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A Science Service Feature

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? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University,
discusses:

SOURCES OF RAINFALL

Of all the precipitation that falls over land areas, only about two ninths, it is estimated, is derived directly from evaporation over the ocean. Moisture for the rest must be obtained by evaporation from land surfaces.

Different types of land surfaces vary greatly in their ability to evaporate moisture. If water is not evaporated and returned to the air, it eventually is drained off into the ocean or other body of water. The leaves of deciduous trees afford such a large evaporating surface that an acre of forested land is capable of giving off moisture into the air more rapidly than even a pond of equal area. Among land surfaces the cultivated field ranks next to the forest as an evaporator, and grass-land third. Bare ground is wasteful of the rain which falls on it, allowing most of the water to run off and returning very little to the air to provide future rain.

The heavy forests of our southeast must supply much of the moisture for summer rains in the middle west, to leeward. But some of this moisture comes from local sources, as little of the rain falling on the western plains runs off; most of it flies off, largely to be precipitated again. Thus, it has been estimated that all the water which flows past St. Louis in the Mississippi is no more than the total rainfall over Missouri alone.

(Tomorrow: St. Swithin's Day)

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