

A Science Service Feature

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? WHY THE WEATHER ? Mailed November 21, 1929.

By Charles Fitzhugh Talman,
Authority on Meteorology.

THE DUST HORIZON

Travel by air is making familiar to many people the phenomenon known as the "dust horizon;" a sort of false horizon formed above the true one and marking the upper boundary of a layer of dust in the lower atmosphere. It is best seen from a lofty vantage point, and is usually a straight line. Sir Napier Shaw says of this phenomenon:

"It marks the top of the layer of air, generally but not always the surface layer, which contains sufficient dust to differentiate it from the layer above by a well-marked boundary. The conditions are favorable for its appearance when the surface layers are comparatively free from eddies."

Another condition favoring the appearance of this line is the existence of what meteorologists call a "temperature inversion;" i.e., a layer of air near the earth's surface colder than the air above it.

In the Punjab hill stations, in India, this boundary line between chilled air below and warmer air above is a familiar sight in October, after the season of the "rains," when the soil becomes dry enough to form dust, and as its appearance ushers in the cool season it is called the "cold weather line."

Ellsworth Huntington describes a similar phenomenon seen from a lofty mountain slope on the southwest of the Tarim basin, in central Asia. He says:

"Our gaze went out far beyond (the lower mountains) to where the last low hills gave place to a strange yellow band. It seemed at first to be the sandy desert of the heart of Asia; but during the two hours of our stay on the pass it expanded and rose, and we then knew it for the inevitable dust haze which shrouds the country more than half the year."

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