BIBLIOGRAPHY.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY

C. FITZHUGH TALMAN, Professor in Charge of Library.

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:

Braak, Dr. C[ornelis].
Het klimaat van den Idjen. Batavia. [1919?] 51 p. maps. diagrs. 32 cm. (Het Idjen Hoogland. Monographie V.) [A comprehensive monograph on the climate of the Idjen plateau, at the eastern end of Java.]

Brezina, Ernst, & Schmidt, Wilhelm.
Über Beziehungen zwischen der Witterung und dem Befinden des Menschen, auf Grund statistischer Erhebungen dargestellt. Wien. 1914. 83 p. tables. 24 cm. (Aus den Sitzungsberichten der Kaiserl. Akademie der Wissenschaften in Wien. Mathem. naturw. Klasse; Bd. CXXIII. Abt. III. Oktober bis Dezember 1914.)

Brooks, C. E. P.
Climate and weather of the Falkland Islands and South Georgia. London. 1920. 146 p. maps. tables. diagrs. 33 cm. (Air Ministry. Meteorological office. Geophysical memoirs, No. 15.)

Brunner, Carl.
Verzeichnis der Veröffentlichungen, der Beobachter und Beamten sowie der Stationen der Bayerischen Landeswetterwarte (vormals K. B. Meteorologischen Centralstation) in den ersten 40 Jahren ihres Bestehens (1879–1918). München. [1919 ?] 22 p. 32 cm.

Fontseré, Eduardo.
Sobre el régimen normal de los vientos superiores en Barcelona durante los meses de verano y otoño. Barcelona. 1920. pp. 65–72. 24 cm. (Facultad de ciencias de la Universidad de Barcelona. Publicaciones de la Sección de ciencias naturales. VIII.)

Great Britain. Meteorological office.
Book of normals of meteorological elements for the British Isles for periods ending 1915. Section I.—Monthly normals for stations (1881–1915). London. 1919. 94 p. 24 cm. Sect. II—Weekly, monthly, quarterly, and seasonal normals for districts. London. 1920. pp. 95–118. 24 cm.

Hellmann, G[ustav].
Isothermen von Deutschland. [Berlin.] 1920. p. 369–376. 2 maps. 25½ cm. (Sitzungsberichte der Preussischen Akademie der Wissenschaftern. Sitzung der physikalischmathem. Klasse vom 18. März.)

Lloyd, Francis E.
Structure of hailstones of exceptional form and size. Montreal. 1916. p. 47–50. 25 cm. (McGill University. Papers from the department of meteorology. New series. No. 1.) [Reprinted from the Transactions of the Royal Society of Canada, Section III, September, 1916.] [Radial spike development on hailstones.]

Shackleton, Sir Ernest.
South: the story of Shackleton's last expedition. 1914–1917. London. 1920. 368 p. map. illus. 25½ cm. [Appendix I contains "Sea-ice nomenclature," by J. M. Wordie, p. 344–347, and "Meteorology," by L. D. A. Hussey, p. 347–351.]

Shamel, A. D., Scott, L. B., & Pomeroy, C. S.
Frost protection in lemon orchards. Washington. 1920. 30 p. 23 cm. (U. S. Dept. of Agriculture. Bull. 821.) [Protected orchards, during freeze of 1912–13 in California, yielded throughout year, while in unprotected orchards the yield was not salable and the trees suffered for a year or more.]

Westman, J.
Sonnenscheindauer im mittelschwedischen Ostseegebiet. 1911–1916. Stockholm. 1917. 34 p. 31 cm. (Kungl. Svenska vetenskapsakademiens handlingar. Band 57. No 9.)
Stärke der Sonnenstrahlung im mittelschwedischen Ostseegebiet im Jahre 1912. Stockholm. 1918. 33 p. 31 cm. (Kungl. Svenska vetenskapsakademiens handlingar. Band 58. No. 8.)

Winchester, Lily.
Teaching of geography to children. London. 1920. 50 p. 19½ cm. [Contains a chapter giving best methods of introducing weather study to young children.]

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. F. TALMAN, Professor in Charge of Library.

The following titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Brueau. 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.

Aviation. New York. v. 8. June 15, 1920.
Jones, Melville. Over-cloud flying and commercial aeronautics. p. 402–408. [Abstract in later REVIEW.]

Engineering news-record. New York. v. 84. June 10, 1920.
Balderston, Charles. Ice inside cast-iron column raises floor. p. 1166.
Hoyt, John C. A 900-inch rain gage on a peak of Kauai. p. 1166. [Said to be the largest rain gage in existence.]

Great Britain. Meteorological office. Geophysical memoirs. London. no. 14. 1920.
Cave, C. J. P., & Dines, J. S. Soundings with pilot balloons in the isles of Scilly: November and December, 1911. p. 79–94.

Meteorological magazine. London. v. 55. 1920.
Brooks, C. E. P. Climates of the British Empire suitable for the cultivation of cotton. p. 37–39. (April.)
Moore, John W. The winter of 1919–20. A remarkable season. p. 57–59. (May.) [A long, mild winter; below normal in September, October, and November, the following four months above normal, and April below.]
Bamford, A. J. Formation of mercury globules in barometers. p. 72. (May.)
W., A. John George Bartholomew, LL. D., F. R. S. E., F. R. C. S. 22d March, 1860–13th April, 1920. p. 74. (May.) [Obituary.]

Nashville review. Nashville. June, 1920.
Nunn, Roscoe. The Nashville climate. p. 40.

Nature. London. v. 105. 1920.
B., W. W. Periodicity in weather and crops. p. 370–371. (May 20.)
Bartrum, C. O. A rainbow inside out. p. 389–390. (May 27.)
Cave, C. J. P. Weather notes of Evelyn, Pepys, and Swift in relation to British climate. p. 393–394. (May 27.) [Suggests that 17th century winters were more severe than now.]

Popular mechanics magazine. Chicago. v. 33. April, 1920.
Alter, J. Cecil. Obtaining the secrets of the unborn floods. p. 557–558.

Popular science monthly. New York. v. 97. July, 1920.
McCrae, Lee. He makes the weather pay. The industrial meteorologist advises farmers and aviators. p. 44.

Royal astronomical society. Monthly notices. London. v. 80. February, 1920.
C., A. L. Father Walter Sidgreaves, S. J. p. 355–358. [Obituary.]
N., H. F. Annibale Riccò. p. 365–367. [Obituary.]

Royal society of Edinburgh. Proceedings. Edinburgh. v. 40. pt. 1. 1919–1920.
Franklin, T. Bedford. The cooling of the soil at night, with special reference to late spring frosts. II. p. 10–22. [Abstract in later REVIEW.]

Scientific American monthly. New York. v. 1. June, 1920.
Carpenter, Ford A. Photographing clouds from an airplane. pp. 484–488.

Scientific monthly. New York. v. 10. June, 1920.
Palmer, Andrew H. Recent California earthquakes. p. 529–552.

Terrestrial magnetism. Baltimore. v. 24. December, 1919.
Dechevrens, Marc. Sur les points du globe où il se produit une marée électrique, dérivée de la marée océanique, observe-t-on une marée magnétique? p. 175–177.
Dechevrens, Marc. Concerning the electric tide observed at Jersey. p. 178–179.

France. Académie des sciences. Comptes rendus. Paris. Tome 170. 1920.

Boutaric, A. Sur l'intensité du rayonnement nocturne aux altitudes élevées. p. 1195–1196. (17 mai.) [Abstract in this REVIEW, p. 284.]

Rothé, E. Sur un anémomètre à oscillations électriques. p. 1197–1198. (17 mai.)

Dunoyer, L., & Reboul, G. Sur la pratique de la prévision du temps. p. 1275–1277. (25 mai.) [The combination of rules with weather map indications.]

Trillat, A., & Mallain. Sur le sort des projections microbiennes dans l'air. Influence de l'humidité. p. 1291–1293. (25 mai.)

Guilbert, Gabriel. Sur l'application des cirrus à la prévision du temps. p. 1398–1399. (7 juin.) [Abstract in this REVIEW, p. 285.]

Meteorologische Zeitschrift. Braunschweig. Band 37. Januar–Februar 1920.

Schmauss, A[ugust]. Kolloidchemie und Meteorologie. p. 1–8.

Wegener, Alfred. Frostübersättigung und Cirren. p. 8–12.

Schirmann, Marie Anna. Neue theoretische Untersuchungen über die Polarisation des Lichtes an trüben Medien und deren Konsequenzen für die Probleme der atmosphärischen Polarisation. p. 12–22.

Ekman, V. Walfrid. Über den Bergriff der stabilen Schichtung. p. 22–26.

Spath, W. Die Sciroccos der Sinaiwüste. p. 26–29.

Möller, Max. Zur Wirkung überadiabatischer Temperaturgradienten. p. 30–31.

Reger, J. Zur Frage der überadiabatischen Temperaturgradienten. p. 31–32.

Grosse, [W]. Die Beaufortskala. p. 32–36.

Hellmann, G[ustav]. Ursprung der hundertteiligen Thermometerskala. p. 36.

Meteorologische Zeitschrift. Braunschweig. Band 37. Januar–Februar 1920—Continued.

Heidke, P[aul]. Arithmetische Glättung von Zahlenreihen. p. 36–37.

Perlewitz, P[aul]. Wärmeprognose. p. 37–38.

Hann, J[ulius] v. Bemerkenswerte, in Stundenintervallen sich folgende Gewitterzüge. p. 38–39.

Köppen, W[aldimir]. Verhältnis der Baumgrenze zur Lufttemperatur. p. 39–42.

Ficker, H[einrich]. Veränderlichkeit der Temperatur und Anomalie der Monatsmittel. p. 42–43.

Schulz, J. F. Herm. Schneedecke und Winterkälte. p. 44.

Hemel en dampkring. Den Haag. 17 jaargang. 1920.

Borgesius, A. H. Avond- en morgenrod als weerteekens. p. 145–151. (Februari).

Van Dijk, G. Ontploffingen en de voortplanting der beweging. p. 182–188.

Hemel en dampkring. Den Haag. 18 jaargang. mei 1920.

Van Dijk, G. Ontploffingen en de voortplanting der beweging. p. 1–7. [Conclusion.]

Vliegtuigwaarnemingen te Soesterberg. p. 7–9.

Sociedad astronómica de España y America. Revista. Año 10. Enero-abril 1920.

Sagristá, José. El Principe Boris Galitzin y su obra cientifica en sismologia. p. 1–7.

Selga, Miguel. La curva de la frecuencia de la nubosidad de Baguio. p. 28–30.

Revista agricultura. San Juan, Puerto Rico. v. 4. Marzo 1920.

Fassig, Oliver L. Trabajo del negociado meteorologico federal en las Antillas. p. 49–51. [Cf. MONTHLY WEATHER REVIEW, Dec., 1920, 47:850–851.]

SPECIAL OBSERVATIONS.

SOLAR AND SKY RADIATION MEASUREMENTS DURING MAY, 1920.

By HERBERT H. KIMBALL, Professor of Meteorology.

[Dated: Solar Radiation Investigations Section, Washington, July 1, 1920.]

For a description of instruments and exposures, and an account of the method of obtaining and reducing the measurements, the reader is referred to this REVIEW for April, 1920, **48**: 225.

The monthly means and departures from normal in Table 1 indicate that solar radiation intensities were generally above normal except at Lincoln, Nebr. At this station the average cloudiness for the month was 76 per cent, and on only two days did the cloudiness average less than 50 per cent.

As a result of this unusually cloudy condition, Table 2 shows a deficiency in the total radiation received on a horizontal surface at Lincoln during the four weeks April 30 to May 27, inclusive. At Madison all the weeks except the one beginning May 7 show an excess of radiation, while at Washington weeks with excess and deficiency of radiation alternate.

Skylight polarization measurements obtained at Washington on six different days give a maximum of 64 per cent and a mean for the month of 57 per cent. Measurements obtained at Madison on nine days give a maximum of 67 per cent and a mean of 56 per cent. These are above the average values for May at Washington, and slightly above at Madison.

TABLE 1.—*Solar radiation intensities during May, 1920.*

[Gram-calories per minute per square centimeter of normal surface.]

WASHINGTON, D. C.

Date.	Suns zenith distance.										
	8 a.m.	78.7	75.7	70.7	60.0	0.0	60.0	70.7	75.7	78.7	Noon.
	75th meridian time.	Air mass.									Local mean solar time.
		A. m.					P. m.				
	e.	5.0	4.0	3.0	2.0	1.0*	2.0	3.0	4.0	5.0	e.
	mm.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mm.*
May 1	4.95	.....	.....	.....	.....	1.44	.....	.....	.....	.....	3.81
3	4.57	.....	.....	.....	1.22	.....	.....	.....	.....	.....	4.17
5	6.50	0.61	0.72	0.88	0.98	.....	1.02	0.81	0.69	.....	4.57
6	4.95	0.68	0.83	0.95	1.17	1.39	.....	.....	.....	.....	3.99
10	7.57	.....	.....	.....	0.84	.....	.....	.....	.....	.....	5.36
15	5.16	.....	0.73	0.93	1.13	1.37	.....	.....	.....	.....	3.99
17	6.50	0.81	0.84	0.94	1.13	1.28	.....	.....	.....	.....	4.37
22	9.14	0.73	0.84	0.96	1.14	1.34	.....	.....	.....	.....	6.76
27	10.21	0.52	0.59	0.74	0.92	1.16	.....	.....	.....	.....	10.21
28	11.38	.....	.....	.....	.....	.....	1.10	.....	.....	.....	12.24
29	8.81	.....	.....	.....	.....	1.25	.....	.....	.....	.....	6.76
Means	.....	0.67	0.76	0.90	1.07	1.32	(1.06)	(0.81)	(0.69)	.....	.....
Departures	.....	+0.06	+0.04	+0.09	+0.09	+0.03	+0.07	+0.02	−0.01	.....	.....

* Extrapolated.