

have bifurcated, taking in one sense a southern direction to the city of Tiberias, to Beisân (Beth Shean, Scythopolis), &c., and in the other sense a western course to the ports of the Mediterranean, to 'Acca of the Phœnicians, by the way of the plain and the Wady 'Abellin, or if bifurcating at the Khân Jubb, Yûsef by the way of Râmeh and Mejd el Kerûm (to 'Acca).

At all of these places mentioned, as well as along the course of the road through Jaulân, the different Khâns or Caravanserais, through the Buttauf and W. 'Abellin, at Rameh and other sites, we find distinct remains of paved Roman roads ; the direction of the road from Damascus to 'Acca is straight, and the nearest route possible ; the regions it crosses are plateaus, plains and level countries, in fact a country which, although now desolated and covered with ruins, is and was designated by nature to be a great commercial highway. Considering all these facts in favour of the opinions given with regard to the Via Maris, and considering that all other roads from Damascus to the Sea, to Tyre and Sidon, &c., have to pass mountainous regions and winding passages, I find no objection of identifying the "Via Maris" in its general features, and in the sense named during the middle ages with the present commercial and caravan road from Damascus to the Jisr Benât Y'akûb or by Khân Miniyeh to 'Acca and Haifa, all the more as we can see from the commerce of the 11th, 12th, and 13th centuries, as given in the excellent work of Heyd, "Die italienischen Handelscolonien in Palaestina" (I, p. 16, 17 ff.), that the city of 'Acca had a great interest in the Indian commerce, that products of India found their way through the Euphrates Valley to the great Emporium of Damascus, and continuing by the shortest way to Beirut and 'Acca, and that the weapons and arms of Damascus manufacturers were exported to Egypt by the port of 'Acca ; on the other side Haifa formed the natural harbour for Tiberias ("Heyd," I, p. 17) which city (Tiberias) "was industrious and had a lively trade by caravans."

G. SCHUMACHER.

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## METEOROLOGICAL OBSERVATIONS.

SARONA, 1883.

THE numbers in column 1 of this table show the highest reading of the barometer in each month ; the maximum for the year was 30.106 ins., in December. In the years 1880 and 1881 the maximum was in January, in 1882 it was in February ; the mean of the three preceding highest pressures was 30.251 ins.

In column 2, the lowest reading in each month is shown ; the minimum for the year was 29.527 ins., in January. In the year 1880 the minimum was in April, in 1881 in February, and in 1882 in July ; the mean for the three preceding years was 29.519 ins.

The range of barometric readings in the year was small, being

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0·579 in. only. The numbers in the 3rd column show the range of readings in each month; the smallest, 0·139 inch, was in June, and the largest, 0·561 inch, was in January.

The numbers in the 4th column show the mean monthly pressure of the atmosphere; the greatest, 29·924 ins., occurred both in February and December, and the smallest, 29·689 ins., was in July.

The highest temperature of the air in each month is shown in column 5. The highest in the year was 106°, in September, the next in order was 99° in May, and 97° in March; in the three preceding years, viz., 1880, 1881, and 1882, the highest temperatures were 103°, 106°, and 93° respectively; the first day in the year 1883 the temperature reached 90° was on the 30th of March, and it was 97° on the next day; in April the temperature exceeded 90° on one day; in May on one day; in August it reached or exceeded 90° on six days; in September there were five days when the temperature reached or exceeded 90°; the highest in the year, 106°, took place on the 30th; in October, on the 29th, the temperature reached 94°, and this was the last day in the year that the temperature was as high as 90°; therefore the temperature reached or exceeded 90° on 16 days; in 1880 on 36 days, in 1881 on 27 days, and in 1882 on 8 days in the year.

The numbers in column 6 show the lowest temperature in each month; the lowest temperature in the year was 35° in March, the next in order was 39° in January, and 40° both in April and December; in January there was only one day when the temperature was below 40°, and in March on one day, when it was as low as 35°, on the 17th; it was not below 40° in any other month of the year; therefore the temperature was below 40° on only two nights in the year; in the year 1880 it was below 40° on 16 nights, in 1881 on 2 nights, and in 1882 on 14 nights.

The yearly range of temperature was 71°; the range of temperature in the year 1880 was 71°, 1881 was 67°, and 1882 was 59°.

The range of temperature in each month is shown in column 7, and these numbers vary from 25° in July to 62° in March.

The mean of all the highest temperatures 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 appears in February, 62°·8; and the highest in July, 88°·2; that in August is nearly of the same value. Of the low night temperatures the coldest, 45°·6, took place in February; and the warmest, 69°·4, in August. The average daily range of temperature, as shown in column 10, in January 15°·7 is the smallest, and in September 27°·7 is the greatest.

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 December, 51°·1; in the year 1880 the month of the lowest temperature was January, 50°·7; and in the years 1881 and 1882 the lowest were in February, viz., 56°·2 and 49°·8 respectively; the mean for the three years being 56°·2. The month of the highest temperature was August, 78°·8; in the years 1880, 1881 and 1882,

the maximum was in August, and were  $79^{\circ}$ ,  $80^{\circ}1$ , and  $78^{\circ}6$  respectively. The mean for the three years was  $79^{\circ}2$ . The mean temperature for the year was  $65^{\circ}7$ , for the three preceding, viz., 1880, 1881, and 1882, were  $66^{\circ}4$ ,  $66^{\circ}7$ , and  $65^{\circ}5$  respectively.

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 those in column 14 are the monthly temperature of the dew-point, or that temperature at which moisture would have been deposited. The elastic force of vapour is shown in column 15; in column 16 is shown the weight of the water present in a cubic foot of air; in January this was as small as four grains, and in August as large as  $7\frac{1}{2}$  grains. The numbers in column 18 show the degree of humidity, saturation of the air being considered 100; the smallest number indicating the driest month, was 57 in September, and the largest 85, in February. The weight of a cubic foot of air under its mean pressure, temperature, and humidity, at 9 a.m., is shown in column 19.

The most prevalent winds in January were S. and S.W., and the least prevalent were E. and N.W. In February the most prevalent were S.E. and S.W., and the least were W. and N.W. In March the most prevalent was S., and the least were N.W., E., and its compounds. From April to September the S.W. winds were most prevalent, and the least prevalent winds generally were N., E., and compounds of E. In October the most prevalent was S., and the least was S.E. In November the most prevalent was S., and the least prevalent were N. and its compounds; and in December the most prevalent winds were S.E. and S., and the least prevalent were N., W., and N.W. The most prevalent wind for the year was S.W., which occurred on 76 times during the year, of which 16 were in July, and 9 in both January and August; and the least prevalent wind for the year was E., which occurred on only 7 times during the year, of which two were in October, and one in each of the months of January, February, June, November, and December.

The numbers in column 29 show the mean amount of cloud at 9 a.m., the month with the smallest amount is June, and the largest January. Of the cumulus, or fine weather cloud, there were 119 instances in the year; of these there were 21 in August, 20 in July, and 13 in September, and only 3 in December. Of the nimbus, or rain cloud, there were 63 instances, of which 18 were in January, 12 in February, and 11 in December, and 3 only from April to September. Of the cirrus, there were 22 instances. Of the stratus there were 24 instances. Of the cirro-cumulus there were 39 instances. Of the cirro-stratus 14 instances in the year, and 84 instances of cloudless skies, of which 14 were in June, 13 in May, and 11 in March.

The largest fall of rain for the month was 11.32 ins. in January, of which 1.31 inch fell on the 9th, and 1.30 inch on the 8th; and the next largest fall for the month was 8.14 ins. in November, of which 3.13 ins. fell on the 3rd, and 1.31 inch on the 25th. In 1880 the largest fall in any month was 10.05 ins. in December; in 1881 the largest was 5.09 ins.

in November, and in 1882 the largest was 7·22 ins. in February. No rain fell from April 25th till October 10th, making a period of 167 consecutive days without rain. The fall of rain in the year was 30·06 ins., being 1·38 in., 12·57 ins., and 7·97 ins. larger than the falls in 1880, 1881, and 1882 respectively; and the mean fall of rain for the three preceding years was 22·55 ins. The number of days on which rain fell was 71, in 1880 rain fell on 66 days, in 1881 on 48 days, and in 1882 on 62 days.

JAMES GLAISHER.

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NOTES BY MAJOR CONDER, R.E.

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I.

PROFESSOR SAYCE ON THE HITTITES.

THE Religious Tract Society have published an interesting little book by Professor Sayce on the Hittites, which will no doubt aid to instruct the general public, though it contains nothing new to scholars. With the greater part of its contents I am fully in accord, but there are occasional statements which should, I think, at once be questioned before they become widely adopted, in the interest of exact archæology; and I hope that these lines may meet Professor Sayce's eye, and induce him to explain or to reconsider the points in question.

When Professor Sayce states that the Hittite monuments are still undeciphered, he, no doubt, expresses his present opinion. In that case he must be supposed to have withdrawn the claim which he made in 1884, to have deciphered and translated several of the texts, as given in a lengthy article in "Wright's Empire of the Hittites." To these translations he makes no reference in his present volume. When, however, he says that "Major Conder's system of decipherment has not yet obtained the adhesion of other scholars," I may be allowed to remark that at least two scholars have informed me that they believed me to be right as to the language, and these scholars perhaps better acquainted with Turanian languages than any others in England. In his last letter one of them says of my recent paper in the *Quarterly Statement* that it "marks a distinct advance, and places the comparisons on a firm foundation."

Professor Sayce makes other statements as below:—

Page 12. "Hamath and Kadesh on Orontes being their most southerly points." He, apparently, is unaware that Sir C. W. Wilson discovered a Hittite monument at Damascus.

Page 15. "The Hittites were a people with yellow skins and Mongoloid features" (repeated p. 101 yet more strongly). This is what I have always urged. Why, then, dispute the probability that their language also may have been Mongolian? It appears, however (p. 134), that "the