

The many reports which were collected about the 'eclipse-wind,' so-called by the late Mr. Ranyard (*Memoirs Roy. Astr. Soc.*, Vol. XLI., Chap. XXXV.), show that some change in the direction and velocity of the wind usually occurs. Theoretically, the passage of the moon's shadow, by suddenly chilling the atmosphere, ought to increase the barometric pressure along its path and so cause an outflow of air in all directions. Investigations to determine the amount of this change of pressure were made by Professor Upton and the writer during the eclipses previously mentioned with the result that the changes which could be attributed to the eclipses were found to be too small to measure directly, even with most sensitive barometers. But a very slight gradient suffices to deflect the wind or to alter its velocity and this effect was detected by us (see *Amer. Meteorological Journal*, Vol. IV., and *Annals Harvard Observatory*, previously cited). At a station traversed by the shadow there should be a deflection of the wind contrary to clock-hands before totality and a movement in the opposite direction after the shadow has passed, if the wind blows from the northern side of the eclipse track, or *vice versa* if the wind blows from the southern side. A wind having the same general direction as the shadow should be accelerated when the shadow advances and retarded when it recedes, and a wind blowing into the advancing shadow should be diminished before this arrives and increased afterwards. During totality a lull in the wind might be expected, analogous to the calm experienced in the center of an anti-cyclone.

Although some of these effects have been perceived, observations in various parts of the shadow-belt are desired in order to confirm or disprove the theory. Therefore, I shall be glad to receive any information about the changes of the wind near the surface of the ground and high up in the atmosphere during the coming eclipse. To determine the direction and strength of the surface-wind a light streamer, or pennant, attached to a freely exposed pole, may be observed several times just before and just after totality, while, if high clouds are visible, a single observation of their drift before and after totality will give the

direction of the upper wind with sufficient accuracy.

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THE UNIVERSITY OF CINCINNATI.

TO THE EDITOR OF SCIENCE: In my statement regarding the situation at the University of Cincinnati, as published in your issue of April 27th, the omission of four words, in a short paragraph on page 669, results in an erroneous statement.

The sentence should read: "During the greater part of the twenty-five years which have elapsed since the organization of the university, the institution has been without a president."

THOMAS FRENCH, JR.

'00 OR 1900.

THE use of the *year of publication* in its full or in its abbreviated form is coming into very general use as a 'catch title' in bibliographic lists and citations. The abbreviated form, *e. g.*, '97, for 1897, cannot be used for more than one century without ambiguity. There are two possibilities concerning the usage of the abbreviation '00; it may stand for either 1900 or for 1800. It is desirable that usage should be uniform. Since the use of the abbreviated form began in the present century,—about 1880, if I am not mistaken,—the omitted figures have always been 18. It seems to me that that is reason enough why we should use '00 always to mean 1800, not 1900, even though the current year belongs to the twentieth century. Thus the apostrophe would without exception stand for the same omitted figures, 18.

E. L. MARK.

HARVARD UNIVERSITY,
April 20, 1900.

CURRENT NOTES ON PHYSIOGRAPHY.

THE MEXICAN BOUNDARY.

THE 'Report of the Boundary Commission upon the survey and re-marking of the boundary between the United States and Mexico, west of the Rio Grande, 1891-1896' (Washington, 1899) includes a chapter devoted to a general description of the country adjacent to the international boundary line, of which the most notable features, in addition to the marked

aridity of the climate and to the great scarcity of perennial streams, are the "bare, jagged mountains rising out of the plains, 'like islands from the sea,' the abundance of the evidences of volcanic action in times geologically recent, the parallelism of the mountain ranges with one another and with the Pacific coast, the general absence of trees, the preponderance of evergreen vegetation, with its dull, leaden-green hue, the prevalence of thorns in nearly all vegetation, the general absence of fragrance in flowers, * * * and the abundance and large size of the cactus." The trail across the Yuma desert passes numerous graves or monuments to travelers who lost their lives from thirst. Besides the volume of text, with 49 plates, there is an atlas containing an index map, 19 detailed maps on scale of 1 : 60,000 with sketched contours, and five plates of profiles, and an album of 258 excellent plates reproduced from photographs of the boundary monuments, and showing, incidentally, an unequalled series of landscapes of that desert region.

GLACIATION OF SIERRA COSTA, CALIFORNIA.

THE 'Ancient Alpine glaciers of the Sierra Costa mountains in [northwest] California,' are described by O. H. Hershey (*Journ. Geol.*, vii, 1900, 42-77). The peaks reach 7000 to 9000 feet. Non-glaciated valleys are V-shaped, hardly wider at the bottom than their streams, and with ragged spurs projecting from their sides. Where the walls are of serpentine, landslips have occurred, forming hummocky, moraine-like masses in the valley bottom. If followed up to their glaciated stretches, they become open U-shaped, with smooth slopes, free from lateral ravines and spurs. Above the smoothed glacial channels, the mountain slopes are still ragged, deeply scored with ravines. Lateral moraines are well developed; terminal moraines are less distinct. The heads of the main and branch glaciated valleys are cliff-walled corries, often holding small rock-basin lakes. Meadows of bog and grass occupy portions of the upper valley floors, as if replacing shallow lakes. Further down, the trunk valley floors are often broken by precipitous steps from one to five hundred feet high.

A curious case of stream diversion by glacial

action is described. The upper part of the valley of Coffee creek (descending northeastward) had in preglacial time a higher floor than the neighboring upper part of the next valley on the west, that of South fork of Salmon river (descending northward), the two being separated by a low dividing ridge. The glacier of Coffee creek obstructed its own valley by a moraine several hundred feet thick, and at the same time ran over a sag in the low lateral divide and descended westward into the adjacent deeper valley, wearing down a gorge through the sag. Hence the present head of the South fork of Salmon river rises in the head of the former Coffee creek valley, follows it for five miles to the valley-floor moraine, within a few hundred yards of the present head of Coffee creek, then turns west through a narrow and rapidly descending cleft and thus deserts the Trinity for the Klamath river system.

THE TROUGH OF LAKE NYASSA.

THE suggestion made by Thomson in 1882 that Lake Nyassa in southeast Africa lies in a down-vaulted trough or *Graben* is confirmed by Bornhardt (*Verhandl. Gesellsch. f. Erdk.*, Berlin, xxvi, 1899, 437-452). The lake surface is 500 meters above sea-level; its bottom sinks several hundred meters below sea level. On either side are highlands from 1000 to 2000 meters in altitude. Fault breccias occur along the border of the trough. The highlands on the northeast where traversed by Bornhardt, consist in part of gneiss and granite. At a moderate distance back from the rapid descent to the lake, the highland surface presents gentle undulations with broad and shallow valleys of gentle fall, while the border of the highland for 10 or 15 kil. back from the trough is trenched by torrential streams in deep valleys of rapid fall, and the rolling surface is there transformed into a series of ragged ridges, scored by steep ravines. Here erosion is in its youthful stage; on the broader highland surface erosion has reached a stage of repose (*Ruhestand*) at the close of a long undisturbed period. The activity of the young streams in the highland border indicates a geologically recent date for the production of the trough.

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