the form of maps, may in due time be presented regarding the glacial lakes above noted. As to the restoration and development of the Tertiary drainage systems, the problem is inherently difficult on account of the unproved inland extension of the Cretaceous coastal plain, of the complicated rock structure of the region, of the uncertain relation between river volume and valley size in the advanced stage reached by the Tertiary cycle of erosion before the glacial period, and of the large volume and irregular distribution of the drift. Additional examples of streams, explainable by the same theoretical process, would perhaps lead as far towards demonstration as the case allows.

W. M. DAVIS.

CURRENT NOTES ON METEOROLOGY.

MONTHLY WEATHER REVIEW.

THE *Monthly Weather Review* becomes more and more indispensable to teachers and students of meteorology with every succeeding number. Under the able editorship of Professor Cleveland Abbe, the *Review* is rapidly enlarging its scope and its sphere of usefulness. The number for December (issued in February) contains, among its special contributions, 'The Circulatory Movements of the Atmosphere,' a translation of portions of a paper by Professor V. Bjerknes, recently published in the *Meteorologische Zeitschrift*, and 'Line Integrals in the Atmosphere,' by Professor F. H. Bigelow. In the 'Notes by the Editor,' Professor Abbe takes up a great variety of topics. In 'Micro-Photographs of Snow Crystals,' the history of the study of snow crystals is briefly reviewed. Under 'Bombarding the Hail Clouds' the question as to the possibility of dispersing hail storms by means of cannonading is answered by Professor Abbe as follows: "The Editor would state that although statistics show that during the past year 15,000 shooting stations were established in Italy, and a very large number in southern France and Austria, yet there is no evidence whatever that the shooting done by these stations has had any effect whatever upon the hailstorms or the hail." A short paper on 'Oscillations of the Lakes and the Climate in Arid Regions' mentions the decreasing depth of Great Salt Lake, the notable diminution of the quantity of water in the streams and wells of Turkestan and Bokhara, and the shrinking of Lake Ngami, in South Africa, and points out that these observations do not indicate a permanent change in the conditions of the atmosphere, these lakes having gone through many similar dry periods before now. Other papers are 'The Commercial Importance of Storm and Weather Forecasts,' 'The Evolution of the Thermometer' (a review of Dr. H. C. Bolton's recent book); 'Correlation of Weather in Distant Localities,' and 'Lightning from Cloudless Skies.' A recent investigation of the 'Relations between Summer and Winter Temperatures,' by Dr. O. L. Fassig, of Baltimore, is found to show that neither warm nor cold summers have any more relation to the succeeding winter temperatures than have the normal summers, or, in general, that there is no regular alternation or period in atmospheric temperatures.

NEW CHARTS OF MEAN MONTHLY RAINFALL.

THE first charts showing the mean monthly rainfall for the world were constructed by Dr. A. J. Herbertson, and published in Bartholomew's new 'Atlas of Meteorology' (1891). Several charts of mean annual rainfall had previously been published, the first fairly complete one being that of Loomis (*Am. Journ. Sci.*, third series, Jan., 1882; revised edition, *Ibid.*, Jan., 1883). Seasonal rainfall charts have recently been constructed by Supan. Herbertson's monthly rainfall charts have now appeared in 'The Distribution of Rainfall over the Land' (*Roy. Geogr. Soc.*, London, 1901, 8vo, pp. 70), on a considerably larger scale than that adopted for them in the 'Atlas of Meteorology.' The discussion is also much more extended than in the 'Atlas.' This monograph will naturally not attract as much attention as it would have done had not the charts already appeared, but nevertheless it may be said that Herbertson's 'Distribution of Rainfall over the Land' is one of the most important meteorological publications of recent years.

NOTES.

ARCTOWSKI, the meteorologist of the *Belgica* expedition, contributes to *Ciel et Terre*

for March 16th a paper entitled 'A propos de la question du climat des temps glaciaires,' in which he states it as his belief that the problem of the climate of glacial periods will be solved through a careful study of the meteorological and other conditions of the Antarctic.

Mr. H. N. Dickson, lecturer in physical geography in the University of Oxford, contributes a paper on 'The Circulation of the Surface Waters of the North Atlantic Ocean' to the *Philosophical Transactions of the Royal Society of London*, Series A, Vol. 196, pp. 61–203. The plates, which are colored, show the monthly distribution of temperature and of salinity in the surface waters of the North Atlantic during the years 1896 and 1897.

'Cloud observations during 1896 and 1897 at Toronto' is the title of a recent publication of the Meteorological Service of the Dominion of Canada (4to, Toronto, 1901, pp. 27). These observations were begun September 21, 1896, and were made by means of theodolites. The full tables of observations are given, but there is no discussion of the results, there being only the briefest summary of average altitudes and velocities by months.

Mammoth Tank, in the eastern portion of San Diego Co., Cal., on the line of the Southern Pacific R. R., is one of the most interesting meteorological stations in the United States. 'The Climatology of Mammoth Tank' is the title of a brief article in the February number of *Climate and Crops: California Section*. The mean annual rainfall for 23 years is 1.81 inches. The maximum temperature recorded was 130°, on Aug. 17, 1878. The warmest month is July, with a mean temperature of 98.5°.

R. DeC. Ward.

FRANÇOIS QUESNAY.

The Smithsonian Institution has received a Livre d'Or, published in commemoration of M. François Quesnay, who died in December, 1774, at the age of eighty years, and was buried at his birthplace, Méré, Seine-et-Oise, France.

The monument and book were the project of the Société populaire, of which M. J. Allain-Le Canu was president and prime mover. The monument was determined upon at Méré during the Fête Scolaire held July 10, 1892, and was completed and inaugurated August 23, 1896. At both ceremonies there were large attendance and great enthusiasm. At the former, addresses were delivered by M. Quesnay de Beaurepaire, the great-grandson of him whom they honored, and at the latter by MM. Bourgeat, representing the Minister of Public Instruction and Beaux Arts, Frederick Passy, M. Bellan and M. Marcel Habert.

M. François Quesnay was an ignorant country boy. He did not learn to read until after he was eleven years old, when he became enamored of the science of medicine, in which he acquired such skill as that he was appointed physician to the King, Louis XV. He became the founder of the science of political economy in France, and finally one of the most learned men of his country and his age. His eminence in these branches of science was such that, two hundred years after he was born, his friends and the neighbors of his town, desiring to give him honor according to his renown, erected a monument in his memory in the town of his birth.

Alexander Quesnay, descendant of François, came to America and fought on her side during the War, of Independence. He remained here after the war, taking up his residence in Richmond, Va., where he was chosen and served as president of the Academy.

Thomas Wilson.

A SUMMARY OF WISCONSIN ARCHEOLOGY.

Members of the Wisconsin Society of Natural History are making systematic efforts to summarize the data of Wisconsin archeology and to preserve the archeological records, specimens and mounds of the State. A committee has been appointed for this purpose. It consists of C. D. Stanhope, H. Denison, W. J. Bennetts and Charles E. Brown. This committee has prepared a circular letter to be sent to every person in the State who is thought to be interested in the archeology of Wisconsin.

There are about three hundred collections of specimens from Wisconsin, varying in size from five hundred to five thousand objects, which