

in *Nature* for February 17th, were much less striking than was anticipated. The influence of the eclipse on the barometer was either nil or so small that a careful study of the tracings will be necessary in order to detect it. The temperature rose more slowly than usual from 11 a. m. until about totality, when it fell rapidly about 5° F., and was constant for some time after totality, but the fall in temperature was partly at first due to the usual change from land winds to sea breezes, which usually takes place at noon. The solar radiation thermometer was the only instrument which showed any considerable influence due to the solar eclipse. This thermometer rose steadily from sunrise until about five minutes after the commencement (*i. e.*, 11:15 a. m.), when it read 144°. It fell continuously and with increasing rapidity until the end of totality, when it registered 81.5°,—practically the temperature of the air. During the latter part of this period it fell at the rate of upwards of 4° in five minutes.

#### HANN'S KLIMATOLOGIE.

THE publication of a second edition of Hann's *Klimatologie* emphasizes anew the urgent need that exists for a standard work on climatology in the English language. At present there is no book of the kind in English, and indeed there is little likelihood that anyone will attempt such a work, since Dr. Hann has so thoroughly and so masterfully presented the subject, on which he is the acknowledged authority the world over. The rapidly growing interest in meteorology and climatology in the universities and schools of the United States makes an English text-book very desirable, if not essential, and it must be the hope of American teachers and students of these two branches of science that an English translation of the new edition of Hann's work will not long be delayed.

#### BAROMETRICAL DETERMINATION OF HEIGHTS.

THE 'Barometrical Determination of Heights' is the title of a neat little book of 28 pages by Dr. F. J. B. Cordeiro, of the United States Navy. The essay was originally written in competition for the Hodgkins Fund prize (the preface has it *Hodgkin*), offered by the Smithsonian Institution. The problem of barometrical hypsometry is reviewed, and a new formula is proposed which, the author states, 'is rigidly accurate in theory and which in practice will give reliable results under all conditions.'

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#### CURRENT NOTES ON ANTHROPOLOGY.

##### THE ABORIGENES OF WESTERN ASIA.

Few localities on the globe have greater historic interest than Asia Minor and Syria; and the traits of the oldest inhabitants of those regions have, therefore, some special importance. The subject was discussed before the anthropological section of the International Medical Congress, at Moscow, last August, with an abundant difference of opinion. Professor Sergi maintained that the most ancient skull-form found there was markedly dolichocephalic; while Dr. von Luschan asserted that it was 'hypsibrachicephalic,' the purest modern examples of which are among the Armenians. Professor Virchow disagreed with von Luschan, and the fact, generally acknowledged, that the Armenians, who are a branch of the Aryan family, were immigrants into Asia Minor, seems to be in conflict with their identification with the primitive settlers.

#### ETHNOLOGICAL STUDY OF CULTIVATED PLANTS.

At the last meeting of the German Anthropological Society, Dr. Hahn read a paper on cultivated plants in reference to ethnology. It is a significant fact that the Australians, before the discovery, did not

cultivate a single food plant anywhere over their vast area; but it is nearly paralleled by North America (north of Central America), where not a single indigenous plant was cultivated except perhaps the sunflower (maize was from Central America). Central and South America could show maize, manioc, tomatoes, potatoes, beans, cacao, tobacco, yams, etc. Africa was the home of the durra and probably of coffee, though the latter seems to have been cultivated first in Arabia. Cereals were the staples of western Europe and Asia from the earliest times, as rice was of eastern Asia. The influence which the culture of these articles of food exercised on the daily life and thoughts of early tribes was profound, as is witnessed by their mythology and laws.

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#### ASTROPHYSICAL NOTES.

IN *Circular No. 19* of the Harvard College Observatory Professor E. C. Pickering announces the results of the examination of the spectra of stars in the large Magellanic cloud on plates taken with the Bruce photographic telescope at the Arequipa station. Six stars in this region, in Right Ascension about 5h. 30m. and South Declination about 69°, are found to have spectra of the fifth type ('Wolf-Rayet' type; Vogel's IIb), consisting largely of bright lines. The position of these stars is unusual, as they lie over thirty degrees from the Milky Way, while all the stars of this class previously discovered, sixty-seven in number, have the remarkable peculiarity of being situated very near the central line of the Milky Way, their galactic latitude on the average being less than 3°.

In the same region seven stars were found whose spectra are of the first type, but with bright hydrogen lines. The number of known stars with this variety of spectrum has been greatly increased in the

past few years in the progress of the Henry Draper memorial.

*Circular No. 21* states that the bright hydrogen line  $H\beta$ , discovered in the spectrum of the southern star No. 9181 of the Argentine General Catalogue in 1895, appears to be variable in that star. It was bright in October, 1897, but invisible on December 27th. Announcement is also made that Mrs. Fleming finds, on examination of Draper memorial plates, that  $\beta$  Lupi is a spectroscopic binary, with a period not yet determined. The approximate relative velocities of the recently discovered spectroscopic binaries  $\mu^1$  Scorpii and *A. G. C.*, No. 10,534, are given as 460 and 610 kilometers per second, respectively.

*Circulars Nos. 22, 23, 24 and 25* refer chiefly to matters of visual and photographic photometry. From a comparison of the constancy of the comparison stars used in determining the variations of over sixty variables found by Professor Bailey in the cluster Messier 5, it appears that any errors due to irregularity in the sensitiveness of the film on a plate are too small to be detected with certainty. The average deviation of five comparison stars on 35 plates, involving over four thousand estimates of brightness, was but 0.02 magnitude, which includes the errors of observation and those from neglecting hundredths of a magnitude in the individual estimates.

By the addition of a second double-image prism to the polarizing photometer long in use at Harvard, so as to produce coincidence of the emergent pencils from the two stars compared, the previously high accuracy of the observations has been increased. Eight measures, by Mr. O. C. Wendell, of the difference in brightness of two stars on a recent evening gave the singular and unusual degree of accordance of all the measures within 0.01 magnitude.

From a series of measures, by Wendell, of the brightness of the short period variable,