

*March, 1909.*

March 1. Minimum  $-2.2^{\circ}\text{C}$ ., maximum  $1.5^{\circ}\text{C}$ .. During the night snow fell abundantly, and this continued during part of the morning, when a layer of firm crackling snow covered the ground to a depth of about  $2\frac{5}{8}$  inches. The snow was very compact and adherent undergoing little diminution of volume under pressure and reducing to a hard, solid mass. Special care was taken in cutting the pieces.

	1st Piece.	2d Piece.	3d Piece.
Volume.....	2,644.5 cm <sup>3</sup> .	2,809 cm <sup>3</sup> .	2,798 cm <sup>3</sup> .
Weight.....	168.8 gm.	172.8 gm.	164.4 gm.
Specific gravity.	0.0638	0.0616	0.0587

Specific gravity, average, 0.0614, say 0.061, with a maximum error of  $\frac{4}{1}$  per cent.

March 2-3. After a very cold night (minimum  $-6.1^{\circ}\text{C}$ .) it thawed slightly (maximum  $2.8^{\circ}\text{C}$ .) and the wind became southerly, but at night more snow fell, and on the morning of March 3 (minimum  $-1.3^{\circ}\text{C}$ .) everything was again covered with a layer,  $2\frac{5}{8}$  inches thick, of snow formed of small grains closely packed, adhering firmly together under pressure with a fair reduction in volume.

The ordinary method of securing a block of snow from the roof failed owing to the fact that the snow adhered to the tools so that small parts of the block always remained on the tools.

A tin box was therefore used, being laid squarely on the flat roof, bottom uppermost, the surrounding snow being then cleared and the imprisoned snow collected.

	Volume.	Weight.	Specific gravity.
1st Piece.....	1,618 cm <sup>3</sup> .	106.65 gm.	0.0659
2d Piece.....	1,618 cm <sup>3</sup> .	132.70 gm.	0.0819
3d Piece.....	1,618 cm <sup>3</sup> .	109.30 gm.	0.0675
4th Piece.....	1,618 cm <sup>3</sup> .	128.55 gm.	0.0795
Mean.....			0.0737

Specific gravity 0.074, with a maximum error of 11 per cent. This method does not seem as accurate as the method of cutting rectangular blocks.

*Remark.* The least specific gravity found was 0.013 for very light fluffy spicules of ice. The greatest specific gravity found (excluding the cases where the ice had begun melting) was 0.169, for closely packed round grains about 1 millimeter in diameter.

**WEATHER BUREAU MEN AS EDUCATORS.**

S. S. Bassler, Local Forecaster, Cincinnati, Ohio, read a paper on the Weather Bureau and its work, on March 16 before the Hyde Park Business Men's Club.

M. E. Blystone, Local Forecaster, Providence, R. I., lectured on the Weather Bureau and its work on March 9 and 30 before the Men's Club of two local churches.

George M. Chappel, Section Director, Des Moines, Iowa, reports that on March 25 he gave a lecture on the work and usefulness of the Weather Bureau, before students of the Iowa State College, Ames, Iowa; on March 24 students from the High School at Valley Junction, Iowa, visited the Local Office at Des Moines.

C. H. Eshleman, Observer, Grand Haven, Mich., reports that students from the Ottawa County Normal School visited the Grand Haven office on March 18 and 19, when he gave an hour's instruction on the development and movements of storms, and on the work of the Weather Bureau.

W. D. Fuller, Observer, Los Angeles, Cal., reports that the local office was visited on March 8 by a class from the State Normal School; and on the 10th by a class from the Yale School for boys.

R. T. Lindley, Observer, Asheville, N. C., reports an increasing interest, on the part of the local public, in the work of the Weather Bureau. He also reports that he has been asked to give daily instructions at the Biltmore Forestry School, Dr. C. A. Schenck, director. Recently the members of this school

visited the Asheville office; as did also the class in physical geography from a local private school.

A. G. McAdie, Professor and District Forecaster, San Francisco, Cal., reports that on March 31 he delivered a lecture at Mount Tamalpais before 200 members of the Public School Teachers' Institute of Marin County.

Eric R. Miller, Local Forecaster, Madison, Wis., reports that on March 12 he addressed the Engineering Society and Club of the University of Wisconsin, on "The relation of the U. S. Weather Bureau to the engineer." On the 17th he addressed the class in hydrology, speaking on the scope of meteorology and climatology.

A. H. Thiessen, Section Director, Raleigh, N. C., reports that on March 8 his office was visited by a class in physics from the local Baptist University (for women). He also reports that the authorities of the State Agricultural and Mechanical College have granted him \$25 for the purchase of lantern slides needed in his course to seniors in agriculture and others.

W. W. Thomas, Assistant Observer, Lewiston, Idaho, gave an informal talk on the work of the Weather Bureau, to students of the Lewiston State Normal School on March 24. After the talk his audience visited the local office where the workings of the service were explained and illustrated.—*C. A., jr.*

**CHANGES IN THE MONTHLY WEATHER REVIEW.**

The following are the latest orders concerning the changes in the MONTHLY WEATHER REVIEW.

U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU,  
Washington, D. C., April 12, 1909.

1. With the view to better meeting the requirements of the public services under control of the United States Weather Bureau and the associated bureaus named in Instructions No. 76, 1908, the system of compiling and publishing meteorological data by the Weather Bureau is hereby modified so that, beginning with July 1, 1909, such data will be grouped according to natural topographic districts and published in a consolidated and unified form.

2. For this purpose the United States has been divided into twelve climatological districts conforming to its twelve principal drainage areas, outlined on the accompanying map (Chart IX). This scheme of division has been adopted as affording the best system of territorial units for the compilation and discussion of climatological data and has been agreed to by the associated bureaus. For these reasons the districts adopted will be adhered to as far as practicable in matters of administration, in the publication of correlated observations, and in the distribution of meteorological data, especially as affecting agriculture, transportation, irrigation, forestry, and engineering. In these lines of work each large district will be under the supervision of a selected division director, but in the supervision of substations and in the collection of observations section directors will continue their present duties within their respective States.

3. The publication of the monthly section reports of the climatological service, except those for Iowa, Porto Rico, and Hawaii, will be discontinued with the issue for June, 1909.

4. Beginning with the issue for July, 1909, the Monthly Weather Review will be devoted exclusively to the publication and discussion of climatological, river, and forecast data. Special articles of a scientific nature, but not strictly climatological, will be published in the Bulletin of the Mount Weather Observatory or in separate form. The editing of the Review will be under the general supervision of the Chief of the Climatological Division, in collaboration with the twelve directors in charge of the climatological districts, who will be designated division editors. The Review will contain twelve sections de-

voted to the climatology of the United States for the month, and in addition thereto such other matter from the Forecast Division, the River and Flood Service, and the associated bureaus as the Chief of Bureau may direct. Division editors and section directors will be expected to incorporate in their monthly reports notes regarding matters of importance pertaining to irrigation, forestry, engineering, agriculture, transportation, and related subjects. A plan of cooperation between officials of the associated bureaus and the Weather Bureau is contemplated whereby such information will be collected for the Review.

5. Each section director will prepare monthly the following data:

- (a) The matter appearing on the page of the monthly section reports as now published headed,  
Climatological data for.....
- (b) That appearing on the page headed,  
Daily precipitation for.....
- (c) The daily maximum and minimum temperatures for not more than ten selected stations in his State, the number depending upon the relation the State bears to the climatological district, or districts, to which it belongs.
- (d) A brief general summary giving the most important facts concerning the weather for the month in the State.

6. The data for that portion of a State lying within any one of the twelve climatological districts will be forwarded to the division editor for that district, together with a copy of the State summary for the use of the editor in preparing a general summary for the district. It will be the duty of the division editors to prepare the data for their districts in form for publication and transmit them to the Climatological Division of the Central Office to be finally revised and printed. From the summaries and notes sent to them by the various section directors the division editors will be expected to prepare papers of scientific value and of practical interest to the public.

7. The correspondence necessary in the carrying out of the foregoing instructions is hereby authorized.

8. Hereafter the National Weather Bulletin will be issued monthly instead of weekly. The publication of the bulletins heretofore issued weekly at the section centers during the crop growing seasons, except for Iowa, Hawaii, and Porto Rico, will not be resumed.

Existing instructions that conflict with the foregoing are hereby revoked.

(Signed)

WILLIS L. MOORE,  
Chief U. S. Weather Bureau.

#### RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. FITZGUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —

*American society civil engineers. Proceedings. New York. v. 35. March, 1909.*

Grunsky, C. E. The sewer system of San Francisco, and a solution of the storm-water flow problem. p. 170-260.

*Electrical world. New York. v. 53. 1909.*

Lightning arresters for alternating current work. p. 698-699. (Mar. 18.)

Poppe, T. W. Storm and lightning protection to line wires. p. 797-798. (Apr. 1.)

15—3

*Geographical journal. London. v. 35. March, 1909.*

Bowman, Isaiah. Man and climatic change in South America. p. 267-278.

Oldham, R. D. Recent earthquakes. p. 294-297.

Williams, George Bransby. The geographical distribution of the mean annual rainfall of Wales and Monmouthshire. p. 297-310.

*Imperial earthquake investigation committee. Bulletin. Tokyo. v. 2. no. 3.*

Omori, F. Note on the long-period variations of the atmospheric pressure. p. 215-222.

Omori, F. Experiments on the vibration of brick columns. p. 223-228.

*Nature. London. v. 80. 1909.*

Eve, A. S. Ionisation in the atmosphere. p. 36-37. (Mar. 11.) [Experiments showing that the "Ebert" apparatus and others of like type are misleading in indicating a large excess of positive over negative electricity in the atmosphere.]

Ashworth, J. R. Is there a vertical magnetic force in a cyclone? p. 40. (Mar. 11.)

Gold, E. The isothermal layer of the atmosphere. p. 68. (Mar. 18.)

*Physical review. Lancaster. v. 28. March, 1909.*

Harvey, Frederic A. Atmospheric radioactivity in California and Colorado and the range of the  $\alpha$ -particles from radium B. p. 188-216.

*Review of reviews. New York. v. 39. April, 1909.*

Poster, Paul P. Plotting the upper air. p. 453-458. [Illustrated.]

*Royal astronomical society. Journal. Toronto. v. 3. Jan.-Feb., 1909.*

Young, J. Three exceptional earthquakes recorded at Toronto, Ont., and Victoria, B. C. p. 71-72.

*Royal meteorological society. Quarterly journal. London. v. 35. Jan., 1909.*

Harries, H. German meteorological society—Twenty-fifth anniversary, 1908. p. 1-6.

Makower, W., White, M., Marsden, E. Investigation of the electrical state of the upper atmosphere, made at the Howard estate observatory, Glossop. p. 7-12.

Ley, C. H. Balloon observations at Birdhill, Co. Limerick, during July and August, 1908. p. 15-29.

Oldham, R. D. Earthquake weather. p. 30. [Extract from Nature.]

Bruce, Eric Stuart. Some forms of scientific kites. p. 31-35.

Cave, C. J. P. The registering balloon ascents in the British Isles, July 27-August 1, 1908. p. 37-42.

Cave, C. J. P. Balloon observations at Ditcham Park near Petersfield, July 27-August 2, 1908. p. 43-50.

Assmann, Richard. The German aerological expedition for the exploration of the upper air in tropical East Africa, July to December, 1908. p. 51-54.

— The snowfall of December 29, 1908. p. 54.

*Royal society. Proceedings. London. ser. A. v. 82. 1909.*

Gold, E. The isothermal layer of the atmosphere and atmospheric radiation. p. 43-70.

*Scientific American supplement. New York. v. 47. March 27, 1909.*

Solar electric phenomena. Their relation to terrestrial magnetic perturbations. p. 207.

*Scottish geographical magazine. Edinburgh. v. 25. March, 1909.*

Geikle, James. Calabrian earthquakes. p. 113-126.

— The Argentine's Antarctic meteorological station. p. 151.

*Symons's meteorological magazine. London. v. 44. March, 1909.*

Devereux, H. B. The cyclone and floods of January, 1907, in New Zealand. p. 36-37.

*Terrestrial magnetism and atmospheric electricity. Baltimore. v. 14. Mar., 1909.*

Moidrey, J. de. L'Observatoire magnétique de Zi-ka-wel. p. 1-2. [Illustrated.]

Eve, A. S. Some problems in radioactivity. p. 25-36.

*Archives des sciences physiques et naturelles. Genève. Tome 27. 15 fév. 1909.*

Dufour, Henri. Recherches sur la réflexion de la chaleur solaire à la surface du lac Léman. p. 206-208.

*Ciel et terre. Bruzelles. 29 année. 1909.*

Boutquin, A. L'Asie centrale. p. 615-625. (Feb. 16.)

*Ciel et terre. Bruzelles. 30 année. 1909.*

Boutquin, A. L'Asie centrale. p. 1-7; 41-48. (Mar. 1, 16.)

V., J. Études sur les nuages. p. 33-40. (16 mars.) [Review of paper by Quervain.]

*France. Académie des sciences. Comptes rendus. Paris. Tome 148. 1 mars, 1909.*

Arctowski, Henryk. Sur les variations de la répartition de la pression atmosphérique à la surface du globe. p. 589-591.

Teisserenc de Bort, L[éon]. Lois de distribution de la température avec la hauteur aux diverses latitudes, et suivant les régimes météorologiques différents. p. 591-594.

*Revue néphologique. Mons. Tome 4. 1909.*

Deschevrens, Marc. La température dans l'air, d'après 300 ballons. p. 290-291, 293, 295. (janvier.)

Deschevrens, Marc. Remarques à propos des explications données des températures de la haute atmosphère. p. 297, 299, 301. (février.)