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A Science Service Feature

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
Secretary, American Meteorological Society
discusses:

INTENSITY OF RAINFALL

The intensity of rainfall is dependent upon the rapidity of condensation and the speed at which a raining cloud passes over a place. Condensation is usually so slow that only light rain occurs. More than half the rainfalls do not exceed five-hundredths of an inch, and half an inch is considered heavy. But falls of one inch are common, and occasionally there is a rainfall of two inches or more in a day. The extreme is the western cloudburst, which is the result of the maximum of convection, a phenomenon typical of the Great Plains and the dry southwest.

The uprushing air currents uphold the rapidly forming raindrops, until the accumulation of water is extraordinarily great. A sudden collapse of the air columns permits the watery mass to descend, almost like a torrent. In mountain country where the entire fall tumbles suddenly upon a small watershed, the consequences to life and property are sometimes disastrous.

The severe thunderstorm provides what seems a small deluge, for here, too, the ascending air currents prevent the drops from falling except in localized areas, into which they may be poured from neighboring regions of ascent, and we have storms which partake of the characteristics of the cloudburst. If such a rainstorm becomes stalled, the downpour continuing for an hour or more makes several inches of rainfall and produces severe local floods. The most intense rain that has fallen into a recording gauge occurred at Porto Bello, Panama, in November, 1911, when the record showed a fall of 2.47 inches in three minutes.

(Tomorrow: Thunderstorms.)

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