

In column 32 the monthly fall of rain is given. The heaviest fall of rain on one day in the months from January to April was 1·48 inch, on April 10th; and the next in order 0·95 inch on April 11th. No rain fell from May 16th till October 6th, making a period of 142 consecutive days without rain. The fall of rain on December 23rd was 0·92 inch, and 0·85 inch and 0·89 inch fell on the 10th and 11th respectively. The heaviest monthly fall in the year was 3·76 inches, in December, and the next in order, 3·04 inches in March. The total fall of rain for the year was 14·37 inches. At Jerusalem the total fall for the year was 23·25 inches.

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT JERUSALEM IN THE YEAR 1895.

By JAMES GLAISHER, F.R.S.

THE numbers in column 1 of this table show the highest reading of the barometer in each month; of these the highest, as usual, are in the winter, and the lowest in the summer months; the maximum for the year was 27·692 inches, in November, and the next in order, 27·687 inches, in January. The highest reading in the preceding 34 years, viz., 1861 to 1894 inclusive, was 27·816 inches, in December, 1879.

In column 2 the lowest reading of the barometer in each month is shown; the minimum for the year was 27·018 inches, in March, and the next in order, 27·079 inches, in April. The lowest reading in the preceding 34 years was 26·972 inches, in April, 1863, and February, 1865.

The numbers in the 3rd column show the extreme range of readings in each month; the smallest was 0·163 inch, in August, and the next in order, 0·184 inch, in July; the largest was 0·474 inch, in December; and the next in order, 0·458 inch, in April. The mean monthly range for the year was 0·327 inch. The mean for the preceding 34 years was 0·309 inch.

The range of barometer readings in the year was 0·674 inch. The largest range in the preceding 34 years was 0·742 inch, in 1872; and the smallest, 0·491 inch, in 1883.

The numbers in the 4th column show the mean monthly pressure of the atmosphere; the highest was 27·465 inches, in January, and the next in order, 27·455 inches, in November; the lowest was 27·247 inches, in August, and the next in order, 27·277 inches, in July. The mean yearly pressure was 27·382 inches. The highest mean yearly pressure in the preceding 34 years was 27·443 inches, in 1861, and the lowest, 27·358 inches, in 1892. The mean for the 34 years was 27·389 inches.

The temperature of the air reached 90° on May 23rd, and there were 4 other days in May when the temperature reached or exceeded 90°. In the preceding 13 years the earliest day in the year the temperature

was 90° was March 25th in the year 1888; in June it reached or exceeded 90° on 5 days; in July, on 9 days; in August, on 10 days; and in September, on 6 days; the 29th being the last day in the year of a temperature as high as 90° . In the preceding 13 years the latest day in the year this temperature reached 90° was October 23rd, 1887. The temperature reached or exceeded 90° on 35 days during the year. In the year 1892 the number of days of this high temperature was 23, and in 1887 was 73; the average of the 13 years was 40. The highest temperature in the year was 97° on both June 14th and September 22nd; the highest in the preceding 13 years, viz., 1882 to 1894, was 108° , in June, 1894.

The temperature of the air was as low as 30° on both January 19th and 20th; and was as low or lower than 40° on 24 other nights in January; in February on 14 nights; in March on 14 nights; in November on 1 night; and in December on 2 nights. Thus the temperature was as low or lower than 40° on 57 nights during the year. In the year 1892 the number of nights of this low temperature was 19, and in 1894 was 113, the average for the 13 years was 55.

The highest temperature of the air in each month is shown in column 5. In January it was $59^{\circ}2$, being the lowest in the year, and $1^{\circ}5$ below the mean of the 13 high day temperatures in January. The high day temperature was also below its average in April, June, July, August, October, and December, and above in the remaining months. The mean for the year was $84^{\circ}3$, being $0^{\circ}3$ above the average for 13 years.

The lowest temperature of the air in each month is shown in column 6. In January it was 30° , being the lowest in the year, and $1^{\circ}6$ below the average. The low night temperature was also below its average in February, March, May, June, August, September, October, and November; and above in April, July, and December. The mean for the year was $43^{\circ}2$, being $1^{\circ}1$ below the average of 13 years.

The range of temperature in each month is shown in column 7; the numbers vary from $29^{\circ}2$ in January to $48^{\circ}8$ in May. The mean range for the year was $41^{\circ}1$, being $1^{\circ}4$ greater than the average of 13 years.

The range of temperature in the year was 67° . The largest in the preceding 13 years was 81° in 1894; and the smallest, $63^{\circ}5$ in the year 1885.

The mean of all the high day temperatures in each month is shown in column 8. The lowest was $53^{\circ}8$ in January, being $2^{\circ}9$ higher than the average. The highest was $88^{\circ}2$ in both July and August, being $0^{\circ}2$ above its average in July, and 1° below in August. The mean for the year was $72^{\circ}3$, being $0^{\circ}1$ above the average of 13 years.

The mean of all the low night temperatures in each month is shown in column 9. The lowest was $36^{\circ}2$ in January, being $2^{\circ}2$ lower than the average; the highest was $64^{\circ}3$ in August, being $0^{\circ}1$ higher than the average. The mean for the year was $51^{\circ}2$, or $1^{\circ}1$ below the average of 13 years.

In column 10 the mean daily range of temperature in each month is

shown ; the smallest was $13^{\circ}3$ in December ; and the next in order, $17^{\circ}6$ in January ; the greatest was $25^{\circ}3$, in August, and the next in order $25^{\circ}2$ in September. The mean for the year was $21^{\circ}1$, being $1^{\circ}2$ greater than the average. The smallest ranges in the preceding 13 years were $9^{\circ}3$, in January, 1883, and $9^{\circ}7$, in December, 1890 ; the greatest were $33^{\circ}8$, in August, 1886 ; and $30^{\circ}1$, in the same month of 1887. The smallest mean for the year was $17^{\circ}8$, in 1883 ; and the greatest, $24^{\circ}3$, in 1886.

The mean temperature of the air, as found from the maximum and minimum temperatures only, is shown in each month in column 11 ; the lowest was 45° in January ; and the next in order, $50^{\circ}2$ in February ; the highest was $76^{\circ}3$ in July ; and the next in order, $75^{\circ}5$ in August. The mean for the year was $61^{\circ}8$ being $0^{\circ}5$ below the average of 13 years. The lowest mean temperatures in the preceding 10 years were $39^{\circ}8$, in January, 1890 ; and 42° , in December, 1886 ; the highest were $81^{\circ}2$, in August, 1890, and $81^{\circ}1$, in July, 1888. The highest mean for the year was $63^{\circ}7$, in 1885, and the lowest 60° , in 1894.

January was the coldest month of the year, and was below its average both by day and night ; the nights were mostly cold and below their average throughout the year.

The numbers in column 12 are the mean readings of a dry-bulb thermometer. If those in column 12 be compared with those in column 11, it will be seen that those in column 12 are a little higher in every month, the difference of the means for the year being $3^{\circ}8$; the mean difference between the mean temperature of the air and that at 9 a.m. for the 13 years was $3^{\circ}4$.

For a few days in the winter months the dry and wet-bulb thermometers read alike, or nearly so, but in the months from May to October the difference between the readings often exceeded 15° , and was as large as 19° on August 27th.

In column 13 the mean monthly readings of the wet-bulb are shown, the smallest differences between these and those of the dry-bulb were $2^{\circ}7$, in December, and $4^{\circ}2$, in March ; the largest were $10^{\circ}5$, in July, and $9^{\circ}7$, in September. The mean for the year was $58^{\circ}5$, and that of the dry $65^{\circ}6$; the mean difference was $7^{\circ}1$.

The numbers in column 14 are the temperature of the dew point, or that of the temperature at which the air would be saturated by the quantity of vapour mixed with it ; the smallest difference between these numbers and those in column 12, were $5^{\circ}3$ in December, and $8^{\circ}5$ in March ; and the largest were $17^{\circ}6$ in July, and $16^{\circ}6$ in September. The mean temperature of the dew point for the year was $52^{\circ}7$; the mean for the 13 years was $50^{\circ}1$.

The numbers in column 15 show the elastic force of vapour, or the length of a column of mercury in inches corresponding to the pressure of vapour ; the smallest was 0.229 inch, in January ; and the largest 0.604 inch, in August. The mean for the year was 0.414 inch ; the average of the 13 years was 0.374 inch.

In column 16 the weight in grains of the water present in a cubic

foot of air is shown ; it was as small as 2.6 grains in January, and as large as 6.6 grains in August. The mean for the year was 4.5 grains ; the average of 13 years was 4.1 grains.

In column 17 the additional quantity of water required to saturate a cubic foot of air is shown ; it was less than 1 grain in December, and more than 4½ grains in July. The mean for the year was 2.8 grains ; the average of 13 years was 3.4 grains.

The numbers in column 18 show the degree of humidity, saturation being represented by 100 ; the largest numbers appear in January, February, March, November, and December, and the smallest from April to October ; the smallest of all was 55 in July. The mean for the year was 64 ; that of the 13 years was 59.

The numbers in column 19 show the weight in grains of a cubic foot of air, under its mean atmospheric pressure, temperature, and humidity. The largest number was in January, decreasing to the smallest in July, then increasing to December. The mean for the year was 482 grains ; that of the 13 years being of the same value.

The most prevalent winds in January were N.E. and E., and the least were N. and S. ; the most prevalent in February were S.W., W., and N.W., and the least were N. and E. ; the most prevalent in March were W., N.W., and S.W., and the least were N. and S.E. ; the most prevalent in April were S.W. and W., and the least were N. and E. ; the most prevalent in May were N.W. and S.W., and the least were S.E. and S. ; the most prevalent in June was N.W., and the least were N., E., S.E., and S. ; the most prevalent wind in July was N.W., and the least were E., S.E., S., and S.W. ; the most prevalent in August was N.W., and the least were N., N.E., E., S.E., and S. ; the most prevalent in September and October were N.W. and N.E., and the least prevalent was S. ; the most prevalent in November were N.E. and N.W., and the least was S. ; the most prevalent in December was S.W., and the least was S. The most prevalent wind in the year was N.W., which occurred on 125 times, of which 22 were in August, 18 in July, and 17 in June, and the least prevalent wind was S., which occurred on only 6 times during the year, of which 2 were in March, and one in each of the months of February, April, May, and July.

The total number of times of each wind are shown in the last line of columns 20 to 27 ; those winds less in number than the average of the preceding 13 years were—

N.	by	14
E.	"	12
S.E.	"	14
S.	"	4

and those winds greater in number than the average of 13 years were—

N.E.	by	19
S.W.	"	7
W.	"	5
N.W.	"	13

The numbers in column 28 show the mean amount of cloud in each month; the month with the smallest amount is July, and the largest February. Of the cumulus or fine weather cloud there were 4 instances; of the nimbus or rain cloud there were 29 instances, of which 9 were in March, 6 in February, 4 in December, and only 1 from June to October; of the cirrus there were 23 instances; of the cirro cumulus 78 instances, of which 11 were in October, 10 in January, and 9 in both February and April; of the cumulus stratus 41 instances; of the cirrus stratus 32 instances; of the stratus 3 instances; and 155 instances of cloudless skies, of which 27 were in July, 26 in August, and 19 in June, and 4 only in both February and March.

The largest fall of rain for the month in the year was 7·24 inches, in December, of which 2·28 inches fell on the 12th, 2·24 inches on the 24th, 1·26 inch on the 13th, and 1·23 inch on the 11th. The next largest fall for the month was 5·94 inches, in March, of which 1·20 inch fell on the 25th, 1·13 inch on the 29th, and 1·05 inch on the 10th. No rain fell from May 17th till October 8th, making a period of 143 consecutive days without rain. The total fall of rain for the year was 23·25 inches, being 2·43 inches below the average of 34 years, viz., 1861 to 1894. The number of days on which rain fell was 52, being 3 less than the average.

Note by Sir CHARLES WILSON, on the Mosaic at Mâdeba (p. 213).

"SPECIAL interest attaches to the plan of the City of Jerusalem given in the mosaic. It is difficult to read the plan from the photographs, but it apparently gives a street lined with columns running from the Damascus Gate to the old Sion Gate, another down the valley, *el Wad*, to the present Dung Gate, a third running from *el Wad* to the present St. Stephen's Gate, and a fourth running eastward from the Jaffa Gate. Near the Damascus Gate, at the northern end of the central street, is a column (*amûd*), possibly the *milion* from which distances were counted. On the west side of the street, leading to the Sion Gate, is apparently the porch of Constantine's Church, and the church itself seems to be indicated in outline. Possibly when the drawings, which are now being made for the German Palestine Society, come to hand, more light may be thrown on the disputed questions connected with the topography of Jerusalem."
