

A Science Service Feature

Released upon receipt
but intended for use
June 3, 1935

? WHY THE WEATHER ?

Mailed May 27, 1935

AIR AVALANCHES

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Gases, as well as solids and liquids, can slide downhill. The rapid descent of a mass of snow on a mountainside is called an "avalanche" or a "snowslide." The equally rapid descent of a mass of air is sometimes described by meteorologists as an "air avalanche." The phenomenon thus named should not be confused with the blast of air in front of a snow avalanche, which is called the "avalanche wind."

On a calm night, under a clear sky, a bare mountaintop loses heat by radiation and may become intensely cold. The air grows denser, and heavier, volume for volume, as it cools. Sometimes this happens so rapidly that, if an adjacent slope is free from obstructions, the mass of cold, dense air rushes downhill, instead of spreading down gradually.

Violent air avalanches are sometimes experienced in the Alps and they have been encountered by exploring expeditions on the slopes of mountains in equatorial Africa, including Mount Ruwenzori, where, in 1908, the camp of a party engaged in a geodetic survey was swept away by one of these torrents of air.

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