

A Science Service Feature

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? WHY THE WEATHER ? Mailed March 24, 1933

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A TYPICAL DUST HORIZON

A false horizon, above the real one, due to the presence in the lower atmosphere of a layer of dust having a well-defined upper boundary is called the "dust horizon." For obvious reasons it cannot be seen by a person who is enveloped in the dust layer, but becomes visible above the latter and may therefore be observed from a mountain or from aircraft. How it came into view at an altitude of a mile above the earth during a summer morning ascent in an airplane is told as follows by Dr. Matthew Luckiesh:

"In the distance the horizon is invisible, the earth is gradually blending into the sky as it is blotted out by the increasing depth of haze which is encountered in oblique vision. No earth horizon is visible owing to the accumulation of smoke and dust-haze carried upward by the convection currents induced by the hot earth below. Then at an altitude of about one mile a horizon appears; it is that of the floating haze and this altitude marks the upper limit of the upward diurnal convection air-currents in this case. An unbroken haze horizon presents itself on all sides as though a surrounding sea had been lifted vertically one mile. In the distance a few cumulus clouds sleepily rear their cauliflower heads out of the haze like nearly submerged icebergs. In the oblique sunlight the colors of the haze are delicate pastel tints of blue, pink, and purple, but the crowns of the distant clouds are brilliantly yellow-white against the deep blue sky."

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