

A Science Service Feature

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? WHY THE WEATHER ?

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THE WATER RISES

Today is the anniversary of the greatest hurricane disaster in our part of the world, that of Galveston, Sept. 8, 1900, when about 6,000 people were drowned. Dr. I. M. Cline, Weather Bureau official in Galveston at that time, has since made a most detailed study of the rise of the sea during hurricanes, especially with a view to forecasting where they will strike the Gulf coast.

When a hurricane enters the Gulf of Mexico, the rising water and great swells are the first danger signals to reach shore. Waves of such size and strength are developed, especially on the right side of the storm, that they travel 30 to 45 miles an hour. In but 15 to 20 hours, then, after the storm has entered the Gulf, its waves may be breaking on the Texas coast, 800 miles away, although the hurricane itself perhaps will not reach that shore till two or even three days later. Though the spirally inblowing winds of the storm which start the waves attain terrific velocities, sometimes over 100 miles per hour, the storm as a whole does not progress very rapidly, usually only 10 to 15 miles per hour.

Comparing the rise in water above the expected tide at various coast stations helps the forecaster trace the path of the hurricane. Sometimes the point of greatest rise will shift to right or left, indicating a change in the course of the storm. The highest water occurs a few miles to the right of the storm center, as the center reaches shore. In heavy storms the water may rise 8 or 10 feet above the normal level and in extreme cases 15 feet, thereby greatly augmenting the attack of the waves and drowning the people remaining on the coastal lowlands.

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