

strata of air, they deposit moisture upon it, because it is relatively cold, having in fact the temperature of a higher region."

A curious though common illustration of this theory has occurred to me while traversing the north-western part of Yorkshire, where I have seen a shower fall at the same moment on a mountain and on the lower ground round it. On the former it fell as small hail; on the latter it was rain;—the drop started as ice, and before reaching the lower ground was melted—having, no doubt, increased in weight during the fusion. I believe that a considerable proportion of our ordinary rain commences its descent in a frozen state; that snow is often the parent of rain; and that hail is not congealed rain more frequently than rain is melted hail.

Such experiments as these on York Minster have been made in many other situations, seldom so free from objection. The results are generally of the same kind, but often the effect of eddy winds is so great as to complicate and exaggerate the effect. All buildings are in some degree objectionable as supports for rain-gauges, for they generate strong deflections of the air.

Desirous of knowing how far we could obtain sensible results at much smaller elevations *free from buildings*, I tried, some years ago, many experiments in my garden with five gauges placed at $1\frac{1}{2}$, 3, 6, 12, and 24 French feet above the surface. The results obtained in parts of two years, viz. January 9 to October 14, 1843, and January 1 to September 2, 1844, which were read off for me by Mr. Cooke, are appended.

French feet above surface.	1843.	1844.
	inches.	inches.
24.....	14·618	9·540
12.....	15·419	10·620
6.....	15·549	10·640
3.....	15·608	10·690
$1\frac{1}{2}$	15·619	10·940