

on high ground, gave the following results, recorded by Mr. Bateman (*Manchester Memoirs*, 1845):—

	Near Glossop. 300 ft.	Head of Hurst Brook Valley. 1500 ft.	Head of Ashopdale. 1600 feet.	Near Hathersage. 300 feet.
	inches.	inches.	inches.	inches.
1839.	44·5	64·0	.....	.....
1840.	45·2	63·0	74·8	38·8
1841.	.....	72·6	80·1	42·9

It is to be regretted that so few observations of this interesting kind have found their way to the Proceedings of our Local Philosophical Societies. By observations continued for three years at York by Mr. Gray and myself, with a variety of gauges, it is found that the quantity of rain collected at different heights above the surface grows less continually as we ascend to a height of above 200 feet. The ground in front of the Museum, the top of the Museum 43·66 feet above it, and the top of a pole elevated 9 feet above the great tower of the Minster, which is itself 203·83 feet above the lowest gauge, were the three stations chosen. The quantities of rain collected from February to February were as follows (snow excluded):—

	Minster.	Museum.	Ground.
	inches.	inches.	inches.
1832-3.	15·715	20·182	23·785
1833-4.	14·963	19·852	25·706
1834-5.	8·294	12·135	15·939

The differences in the quantities of rain at the different elevations are found to vary with the season of the year. If we express the quantity on the ground always by the number 100, and class the results in warm and cold months, we have the following table:—