

A Science Service Feature

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? WHY THE WEATHER ?

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RIME

The deposits of white rough ice that grow out to windward of objects exposed to drifting fog or cloud when the temperature of the air is below freezing are known to science as "rime," and the most striking examples are seen on mountains open to the winds. Dr. Alexander Buchan has thus described such deposits as observed on the summit of Ben Nevis, the highest mountain in the British Isles:

"The forms and arrangements of the crystals vary with the surface to which they adhere, but all belong to the feathery or fir-cone type, the branches lying at an angle of 30 degrees, with the main axis pointing to windward. On a flat board they gather first and most abundantly near its edges, forming a beautiful border round it, while the centre remains clear, thus suggesting interesting conclusions regarding the relative velocities of the wind at different points of the board. On the other hand, a round post shows an almost uniformly disposed mass of crystals all over its windward half, and so accurately do they point to windward, that it is possible to trace changes in the direction of the wind from the successive layers of crystals at different angles.

"The rate of growth of the crystals varies with the density of the fog and the speed of the wind. For the winds and fogs of most usual occurrence a growth of about half an inch per hour is the average, but under exceptionally favorable conditions 2 inches per hour has been reached. With a damp feeling in the air, the crystals are icy and hard; but with a temperature considerably under 32 degrees the crystals are looser in texture, and are easily brushed away. On one occasion, during the winter of 1884-85, a post 4 inches square grew into a slab of crystalline snow of about 5 feet broad and 1 foot thick in less than a week, strong southeasterly winds with low temperatures prevailing during the whole time."

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