

Weather Review, December, 1927, pp. 519-530). The Monthly Meteorological Report for November, 1928, of the Department of Operation and Maintenance of the Panama Canal, shows for this month a reversal of the usual pressure gradient, and with it the wettest month on record for the Pacific slope of Panama. The monthly mean bihourly pressure was 29.835 inches at Balboa Heights and 29.831 at Cristobal. The small excess of pressure at the Pacific coast over that at the Atlantic and the consequent light winds permitted probably greater raininess on the Pacific slope than if the winds had been stronger, for the rains of Panama are typically of the local shower type. The rainfall of the Pacific section was generally twice the average, and ranged from 9.91 at Taboga, which is normally the driest place in Panama, to 44.29 inches at Mariato. Balboa Heights had 20.51 inches of rainfall, more even than Gatun, that normally has twice the rainfall of Balboa. Rain fell on 23 days at Balboa and on 30 days at Cristobal.

The failure of the norther of November 23 to reach Panama after coming as far as Costa Rica, where it was apparently responsible for the devastating floods at this time, may have been due to the reversed pressure gradient over Panama this month. However, it is worthy of note that the heaviest rain of the month at San Blas Farm, in northern Panama, 7.20 inches, fell on November 23. [This was a quarter of the entire rainfall at that place for November.]—C. F. B.

Meteorological summary for Chile for December and also the year 1928 (by J. Bustos Navarrete, Observatorio del Salto, Santiago, Chile).—December.—Atmospheric circulation over the South Pacific Ocean was a little more active in the first and last decades of the month. The depressions most important in producing unsettled weather and rains in the south were those charted during the following periods: 1st to 3d, 4th to 5th, 6th to 7th, 18th to 19th(?), and 28th to 30th. The condition of foul weather and rain

between Chiloe and Talca during the first days of the month was a feature well worth mention.

The most important anticyclonic centers, accompanied by fine weather, showed the following positions and movements: 1st to 14th, from Coquimbo to Juan Fernandez, Chiloe, and Argentina; 17th to 18th, over Chiloe; 19th to 20th, from Juan Fernandez to Chiloe; and 24th to 27th, from Chiloe toward Argentina.

In the central zone the weather was variable in the first decade, but uniform in the second and third decades. In the southern zone there was an increase in precipitation; at Valdivia the total for the month was 9.17 inches.

Year 1928.—The slight anomalies presented were unequal distribution of rainfall which occurred mainly in the central zone between April and June, and gradual increase in temperature and dryness beginning with July. On the whole this year had more precipitation and somewhat lower temperature than the year 1927.

The months of January and February had lower temperatures than the same months of the preceding year; the summer was more moderate. The winter months were cold, but not severe, with lowest mean temperature in June. Beginning with July there came an increase in temperature, a rare occurrence since normally the minimum appears in July or August.

At Santiago the highest temperature was 91° on February 22 and the lowest 28° on June 25 (lowest in Chile, 11° at Caracoles on June 24). The total annual precipitation was 13.82 inches, June being the rainiest month with 5.94 inches. In the cordilleras the average depth of snowfall was 3 meters (9.8 feet).

The most notable phenomena of the year were the torrential rains occurring at the beginning of April between Curico and Talca, 5.50 inches in 48 hours; in the mountain region snowfall was extraordinarily heavy and caused great damage. The heavy downpour at Valdivia on June 9 gave 6.97 inches in 24 hours.

BIBLIOGRAPHY

C. FITZHUGH TALMAN, in Charge of Library

RECENT ADDITIONS

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Note sur les typhons. Hanoi. 1927. 9 p. diagr. plates (part fold.) 28 cm. (Extr.: Bull. econ. Serv. mét. de l'Indochine.)
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- Dodd, West.
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- Exner, Felix M.
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- Trinkler, Emil.
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