A Science Service Feature

Released upon receipt
but intended for use
April 15, 1931

? WHY THE WEATHER ? Mailed April 8, 1931

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DESERT RAIN-GAUGES

Rain-gauges of several patterns have been designed for measuring rainfall in uninhabited regions, where the instruments can be visited only at long intervals of time. One of the most remarkable is the huge gauge installed on the summit of Mount Waialeale, in the Hawaiian island of Kauai, which was constructed to hold an entire year's rainfall at one of the wettest known places on earth.

In recent years the Desert Laboratory of the Carnegie Institution, at Tucson, Arizona, has been measuring seasonal rainfall in the desert area of the southwestern United States and northwestern Mexico with gauges of unique design, which are visited only twice a year. Twenty-four of these instruments are in use.

The "desert rain-gauge" employed for the purpose consists of a conical copper vessel, which is buried in the ground and is connected by a short vertical tube, projecting a few inches above-ground, with a conical receiver. A small quantity of light mineral oil is left in the gauge. This floats on the surface of the water as it accumulates and prevents evaporation, despite the excessive dryness and heat of the atmosphere.

The visible portion of the instrument is painted a dull drab color and coated with sand so that it may not attract indiscreet attention on the part of passers-by. In one of the few cases in which gauges have been disturbed, ardent prohibition agents, finding an unfamiliar object made of copper, which they assumed to be a new kind of still, spoiled a six-month record of rainfall.

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