

U. S. DEPARTMENT OF AGRICULTURE.

REPORT FOR MAY, 1900.

MARYLAND AND DELAWARE SECTION
OF THE
CLIMATE AND CROP SERVICE
OF THE
WEATHER BUREAU.

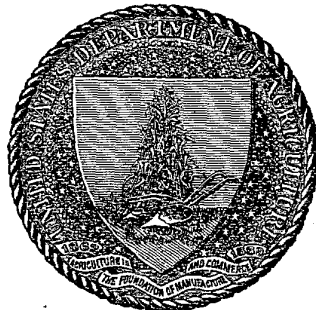
IN COOPERATION WITH THE
MARYLAND STATE WEATHER SERVICE.

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

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

BY

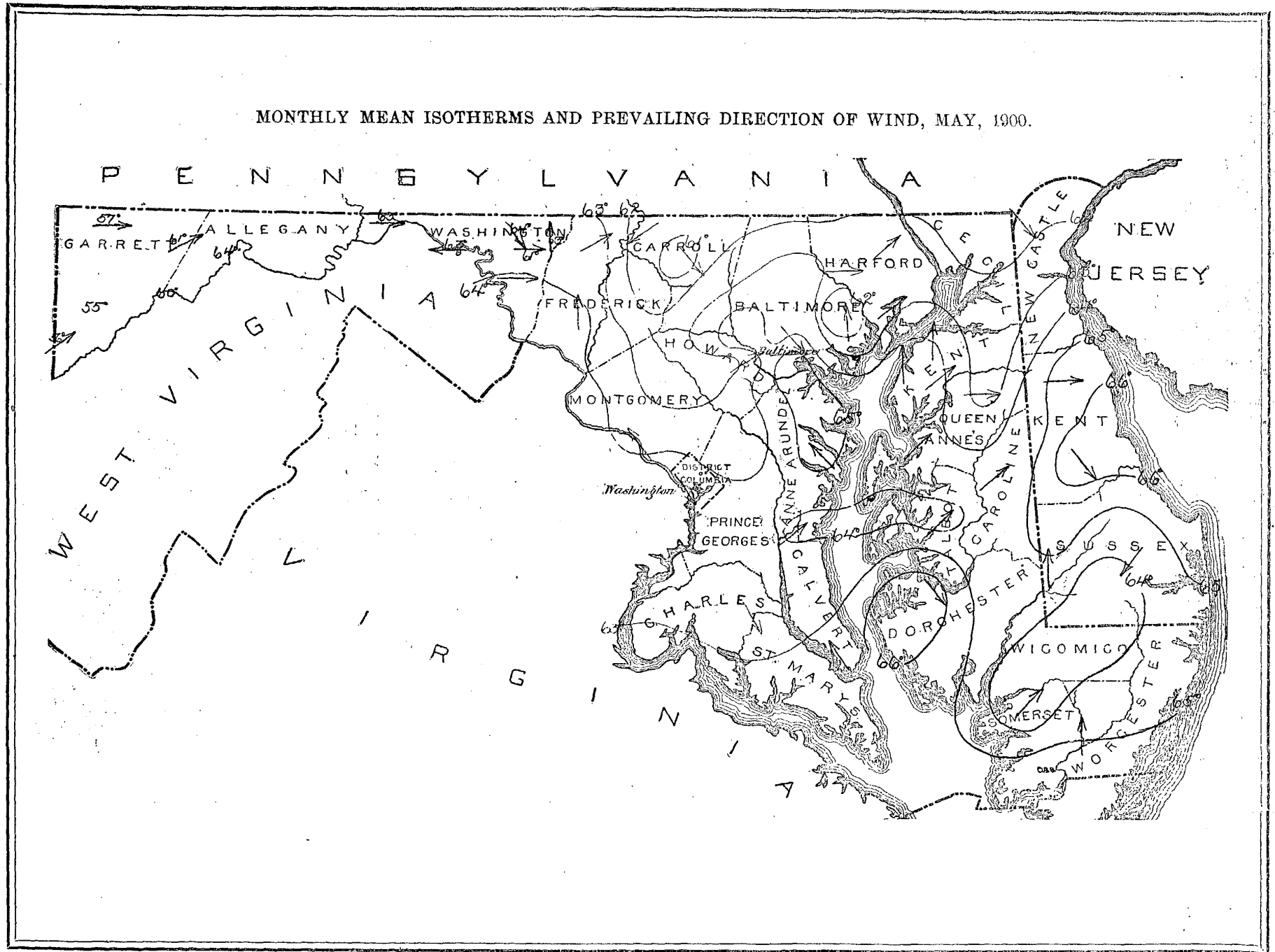
F. J. WALZ,
SECTION DIRECTOR.



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

1900.

MONTHLY MEAN ISOTHERMS AND PREVAILING DIRECTION OF WIND, MAY, 1900.



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

OF THE
WEATHER BUREAU.

CENTRAL OFFICE: WASHINGTON, D. C.

MARYLAND AND DELAWARE SECTION,

F. J. WALZ, Section Director.

Vol. V.

BALTIMORE, MD.

No. 5.

**A TYPICAL METEOROLOGICAL STATION
 IN JAPAN.**

Mr. Frederick Bennett Wright, until recently an assistant on duty at this station, is now on a foreign trip which will cover a period of fully two years. During that time he will complete the circuit of the globe, while his wanderings will carry him across many degrees of latitude, from the South Sea islands to the wilds of Siberia. Mr. Wright is a student of geology and is devoting his main attention to that science while abroad, but subjects of more popular interest have not escaped his observation, as those who have read his interesting letters can testify. Just before leaving Japan he favored this office with an account of that empire and its inhabitants. Industrious, ambitious, and progressive, the Japanese are striving for a first place among the nations of the world, neglecting no measure that seems calculated to aid in developing the resources of their country. Mr. Wright was particularly impressed with their meteorological service; regarding which he writes:

"In Maryland it is hard to think of Japan as being equipped with meteorological observatories which would do credit to any of our large American cities. In respect to agriculture and forestry Japan far surpasses us. All the hillsides, where it is possible, are terraced with great care, and the small patches thus made raise at least two and often three crops a year. First a grain, such as wheat or barley, then rice, and lastly vegetables of some kind. Hillsides that are too steep, or are composed of too poor soil for this, are set out with pine trees. There is no place except Holland where the land is in such a high state of cultivation. This has been the case for centuries, but the aid given the farmers by the weather bureau reports and forecasts is a blessing that has come with the recent Japanese awakening.

Besides the Central Office at Tokyo there are 70 substations which furnish data for the weather map and forecast issued every day at 2 p. m. This bulletin contains much the same facts as ours but has three maps showing the weather changes during the preceding 24 hours. At Mayebashi I visited the office, which is located just outside of the town, and was shown the apparatus and methods of work. In

some respects it is better equipped than those of similar importance in the United States, but not as well in others. Nearly all of the instruments are of German make. The observers here are worked rather hard, for eye observations of the air temperature and the wet bulb, the height of the barometer, the direction of the wind, etc., are taken every four hours during both night and day. A record is also kept of the amount of ozone in the air and the temperature of the soil at one, two, and three feet.

One of the most interesting parts of the office to me was the seismograph room. Here in Japan where earthquakes occur every few days or oftener the record of a seismograph is of great interest and importance, although shocks cannot be forecasted. This instrument is set on a solid masonry base built up from the ground so that the least movement will be transmitted. The slightest quiver of this base disturbs a cup of mercury, which makes an electrical connection that sets the large cylinder, carrying the record paper, revolving slowly, and also making three ink dots on the face of the clock; the first at the hour, the second at the minute, and third at the second. On the record sheet, which is lamp-black paper, rests two points so hung that they are practically undisturbed by any trembling of the earth and so are known as immovable points. One of these records the vertical and the other the lateral movements. In case of an earthquake the pens remain stationary, while the movements of the cylinder, which are the same as the ground at that place, makes a tracing indicative of the magnitude and directions of the earth movement."

* *

A STORM AT CUMBERLAND, MARYLAND.

(From notes by Mr. Howard Shriver, Voluntary Observer.)

The storm set in about 5.30 p. m., on May 8th, with a bank of clouds forming in the northwest over Will's Mountain. Soon there came a succession of violent blasts. The plank stable behind which I stood shook. A small one-horse wagon not far away was spun around like a top, until the turning locked it and saved it from being blown down the hill to the tannery. The lightning was forked; the thunder in heavy rolls. Looking up Lee Street I saw a whirlwind ten or twelve feet in diameter, composed of dust. This was followed by wind and rain from the northwest. On my way home I passed Ladew's garden, where the fence rail and a lot of palings were broken by a large piece of iron (a chimney-top as I afterwards learned). The whirlwind had risen along the east of the public school building, carried away the chimney-top, whirling it upwards until finally it was released and came down to wreck the fence. The iron was light, but the top was large and so descended with much force. At this time the gusts, forty to fifty miles, tore off roofs, broke branches and tree tops, carried away signs, etc. They fell afterward to light breezes, but again increased to a gale at about 6 p. m. This gale, in gusts, several of which were over sixty miles per hour, was as severe as any I can recall.

CLIMATE AND CROP CONDITIONS.

May temperatures averaged very nearly normal. There were two cold periods—from the 3d to the 6th and on the 10th, and one warm wave—from the 14th to 17th, but at other times the departures were not marked. The early part of the month was quite dry, but on the 19th heavy and general rains fell, measuring from two to over three inches in places. The precipitation that followed was irregular in its distribution, and for the most part light in amount, although moderately heavy showers fell in the western districts towards the close of the month.

Frosts were general during the first cold spell of the month. Ice half an inch thick was reported in Western Maryland on the 4th and thin ice formed as far south as Anne Arundel County on the following day. In the western counties the late fruit blossoms were hurt slightly at this time, and tender vegetation suffered to a greater degree, while throughout the entire Section a retardation of all growth was noted. Crops suffered greatly from the dry weather until relief was brought by the heavy rains of the 19th. The much-needed moisture was not received in time to make a good yield of either clover or timothy. Oats also failed to rally entirely from the damage sustained during the drought. Peas have suffered again this year from the ravages of the louse, and very poor returns are expected. At the close of the month wheat, rye, corn, tobacco, and minor crops were doing well.

* * *
CLIMATOLOGY OF THE MONTH.

ATMOSPHERIC PRESSURE.

Monthly mean at Washington, D. C., 29.98 inches; at Baltimore, 29.98 inches; average, 29.98 inches; highest, 30.34 inches, at Baltimore, on the 29th; lowest, 29.43 inches, at Baltimore, on the 19th.

TEMPERATURE.

The monthly mean (entire territory), 63.2°, is 0.2° above the normal.

The highest monthly mean was 66.9°, at Distributing Reservoir.

The lowest monthly mean was 55.4°, at Deer Park.

The highest temperature recorded during the month was 103°, at Wyoming, Del., on the 15th.

The lowest temperature recorded during the month was 20°, at Deer Park, on the 4th and 5th.

The greatest local monthly range was 72°, at Wyoming, Del.

The least local monthly range was 43°, at Cumberland.

The greatest daily range was 52°, at Hancock, on the 6th.

The least daily range was 2°, at Cumberland, on the 27th.

PRECIPITATION,
in inches and hundredths.

The monthly average (entire territory), 2.46, was 1.67 below the normal.

The greatest amount was 4.93, at Millsboro, Del.

The least amount was 1.00, at Baltimore.

The greatest amount in twenty-four hours was 3.15, at Washington, D. C., on the 19th.

The average number of rainy days, 6.

WIND.

The prevailing direction was from the southwest.

The total movement was 4,101 miles, at Baltimore, and 4,913 miles, at Washington, D. C.

The maximum wind velocity was 28 miles per hour from the northwest, at Washington, D. C., on the 3d.

MISCELLANEOUS PHENOMENA.

Thunderstorms.—Bachman's Valley, Baltimore, 3; Boettcherville, 7, 19, 31; Boonsboro, 19, 31; Cambridge, 3, 18, 24, 25, 30; Chestertown, 3, 31; Chewsville, 8; Coleman, 31; Denton, 3; Fallston, 3, 20, 31; Frederick (north of), 3, 8; Frostburg, 8, 18; Grantsville, 8, 19, 28, 31; Green Spring Furnace, 3, 8; Hagerstown, 3, 31; Harney, 8; Jewell, 3; Laurel, 3; Millsboro, 3, 19; Mount St. Marys, 3, 8; New Market, 3; Pocomoke City, 3, 9; Princess Anne, 3, 9, 19; Queenstown, 3, 9; Rock Hall *a* and *b*, Seaford, 3; Smithsburg *b*, 3, 8; Solomons, 1, 3, 18, 19, 28; Sunnyside, 8, 19, 28, 30, 31; Taneytown, 8; Van Bibber, 3; Washington, D. C., 3, 19, 31; Western Maryland College, 3; Westernport, 8; Woodstock, 3.

Ice.—Chase, Frostburg, 4; Fallston, Laurel, 10.

Hail.—Millsboro, Seaford, 3; Pocomoke City, 9; Cherry Run, 31.

Frost.—Bachman's Valley, 4; Boettcherville, 5; Charlotte Hall, Chase, 10; Chestertown, 4; Chewsville, 3, 4, 5, 9; Denton, Easton, 10; Deer Park, 3, 4, 5, 6, 10, 22; Frostburg, 5; Grantsville, 1, 2, 4, 5, 6, 10; Green Spring Furnace, 4, 5, 6, 10; Hagerstown, 4, 5, 6; Harney, 4, 10, 21; Laurel, Mount St. Marys, 10; Newark, 5, 10; New Market, 10; Princess Anne, 5, 11; Seaford, 10; Smithsburg *a*, Sunnyside, 4, 5, 6, 10; Takoma Park, 10; Taneytown, 4, 10, 21; Van Bibber, 9; Washington, D. C., Wyoming, 10.

Fog.—Cambridge, Easton, 17; Harney, 3, 16; Jewell, 17; Millsboro, 3; Mount St. Marys, 13; Princess Anne, 3, 15, 16, 17; Queenstown, 2, 16; Taneytown, 3.

Solar Halo.—Jewell, 23, 28; Rock Hall *b*, 28; Washington, D. C., 18.

Lunar Corona.—Millsboro, 7, 30.

Notes on Solar Eclipse of the 28th.—Baltimore, incomplete solar corona at 8.47 a. m.; Charlotte Hall, fall of temperature during eclipse; Chestertown, only partially visible on account of cloudy morning; Princess Anne, it was very dark, the chickens went to roost; a half circle on upper part of the sun that had all the colors of the rainbow.

ERRATA.

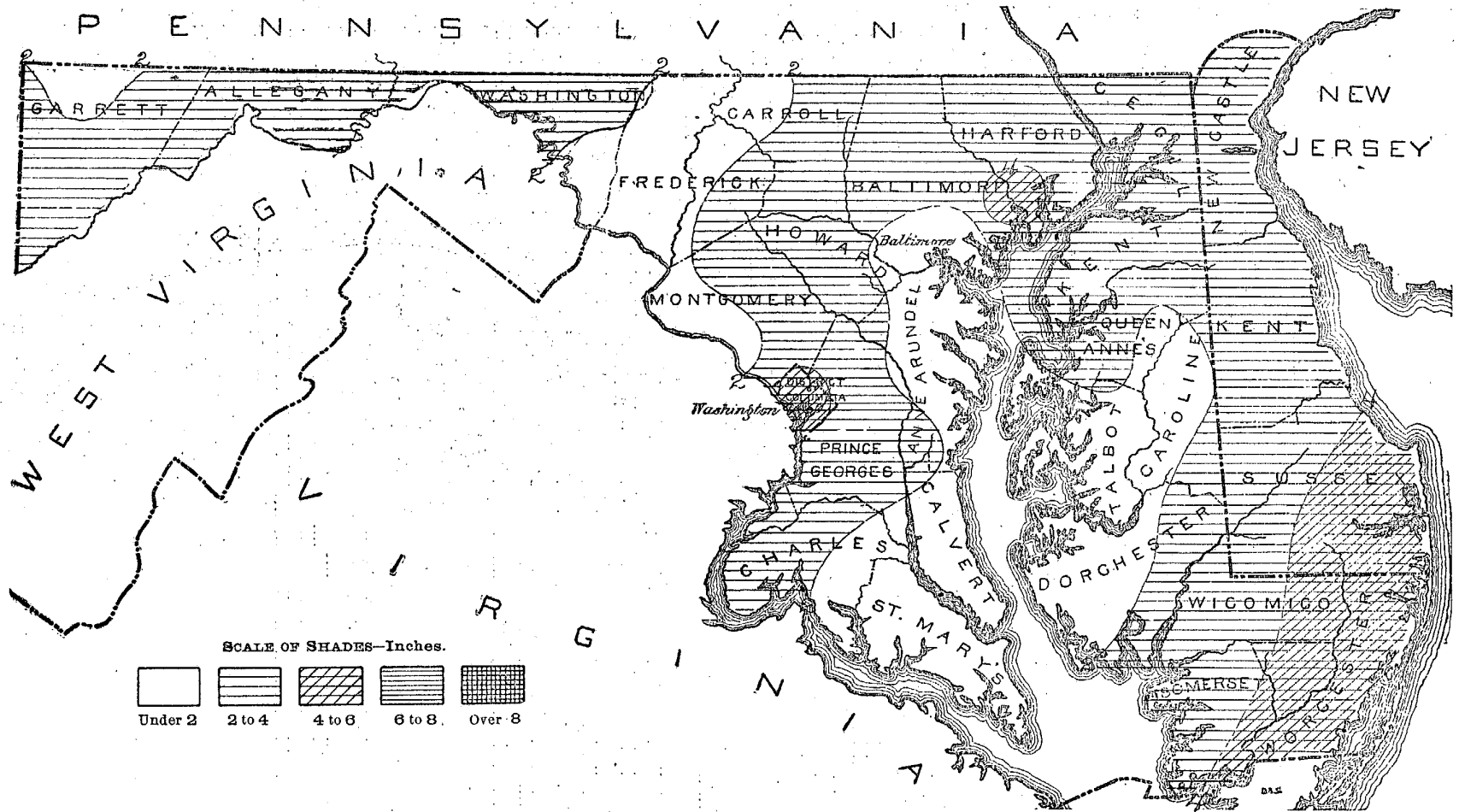
March, 1900, Report: Page 5.—Total snow fall at Annapolis, 5.5, should read 9.5; total snow fall at Green Spring Furnace, 29.0, should read 23.0; total precipitation at Hagerstown, 3.47, should read 4.67; total precipitation at Queenstown, 3.63, should read 3.73; mean temperature at Sunnyside, 35.6, should read 30.6; Page 6.—Mean minimum temperature at Sunnyside, 31.6, should read 21.6. Pages 5 and 8.—Total precipitation at Van Bibber, 2.04, should be omitted as record is incomplete; total precipitation at Milford, Del., 3.25, should read 4.52; and amount on 15th, blank, should read 1.27.

Climatological data for Maryland and Delaware, May, 1900.

Table with columns: Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Total snowfall, Number rainy days, Number clear days, Number partly cloudy days, Number cloudy days), Sky, Prevailing direction of wind, Observers.

NOTE.—All records are used in determining State or district means, but State and district departures are determined by comparison of current data of only such stations as have normals. Letters of the alphabet indicate the number of days missing. † Mean of 7 a. m. + 2 p. m. + 2. † Incomplete record.

TOTAL PRECIPITATION, MAY, 1900.



SCALE OF SHADES—Inches.

