



Meteorological Report from Jerusalem for Year 1882

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preserved in the alphabets of Southern Arabia. The forms of the Phœnician *béth* hitherto known do not bear a very close resemblance to the South Arabian *b*; on the other hand, the new form which has been disinterred at Lachish is identical with it, if turned on its side, as is necessary when we compare the Phœnician and the South Arabian forms of the letters. Like the South Arabian *b*, it then is also identical with the old hieratic form of the Egyptian hieroglyphic for "house." And *béth*, as everyone knows, signifies "a house."

METEOROLOGICAL REPORT FROM JERUSALEM FOR YEAR 1882.

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 appear in the winter, and the lowest in the summer months; the maximum for the year is 27·721 inches, in January. In column 2 the lowest in each month are shown; the minimum is 27·108 inches in April; the range of readings in the year was 0·613 inch. The numbers in the 3rd column show the extreme range of readings in each month; the smallest, 0·197 inch, is in July, and the largest, 0·517 inch, is in April. The numbers in the 4th column show the mean monthly pressure of the atmosphere; the highest, 27·516 inches, is in January, and the lowest, 27·272 inches, is in July. The mean pressure for the year is 27·398 inches; at Saronā the mean pressure for the year was 29·856 inches.

The highest temperature of the air in each month is shown in column 5. The highest in the year was 99°·5, on August 28th, on which day the maximum temperature at Saronā was 89°; the temperature reached or exceeded 90° in every month from May to October, with the exception of July; the first day in the year the temperature reached 90° was on May 12th. In June there were 7 days when the temperature reached or exceeded 90°; in August, 11 days; in September, 7 days; and in October, 2 days, the 1st and 2nd, these being the last days in the year of such a high temperature as 90°. Therefore the temperature reached or exceeded 90° on 28 days during the year. At Saronā the temperature did not reach 90° till September 24th, and reached or exceeded 90° on only 8 days in the year; the highest in the year at Saronā, viz. 93°, took place on November 1st, on which day the maximum temperature at Jerusalem was 74°.

The lowest temperature of the air in each month is shown in column 6. The lowest in the year was 28°·5, on both the 3rd and 12th of February; the temperature was below 40°, in January, on 18 nights; in February, on 25 nights; in March, on 1 night; and in April, on 2 nights; the last night in the year the temperature was below 40° was April 16th.

Therefore the temperature was below 40° on 46 nights during the year. The yearly range of temperature was 71° . At Sarona the temperature was below 40° on 14 nights in the year; the lowest in the year was 34° , on January 30th. The yearly range at Sarona was 59° .

The range of temperature in each month is shown in column 7, and these numbers vary from 25° in January, to 50° in May. At Sarona the range of temperature in each month varied from 25° in August, to 47° in November.

The mean of all the highest by day, of the lowest by night, and of the average daily ranges of temperature, are shown in columns 8, 9 and 10 respectively. Of the high day temperature, the lowest, 49° , is in February, and the highest, $88^{\circ}2$, in August. At Sarona, of the high day temperature, the lowest, $55^{\circ}7$, is in February, and the highest, $87^{\circ}2$, in September. Of the low night temperature, the coldest, $36^{\circ}1$, is in February, and the warmest, $65^{\circ}3$, is in August. At Sarona, of the low night temperature, the coldest, $43^{\circ}7$, is in January, and the warmest, $68^{\circ}7$, in August.

The average daily range of temperature, as shown in column 10, the smallest, $11^{\circ}4$, is in December, and the largest, $22^{\circ}9$, is in August. At Sarona, of the average daily range, the smallest, $11^{\circ}7$, was in February, and the largest, $22^{\circ}7$, in October.

In column 11, the mean temperature of each month, as found from observations of the maximum and minimum thermometers only are shown; the month of the lowest temperature is February, $42^{\circ}5$, and that of the highest is August, $76^{\circ}8$. The mean for the year is 62° . At Sarona, of the mean temperature of each month, the lowest is February, $49^{\circ}8$, and the highest, August, $78^{\circ}6$. The mean for the year at Sarona is $65^{\circ}5$.

The numbers in columns 12 and 13 are the monthly means of a dry and wet bulb thermometer, taken daily, at 9 a.m., and in column 14, the monthly temperature of the dew-point, or that of the temperature at which dew would have been deposited. The elastic force of vapour is shown in column 15, and in column 16 the water present in a cubic foot of air, in January, was as small as $2\frac{1}{2}$ grains, and as large as 5 grains, in August. The numbers in column 18 show the degree of humidity, saturation being considered as 100, the smallest number in this column is in June, and the largest number in January. The weight of a cubic foot of air under its pressure, temperature, and humidity, at 9 a.m., is shown in column 19.

The most prevalent winds in January were S.W., W., and E., and the least prevalent wind was N. In February the most prevalent were S.W. and W., and the least prevalent was S.E. In March the most prevalent were W., N.W., and E., and the least were S. and S.W. In April the most prevalent were S.W., S., and S.E., and the least were N. and N.E. In May, June, and July, the most prevalent were N.W. and W., and the least were N.E. and S. In August and September the most prevalent was N.W., and the least were S.E. and S. In

October the most prevalent were N.W. and N., and the least was S.E. In November the most prevalent was N., and the least was S.; and in December the most prevalent winds were W., E., and N., and the least prevalent winds were S.E., S.W., and N.W. The most prevalent wind for the year was N.W., which occurred on 84 times during the year; of which 13 were in both August and September, and 12 in July; and the least prevalent wind for the year was S., which occurred on only 19 times during the year, of which 5 were in April, 4 in December, and 3 in February. At Sarona, the most prevalent wind for the year was S.W., which occurred on 119 times during the year; and the least prevalent was N.E., which occurred on only 12 times during the year.

The numbers in column 28 show the mean amount of cloud in each month; the month with the smallest amount is June, and the largest February. Of the cumulus, or fine weather cloud, there were 49 instances in the year; of these, 9 were in October, 7 in September, and 6 in both May and August, and none in December. Of the nimbus, or rain cloud, there were 32 instances, of which 10 were in February, 8 in April, 5 in both March and December, and only 1 from May to November. Of the cirrus there were 14 instances; of the stratus, 5 instances; of the cumulus stratus, 54 instances, of which 10 were in both January and November, and 9 in December. Of the cirro stratus there were 19 instances; of the cirro cumulus, 24 instances; and 168 instances of cloudless skies, of which 25 were in June, 24 in July, and 22 in September, and only 3 in February. At Sarona there were only 57 instances of cloudless skies, of which 11 were in October, and 8 in both January and June.

The largest fall of rain for the month in the year was in February, 12.59 inches, of which 2.60 inches fell on the 5th, 2.30 inches on the 10th, and 2.13 inches on the 4th. The next largest fall for the month was 4.99 inches, in December, of which 2.69 inches fell on the 27th, and the next in order was 3.65 inches in April, of which 1.18 inch fell on the 15th. No rain fell from the 24th of May till October 23rd, making a period of 151 consecutive days without rain. The total fall of rain for the year was 26.72 inches, which fell on 63 days during the year. At Sarona, the largest fall for the month in the year was 7.22 inches, in February, and the next in order were 4.37 inches, in January, and 4.17 inches, in April. No rain fell at Sarona from May 25th till October 20th, with the exception of one day, viz., August 10th, when 0.35 inch fell, therefore making two periods of 76 and 70 consecutive days without rain. At Sarona, the total fall for the year was 22.09 inches, which fell on 62 days during the year.

MONTHLY METEOROLOGICAL TABLE

Deduced from observations taken at Jerusalem, by JOSEPH GAMIEL, in a garden within the city, about 2,500 feet above the level of the Mediterranean Sea, open on all sides.
Latitude, 31° 46' 40" N, Longitude, 35° 13' 30" E.

Months.	Pressure of atmosphere in month.				Temperature of the air in month, at 9 a.m.							Mean readings.			Vapour.			Direction of wind. Relative proportion of.							Rain.					
	Highest.	Lowest.	Range.	Mean.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.	Mean daily range.	Mean.	Dry bulb.	Wet bulb.	Dew point.	Elastic force of vapour.	Weight of vapour in a cubic foot of air.	Additional weight required for saturation.	Degree of humidity.	Weight of a cubic foot of air.	Direction of wind. Relative proportion of.							Mean amount of cloud.	Number of days on which it fell.	Amount collected.	
																				N.	N.E.	E.	S.E.	S.	S.W.	W.				N.W.
1882.	in.	in.	in.	in.	°	°	°	°	°	°	°	°	°	°	grs.	grs.	grs.	°	grs.											in.
January ...	27.721	27.314	0.407	27.516	56.5	31.0	25.5	49.8	37.4	12.4	43.6	45.3	41.8	37.8	.227	2.6	0.8	75	505	1	4	6	2	2	8	6	2	4.3	11	3.08
February ...	27.693	27.177	0.516	27.460	70.5	28.5	42.0	49.0	36.1	12.9	42.5	43.4	41.0	38.2	.230	2.7	0.6	81	506	5	3	2	0	3	6	7	2	7.2	16	12.69
March ...	27.618	27.182	0.436	27.445	75.0	38.0	37.0	63.5	45.4	18.1	54.4	55.8	49.5	43.6	.236	3.1	1.8	65	493	2	4	6	2	1	1	9	6	3.7	4	0.97
April ...	27.625	27.108	0.517	27.333	78.0	38.5	39.5	68.3	53.3	15.0	60.8	60.9	53.7	47.4	.229	3.6	2.4	61	486	1	1	3	5	5	8	4	3	5.8	12	3.65
May ...	27.504	27.118	0.386	27.358	80.0	40.0	50.0	75.4	54.0	21.4	64.7	68.0	58.0	50.1	.362	4.0	3.5	52	481	3	1	4	4	1	4	6	8	2.9	4	0.57
June ...	27.472	27.202	0.270	27.346	83.3	48.5	44.8	82.7	60.6	22.1	71.7	75.7	60.5	49.7	.356	3.8	5.8	40	473	8	0	2	4	0	1	5	10	0.7	0	0.00
July ...	27.358	27.161	0.197	27.272	89.8	58.5	31.3	85.5	63.5	22.0	74.5	78.1	64.5	55.1	.435	4.6	5.7	45	469	3	0	0	1	0	5	10	12	0.9	0	0.00
August ...	27.399	27.191	0.208	27.304	99.5	60.0	39.5	88.2	65.3	22.9	76.8	79.5	66.1	57.0	.464	4.9	5.8	45	468	8	3	0	0	0	1	6	13	2.4	0	0.00
September ...	27.560	27.298	0.262	27.402	97.0	59.0	38.0	86.9	65.0	21.9	76.0	79.2	64.4	54.3	.421	4.5	6.2	42	470	5	3	3	0	0	0	6	13	0.8	0	0.00
October ...	27.537	27.323	0.214	27.432	90.0	52.5	37.5	76.2	56.4	19.8	66.3	68.6	57.9	49.5	.356	3.9	3.7	50	470	7	2	6	0	2	1	5	8	2.5	1	0.07
November ...	27.573	27.320	0.253	27.456	75.5	47.5	28.0	67.0	52.4	14.6	59.7	62.5	54.3	47.3	.325	3.6	2.7	57	488	8	4	5	2	1	2	3	5	4.5	4	0.80
December ...	27.617	27.213	0.404	27.447	70.0	40.0	30.0	58.6	47.2	11.4	52.9	53.9	49.9	46.0	.310	3.5	1.2	74	495	5	4	6	2	4	2	6	2	6.1	11	4.99
Means ...	27.556	27.217	0.340	27.398	82.1	45.2	36.9	70.9	53.0	17.9	62.0	64.2	55.1	47.2	.342	3.7	3.4	57	485	sum. 56	sum. 29	sum. 43	sum. 22	sum. 19	sum. 39	sum. 73	sum. 84	3.5	sum. 63	sum. 26.72