

A Science Service Feature

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? WHY THE WEATHER ?

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THE EYE OF A HURRICANE

All well defined whirls have a central region of lowest pressure, due to the centrifugal action in the rotating fluid. An eddy in water, such as that formed when water in a full wash basin flows out through a hole in the bottom, is usually rapid enough to exclude all water from the central core. Whirls in the lighter air, while not developing such strong centrifugal force, do effect appreciable reductions in pressure by this action. In such whirlwinds as tornadoes and waterspouts the pressure is reduced by a quarter or a third, and there appears to be a central core. In the broader tropical cyclone, and occasionally in extra-tropical cyclones over the oceans, the pressure reduction is of the order of a twentieth to a tenth, and a core of light winds or calms five to thirty miles in diameter is found.

This central calm area in a storm is usually marked by clearing skies and higher temperature. It is called the "eye of the storm". Only the most intense cyclones have such an eye, so the phenomenon is generally associated with the tropical hurricane. The few minutes to an hour or two of quiet after the hurricane is often a life saver. The brief respite is sometimes sufficient for rescuing the shipwrecked, or, in the cases of ships in port, to permit steaming to the opposite side of the harbor in preparation for the hurricane soon to spring up from the opposite direction.

With the approach of the heavy wall of clouds, a highpitched whining may sometimes be heard. Then a wall of spray high enough to hide a ship approaches. The hurricane blast and its ballast of exceedingly fine rain now smothers everything. The eye has passed.

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