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A Science Service Feature

? WHY THE WEATHER ?

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EVAPORATION

It is estimated that something like sixteen million tons of rain and snow falls upon the surface of the earth, on an average, every second. Day after day, year after year, and century after century this prodigious downpour goes on; yet the oceans get no fuller, the land, as a whole, gets no damper, and—strangest of all—the atmosphere, despite this tremendous drainage of its moisture, gets no drier. The explanation of the paradox is, of course, found in the process that we call evaporation.

Everybody knows, in a general way, that the waters of the earth evaporate, but few people realize that the amount of evaporation occurring throughout the world is, in the long run, exactly equal to the world's rainfall. For every ton of water that falls upon the globe a ton passes off, in the form of a gas or vapor, into the air, though not, as a rule, at the same place where it fell. The oceans, lakes and rivers generally lose a good deal more water by evaporation than they receive directly as rain. The lands, for the most part, lose less by this process, though a tract of land covered with luxuriant vegetation, especially with forests, vies with a corresponding area of water in the amount of moisture it supplies to the air, because plants gather water underground with their far-spreading roots, pump it ^{up} through their stems and trunks, and breathe it out through their innumerable pores.

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