

times happened from frightened animals, and it was sometimes dangerous for people to pass, the weekly market is now held outside the town in the depression of the so-called *Birket es Sultan*, or the lower pool in the Western Valley on the side of the Bethlehem road.

12. In consequence of the increase of the population and of the railway traffic, some streets have become overcrowded with people, and heavily-laden camels could only with difficulty pass through, endangering the crowd, so that accidents repeatedly happened. It is now arranged that in those streets no camels can henceforth pass. At their ends iron bars forming narrow and low entrances are put, which no camel can pass but only donkeys or horses without a rider, and especially walking people. These hindrances are put at the top of Suwaikat Allun, at the Greek convent, at the Khankeh, and at the entrance of the Jewish quarter; Khan es Zait is still left open on account of the building work at the Muristan, to which camels have to bring stones, coming in by the Damascus Gate.

13. The excavations of Dr. Bliss are going on, and I take the liberty to go there once every week to see the state of things. It proves that the city wall was once situated a little more down the hill than was expected. Yet the question is not yet fully settled. It is strange that no proper wall or traces of such have hitherto been found except at the tower, but only very high rock scarps.

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT JERUSALEM IN THE YEAR 1886.

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 27·656 inches in December. In column 2 the lowest reading in each month is shown. The minimum for the year is 27·086 inches in March. The range of readings in the year was 0·570 inch. The numbers in column 3 show the range of readings in each month; the smallest, 0·196 inch, is in July, and the largest, 0·487 inch, in March. The numbers in column 4 show the mean monthly pressure of the atmosphere; the highest, 27·504 inches, is in December, and the lowest, 27·251 inches, in July. The mean pressure for the year was 27·385 inches. At Saronia the mean pressure for the year was 29·839 inches.

The highest temperature of the air in each month is shown in column 5. The highest in the year was 105°, on June 15th. The first day the temperature reached 90° was on April 30th. In May there were 2 days when the temperature reached or exceeded 90°; in June, 14 days; in

July, 11 days ; in August, 19 days ; and in September, 8 days. Therefore the temperature reached or exceeded 90° on 55 days during the year. At Saroná the first day the temperature reached 90° was on April 30th, it reached or exceeded 90° on only 16 days during the year ; the highest temperature in the year at Saroná, 112° , took place on June 15th.

The numbers in column 6 show the lowest temperature in each month ; the lowest in the year was $28^{\circ}\cdot 5$ on March 28th. In January the temperature was below 40° on 22 nights ; in February on 16 nights ; in March on 18 nights ; in April on 10 nights ; in November on 7 nights ; and in December on 24 nights. Therefore the temperature was below 40° on 97 nights during the year. The yearly range of temperature was $76^{\circ}\cdot 5$. At Saroná the temperature was below 40° on only 3 nights during the year ; the lowest in the year, $37^{\circ}\cdot 0$, took place on both December 22nd and 23rd. The yearly range of temperature at Saroná was 75° .

The range of temperature in each month is shown in column 7, and these numbers vary from $28^{\circ}\cdot 5$ in January, to $60^{\circ}\cdot 2$ in April. At Saroná the range of temperature in each month varied from 26° in August to 55° in June.

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 temperatures, the lowest, $53^{\circ}\cdot 9$, is in January, and the highest, $92^{\circ}\cdot 2$, in August. At Saroná, of the high day temperature, the lowest, $64^{\circ}\cdot 7$, is in January, and the highest, $87^{\circ}\cdot 9$, in August.

Of the low night temperature, the coldest, $37^{\circ}\cdot 8$, is in December, and the warmest, $59^{\circ}\cdot 7$, in June. At Saroná, of the low night temperature, the coldest, $48^{\circ}\cdot 1$, is in December, and the warmest, $69^{\circ}\cdot 2$, in August.

The average daily range of temperature is shown in column 10, the smallest, $14^{\circ}\cdot 8$, is in January, and the largest, $33^{\circ}\cdot 8$, in August. At Saroná, of the average daily range of temperature, the smallest, $15^{\circ}\cdot 4$, is in January, and the largest, $23^{\circ}\cdot 5$, in October.

In column 11 the mean temperature of each month is shown, as found from observations of the maximum and minimum thermometers only. The month of the lowest was December, $42^{\circ}\cdot 0$, and that of the highest, August, $75^{\circ}\cdot 3$. The mean temperature for the year was $60^{\circ}\cdot 1$. At Saroná, of the mean temperature, the month of the lowest is January, $57^{\circ}\cdot 0$, and that of the highest August, $78^{\circ}\cdot 6$. The mean for the year at Saroná was $66^{\circ}\cdot 8$.

The numbers in columns 12 and 13 are the monthly means of a dry and wet bulb-thermometer, taken daily at 9 a.m. In column 14 the monthly temperature of the dew-point, or that temperature at which dew would have been deposited, is shown ; the elastic force of vapour is shown in column 15. In column 16 the water present in a cubic foot of air is shown ; in December it was as small as 2·9 grains, and in August as large as 5·3 grains. In column 17 the additional weight required for saturation is shown. The numbers in column 18 show the degree

of humidity, saturation being considered 100; the smallest number indicating the driest month is 40, in June, and the largest, 80, is 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 wind in January was W., and the least prevalent wind was S.W. In February the most prevalent were E., S.W., and W., and the least prevalent was S. In March the most prevalent were W., S.W., and N.W., and the least were N. and E. In April the most prevalent was N.W., and the least was S. In May the most prevalent was N.W., and the least were E., S.E., and S. In June the most prevalent was N.W., and the least prevalent was S. In July and August the most prevalent were N.W. and W., and the least were N., N.E., E., S.E., and S. In September the most prevalent was N.W., and the least was S. In October the most prevalent were E., N.W., and W., and the least were S.E. and S. In November the most prevalent were N.E. and E., and the least were S.E. and S.; and in December the most prevalent winds were N.E., E., and S.W., and the least prevalent were S. and N.W. The most prevalent wind for the year was N.W., which occurred on 96 times during the year, of which 17 were in July, 16 in August, and 15 in June; and the least prevalent wind was S., which occurred on only 6 times during the year, of which 2 were in both January and March, and 1 in both April and May. At Sarona the most prevalent wind for the year was S.W., which occurred on 69 times during the year, and the least prevalent wind was E., which occurred on only 5 times during the year.

The numbers in column 28 show the mean amount of cloud at 9 a.m.; the month with the smallest is August, and the largest, March. Of the cumulus, or fine weather cloud, there were 43 instances in the year, of which 9 were in July, 8 in August, and 7 in both May and September. Of the nimbus, or rain cloud, there were 42 instances, of these 9 were in both January and February, and 8 in March. Of the stratus there were 2 instances; of the cirrus, 2 instances; of the cirro stratus, 26 instances; of the cirro cumulus, 40 instances; of the cumulus stratus, 72 instances; and 138 instances of cloudless skies, of which 23 were in August, 22 in June, and 19 in July. At Sarona there were 119 instances of cloudless skies, of which 20 were in June, 14 in December, and 12 in both July and October.

The largest fall of rain for the month in the year was 9.51 inches in February, of which 3.35 inches fell on the 25th. The next largest fall for the month was 6.55 inches in January, of which 3.43 inches fell on the 5th. No rain fell from May 17th to October 30th, making a period of 165 consecutive days without rain. The fall of rain for the year was 31.69 inches, which fell on 63 days in the year. At Sarona the largest fall of rain for the month in the year was 5.00 inches in December. No rain fell at Sarona from May 11th to October 30th, making a period of 171 consecutive days without rain. The total fall of rain for the year at Sarona was 20.09 inches, which fell on 66 days during the year.