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A Science Service Feature

? WHY THE WEATHER ?

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By Charles Fitzhugh Talman,  
Authority on Meteorology.

CLOUDBURST CAVITIES

A familiar effect of a cloudburst, or any heavy fall of rain, occurring in a mountainous region is to scoop deep channels and gullies where the flow of the storm water is concentrated by the slope of the ground. In rarer cases a downpour scoops good-sized holes in the ground through the mere impact of the falling water, indicating an extraordinary intensity of the rainfall. Some remarkable examples of "cloudburst cavities" in the British Isles have been described by John Glasspoole, an English meteorologist.

One of these cavities resulted from an afternoon thunderstorm in 1916 on a moor near the western border of the county of Durham. Eleven years after the shower its effects were strikingly visible. On a gentle slope the top layer of grass and peat had been washed away to a depth of about 4 feet over an area of about 20 yards by 40 yards and deposited just below. The cavity appeared to be quite different from other scars on the moors, which could be accounted for by the sudden rush of water from a large area, or to the undercutting of the hillside by a stream in flood.

On the Cheviots in July, 1893, the upper layer of peat over an area of from 30 to 40 acres was ploughed up to a depth of some five feet and piled in enormous masses. In September, 1903, a downpour on a steep slope in Snowdonia excavated a circular hole 20 feet across and 3 feet deep. In July, 1907, in South Herefordshire, also on a steep hillside, a hole 5 feet deep and 10 to 12 yards across was scooped out by a thundershower. In this case the excavation was partly attributed to the effects of lightning.

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