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Bulletin mensuel. 1905. 74 pp. f°. Upsal. 1905-6.

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Regime hydrologique du Dalelf. (Extr. Bull. Geol. Inst., Upsala. No. 1, v. 8.) 72 pp. 4°. Upsal. 1906.

RECENT PAPERS BEARING ON METEOROLOGY.

C. FITZHUGH TALMAN, Acting 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 ——

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Ward, Robert DeC[ourcy]. The classification of climates. Pp. 401-412.
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Shaw, W[illiam] N[apier]. An apparent periodicity in the yield of wheat for eastern England, 1885-1905. Pp. 69-76.

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Hands, Alfred. Some so-called vagaries of lightning reproduced experimentally. Pp. 189-196.
Stevens, Catharine O. Note on the value of a projected image of the sun for meteorological study. Pp. 199-201.

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Dines, W. H. Two new light meteorographs for use with unmanned balloons. Pp. 101-102.
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Brunhes, Bernard. Sur la théorie des règles de Guilbert pour la prévision du temps. Pp. 40-62.

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Mercanton, Paul L. Sur l'inclinaison magnétique terrestre aux époques préhistoriques. Pp. 139-140.
Störmer, Carl. Sur les trajectoires des corpuscles électriques dans l'espace sous l'influence du magnétisme terrestre, avec application aux aurores boréales et aux perturbations magnétiques. Pp. 140-142.
Villard, P. Sur l'aurore boréale. Pp. 143-145.

La Nature. Paris. 34 année. 11 août 1906.
Rudaux, Lucien. Photographies d'aurores boréales. Pp. 175-176.

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Nell, Ch. A. C. L'orientation des bandes polaires. Pp. 52-54.
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Warburg, E., and Leithäuser, G. Ueber die Darstellung des Ozons aus Sauerstoff und atmosphärischer Luft durch stille Gleichstromentladung aus metallischen Elektroden. Pp. 734-742.
Warburg, E., and Leithäuser, G. Ueber den Einfluss der Feuchtigkeit und der Temperatur auf die Ozonisierung des Sauerstoffs und der atmosphärischen Luft. Pp. 751-758.

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Bjerknes, V., and Sandström, J. W. Hilfsgrössen zur Berechnung der Druckverteilung in der Atmosphäre an den internationalen Tagen 1900-1903. Pp. 1-17.
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Vujevic, Paul. Die Theiss; eine potamologische Studie. Pp. 1-76.

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Steiner, L. Graphische Methode zur Bestimmung der Insolationsmenge. Pp. 294-300.
Kassner, C[arl]. Normale Monatsmittel der Temperatur und des Niederschlages für den Brocken. Pp. 300-306.
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—— Der Fröhlingseinzug in Mittleuropa nach Prof. E. Ihne. Pp. 313-315.
Sapper, K. Antipassat in Westindien und Mittelamerika. Pp. 315-316.
H[ann], J[ulius]. Luft-und Wassertemperaturen im Mittlemeere. Pp. 316-317.
Conrad, V. Bemerkungen zum Zusammenhang des "Knisterns im Telephon" auf dem Sonnblick mit Potential und Zerstreuung. Pp. 318-319.
Greim, G. Zur Entstehung des Graupels. P. 320.
Siegel, Franz. Resultate der meteorologischen Beobachtungen im Jahre 1905 am Observatorium erster Ordnung zu Curityba (Staat Parana). Pp 321-322.
Nordmann, Charles. Ueber einige Experimente zur Bestimmung der Ionisation der Atmosphäre, die in Algerien anlässlich der totalen Sonnenfinsternis vom 30 August 1905 angestellt wurden. Pp. 322-323.
C., V. Luftelektrische und photometrische Beobachtungen während der totalen Sonnenfinisternis vom 30 August 1905 im Palma (Mallorca) vom J. Elster, H. Geitel, und F. Harms. Pp. 323-325.
H[ann], J[ulius]. Meteorologische Beobachtungen zu Good Hope im arktischen Nordamerika 1900-1903. Pp. 329-330.

Petermanns Mitteilungen. Gotha. Band 52. 1906.
Neumann, L. Deutschlands mittlere Jahres-, Januar-, April-, Juli-, und Oktober-Temperaturen. Pp. 140-142.

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Krebs, Wilhelm. Wogenbewegungen der Atmosphäre, erkennbar auf Luftdruckkarte und Barogramm. Pp. 307-312.

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Klengel, Friedrich. Die Niederschlagsverhältnisse von Deutsch-Südwestafrika. (Mai 1906.) Pp. 103-107.
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Schips, K. Vom "Wettermachen" im grossen. (Juni 1906.) Pp. 137-140.
Diesner, P. Witterung auf der Zugspitze in Winterhalbjahr 1905-6. (Juni 1906.) Pp. 140-142.
Mylius, W. Wetterinstinkt. (Juli 1906.) Pp. 145-153.
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Kress, Wilhelm. Der Einfluss des Windes auf drei in der Luft fliegende Körper. Pp. 141-143.
Hemel en Dampkring. Amsterdam. 4 Jaargang. Juli, 1906.
Smits, P. J. Is de intensiteit van den regenval periodiek? Pp. 37-42.
Memorie della Società degli Spettroscopisti Italiani. Catania. Vol. 35. Dispensa 6a, 1906.
Bemporad, A. Sul modo di variare della radiazione solare durante le fasi di un'eclisse. Pp. 89-102.
Rivista Marittima. Roma. Vol. 39. Giugno, 1905.
Eredia, Filippo. I venti forti nelle coste italiane dell'Adriatico e dell'Jonio. Pp. 533-540.

WEATHER BUREAU MEN AS EDUCATORS.

The following lectures and addresses by Weather Bureau men are reported:

Mr. G. Hass-Hagen, June 8, 1906, before the teachers of the Anderson County Normal Institute, Palestine, Tex., on "Weather Bureau instruments, forecasting, and the utility of the Bureau's work".

Mr. N. R. Taylor, July 26, 1906, before the Southwest Missouri Summer Normal School, in the auditorium of the Springfield, Mo., High School Building, on "Storms".

Classes from colleges, schools, and academies have visited Weather Bureau offices, to study the instruments and equipment and receive informal instruction, as reported from the following offices:

Huron, S. Dak., July 18, 1906, students of the summer school of the Huron College.

Springfield, Mo., July 23, 24, and 25, 1906, the teachers attending the summer normal school at that place.

Vicksburg, Miss., July 13, 1906, a party of teachers spending the summer at the St. Francis Xavier Academy, in that city.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

In middle and southern latitudes of the North Atlantic Ocean barometric pressure averaged high. Over the Azores the barometer fell below 30.00 inches on one day only, the 25th, and at Hamilton, Bermuda, pressures ranged from 30.10 to 30.30 throughout the month. A slight barometric disturbance crossed the British Isles from the 5th to 8th, and pressures were relatively low over the British coasts during the last half of the month, with lowest readings over Scotland from the 18th to 20th and over the southern coasts from the 26th to 30th.

The barometric depressions that appeared over the United States were of slight intensity. The areas of high barometer were unusually well defined, for the season, and the uniform alternation of barometric troughs and crests over the country produced the numerous showers and moderate temperatures that characterized the month generally east of the Rocky Mountains.

The general warm wave of the latter part of June continued in the Middle-Eastern States until July 3. The breaking of this warm wave was attended by heavy showers that occurred in connection with ill-defined barometric depressions that foreran an area of high barometer of great magnitude which advanced eastward from the north Pacific coast.

BOSTON FORECAST DISTRICT.

Rainfall, while generally in excess of the monthly average, was chiefly in the form of showers, and temperatures showed moderate variations from the normal. Dense fogs were a conspicuous feature in the coast districts. No warnings were issued and no destructive winds occurred.—*J. W. Smith, District Forecaster.*

NEW ORLEANS FORECAST DISTRICT.

Rainfall was excessive in nearly all parts of the west Gulf districts, and temperature was generally below the normal. Special warnings were neither issued nor required.—*I. M. Cline, District Forecaster.*

LOUISVILLE FORECAST DISTRICT.

Moderate temperature and showery weather prevailed throughout the month. The principal cool spell extended from the 3d to 9th, and there were no protracted periods of unusually high temperature. Heavy thunderstorms occurred at frequent intervals and some damage was caused by heavy local rains. No special warnings were issued.—*F. J. Walz, District Forecaster.*

CHICAGO FORECAST DISTRICT.

No severe storms occurred and no storm warnings were issued. A marked area of high pressure during the first week of the month caused low temperatures in the cranberry marshes of Wisconsin, minimum readings of 33° being recorded at two places on the morning of the 6th. Warnings of light frost were issued in advance of these readings—*A. J. Henry, Professor and District Forecaster.*

DENVER FORECAST DISTRICT.

Thunderstorms were numerous and occurred with heavy precipitation almost daily in a narrow belt extending along the Continental Divide from southwestern Wyoming to central New Mexico; elsewhere in the Rocky Mountain districts rainfall was generally below the normal and temperature was unusually low. At several stations on the eastern slope the month was the coolest July on record.—*F. H. Brandenburg, District Forecaster.*

SAN FRANCISCO FORECAST DISTRICT.

The month as a whole was one of quite pleasant weather. Afternoon thunderstorms were frequent in the Sierra Madre and in the southern portion of the Sierra Nevada mountains. Along the coast the month was marked by considerable cloudiness with morning and afternoon fogs.—*A. G. McAdie, Professor and District Forecaster.*

PORTLAND, OREG., FORECAST DISTRICT.

The month was the warmest July on record since the early seventies, and then it was equaled and not exceeded. Rainfall was light and no heavy rains were reported in any part of the North Pacific States. Warnings were not issued or required.—*E. A. Beals, District Forecaster.*

RIVERS AND FLOODS.

There was no high water of consequence during the month in any of the rivers on which river and flood service is maintained.

The Mississippi and Missouri rivers were highest at the beginning of the month, and fell slowly throughout the month.

The Ohio River and the rivers of the Southeastern States were highest from the 15th to the 25th owing to the heavy rains during that period; several of the smaller streams showed marked rises, especially in the headwaters, due to heavy local rains.

Flood stages were reached at but two stations; warnings were issued for high water in the Trinity River on July 27 and were fully justified.

On July 1, 1906, Columbia, S. C., was made a district center, with territory comprising the watersheds of the Edisto and Santee rivers; and the district center for the rivers of California was transferred from San Francisco to Sacramento, Cal.; provision is being made for additional stations and improved river service in both these districts.

The highest and lowest water, mean stage, and monthly range at 280 river stations are given in Table VI. Hydrographs for typical points on seven principal rivers are shown on