

A Science Service Feature

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? WHY THE WEATHER ?

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By Charles Fitzhugh Talman,
Authority on Meteorology.

HOW DUST IS RAISED

While there are many agencies that help to charge the atmosphere with dust, the most important of them all is the wind. Let us see what happens when the wind blows over the surface of a dusty road, for example. If the air flowed in a smooth horizontal stream over such a surface, its friction would drag the dust along the ground, but would not lift it. Such surface drifting, due to the horizontal component of the wind's motion, does, of course, occur, and its effects are strikingly visible in the shifting dunes that often form over a broad surface of sand or snow. All winds near the earth's surface are, however, full of waves and eddies, and in many cases, as over a stretch of strongly heated soil, there are strong updrafts, sometimes extending to a great height in the atmosphere. All kinds of dust are heavier than air, and, contrary to popular belief, never truly "float" in the atmosphere. Dust may enter the atmosphere at high levels, through the disintegration of meteors; or it may be spouted up by volcanoes, but dust blown up from the earth's surface rises only because the air is rising with it; and, in still air, all dust sinks more or less rapidly toward the ground. The rate of its fall depends upon its specific gravity, and upon the size and shape of the dust particles.

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