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? WHY THE WEATHER ?

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HOW MUCH DID IT RAIN?

The measurement of rainfall seems simple - merely catch it all in a tin can and measure its depth. But there are many sources of error which need to be eliminated. The rain gauge should catch all and only the water that, without eddying action around the gauge, would fall onto a piece of ground the same size. The gauge has to be above the ground splash, away from the spray off trees and buildings, and its rim must be kept horizontal. Evaporation must be limited to avoid error before the observer comes. Furthermore, the can must be deep enough to hold much rainfall. And the observer should be able to measure the depth readily, by such means as a cedar stick with exaggerated scale plunged into a rain receptacle that multiplies the depth. The Weather Bureau uses a brass tube about  $2\frac{1}{2}$  inch diameter inside the 8 inch funnel to provide a depth 10 times the fall. The funnel is a cover helping to prevent loss by evaporation. In winter great difficulties arise in trying to get the depth and water content of drifted snow. In regions where there is a fair amount of snow each winter, the winter and annual totals of rainfall are likely to be somewhat inaccurate, in spite of the use of reasonable care.

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(Tomorrow: Physical Bases of Climate)

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