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? WHY THE WEATHER ? Mailed March 9, 1935

MUSIC IN THE AIR

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Among the mysteries of atmospheric acoustics are the many reported cases of musical sounds heard in the air in places where there are no obvious sources of such sounds. In many but not all of these cases the sounds are recognized to be the echoes of sounds that are not musical; such as a shout, the firing of a gun, the breaking of waves on a beach, the roar of a river, or the noise of a motor.

Musical echoes of non-musical sounds are described in the textbooks, but only those produced when the irregular sound-waves of a noise are converted into a series of regular vibrations on account of being reflected by objects, such as steps or fence palings, spaced at uniformly increasing distances from the source. In the cases above mentioned the sounds are apparently reflected from quite irregular groups of objects, such as the trees of a forest or the rugged face of a cliff.

Several such musical echoes were encountered in the forties of the last century in the Maine woods and on the shores of Lake Superior by Dr. Charles T. Jackson, and his experiences inspired a long and beautiful passage in the poem "May Day," by Ralph Waldo Emerson. A number of other striking cases have since been reported.

The weird sounds that are frequently heard over the lakes of Yellowstone National Park are sometimes musical but often otherwise. They are not known to be echoes. Some of them, at least, are probably sounds of distant origin that seem to come from near at hand because of a state of the atmosphere known as a "temperature inversion" (i.e., an increase of temperature upward, in place of the more usual decrease).

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