

A Science Service Feature

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? WHY THE WEATHER ?

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CLOUDS FORMED BY MOUNTAINS

When a stream of moist air is forced to ascend in passing over a mountain the air cools by expansion and some of its moisture may condense to form a "cloud cap" over the summit. In local weather lore such caps are generally regarded as portents of rain. These caps attached to mountains were called "parasitic clouds" by scientific writers of a century or more ago, and some curious explanations of them were proposed. Occasionally a "cloud banner" streams far to the leeward of a mountain.

One of the most famous and striking of cloud caps is the "Tablecloth" that spreads over Table Mountain, near Cape Town, when a moist wind blows in from the sea. Sometimes the local topography causes the wind that has swept over a mountain to form a second stationary wave to the leeward of the summit, and this may also be marked by a cloud, which, like the cloud cap, presents a delusive appearance of permanence, while it is, in reality, in constant process of formation on the windward side and dissipation on the leeward. The two clouds thus formed, one over the summit and the other to the leeward, are often seen at Table Mountain, and are further exemplified in the celebrated "Helm and Bar" of Crossfell, in the English Lake District.

In the case of a wind blowing athwart a ridge or mountain range, a bank of cloud may form along the whole crest. Such is the "foehn wall" that appears along Alpine heights when the foehn wind is blowing.

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