

publications appeared as the second volume of the Report of the Chief of Weather Bureau, for the years, 1899-1900 and 1900-1901, respectively. His last important piece of work while with the Weather Bureau was an investigation of the evaporation of Salton Sea, a body of water that filled a depression in southeastern California by overflow from the Colorado River.

In 1904 Professor Bigelow advocated a very elaborate project for a scientific organization in the Weather Bureau for research and investigation into atmospheric, electrical, and magnetic phenomena and their correlation with solar characteristics. This was partly carried into effect in the institution known as Mount Weather, but his connection with the bureau was severed without his ambitions in this connection being attained. The present writer was closely associated with Professor Bigelow during the latter's service in the bureau.

Personally, he was reserved and was not what is commonly called a "good mixer."

Owing to the highly mathematical and often obscure character of his papers the leading officials of the Weather Bureau found it difficult to follow the force of his arguments or concur in the integrity of his conclusions. This led to a sort of isolation of the author, which fact Bigelow no doubt felt rather keenly at times. Indeed, discouragement at the outlook probably was an important factor in the termination of his connection with the bureau.

As his investigations into the general circulation of the atmosphere progressed he found himself departing more and more widely from the views held by Ferrel and other early writers. Before he left the Weather Bureau in 1910, the idea of entirely revamping meteorology had taken possession of him, at first as a mild sort of obsession, which later became the impelling object of his existence. With the infirmities of age bearing upon him and not meeting with the responses that he thought were due his labors, it is not strange that his occasional letters to his old associates were tinged with more or less bitterness against those who withheld their approval of his radical views and system.

He published in New York in 1915 a treatise on Circulation and Radiation in the atmospheres of the earth and of the air. While this publication apparently presented his final views he followed it by supplements, of which 5 were issued, the final supplement, No. 5 of the series, bears the following suggestive title: "The New Must Replace the Old, Delenda est Carthago, Atmospheric Physics as Applied to a Reformed Meteorology."

One can not but admire the indomitable spirit of the man, doubtless inherited from his militant New England ancestors. Like the martyrs of old he went down with his colors flying. Broken by the infirmities of age, and in a foreign land his last communication to the Weather Bureau, couched in the same spirit as the earlier ones, was dated Vienna, February 21. Ten days later he passed away. His remains, together with those of his wife, were brought to this country and interred at Concord, Mass., his birthplace, on April 12, 1924.—*A. J. Henry.*

#### BORIS WEINBERG APPOINTED DIRECTOR

Announcement has recently been received of the appointment on January 30, 1924, of Prof. Boris Weinberg as the new director of the Central Physical Observatory at Leningrad (formerly Petrograd).

#### WEATHER BUREAU STAFF MEETINGS<sup>1</sup>

Following is a continuation of the program of the Weather Bureau staff meetings:

MARCH 5, 1924

C. F. Marvin: The Sun Spot period in terrestrial temperatures.

MARCH 19, 1924

C. P. Olivier: Professor of astronomy in the Leander McCormick Observatory, University of Virginia (by invitation): Meteors.

APRIL 2, 1924

E. H. Bowie: Diagnosing synoptic weather charts.

APRIL 16, 1924

A. J. Henry: Seasonal forecasting in India (based on the work of Dr. Gilbert T. Walker).

MAY 7, 1924

S. P. Fergusson: An improved anemometer for general use.  
P. C. Day: Difficulties in reducing wind velocities to a uniform standard.

MAY 22, 1924

E. H. Bowie: The problem of the daily weather map. A suggested solution.

With this meeting the series closes until autumn of 1924.—*A. J. H.*

<sup>1</sup> Cf. this REVIEW, 52: 35-36.

#### BIBLIOGRAPHY

C. FITZHUGH TALMAN, Meteorologist in Charge of Library

##### RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies.

##### Anglada, Josep.

Sondatges de l'atmosfera lliure a Barcelona, amb globus pilots, des del 1. er de Juliol al 31 de Desembre de 1923. Barcelona. 1924. 32 p. 21½ cm. (Servei met. de Catalunya. Notes d'estudi. N.º 28.)

##### Braak, C.

Het klimaat van Nederlandsch-Indie. v. 1. pt. 4. Batavia. 1923. v. p. plates (part fold.) 27½ cm. [K. Mag. en met. obs. Batavia. Verh. 8.] [With English summaries.]

##### Burns, George P.

Studies in tolerance of New England forest trees. no. 4. Minimum light requirement referred to a definite standard. Burlington. 1923. 32 p. figs. plates. 23 cm. (Vt. agric. exp. sta., July, 1923. Bulletin 235.)

##### Chu, Co-Ching.

Climate of Nanking. [18 p.] 25½ cm. [Title and text in Chinese.]

##### Eredia, Filippo.

Contributo della Sicilia agli studi geofisici. Castello. 1923. 20 p. 26½ cm. (Estr.: Atti Soc. ital. per il prog. sci. 12 riunione. Catania, Apr., 1923.)

Le divisioni dell'anno a seconda dei fenomeni meteorologici. 6 p. 27½ cm. [Estr.: Boll. bimen. Soc. met. ital., N. 1-3, Gen.-Marzo 1924.]

**Febrer, Joaquim.**

Observacions pluviomètriques de la Xarxa Catalana, corresponents als anys 1911, 1912, 1913, 1918, 1919 i 1920. Barcelona. 1924. 56 p. maps. 21½ cm. (Servei met. de Catalunya. Notes d'estudi. N.º 27.)

**Follansbee, Robert.**

Variation in annual run-off in the Rocky Mountain region. Washington. 1923. 14 p. figs. plates (fold.) 23 cm. (U. S. Geol. survey. Water-supply paper 520-A.)

**France. Office national météorologique.**

Radiogrammes météorologiques émis par les postes T. S. F. régionaux français. Correctif No 20 de la notice No 11,637 du 19 octobre 1922. En vigueur au 10 mars 1924. [Paris.] 1924. 24 p. 31 cm. [Manifolded.]

**Haushofer, Karl.**

Die Einheit der Monsunländer. p. 20-27. 24 cm. [Exc.: Zeits. für Geopolitik. Jahrg. 1, Jan., 1924.]

**Hawkins, Edgar.**

Medical climatology of England and Wales. London. 1923. xiv, 302 p. plates. 22 cm.

**Huttenlocher, Friedrich.**

Sonnen- und Schattenlage. Ihr Klima und ihr Einfluss in den Alpen sowie im Schwaben- und Frankenland. Oehring. 1923. 61 p. figs. 22½ cm. (Erdgeschichtliche und landeskundliche Abhandlungen aus Schwaben u. Franken, hrsg. vom Geol. und vom Geogr. Inst. der Univ. Tübingen.)

**Jamaica, [Meteorological service.]**

Meteorological results of barometric pressure, temperature &c., giving tables of averages for 33 years. Kingston. 1923. 21 p. 33½ cm.

**Kähler, K.**

Messmethoden der atmosphärischen Elektrizität. p. 451-482. illus. 25½ cm. [In Abderhalden, Emil, ed., Handbuch der biologischen Arbeitsmethoden. Abt. 2, Physikalische Methoden, Heft 3.]

Messmethoden der Sonnen- und Himmelsstrahlung. p. 379-414. illus. 25½ cm. [In Abderhalden, Emil, ed., Handbuch der biologischen Arbeitsmethoden. Abt. 2, Physikalische Methoden, Heft 3.]

**Kallio, N. V.**

Über die Wolkenhöhen bei der Drachenswarte Iimala. Helsinki. 1922. 7 p. 24½ cm. (Mitt. der Meteorologischen Zentralanstalt des finnischen Staates. N:o 10.)

**Keränen, J.**

Über den Bodenfrost in Finnland. Helsinki. 1923. 57 p. 24½ cm. (Mitt. met. Zentralanstalt des finnischen Staates. no. 12.)

**Kidson, E.**

Cloud-heights from Melbourne observatory photographs. Wellington. 1923. p. 153-192. figs. 22 cm. (Exc.: Report Australasian assoc. adv. sci. v. 16, 1923.)

**Kimball, Herbert H.**

Determination of daylight intensity at a window opening. 18 p. figs. 23 cm. [Trans. Illum. engin. soc., v. 19, no. 3, March 1924.] [Preprint.]

**Köppen, W.**

Die Klimate der Erde. Grundriss der Klimakunde. Berlin. 1923. x, 369 p. illus. plates (part fold.) 20½ cm.

**Lindholm, F.**

Klimat och väderleksförhållanden. Stockholm. 1923. p. 87-107. illus. figs. 23½ cm. (K. Vattenfalls-styrelsens broschyr ser. B, N:r 1: flygleden Porjus-Suorva.)

**McConnell, W. J., and others.**

Air motion. High temperatures and various humidities. Reactions on human beings. p. 199-224. illus. chart. 23½ cm. [Exc.: Journ. Amer. soc. heat. & vent. engin v. 30, March, 1924.]

**Mariotte, Edme.**

Discours de la nature de l'air. De la végétation des plantes nouvelle découverte touchant la vue. Paris. 1923. xiii, 118 p. 19 cm.

**Miari-Fulcis, Francesco.**

Riduzione a comune misura dei massimi e minimi barometrici annuali osservati a Padova dal 1725 al 1831. [Venezia. 1882.] 19 p. 22½ cm. (Estr.: Atti R. ist. veneto di sci., lett. ed arti. v. 8, ser. 5.)

**Mollá, Juan García.**

Los sistemas de nubes. Notable avance en la meteorología. p. 80-82. illus. plates. 29 cm. [Exc.: Iberica. Año 11, 2-9 Feb., 1924.]

**New York (state). Conservation commission.**

Annual report. 13th. 1923. Albany. 1924. 254 p. illus. front. map (fold.). 23 cm. [Describes experiments with balloons to study spread of gypsy moth by the wind, p. 162-169.]

**Nunn, Roscoe.**

Meteorology and some Tennessee meteorologists. Nashville. 1924. 1 sheet. 60 cm. [Exc.: Nashville banner. v. 48, March 23, 1924.]

**Rizzo, G. B.**

Il clima di Torino. p. 261-320. 27½ cm. [Torino. R. Accad. di Torino. Memorie. Ser. 2, T. 43. 1893.] [Photostated.]

Sulla relazione fra le macchie solari e la temperatura dell'aria a Torino. p. 83-98. 24 cm. [Annali della R. Accad. d'agric. di Torino. 40-41. 1897-98. Torino. 1898-99.] [Photostated.]

**Smith, C. Alphonso.**

Matthew Fontaine Maury. 10 p. 23 cm. (Repr.: Alumni bulletin, Univ. of Va., Jan., 1924.)

**Špaček, J.**

Poměry srážkově v Čechách. [Conditions of precipitation in Bohemia.] pt. 1. Praz. 1922. 14 p. fig. 31 cm. [Author, title and text in Bohemian.] (Reports of the tech. pub. serv. Year 4, no. 3-5.)

**Swoboda, Gustav.**

Die wissenschaftlichen Grundlagen der Wettervorhersage. Prag. 1915. 23 p. figs. 22½ cm. (Sammlung gemeinnütziger Vorträge. Nr. 439-440. Mai-June 1915.)

**Wallén, Axel.**

L'eau tombée dans la haute montagne de la Suède. p. 72-104. figs. map. 24½ cm. (Geografiska annaler. H. 1. 1923.)

Hydrology of Sweden. Stockholm. 1923. 19 p. illus. maps. 24 cm. (Met'l. and hydrog. service of Sweden. No. 215.)

**RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY**

The following 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 and other communications bearing on meteorology and cognate branches of science. This is not a complete index 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.

*American journal of science. New Haven. (5) v. 7. April, 1924.*

Hite, M. P. Some observations of storm effects on ocean inlets. p. 319-326.

*American medicine. New York. new ser. v. 19. March, 1924.*

Schaefer, Theodore William. Bioclimatology. The effects of climate, temperature and seasons upon the nutrition of the different races of mankind. p. 146-158.

*Beiträge zur Physik der freien Atmosphäre. Leipzig. 11. Bd. H.2. 1 November 1923.*

Bartels, J. Der lokale Anteil in der täglichen Luftdruckschwankung. p. 51-60.

Dietzius, R. Die Absorption des Lichtes in trüben Medien, insbesondere Nebel und Wolken. p. 69-74.

Hergesell, H. Otto Stoll. p. 49-50. [Obituary.]

Reger, J. Vergleichung von Anstiegs- und Abstiegstemperaturen bei Drachenaufstiegen. p. 75-78.

Travniczek, F. Ueber die Abnahme der Luftdruckveränderlichkeit mit der Höhe in verschiedenen Gebirgen und ihre Bedeutung für den Aufbau der Depressionen. p. 61-68.

*Carnegie institution of Washington. Wash. Year book no. 22. 1923.*

Antevs, Ernst. The big tree as a climatic measure. p. 299-301.