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? WHY THE WEATHER ? Mailed September 15, 1930.

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THE CHIEF FACTOR IN FIRE WEATHER

Science has learned much in recent years about the relations of atmospheric conditions to forest fires. The subject is complex, but undoubtedly the outstanding discovery is the fact that, of all the weather elements, relative humidity exercises, as a rule, by far the greatest control over the spread of fires.

Formerly rain and snow were looked upon as the elements of weather chiefly valuable in protecting the forest from fire, while drought and wind were regarded as the greatest fire hazards of atmospheric origin. Snow protects the forests as long as it lies on the ground, but the U.S. Forest Service has reported cases in which, with deep snow lying under the trees, open places, free from snow, were found to be covered with highly inflammable grass and weeds. Rain is a protection while it lasts, but if the humidity is low the forest fuels dry very rapidly after a shower.

A protracted drought does not make the forest litter dry and inflammable if the humidity of the air remains high. Wind tends to increase the fire hazard through spreading the flames and scattering embers, and also because, other things being equal, evaporation increases with wind velocity; but if the wind is moist it will, instead of fanning the flames, tend to hold the fire in check. A very damp wind may even act as a fire extinguisher.

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