

coast of Louisiana and the east coast of Texas early in the morning of the 14th and hurricane warnings were ordered from Morgan City, La., to Point Bolivar, Tex., at 2 p. m. (eastern standard time).

*August 23-28.*—Vessel reports showed disturbed conditions in the central Caribbean Sea on the morning of August 23 with some evidence of cyclonic circulation central about 250 miles southeast of Jamaica. This disturbance moved west-northwestward across northern Yucatan, with rapidly increasing intensity, and reached the Mexican Coast between Tampico and Brownsville on the morning of August 28.

On crossing Yucatan the storm was of full hurricane intensity. The Am. S. S. *Agwistar* was in the center on the morning of the 26th, while anchored 7 miles north of Progreso. Winds of hurricane force were experienced from 4 a. m. to 7 a. m. (local time) but with a dead calm from 5:15 to 6:00 a. m. Lowest pressure was 28.92 inches during the calm. The highest wind was estimated at 90 miles an hour. The Nic. M. S. *Sama* also became involved in the hurricane on the 26th. The ship was very near the center at 4:00 a. m. of the 27th, at  $22\frac{1}{2}^{\circ}$  N.,  $93\frac{1}{2}^{\circ}$  W., barometer 29.26 inches. According to estimates of the ship's officers, the highest wind was 90 miles an hour between 8 p. m. and midnight of the 26th.

As to the effects of this storm during its early history, Forecaster Norton at Jacksonville says:

We have had no reports of damage, and since the storm did not seriously affect any land area in the Caribbean except the sparsely settled coastal section of northeastern Yucatan, it is believed that damage was relatively small. The paucity of ships' observations near the storm center made the problem of the forecaster somewhat difficult in charting the exact center of the storm and calculating its intensity, but this lack of ships' reports is indicative of the value of the advices to shipping, and no reports have been received of any ship having been damaged in the Caribbean.

Concerning the winds aloft during the progress of the disturbance, Forecaster Dyke of New Orleans makes the following comment:

Upper winds during the movement of the storm were from the east over the Middle and West Gulf States except for a brief interruption in the morning of the 26th, when upper winds, 10,000 feet and higher, were from the southeast over Texas. Upper winds at Tampico were from the northeast until the storm approached near enough to deflect them to the north and northwest. Under the prevailing flow of air no turning to the right was to be expected.

The following is taken from the report of the official in charge of the Weather Bureau office at Brownsville, regarding the passage of the storm into Mexico and the damage resulting there:

Reports from Capt. Durst, Pan American Airways pilot, through Mr. Ronning their meteorologist, and from local fishermen who apparently were in the northern portion of the storm track, the center apparently went inland in the vicinity of Boca Jesus Maria, and the width of path of damage on the beach was about 75 to 80 miles. The little village La Pesca on the beach in the same latitude as Soto La Marina appears to have had winds strong enough to blow their palm-thatched huts down or badly damage them. In Brownsville and vicinity fishermen, who happened to be on the beach or on an island some 20 miles north of Boca Jesus Maria, estimate the wind velocity around 75 to 80 miles per hour from northwest to north into the east. The center reached the coast line probably shortly after midnight Saturday.

Velocities in some of the squalls along this immediate coast, according to Brazos Coast Guard personnel, were estimated at about 45 miles per hour. The condition of the Gulf of Mexico along this immediate coast, however, was affected greatly, according to the Brazos Coast Guard personnel and reports from others at or near the beach at Del Mar, a resort on the beach a short distance south of Port Isabel, Texas. The water was very rough and swells occasionally swept entirely across Padre and Brazos islands in places, washing away a few inexpensive structures at Del Mar—the only damage as a result of the storm in the vicinity of which we have any knowledge.

Frequent advisory warnings were issued from Jacksonville on August 23, 24, and 25 and from New Orleans on August 26, 27, and 28. Northeast storm warnings were hoisted on the extreme southern Texas coast at 9:30 p. m. of the 26th. Hurricane winds were forecast for the extreme northeastern coast of Mexico.

## BIBLIOGRAPHY

[RICHMOND T. ZOCH, in Charge of Library]

By AMY P. LESHER

### 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:

Agostini, Enrico de.

La Reale società geografica italiana e la sua opera dalla fondazione ad oggi (1867-1936). Roma. 1937. 149 p. plates, ports.  $24\frac{1}{2}$  cm. At head of title: Col. Enrico de Agostini, segretario della Reale società geografica italiana.

Astrophysica norvegica.

v. 1-2. 1934-1937. Oslo. 24 cm. ill., etc.

v. 1, no. 1. Størmer, Carl. On the trajectories of electric particles in the field of a magnetic dipole with applications to the theory of cosmic radiation. Third communication. 1934. p. 1-10. diags.

v. 1, no. 2. Godske, C. L. Über Bildung und Vernichtung der Zirkulationsbewegungen einer Flüssigkeit. 1934. p. 11-86. diags.

v. 1, no. 3. Størmer, Carl. Measurements of luminous night clouds in Norway 1933 and 1934. 1935. p. 87-114. tables, diags. 17 plates at end.

v. 1, no. 4. Størmer, Carl. On the trajectories of electric particles in the field of a magnetic dipole with applications to the theory of cosmic radiation. Fourth communication. 1935. p. 115-168. tables, diags. 17 plates at end.

v. 1, no. 5. Godske, C. L. A simplified treatment of some fluid oscillations. 1935. p. 169-197. diags.

v. 1, no. 6. Bjerknæs, J., & Godske, C. L. On the theory of cyclone formation at extra-tropical fronts. 1936. p. 199-235. diags.

v. 1, no. 7. Solberg, H. Über die freien Schwingungen einer homogenen Flüssigkeitsschicht auf der rotierenden Erde. 1. 1936. p. 237-340. diags.

v. 2, no. 1. Størmer, Carl. On the trajectories of electric particles in the field of a magnetic dipole with applications to the theory of cosmic radiation. Fifth communication. 1936. p. 1-121. tables, diags. 20 plates at end.

v. 2, no. 2. Solberg, H. Schwingungen und Wellenbewegungen in einer Atmosphäre mit nach oben abnehmender Temperatur. 1936. p. 126-172. tables, diags.

v. 2, no. 3. Rosseland, S. On the theory of rotating stars. 1. 1936. p. 173-191. diags.

v. 2, no. 4. Størmer, Carl. On the trajectories of electric particles in the field of a magnetic dipole with applications to the theory of cosmic radiation. Sixth communication. 1937. p. 193-248. tables, diags.

v. 2, no. 5. *do.* II. 1937. p. 249-262.

Baisley, Herbert Kenneth.

Aerial photography [with 13 plates]. (In Smithsonian institution. Annual report, 1936. Washington, D. C. 1937.  $23\frac{1}{2}$  cm. p. 383-390. 13 pl. on 7 l.)

Bégué, L.

Contribution à l'étude de la végétation forestière de la Haute-Côte d'Ivoire. Paris. 1937. 126 p. xix pl., fold. map. 25 cm. (Publications du Comité d'études historiques et scientifiques de l'Afrique occidentale française. Série B, n° 4.)

- Betts, Morris Cotgrave, & Ashby, Wallace.**  
Wind-resistant construction for farm buildings. Wash., D. C. 1932. 6 p. illus. 23½ cm. (U. S. Dept. of agriculture. Leaflet no. 87.) Contribution from Bureau of agricultural engineering.
- Brooks, Frederick Augustus.**  
Solar energy and its use for heating water in California. Berkeley, Calif. [1936.] 64 p. illus. (incl. maps), tables, diags. 24 cm. (California. Agric'l. exper. station, Berkeley. Bulletin 602, November, 1936.) "Literature cited." p. 62-64.
- Dedebant, G.**  
La géométrie isobarique. Paris. 1935. 24 p. 25¼ cm. (Mémoire présenté à l'Association de météorologie de l'U. G. G. I. Lisbonne. September 1933.)
- Daniel Guggenheim medal fund, inc.**  
The Daniel Guggenheim medal for achievement in aeronautics. Biographies of Orville Wright [and others]. New York. 1936. 62 p. ports. 23½ cm. Illustration of the medal on recto of first portrait.
- Fujiwhara, Sakuhei, & others.**  
On vorticity in the atmosphere as a weather factor, by S. Fujiwhara, K. Nakata, H. Sibahasi, M. Uda, S. Oka, A. Harasima, and N. Watanabe. (Contribution XIV from the Geophysical seminary in the Physical institute, Faculty of science.) [Tokyo. 1935.] p. 65-106. tables, diags. 26½ cm.
- Gone with the winds.** North Chicago, Ill. 1937. p. 9-11. illus. 32½ cm. [From What's new, February 1937, Abbott laboratories, North Chicago, Ill.]
- Great Britain. Meteorological office.**  
Meteorology in relation to air navigation. London. 1937. p. 211-259. illus., diags. 21½ cm. (Reprint of chapter XVII of the "Manual of air navigation," vol. 1.) (M. O. 327.)
- International geographical union. Commission of climatic variations.**  
A bibliography of scientific papers on climatic variations. [Compiled by Henryk Arctowski.] Lwów. 1938. 254 p. 34 cm.
- Japan. Niigata meteorological observatory.**  
Report of the meteorological observatory, Niigata, Japan, for the 40 years 1886-1925. [n. d.] 252 p. plates, tables, diags. (part fold.) 26 cm.
- Kaster, Howard B.**  
Notes, aeronautical meteorology. Oakland, Calif. [c1934.] cover-title, 104 numbered 1. illus., diags. 27½ cm. Mimeographed. Bibliography.
- Linke, F.**  
Medizinisch-meteorologische Statistik. Gesammelte Vorträge der 1. Frankfurter Konferenz für medizinisch-naturwissenschaftliche Zusammenarbeit (30. und 31. März 1936). Berlin. [1936.]
- McCarthy, D. J.**  
Lightning and its effects. [n. p.] [1919.] 9 p. 28½ cm. [Copy of an article appearing in the Railway signal engineer for March 1919. Photographs not included.] [Typewritten.]
- MacLean, John Kennedy, & Fraser, Chelsea.**  
Heroes of the farthest north and farthest south. With 32 illus. & 34 maps. Rev. ed. New York. 1938. xiv, 484 p. front., illus. (maps), plates, ports. 21 cm. "Fifth printing; first printing of revised edition, 1937."
- Petersen, William F.**  
The patient and the weather. Ann Arbor, Mich. 28 cm. illus. v. 1, part 1. The footprint of Asclepius. 1935. 127 p.  
v. 1, part 2. Autonomic integration. 1936. 781 p.  
v. 4, part 1. Organic disease. Cardio-vascular-renal disease, with a chapter on experimental endocarditis, by Alexander J. Nedzel, M. D. 663 p.  
v. 4, part 2. Organic disease. Hypo- and hyperthyroidism. Diabetes. The blood dyscrasias. Tuberculosis. 729 p.  
v. 4, part 3. Organic disease. Surgical problems. 651 p.
- Pettis, C. R.**  
Flood probability formula modified to simplify application. A method of determining the probable 100-year floods based on the width of a drainage area and on rainfall statistics modified to improve it both practically and theoretically. Rainfall index for entire United States developed from runoff records. [New York.] 1934. p. 804-805. map. 28 cm. (Engineering news-record, June 21, 1934.)
- Pflugbeil, Werner.**  
Die 20tägige Welle des Winters 1928-1929. Leipzig. 1935. 77 p. maps, tables, diags. 23½ cm.
- Philippines (Commonwealth). Weather bureau.**  
Wind and rainfall distribution in selected Philippine typhoons. By Rev. Charles E. Deppermann, S. J., assistant director, Weather bureau. Manila. 1937. 38 p. incl. charts. 29 cm. At head of title: Commonwealth of the Philippines. Department of agriculture and commerce. Weather bureau. Manila central observatory. "References": p. 13.
- Schonland, B. F. J.**  
[Papers on lightning.] v. p. (Reprints from South African journal of science, v. XXXII, p. 24-31, Nov., 1935; Scientia, p. 247-251, May 1936; Philosophical magazine, Ser. 7, v. xxiii, p. 503-508, March 1937.)  
Atmospherics and lightning. p. 24-31.  
Lightning. p. 247-251.  
The diameter of the lightning channel. p. 503-508.
- Schröder, Gustav, & others.**  
Vom "Grünen Strahl." [n. p. 1937.] p. 489-496. 2 fold. plates. 27½ cm. (Reprint from Annalen der Hydrographie und maritimen Meteorologie. Nov. 1937.)  
Schröder, Gustav. Beobachtungen zur Ermittlung der atmosphärischen Vorbedingungen für das Auftreten des grünen Strahles und der Farbenschwankungen. p. 489-492.  
Schröder, Gustav. Der grüne Strahl an einem 140 Seemeilen entfernten Bergabhang. p. 492-493.  
Hartmann, Wilhelm. Beobachtungen des Grünen Strahles an der Nordseeküste. p. 493-495.  
Klaehn, Otto. Beobachtungen des grünen Strahles im Golf von Siam und in der Grönland-See. p. 495-496.
- Tippenhauer, Louis Gentil.**  
The precalculable real cause of the weather. A brief exposition of the laws governing the mechanisms of the weather and their practical application in long-range weather forecasting with 25 diagrams. New York. c1935. 30 p. port., diags. (part fold.) 28½ cm.
- U. S. Congress. House. Committee on world war veterans' legislation.**  
Effect uniform provisions in laws administered by Veterans' administration. Report [and Minority views]. (To accompany H. R. 12869.) [Wash., D. C. 1936.] 5, 9 p. 23½ cm. (74th Congress, 2d sess. House. Rept. 2899). (Contains references to the Florida hurricane disaster.)
- U. S. Geological survey. Committee on observation wells.**  
Report. A preliminary manual of methods. R. M. Leggette, L. K. Wenzel, R. C. Cady, S. W. Lohman, V. T. Stringfield, R. W. Sundstrom, and S. F. Turner. Washington, D. C. 1935. 58 numbered leaves. 8 pl. (incl. charts, diags.) 26½ cm. Rotaprinted.
- U. S. National resources committee. Water resources committee.**  
Drainage basin problems and programs. 1937 revision. Feb. 1938. Washington, D. C. 1938. x, 154 p. incl. tables. maps (part fold.) 29 x 23½ cm. Abel Wolman, chairman.
- U. S. Weather bureau.**  
International code for radio weather reports from ships. Used by the United States Weather bureau in broadcasting ships' weather reports from United States navy radio stations in accordance with schedules given in U. S. W. B. radio circular no. 1. Wash., D. C. 1938. 16 p. incl. tables. 23 cm. (W. B. no. 1046.)
- ZoBell, Claude E., & Mathews, Helen M.**  
A qualitative study of the bacterial flora of sea and land breezes. [Washington, D. C.] 1936. p. 567-572. tables. 30½ cm. (Reprinted from the Proceedings of the National academy of sciences, v. 22, no. 10, Oct. 1936.)