

Most Italian droughts have been associated with the apparent joining of the Siberian and Atlantic high pressure areas across Europe. When this occurs, the Atlantic depressions pass farther to the north, and only occasionally may secondaries develop in the Mediterranean, producing rain in the central and southern parts of Italy. In the present case, the northern portion received almost no rain because the few depressions which did appear on the coast of northern Africa were prevented from producing precipitation in northern Italy by the high pressure above mentioned. They did produce some rain in the southern part, however.

The author believes that, in addition to the high pressure belt across Europe, unusually low pressure in the

eastern Mediterranean was a contributing factor to the drought of 1921.

The intensity of this drought may be estimated from the comparison of rainfall records at Padua and Milan, which are the longest available. A study of these records shows that periods when the rainfall was less than one-third of the normal always occurred in winter, but never with the intensity shown in the months of October to December. The two longest periods in which no rain fell occurred in 1854, from January 13 to April 19, and in 1878, from January 1 to March 22. But never before has such a drought occurred in the early months of winter.—*C. L. M.*

BIBLIOGRAPHY.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Meteorologist 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:

- Agius, T[homas.]**
Ocean meteorology. Malta. 1922. 7 p. 23½ cm. (Extr.: Melita. Feb., 1922.)
Weather forecasting at Malta. Malta. [1922.] 18 p. 18½ cm. (Extr.: General guide of Malta & Gozo. 1922-23.)
- Alexander, W. H., & Patton, C. A.**
Ohio weather for the year 1921. Wooster. 1922. p. 215-312. figs. 23 cm. (Ohio agric. exp. sta., Bulletin 360.)
- Amsterdam. K. Akademie van wetenschappen.**
Oceanography, meteorology, seismology and terrestrial magnetism. Amsterdam. 1923. 14 p. 27½ cm. (Internat. circumpacifische onderzoek comm. Sec. seis., climat., and met. 1923.)
- Belgian Congo.**
Éléments climatologiques [d'Elisabethville.] 1911-1920. [Elisabethville.] n. d. unpag. 29½ cm.
Éléments climatologiques [d'Elisabethville.] Janv., 1921-Nov., 1922. [Elisabethville.] n. d. v. p. 29½ cm.
- Bjerknes, J., & Solberg, H.**
Life cycle of cyclones and the polar front theory of atmospheric circulation. Kristiania. 1922. 18 p. illus. 31 cm. (Geofysiske pub. v. 3. no. 1.)
- Brooks, C. E. P.**
Evolution of climate . . . with a preface by G. C. Simpson. London. 1922. 173 p. 22 cm.
- Eckardt, Bruno.**
Ergebnisse der Pilotballonaufstiege von Hambard-Grossborstel (Drachenstation der Deutschen Seewarte) ausgeführt in den Jahren 1915 bis 1917 und vektorieil berechnet. Hamburg. 1922. unpag. 22 cm.
- France. Office national météorologique.**
Radiogrammes météorologiques d'intérêt général émis par les postes T. S. F. de l'Europe et de l'Afrique du Nord (France et possessions françaises non comprises.) Liste des émissions et tableaux de déchiffrement. Paris. 1922. vii, 95 p. 31½ cm.
- [Friedman, A. A.]**
[On vertical currents in the atmosphere. Petrograd. 1919.] p. 67-104. figs. 22 cm. [Title and text in Russian.]
- Fritsche, H.**
Die säcularen Aenderungen der erdmagnetischen Elemente. Riga. 1910. 28 p. plates. 27 cm.
- Humphreys, William J.**
Murmur of the forest and the roar of the mountain. p. 49-64. illus. 25½ cm. (Repr.: Journ. Wash. acad. sci., v. 13, Feb., 1923.)
- Huntington, Ellsworth.**
Lordly sun. p. 440-448. illus. 25 cm. (Harper's magazine. v. 146. Mar., 1923.) [Discusses solar effects on terrestrial weather.]

- Johnson, F. R.**
Influence of the forest in retarding run-off as brought out by the Pueblo flood. 7 p. illus. 30½ cm. (Repr.: Water resources. Dec., 1922.)
- Mansfield, George Rogers.**
Origin of the "Brown Mountain light," in North Carolina. [Washington. 1923.] 12 p. map. 35½ cm. [Manifolded.] [U. S. Geol. Survey. Press notice 14328.]
- Newell, Frederick Haynes.**
Water resources, present and future uses. New Haven. 1920. 310 p. plates. 25½ cm.
- O'Connor, G. J.**
Daylight saving a cooling proposition. p. 41. illus. 30½ cm. [Cutting: Heating and ventilating mag., May, 1922.]
Heating and ventilating the earth. A conception of the vast air movements and heat exchanges throughout the world which mark the hand of the master engineer. p. 38-40. illus. 30½ cm. [Cutting: Heating and ventilating mag., Oct., 1922.]
- Sligh, Tom Standifer.**
Recent modifications in the construction of platinum resistance thermometers. Washington. 1921. p. 49-63. plates. 27½ cm. (U. S. Bureau of standards. Scientific papers, no. 407.)
- Talman, Charles Fitzhugh.**
Meteorology; the science of the atmosphere. New York. [c1922.] iii, 384 p. front. illus. plates. diags. 20½ cm. (Popular science library. v. 1.)
- Tippenhauer, Gentil.**
Die astronomische Berechnung des Wetters. p. 72-73; 83-85. illus. 31½ cm. (Astronomische Zeitschrift. 16 Jahrg. Juli-Aug., 1922.)
- Topolansky, Moritz.**
Der Reif und Tau in Österreich bis 1100 m Seehöhe. Wien. 1914. 18 p. figs. plates. 30½ cm. (Jahrb. K. K. Zent.-Anst. für Met. und Geod. Offizielle Pub. Jahrg. 1912. Neue Folge 49. Bd.)
- Vallerey, J.**
Physique du globe. 5th ed. Paris. 1922. 169 p. illus. maps. 22 cm.

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. F. TALMAN, Meteorologist 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 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.

- Aeronautical digest.* New York. v. 2. January, 1923.
Marvin, Charles F. The Weather bureau and aviation. p. 6-7.