NOTES BY THE EDITOR.

MEXICAN CLIMATOLOGICAL DATA.

In order to extend the isobars and isotherms southward so that the students of weather, climate and storms in the United States may properly appreciate the influence of the conditions that prevail over Mexico the Editor has compiled the following tables from the current numbers of the Boletin Mensual as published by the Central Meteorological Observatory of Mexico. The data there given in metric measures have been converted into English measures. The barometric means are as given by mercurial barometers under the influence of local gravity, and therefore need reductions to standard gravity, depending upon both latitude and altitude; the influence of the latter is rather uncertain, but that of the former is well known. For the sake of conformity with the other data published in this REVIEW these corrections for local gravity have not been applied.

Mexican data for June, 1896.

Stations.	Altitude.	Mean barometer.	Mean temperature.	Relative humidity.	Precipitation.	Prevailing direction. Wind.	Cloud.
	Feet.	*Inch.*	° *F.*	%	*Inch.*		
Colima (Seminario)	.....	28.25	82.0	68	3.37	ssw.	sw.
Colima	1,291.2	.....	83.8	.....	.....	.....	
Guadalajara (Obs. d. Est.)	5,188.0	24.97	75.2	81	13.59	.....	ne.
Guanajuato	6,761.3	23.68	69.8	47	3.95	ene.	ene.
Jalapa	4,757.3	25.55	69.4	75	15.61	n.	
Leon	5,901.0	24.28	73.8	42	1.15	ene.	
Magdalena (Sonora)	.....	.....	83.5	.....	0.67	.....	
Mazatlan	24.6	29.86	84.2	74	0.47	w.	e.
Merida	50.2	29.88	81.5	79	11.57	e.	e.
Mexico (Obs. Cent.)	7,488.7	23.08	65.5	54	1.17	n.	ne.
Mexico (E. N. de S.)	7,480.3	23.11	66.6	56	1.10	ne.	
Morelia (Seminario)	6,401.0	23.95	66.9	62	2.64	ne.	ne.
Oaxaca	5,164.4	25.06	72.9	63	4.22	nw.	ne.
Pabellon	6,312.4	.....	.....	.....	.....	.....	
Pachuca	7,956.3	22.59	59.5	68	0.58	nne.	
Puebla (Col. Cat.)	7,112.0	23.43	67.5	61	5.78	.....	
Queretaro	6,069.7	24.18	70.0	53	2.50	e.	e.
Saltillo (Col. S. Juan)	5,376.7	.....	.....	.....	.....	.....	
San Luis Potosi	6,201.9	24.15	70.5	53	0.33	e.	e.
Silao	6,063.1	24.25	74.5	57	1.71	ne.	ne.
Toluca	8,612.4	29.91	61.3	44	3.75	ene.	ne.
Trejo (Hac. Silao, Gto.)	.....	.....	.....	.....	3.71	.....	
Zacatecas	8,015.2	22.55	68.7	48	1.51	e.	ne.
Zapotlan (Seminario)	5,124.8	25.05	73.9	.....	6.17	se.	ne.

Mexican data for July, 1896.

Stations.	Altitude.	Mean barometer.	Mean temperature.	Relative humidity.	Precipitation.	Prevailing direction. Wind.	Cloud.
	Feet.	*Inch.*	° *F.*	%	*Inch.*		
Colima (Seminario)	.....	28.30	80.6	72	4.98	wsw.	
Colima	1,291.7	.....	82.0	.....	.....	.....	
Culiacan	112.2	.....	.....	.....	.....	.....	
Guadalajara (Obs. d. Est.)	5,188.0	25.02	70.9	83	13.60	nnw.	ne.
Guanajuato	6,761.3	23.72	68.2	53	1.70	ene.	e.
Jalapa	4,757.3	25.61	66.9	87	14.79	e.	
Lagos (Liceo Guerra)	6,274.5	24.21	70.3	55	1.88	e.	e.
Leon	5,901.0	24.33	72.0	53	1.86	se.	ene., ese.
Magdalena (Sonora)	.....	.....	84.2	.....	.....	s., w.	n.
Mazatlan	24.6	29.90	85.1	76	7.12	nw.	e., ne.
Merida	50.2	29.98	81.0	77	3.81	ne.	e.
Mexico (Obs. Cent.)	7,488.7	23.11	63.5	65	3.92	n.	ne.
Mexico (E. N. de S.)	7,480.5	23.06	65.7	69	3.74	nw.	
Morelia (Seminario)	6,401.0	24.00	63.5	71	5.19	ne.	ne.
Oaxaca	5,164.4	25.10	72.3	64	2.57	nw.	ne.
Pabellon	6,312.4	24.01	71.2	57	2.61	se.	e.
Pachuca	7,956.3	22.56	57.6	69	0.47	ne.	
Puebla (Col. Cat.)	7,112.0	23.45	65.8	64	4.17	.....	
Queretaro	6,069.7	24.22	69.1	61	1.02	e.	ene.
Saltillo (Col. S. Juan)	5,376.7	24.97	73.8	65	2.72	ne.	n.
San Luis Potosi	6,201.9	24.20	63.7	63	0.26	e.	e.
Silao	6,063.1	24.29	72.7	68	3.40	ne.	ne.
Tacubaya (Obs. Nac.)	7,620.2	.....	.....	.....	.....	.....	
Toluca	8,612.4	21.96	60.3	63	6.46	ese.	ne.
Trejo (Hac. Silao, Gto.)	.....	.....	.....	.....	3.16	.....	
Zacatecas	8,015.2	22.59	65.1	61	1.61	e.	e.
Zapotlan (Seminario)	5,124.8	25.09	71.1	.....	10.26	.....	

THE PERIODICITY OF GOOD AND BAD SEASONS.

A lecture on the above subject, delivered June 3, 1896, by H. C. Russell, director of the astronomical observatory and also of the meteorological service at Sydney, N. S. W., is published in an abridged form in the English journal Nature, for August 20, 1896. The importance of long-range predictions to the agricultural interests of the United States demands that we give our careful attention to the discovery announced by Mr. Russell that, in general, there is a periodicity of nineteen years in the occurrence of droughts. He began by studying the statistics of the records in Australia since 1788, the date of the foundation of the colony of New South Wales, and here first found evidence of a 19-year period. He next found that the droughts of India coincided with those of Australia, so far as the records went, and that he could, by means of the Indian record, plausibly locate the greatest of all the droughts in Australia as having occurred in 1769–70. Up to this time he had not studied the ordinary dry years separately from those in which phenomenal droughts occurred, but had found that bad or droughty years usually came in groups of from three to seven. The end of the first and the beginning of the second year of drought was the date used by him in his studies.

Russell now divided the droughts into first and second class, treating each separately, and proceeded to study European statistics. Between the years 900 and 1896, A. D., the interval of nine hundred and ninety-six years embraces about fifty-two periods of nineteen years each; he found that of the fifty-two repetitions of years when droughts should be expected they were actually present on forty-four of these; of the eight missing years, six occurred between 900 and 1000, A. D., when the historical record is very incomplete. Starting with 1896, and reckoning backward to 900, Russell found 78 droughts in different countries somewhere in the world that fit into the period of recurrence of droughts of the first class. During the same period he found that there should be fifty-one returns of the year that is characterized by second-class droughts, and that history actually records 89 such droughts in different countries on thirty-six of these periods. There is, therefore, a total of 167 droughts between the years 900 and 1896 that occur on the years when droughts are to be expected, according to Russell's 19-year period, and there remain only 41 other droughts on record, scattered through various discordant years; of these latter, 26 are considered by him to belong to a third class, that is irregular in Australia, but more regular and more important in the Northern Hemisphere. Mr. Russell, therefore, claims that out of 208 recorded droughts, 193 fit into his cycle of nineteen years, and that as this cycle has continued for a thousand years, so it may be trusted to justify forecasts based upon it.

Going farther back in history, our author finds that of 20 droughts recorded in B. C. years, 19 fit into his drought cycle, and the fact of such a remarkable agreement is urged as a confirmation of the historical chronology, although it seems reasoning in a circle. The drought predicted to Pharaoh by Joseph apparently belongs to the same period as that predicted by Elijah forty-two cycles (or forty-two times nineteen years) later; the drought predicted by Elisha occurred nineteen years, or one cycle, after that of Elijah, and these ancient predictions seem to Russell to show that the Egyptians and Jews knew of this 19-year period. He even considers it possible that the records kept by the Assyrians since the year 3800 B. C. must have shown them this 19-year period in droughts, as it is known to have also shown them the similar period of eighteen years in eclipses.