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? WHY THE WEATHER ?

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HEARING BETTER THAN SEEING IN FOGS

One of the most impressive features of a fog is the abnormal audibility of sounds. One could almost say, the worse the seeing, the better the hearing. Distant noises rarely noticed on clear days sound startlingly near in a fog. It seems as if the fog were an amplifier.

The fog itself is, however, merely a normal accompaniment of the inversion of temperature that favors abnormal propagation of sound through the lower air. An inversion of temperature means simply that the temperature is lower near the ground than higher up. This is the reverse of usual conditions, and favors wide audibility in two ways. First, the sound waves rising into the higher and warmer layers travel faster than those going more horizontally in the colder air below, and thus these higher portions tend to bend back to the ground, instead of going off in straight or upward curved lines. All portions of the sound waves going off at but moderate angles from a horizontal may thus be returned to earth as if by reflection. Second, where the air is coldest and densest at the bottom, it is stable and not broken up into masses differing in density at the same level. Such diverseness of the air usually tends to bend the sounds in different directions and disperse them.

(Pick up one column cut in matrix form.)

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