm, April 10th and 11th. The snow was heaped over my gauge by the wind, so I went into a thicket of timber, after the storm, where the wind had little or no effect, and took snow up in the gauge down to the leaves."

The clippings forwarded by Prof. Curtiss are reprinted below. The names of the newspapers from which they are taken are not known:

* * *

Glenville.—April 16. Mr. John McGuigan's barn was broken in by the heavy snow we had last week. The snow was drifted quite a good deal in the roads.

* * *

Boothby Hill.—April 18. We had a very hard snow-storm last week, the snow falling to the depth of from 15 to 17 inches on the level. It is now coming like April again.

* * *

Churchville.—April 16. By far the heaviest snow of the winter fell in this vicinity the first part of last week. Notwithstanding the fact that about half melted, it was about twelve inches deep on Thursday morning. Had the ground been cold and dry, and the snow remained as it fell, it would easily have measured two feet on a level.

* * *

Shawsville.—April 17. The storm which visited us last week was decidedly the most severe that we have known for many years. The wind was not as high as during the blizzard of 1888, but a much larger quantity of snow fell. The storm commenced with a heavy fall of rain about 7.30 A. M., and snow began to fall at 9 o'clock. You may judge of the fierceness of the storm when the saturated ground was covered by an average depth of from 20 to 24 inches. It is estimated by competent judges that had the ground been frozen and the snow lighter, the snow would have been at least three feet in depth. At this writing it has almost entirely disappeared.

The recent heavy snow, which fell last week, was too much for some of the buildings here (Bagley). A barn on Dr. M. Price's farm was wrecked by the roof giving way, and a shed for horses at the Quaker Church, 100 feet long, fell over with a crash. A barrack on the late Josie Harlan's estate was partly wrecked. Mr. James Shea also lost a shed, and the large barrack on Squire James K. Keech's farm was completely wrecked. He and Mr. Augustus Reckord had just left the building when it fell without a moment's warning.

* * *

Well, the biggest April snow on record is gone. We had over twenty inches on the ground at one time, but it is generally thought that about thirty inches in all fell. Many shade trees and sheds were broken with the great weight.

* * *

The recent heavy snow-storm has done much damage to fruit, peaches in particular, as they were pretty well in bloom. Apples were not quite so forward and not much injured.

* * *

Prof. Curtiss also sends a letter received by him from Edward Ferry, Esq., dealer in lumber, coal, and fertilizers, Bel Air, Md., which is given in full below:

Bel Air, Md., April 17, 1894.

Prof. G. G. Curtiss, Bagley, Md.

Dear Sir:—Am not able to give you any of the particulars of the weight of snow on scales; in fact, I knew nothing about it until I learned through the paper. My clerk says he took the weight and found it exactly 1520 lbs. Did not take measurement of depth. The scale platform measures 7 ft. and 10 in. by 15 ft. Never have had scale to weigh over 600 lbs. before to my knowledge, even with snow of as much or greater depth.

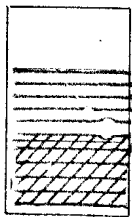
Yours truly,

(Signed) EDWARD FERRY.

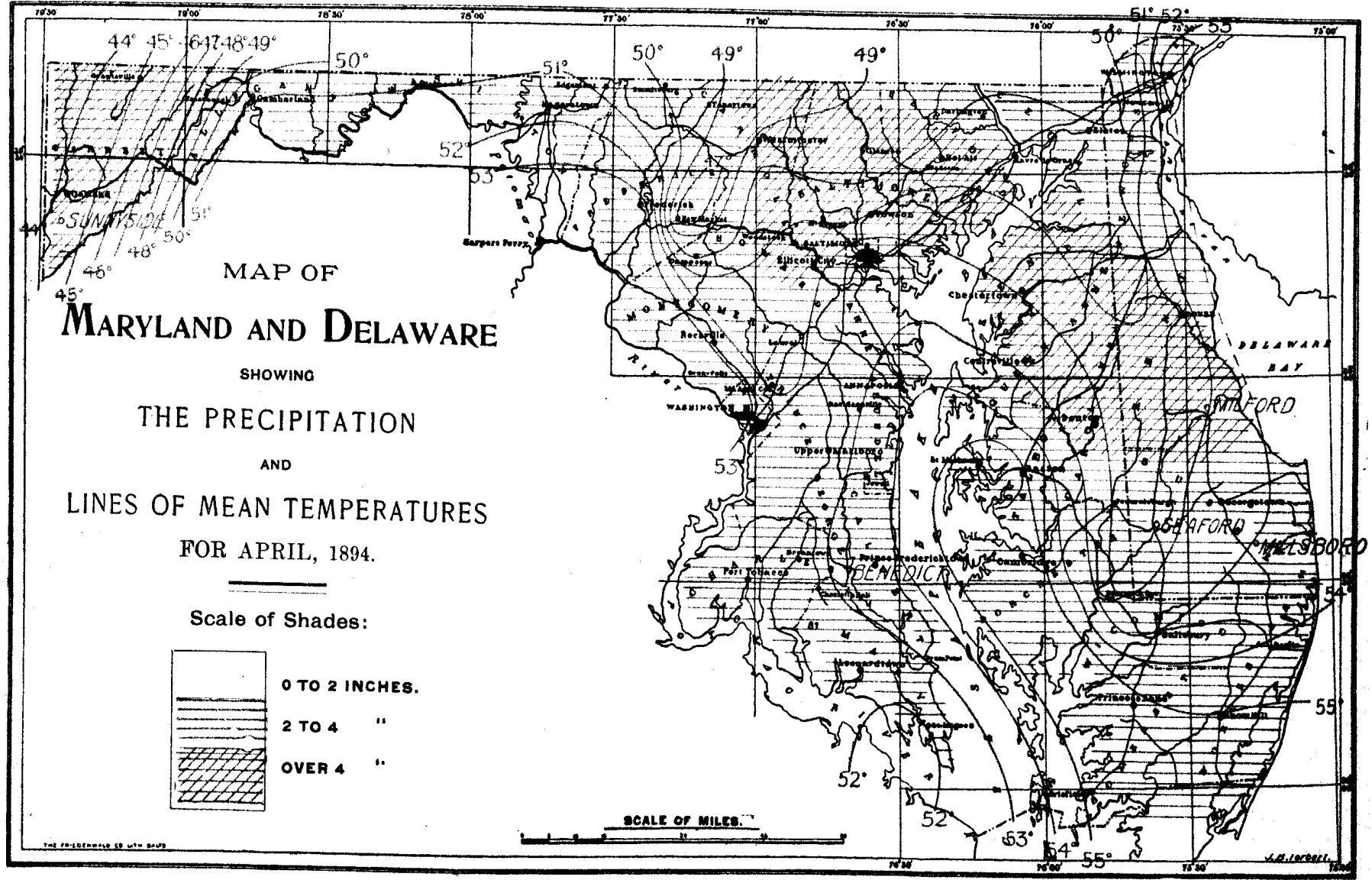
Prof. Curtiss makes the following note relative to the above letter: "I saw a statement in the paper (county) and wrote to Mr. Ferry to authenticate it. The within is his reply. He does not state how the scales were as to wind effect. At 1000 ounces to the cubic foot, this gives nearly $2\frac{1}{2}$ inches of water."

MAP OF
MARYLAND AND DELAWARE
 SHOWING
 THE PRECIPITATION
 AND
 LINES OF MEAN TEMPERATURES
 FOR APRIL, 1894.

Scale of Shades:



0 TO 2 INCHES.
 2 TO 4 "
 OVER 4 "



THE FRIEDENBERG CO. LITH. BALTO.

J. P. TORRELL

Meteorological and Weather Signal Display Stations of the Maryland State Weather Service.

Stations.	County.	Meteorological Observer.	Displayman.
Annapolis	Anne Arundel		W. M. Abbott.
Appleton	Cecil		W. C. Henderson.
Bachman's Valley	Carroll	J. M. Myers.	
Baltimore		G. N. Wilson. J. H. Donaldson. A. T. Brewer. <i>Ass't Editor of Monthly Report.</i> R. C. New. <i>Ass't Editor of Weekly Bulletin.</i>	
Benedict	Charles	Thomas Berry.	
Bel Air	Harford		N. N. Nock.
Boettcherville	Allegany	F. F. Brown.	
Bradshaw	Baltimore		B. F. Taylor.
Buckeystown	Frederick		A. W. Nicodemus.
Cambridge	Dorchester		Calvert Orem.
Charlotte Hall	St. Mary's	J. Francis Coad.	
Cherryfields	St. Mary's	J. Edwin Coad.	
Chestertown	Kent	Hon. M. deK. Smith.	
Cumberland	Allegany	Howard Shriver. E. T. Shriver.	
Darlington	Harford	A. F. Galbreath.	
Delaware City, Del.	New Castle		W. E. Reybold.
Denton	Caroline	F. C. Ramsdell.	
Dickerson	Montgomery		W. H. Dickerson.
Distributing Reservoir, D. C.		Col. G. H. Elliot.	
Dover, Del.	Kent	Jno. S. Jester	Philip Burnet.
Easton	Talbot	G. W. Minnick	G. W. Minnick.
Edgemont	Washington	Chas. Feldman.	
Fallston	Harford	G. G. Curtiss, A. M.	
Fenby	Carroll	Wm. Fenby.	
Frederick	Frederick	J. H. Apple.	W. T. Delaplaine.
Frederica, Del.	Kent		Miss E. V. Newnom. Miss L. T. Frazier.
Garey, P. O.	Howard		Walter Dorsey.
Glyndon	Baltimore		J. J. Dyer.
Grantsville	Garrett		T. H. Bittinger.
Great Falls	Montgomery	Col. G. H. Elliot.	
Hampstead	Carroll		H. H. Meals.
Hartly, Del.	Kent		Miss C. A. Forde.
Havre de Grace	Harford		W. S. McCombs.
Kenton, Del.	Kent		W. S. Arthurs.
Kirkwood, Del.	New Castle	J. S. Carnagy.	
Laurel, Del.	Sussex		E. D. C. Hegeman.
Lonaconing	Allegany		J. J. Robinson.
Mardela Springs	Wicomico	A. E. Acworth	L. A. Wilson.
McDonogh	Baltimore	H. Pender.	
Middletown	Frederick		G. C. Rhoderick, Jr.
Milford, Del.	Kent	J. Y. Fouik	J. Y. Fouik.
Millsboro, Del.	Sussex	Rev. L. W. Wells.	
Mt. St. Mary's	Frederick	J. A. Mitchell, A. M.	Jos. H. Martin.
Newark, Del.	New Castle	Wm. H. Bishop.	
New Market	Frederick	Miss Margaret D. Hopkins.	
Oakland	Garrett	J. Lee McComas, M. D.	J. L. McComas, M. D.
Odenton	Anne Arundel		E. B. Watts.
Pocomoke City	Worcester	R. M. Stevenson	R. M. Stevenson.
Receiving Reservoir, D. C.		Col. G. H. Elliot.	
Rising Sun	Cecil		E. A. Reynolds.
Rockville	Montgomery		Emmett Dove.
Salisbury	Wicomico		L. W. Gunby.
Seaford, Del.	Sussex	H. L. Wallace	H. L. Wallace.
Smyrna, Del.	Kent		A. D. Yocum.
Snow Hill	Worcester		Purnell & Vincent.
Solomon's	Calvert	W. H. Marsh, M. D.	
†Sparrow's Point	Baltimore		Md. Steel Co.
Sunnyside	Garrett	John G. Knauer.	
Sykesville	Carroll		J. S. Hyatt.
Upper Marlboro	Prince George's	J. B. Perrie.	
Washington, D. C.		S. W. Beall.	
West Friendship	Howard		Postmaster.
Westover	Somerset		E. D. Long.
Wilmington, Del.	New Castle	F. C. D. McKay	Wm. Lawton.
Woodsboro	Frederick		G. F. Smith.
Woodstock	Howard	T. J. A. Freeman, S. J.	
*Birdsnest, Va.	Northampton	C. R. Moore.	
*Cape Charles, Va.	Northampton	O. A. Browne.	
*Norfolk, Va.	Norfolk	A. B. Crane.	
*Warsaw, Va.	Richmond	C. H. Constable.	

*Stations of the Virginia State Weather Service. †Whistle signals only.

