



On the Strength or Pressure of the Wind at Sabona, Recorded Daily by Herr Dreher in the Ten Years 1880 to 1889

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are still in position, running down the centre of the double vault and supporting the roofs, whilst in the present south wall of the southern portion of the double vault I detected a similar capital peeping through a mass of rubble masonry now serving as the south wall, but which probably encases a second similar colonnade running parallel to the other. The southern portion of the double vault seemed to me to be considerably broader, though not much higher, than the northern portion running alongside it, whilst in the yard of the mosque there is a good masonry pier with the spring of an arch on its northern face near its present top. I can therefore not help thinking that in these remains, which I hope Mr. Schick will in due time plan and report on, we have portions of the central nave and northern aisle of the church of St. Martin, and in the pier in the mosque-yard and capital, peeping (as above described) through rude masonry, vestiges of the southern aisle, part of which latter is in all likelihood incorporated into the mosque itself. The bases and pedestals of the four columns separating the northern aisle from the central nave are buried, probably to the depth of 5 feet or 6 feet, in *débris*, their capitals being at present about 4 feet above the ground. The intercolumnar spaces at the present eastern and western ends of the double vault had been, at some time or other, blocked up with rude masonry, and transverse rubble walls built so as to form rooms; but these walls have fallen into ruin, and are now in some places removed, so that one can see from end to end of the place. In the northern aisle there is a heavy circular stone trough, perhaps at one time belonging to a font. I did not notice traces of an apse. Mr. Lees has kindly promised to try to photograph the interior of the vault for the Fund.

ON THE STRENGTH OR PRESSURE OF THE WIND AT SARONA, RECORDED DAILY BY HERR DREHER IN THE TEN YEARS 1880 TO 1889.

By JAMES GLAISHER, F.R.S.

(Continued from January "*Quarterly Statement*," p. 63.)

ON THE PRESSURE OF THE WIND IN STRONG WINDS AND GALES AT SARONA, FROM THE YEAR 1880 TO 1889.

By collecting all pressures of estimated strength 2 and higher, independent of direction, the next table, showing the frequency of strong winds for the different months of each of the years 1880 to 1889, was formed:—

TABLE XXXIV.—Showing the number of winds estimated 2 and higher, in every month in the ten years, at Sarona :—

Months.	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	Sums.
January	3	3	2	4	4	6	4	7	3	2	38
February	4	11	5	4	6	1	5	5	4	3	48
March	6	9	2	4	3	1	7	5	9	7	53
April	6	9	7	0	5	3	2	6	9	2	49
May	1	3	2	0	2	2	3	1	5	1	20
June	3	0	1	0	3	5	1	2	4	0	19
July	0	2	1	0	2	3	2	0	0	1	11
August	0	1	0	0	1	4	2	4	0	0	12
September	3	1	0	2	1	1	4	1	0	1	14
October	1	1	5	1	1	5	3	0	2	1	20
November	5	8	1	2	3	3	3	0	1	4	30
December	8	0	3	3	1	5	3	3	3	6	35
Sums	40	48	29	20	32	39	39	34	40	28	349

From this table we see that in many months, chiefly in the summer, the pressure of the wind has always been less than the estimated value 2, and that in many other months there have been but one instance in the month of this pressure having been experienced. The month with the greatest number of strong winds is February, 1881, and the next in order are March and April, both in the years 1881 and 1888.

The numbers in the last column show the number of winds of estimated strength 2 and above, in the ten years; the smallest numbers are 11, 12, and 14 in the months of July, August, and September respectively, and the largest numbers are 48, 53, and 49 in the months of February, March, and April respectively.

The numbers at the foot of the column show the number of such estimated winds in each year; the year with the smallest number, 20, was 1883, and the next in order of fewness were 1889 with 28, and 1882 with 29. The year with the largest number is 1881 with 48, and the next in order are 1880 and 1888, both with 40. The total number of such winds in the ten years was 349.

By collecting all pressures whose estimated force was 2 or higher, under each direction of wind in each year, the following table was formed :—

TABLE XXXV.—Showing the number of strong winds of 2 and above, in each direction in the ten years, at Sarona :—

Years.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Sums.
1880	0	1	2	3	10	13	10	1	40
1881	2	0	4	2	12	15	11	2	48
1882	0	0	3	4	7	12	2	1	29
1883	5	0	2	0	4	6	3	0	20
1884	1	0	1	1	10	8	9	2	32
1885	4	2	2	2	7	16	5	1	39
1886	1	0	1	0	14	14	6	3	39
1887	1	0	2	1	5	17	8	0	34
1888	1	0	1	3	5	20	9	1	40
1889	0	0	2	1	11	12	1	1	28
Sums ..	15	3	20	17	85	133	64	12	349

From this table we see that there was no instance of a strength of wind of estimated force 2 :—

From the N.	....	....	....	in the year	1880.
" N.E.	....	....	....	"	1881.
" N. and N.E.	....	....	....	"	1882.
" N.E., S.E., and N.W.	....	....	....	"	1883.
" N.E.	....	....	....	"	1884.
" N.E. and S.E.	....	....	....	"	1886.
" N.E. and N.W.	....	....	....	"	1887.
" N.E.	....	....	....	"	1888.
" N. and N.E.	....	....	....	"	1889.

The largest number of instances of such winds—

In 1880	was 13	from S.W.
1881	" 15	" S.W.
1882	" 12	" S.W.
1883	" 6	" S.W.
1884	" 10	" S.
1885	" 16	" S.W.
1886	" 14	" S.W. and S.
1887	" 17	" S.W.
1888	" 20	" S.W.
1889	" 12	" S.W.

The numbers at the foot of the table show the total number of instances of such winds of such strength in the ten years. The smallest

number is 3 under north-east, the next in order is 12 under north-west, and 15 under north. The largest number is 133 under south-west, the next in order are 85 with south, and 64 with west. In the ten years the south, south-west, and west winds number 282 of the strong winds out of the 349, the total number, thus leaving 67 only for the remaining directions.

By collecting all strong winds in each year, and arranging them under the different estimated strengths, the next table was formed.

TABLE XXXVI.—Showing the number of strong winds of 2·0 and above 2·0 in estimated strength in the ten years, at Sarona :—

Years.	Estimated strength of the Wind.								Sums.
	2·0	2·5	3·0	3·5	4·0	4·5	5·0	6·0	
1880	23	3	7	0	3	0	3	1	40
1881	30	3	10	0	5	0	0	0	48
1882	15	5	6	0	3	0	0	0	29
1883	9	3	4	0	3	1	0	0	20
1884	18	2	3	4	1	3	1	0	32
1885	23	2	7	0	6	0	1	0	39
1886	23	4	6	1	2	1	1	1	39
1887	26	1	2	0	4	1	0	0	34
1888	20	8	8	0	4	0	0	0	40
1889	22	0	6	0	0	0	0	0	28
Sums	209	31	59	5	31	6	6	2	349

From this table we learn that in the years 1881, 1882, and 1888, that the greatest pressure of the wind was the estimated force of 4, and that the greatest pressure in the year 1889 was estimated as 3, of which there were six instances. So that two or three years together may pass without a greater strength of wind than estimated 4.

It is to be noted that the year 1886 is the only one with a number under all the different pressures.

The number of instances of estimated force 2 outnumbers all the other pressures; the greatest number in one year was 30, in 1881, and the least was 9, in 1883. The total number under 2, in the ten years, was 209, leaving 140 for all other pressures, of which six appear under 5, and two under that of 6.

The high pressure of 5 took place three times in 1880, viz., on March 15, from the west; on December 8, from the west; and on December 13, from the south-west: the next instance was in 1884, on

January 21, from the west; the next in 1885 on May 22, from the north; and in 1886, on January 4, from the south. The instances of the strength as 6, are two in number, viz., the first in 1880, on October 18, from the west, and the second in 1886, on January 5, from the north-west; on the day preceding, January 4, the wind was from the south with strength 5. On all these dates the weather is described as stormy or terribly stormy, and generally accompanied with thunder and lightning, I am inclined to think that both the estimated numbers 5 and 6 are over-estimated, for there is no mention of uprooting trees or damaging buildings in the journals on these days. Of these eight gales, four were from the west, one from south-west, one from south, one from north, and one from north-west, and three took place in January, two in December, one in March, one in May, and one in October. So that in these ten years no heavy gale has taken place in the months of February, April, June, July, August, September, or November.

NARRATIVE OF A SECOND JOURNEY TO PALMYRA,

including an exploration of the Alpine regions of Lebanon and Anti-Lebanon, and the southern half of the Nusairi Chain.

By Rev. GEORGE E. POST, M.A., M.D., F.L.S.

(Continued from January "Quarterly Statement," p. 43.)

Wednesday, August 6.—We left Bibnîn at 7 a.m., passing by the fountain from which flows the limpid stream by which we had encamped. We then struck over the foot-hills in a direct course to *Judaideh* and *Zohr-el-Husein*. From these villages a fine view is obtained of *Jebel Turbul*. This outwork of Lebanon is a peak about 2,000 feet high, separated from the *Dunnîyeh* by the broad valley of the north branch of the Kadisha River. From its isolated position it is one of the most prominent points of the landscape from every part of the plain of 'Akkâr, as well as from Tripoli, and from all the commanding shoulders of the *Dunnîyeh* itself. The stratification of its limestone rocks is singularly plaited and twisted.

From *Zohr-el-Husein* we plunged into the deep gorge of the Nahr-el-Bârid, just below where its north and south forks join to form the main stream. The views looking up the gorges, with their numerous branch ravines and rugged mountain peaks, many of them heavily wooded, and backed by the giant mass of Makmel, recall some of the finest scenery of the Alps and the Tyrol. In the river valley we found a few peasants who put us on our track. We took a refreshing bath in the cool, clear water of the north branch, and then crossed the tongue of land which separates it from the turbid waters of the south branch, yellow with sediment brought down by the melted snow of Makmel. Crossing this