

as in the case of plants, the organisms specially adapted to continual sunshine—the desert fauna—seem to be absent from prepleistocene deposits. Horned toads, Gila monsters and animals of similar habits were not then in evidence, so far as the writer is aware.

In any case, the postulates for a sunless existence of prepleistocene beings are not greater, if as great, as those involved in Chamberlin's hypothesis of a materially greater, or less, content of carbonic dioxide in the atmosphere.

It does seem to the writer that unless it can be shown that the temperature prevailing at the beginning of the glacial epoch could not have been high enough to maintain a cloud envelope, Manson's theory as outlined above must be considered the most probable among those that have heretofore been suggested, as fulfilling both qualitatively and quantitatively the postulates of the great ice age; not excluding, of course, the probable influence of the agencies claimed by Arrhenius and Chamberlin as the chief ones, but which appear to the writer to be inadequate to account for the phenomena in actual evidence.

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January, 1907

CURRENT NOTES ON METEOROLOGY

WINDS ON THE PEAK OF TENERIFFE

THE controversy regarding the direction of the upper winds in the vicinity of the Cape Verde and Canary Islands has prompted Hann to bring together (*Met. Zeitschr.*, Dec., 1906) the published observations of wind direction on the summit of the Peak of Teneriffe (Lat. 28° 49' N.; Long. 16° W., altitude 12,172 feet). The conclusion is as follows: the S. W. and W. wind which is very often observed above 3,000 meters, even in summer, is certainly not a local wind, but belongs to the upper members of the general atmospheric circulation. The N. E. trade occasionally blows on the top of the peak, at least in summer. The mean direction of cirrus clouds in winter is W. by S. The N. W. winds observed by Hergesell

in summer in the vicinity of the Canary Islands were probably connected with the then location of the subtropical high-pressure area of the North Atlantic Ocean. The map of isobars at 4,000 meters (Teisserenc de Bort) shows, in July, the center of the maximum somewhat N. W. of the Canaries, so that northerly winds at 4 km. above sea-level would not be contradictory to the pressure distribution. According to the interesting observations of temperature and humidity made by Hergesell in the free air above the anticyclone, the latter may extend to greater altitudes than has thus far been assumed. More constant equatorial currents are to be expected over the West Indies and Central America in the same latitudes.

CLIMATOLOGY OF THE UNITED STATES

'THE Climatology of the United States,' by Professor A. J. Henry (Bull. Q. U. S. Weather Bureau, 4to, 1906, pp. 1012, Pls. 34, Figs. 7), is one of the most important publications of our Weather Bureau. The need of a compact summary of the essential climatological data for the United States has long been felt. Hitherto these tabulations have been scattered through various annual reports of the chief of the Weather Bureau. Since Loren Blodget's famous classic, 'The Climatology of the United States' (1857) there has been no attempt to collect into one volume, and to discuss, the mass of climatological material collected by our official and voluntary observers. The data in this volume cover, generally speaking, the period 1870-1893. There is a discussion, satisfactory on the whole, of the climates of the United States in general (84 pages), illustrated by a considerable number of maps. This is the portion of the book which will be most generally used, and it will serve its purpose well. A long series of tables follows, in such form that they can easily be referred to by those who wish detailed information. At the end, occupying the larger part of the volume, come condensed summaries for the different states. The advertised price of the book is \$10, which is much too high if the volume is to find its way

generally into our libraries, but it is to be hoped that all educational institutions will secure free copies.

THE ANTI-TRADE OVER THE ATLANTIC OCEAN

THE 'Results of the Franco-American Expedition to explore the Atmosphere in the Tropics' are discussed by Professor A. L. Rotch in the *Proc. Amer. Acad. Arts and Sci.*, Vol. 42, No. 14, Dec., 1906. A summary of these results has already appeared in *SCIENCE*. This expedition, it will be remembered, was sent out in the summer of 1905, at the joint expense of Messrs. Teisserenc de Bort and Rotch, and made studies of the atmospheric conditions in and above the N. E. trade belt of the eastern North Atlantic, by means of small balloons and kites. The most important result of the summer's work was the establishment of the fact that 'the classic observations of the return trade, which were long ago made on the Peak of Teneriffe, indicate a general phenomenon, and agree with those obtained over the open ocean by the present expedition.' We note also a confirmation (p. 268) of the view that at sea cumulus clouds (noted at the edge of the N. E. trade in this case) are probably formed by the condensation of water vapor which is diffused upward from the ocean surface.

THE TSUKUBA OBSERVATORY

WE have received the results of meteorological observations made on Mt. Tsukuba (Japan) during the year 1902. This mountain is about forty miles northeast of Tokio, and rises to 2,854 feet at its highest summit. Although the altitude is not great, the exposure is excellent. In addition to the summit station, there are also a base and an intermediate station. The observatory is well equipped with standard instruments. Observations are taken at 2, 6 and 10 A.M. and P.M. on the summit; at 0, 2, 4, 6, 8, 10 A.M. and P.M. at the intermediate station. At the base, observations are made weekly, when the thermograph and barograph sheets are changed. On the summit, hourly records can be obtained from the self-recording instruments. An annual publication is issued. On the title-

page appears this statement: 'Herausgegeben von Hofmarschall-Amt. S. K. H. des Prinzen Yamashina.'

TUBERCULOSIS AMONG THE INDIANS OF ARIZONA AND NEW MEXICO

UNDER the above title Dr. I. W. Brewer, of Fort Huachuca, Ariz., has given the results of a study recently made by him, with the assistance of the medical officers at the Indian agencies and schools (*N. Y. Med. Journ.*, Nov. 17, 1906). The wide-spread prevalence of tuberculosis among these Indians emphasizes very forcibly the fact that the climate of Arizona and New Mexico, with all its sunshine and dryness, is not a specific. No climate is a specific. It is certainly of great benefit to those in the early stages of tuberculosis, but is of little value when a patient is improperly nourished and is surrounded by filth, or lives in poorly ventilated houses.

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THE AMERICAN WOMEN'S TABLE AT NAPLES

THE Naples Table Association for promoting Laboratory Research by Women wishes to call attention to the opportunities for research in zoology, botany and physiology provided by the foundation of this table.

The Zoological Station at Naples was opened by Professor Anton Dohrn in 1872 for the collection of biological material and for the study of all forms of plant and animal life. Under the personal direction of Professor Dohrn and his assistants the station has developed into an international institution for scientific research. Any government or association which pays five hundred dollars annually is assigned a table for research and is entitled to appoint to it qualified students, who are provided by the station with all materials, apparatus and assistance, free of cost. One table is sometimes used by four or five research students in the course of a year.

This association, which was formed in 1898 to promote scientific research among women,