

A Science Service Feature

Released upon receipt
but intended for use
June 22, 1934

? WHY THE WEATHER ?

Mailed June 15, 1934

LIGHTNING WITHOUT THUNDER

By Charles Fitzhugh Talman,
Authority on Meteorology.

Distant lightning without audible thunder is familiar to everybody, but silent lightning in the immediate vicinity of the observer has rarely been reported. The following communication on this subject was received many years ago by the U.S. Weather Bureau from a correspondent in Florida:

"A house next door was struck; I saw a blinding flash simultaneous with a splitting sound and waited for the crash of thunder, which did not come. The house, which was about 20 feet from the one I was in, was struck on the peak of the roof. The discharge followed the shingles about halfway to the eaves, splitting them up; it then turned and went over the gable and into the house, and so on down to the cellar, stunning the occupants, but not doing much damage.

"A friend told me he had a similar experience. He was going along the street during a thunderstorm; there was a bright flash, accompanied by a rumbling noise, as he was passing a house, but no thunder. On looking to find the cause of the peculiar sound, he saw that the chimney had been struck and knocked to pieces, the bricks falling on the roof made the rumbling noise that had attracted his attention; but he was astonished that there was no thunder."

Thunder is loud when sound waves from a considerable part of a long and irregular lightning path reach the observer at the same instant and combine in their effects upon his ear. In cases such as those mentioned, the path is probably almost end-on to the observer, the waves reach him progressively instead of in combination, and their effects are thus too feeble to be perceived.

A number of cases have been reported in which vivid lightning seen near the zenith was not attended by thunder. In these cases the lightning discharges probably occurred at great heights and were inaudible not only on account of their distance but also because the air at such heights is comparatively rare and the intensity of a sound diminishes with the density of the air in which it is generated. Thus we are told that at the top of Mont Blanc the report of a pistol sounds no louder than that of a firecracker at sea level.

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