

A Science Service Feature

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! WHY THE WEATHER !

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FORECASTING OVERLAND FLOODS

A new kind of flood prediction was undertaken by the Weather Bureau during the great floods of recent memory along the lower Mississippi. The Bureau has for years issued very accurate predictions days or weeks in advance of the progress of flood stages down the river. No attempt had, however, been made before 1927 to predict the rate at which water would flow over adjacent lands or the depth to which these lands would be submerged.

Analysis of experience in previous floods indicated that an "overland flood" - i.e., one moving across the country behind the levees, - requires about three times as long to travel a given distance as one traveling down the river itself. Following the natural contour of the country such a flood would move about 13 miles a day on an average, or in a straight line from 7 to 8 miles a day.

In order to make forecasts of the movement of flood water down the Tensas and Atchafalaya Basins, a contour map of the country was needed. As no such map existed, the Weather Bureau forecaster at New Orleans, after securing elevations and profiles from the railroads, constructed a provisional map, and then proceeded to issue specific warnings for each locality where overflow was threatened. These warnings not only indicated the dates when the water would reach the places mentioned but also the probable depth of the water. They included advice as to whether places should or should not be evacuated and thus saved lives and property in the one case and the expense and discomfort of removal in the other.

The predictions were, in general, highly successful.

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