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? WHY THE WEATHER ? Mailed August 15, 1933

RAIN-PRINTS IN THE ROCKS

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Records of rain storms that occurred millions of years ago are found today in the shape of the small circular marks variously known as rain-prints, rain-pits, rain-spots and fossil raindrops. There is no mystery about the formation of these marks, for the process is still going on and can easily be observed. A sandy beach, for example, may often be seen after a shower to be pitted with the little depressions made by the drops. If the wind blows from the land, these pits are likely to be filled with dry drifting sand. If a square of this sand is carefully cut out and baked hard, we obtain impressions of a durable character.

The rain-prints collected by geologists throw a certain amount of light upon the weather and climate of ages past. Their age can be determined approximately from the accompanying fossils and other characteristics of the formations in which they occur. Thus their prevalence gives some indication of the relative raininess of different geological periods in particular regions, and the character of the rainfall. Their forms likewise indicate the direction and force of the winds accompanying the primeval shower. If the wind blew from the south, the southern side of the depressions will slope downwards gradually toward the north, while the opposite slope will be more or less precipitous. The greater the contrast between the steepness of the opposite slopes, the stronger must have been the wind. Symmetrical depressions were formed in calm weather.

Fossil raindrops are either concave or convex. The former occur in the hardened material on which the rain fell; the latter in the drifted material, also hardened into rock.

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