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A Science Service Feature

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? WHY THE WEATHER ?

Dr. Charles F. Brooks,
Secretary, American Meteorological Society
discusses:

THE SEA BREEZE

Residents of the narrow strip lying within a few miles of the Atlantic Ocean or the Great Lakes regard the lake or sea breeze, or east wind, as it is often called in the North Atlantic cities, as one of their blessings. Each quiet hot summer day, as the heat grows intense, a cool wind springs up, coming from over the water and, when from the ocean, scented with the odor of the seashore. It is wonderfully refreshing, especially to residents of cities. The hotter the day the stronger is the sea breeze, for its cause is the contrast between land and water temperatures.

On such a day the hot sun heats the earth and this in turn heats the air. The heated air expands, and some of it spills over above the denser air over the water, lowering the pressure over the land and raising it over the water. In consequence of the difference in pressure so created, the flow of cool air from the sea starts in, first at surface level and gradually extending to greater heights as the heated air over the land continues to flow out to sea, aloft.

The influence of this phenomenon extends comparatively few miles inland, as a rule. As in quiet weather the intensity of the breeze depends upon the degree of contrast between land and ocean temperatures, quite naturally fresher breezes blow from the cold water off the New England coast, than from the warmed water off the shores of the southern states.

(Tomorrow: Wet and Dry Moon Fallacy.)

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