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? WHY THE WEATHER ?

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THE LINE SQUALL

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The line-squall is a squall of great length and little breadth, which advances broadside-on over land and water. It is often hundreds of miles long but is so narrow that at any particular place its effects are felt but a few minutes, though the total life of the squall may amount to twenty-four hours or more. Besides a sudden brief acceleration of the wind, characteristic of all squalls, the line-squall brings a marked shift of wind direction, a slight rise in the barometer and a decided fall in temperature. Usually a long straightish roll of cloud, often very ragged at the lower edge, extending across the sky, is seen advancing and passing overhead, but this characteristic cloud is sometimes obscured by the general cloud masses. The passage of the squall is generally attended by rain, hail or snow, and frequently by thunder and lightning.

Such squalls are due to the wedge-like intrusion of a mass of cold air under a mass of warm air, and they occur mainly though not exclusively along the trough of a traveling barometric depression; corresponding, according to the new views of meteorologists, to the "cold front" between polar and equatorial air currents. Some, on the other hand, are not associated with traveling depressions, but are due to a similar encounter of two air currents differing in temperature on account of blowing from unequally heated areas of land or water. To the former class of line-squalls belong the pamperos of the River Plate region and the southerly bursters of the southeast Australian coast; to the latter, the sumatras of Malacca Strait, which occur when air cooled by nocturnal radiation flows down from the mountainous interior of the Malay Peninsula and meets the warm air over the strait.
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