

A Science Service Feature

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? WHY THE WEATHER ?

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RAINFALL OF THE EAST

Of the well watered eastern half of the United States, Professor W.M. Davis says:  
"The world hardly contains so large an area as this so well adapted to civilized occupation."

The rainfall of the United States east of the Rockies seems to come from moisture originally derived from the Gulf of Mexico and the Atlantic Ocean; and, judging from the distribution of rainfall, the Gulf of Mexico is of primary importance. From the heavily watered north Gulf coast, where the rainfall is 60 inches a year, the amount decreases inland, slowly to the north, but rapidly to the northwest and west. East of the Appalachians the moisture from the Atlantic keeps the country well supplied, the rainfall being generally 45-50 inches in the south, and 40-45 in the north. The effect of the Appalachians is to increase the rainfall on the borders, but to decrease the rain in the interior, of the mountain region. Thus there are local maxima of over 50 inches on the slopes well exposed to moist winds; but minima of less than 40 inches in the valleys. The extremes are over 80 inches on the exposed southern face of the Appalachians where North Carolina, South Carolina and Georgia meet; and under 30 inches in the enclosed Champlain valley.

Without the abundant moisture which sweeps <sup>westward</sup> ~~upward~~ unobstructed all the way from the Gulf of Mexico, the Great Lakes could <sup>hardly</sup> exist. Since they are present, they exert a local effect on the climate; and increase the rainfall by perhaps 5 inches. Contrasts between windward and leeward shore rainfalls are not marked, for the light precipitation which occurs frequently with the cool westerly winds, and the heavy rainfall which comes with the less frequent easterly winds nearly balance.

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