Summary of the state of the barometer, &c., in Kendal, 1833

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Summary of the State of the Barometer, &c., in Kendal, 1833.

Months.	Barometer.			Thermometer.			Quantity of Rain in Inches.	Wet Days.	Prevalent Winds.
	Max.	Min.	Mean.	Max.	Min.	Mean.			
Jan.	30·47	29·25	30·02	41°	19°	31· ⁴⁶ ₀₀	1·628	5	w.
Feb.	29·92	28·58	29·21	48	28·5	39·78	4·582	22	w.
Mar.	30·16	28·52	29·69	51·5	28	38·66	2·070	12	n. e.
April.	30·07	28·84	29·52	60·5	33	44·91	3·754	22	s. w.
May ...	30·26	28·99	29·89	69·5	38	57·37	2·534	11	w.
June.	30·03	29·26	29·56	73	36	55·72	7·715	20	w.
July ...	30·28	29·33	29·79	72·5	45	59·72	2·333	14	w.
Aug.	30·27	28·96	29·76	69	40·5	55·35	1·966	11	n.
Sept.	30·18	29·03	29·68	67	35	52·65	3·527	13	w.
Oct.	30·04	28·88	29·59	61	28	47·76	3·752	15	w.
Nov.	30·05	28·50	29·61	56·5	26	42·21	7·438	21	w.
Dec.	29·84	28·77	29·33	51·5	27·5	41·75	14·219	27	w.
Annual Means, &c.	30·13	28·91	29·64	60·08	32·04	47·03	55·418	193	w.

The annual mean of the barometer is very near the average of the last 11 years, and the mean temperature under that of the same period. The quantity of rain is within an inch of the average for the preceding 11 years, this average being 56·309 inches. In four years only out of the preceding 11 was there less than in 1833, viz. 1826, 1828, 1829, and 1832. The year 1826 was by far the driest year, both as regards the number of rainy days and the quantity of rain measured, the quantity being but 43·060 inches. In 1822, 1823 and 1824, we had 62·726, 62·749 and 62·762 respectively. In 1823 there were 198 rainy days, and in 1826, 147. But in the period alluded to there has been no year, except 1823 and 1830 (in which 194 wet days occurred), equal to 1833 in the number of rainy days. Till the middle of October, or even the beginning of November, we had much less than our usual quantity of rain, since which time there has been almost continued rain, for out of the 61 days in November and December, we had 48 rainy days, 27 of which occurred in December. In these two months, it will be observed, we had 21·657 inches, a quantity equalling, if not exceeding, the annual amount which falls in the neighbourhood of the metropolis.

During the year 1833, the quantity of rain which fell at Birklands, the residence of E. W. Wakefield, has been measured, with an account of which he has obligingly furnished me. The situation of Birklands is about a mile from the site of my rain-gauge, and the elevation above it, as measured by the barometer, is 30 yards, and yet, from this variation in the level of the two places, there have been 3·999 inches less rain at Birklands than at Kendal. This circumstance proves, what is already well known, that a less quantity falls in high situations than in the adjacent valleys. Taking, however, the monthly quantities at each place, it does not always happen that a less quantity of rain falls at Birklands than at Kendal; i.e. in January, April, May, July, August, and September, (6

months out of the 12,) more rain was measured in each of these months at Birklands than at Kendal. In comparing the quantity taken at each place, it appears that when large quantities of rain fall, the difference is greater than when small ones are measured. In several instances, especially when the quantity is small, E. W. Wakefield takes more than I do in Kendal; but in comparing one month after another, it appears that the *daily* quantity is less at Birklands than at Kendal. The apparent discrepancy between the two accounts which sometimes occurs in the daily quantity of rain taken, under the same circumstances, arises, I am inclined to think, from our measuring the quantity at different hours, probably when heavy rain is falling, by which means, he may appear to take a larger than I have done on any particular day, from including one or even two hours more rain. In the six months in which the rain taken at Birklands exceeds that at Kendal, the weather was less windy; but I am not sure that this circumstance will satisfactorily account for the increased quantity. In the wettest month, December, the quantity measured at Birklands was 12·390 inches, or nearly two inches less than at Kendal, and in November 6·308, or above one inch less. These were by far the most windy and boisterous months in the year, as the dreadful loss of shipping on our coasts lamentably proves.

As I am aware that considerable interest exists in different parts of the kingdom among scientific men respecting the meteorology of Kendal, I annex an account of the quantity of rain, which I have carefully measured during the last 12 years, the average of which period may be fairly considered as the mean quantity which falls in Kendal. In 1822 there were measured 62·726 inches.

1823	_____	62·749
1824	_____	62·762
1825	_____	59·973
1826	_____	43·060
1827	_____	58·006
1828	_____	54·816
1829	_____	46·173
1830	_____	58·030
1831	_____	61·416
1832	_____	49·688
1833	_____	55·418

the average of which is 56·235 inches. On reviewing the past year, I may remark, that January was an unusually dry month, five days of which only were wet ones. February was a very wet one. The next three months were particularly dry, and the weather genial. The greater part of June was wet, but July, August, September, and the early part of October, were dry, and we had no frost from the 30th of March to the 9th of October. The remaining part of October, and nearly the whole of November and December, were extremely wet. We have not had many appearances of the aurora borealis during the year. The first appearance of it was on the 12th of September. In that and the following month it was repeatedly seen, and once in December. SAMUEL MARSHALL.

Kendal, 19th 2nd Month, 1834.