This publication should stimulate friends of American archæology to contribute liberally to this enterprise, as it abundantly shows that the soil of our own continent offers problems in reference to ancient civilization every whit as interesting as those existing in the valley of the Nile or on the banks of the Euphrates.

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CURRENT NOTES ON PHYSIOGRAPHY.

GULF STREAM AND LABRADOR CURRENT.

PROF. WM. LIBBEY, JR., of Princeton, presented to the Sixth (London) International Geographical Congress, an abstract of the results obtained from serial temperature soundings along the boundary of the Gulf Stream and the Labrador current, made under his direction by the U. S. Fish Commission southward from the New England coast (Lat. 41° to 39°) between Block Island and Nantucket, in the summer months of 1889 to 1892. Surface and deep currents are separately discussed. The former are found to fluctuate with weather changes; the most intimate relation appearing between surface winds and the surface termination of isothermal lines (isothermobaths) on vertical north-south sections. The surface currents are continually swayed laterally, or hurried or retarded by the winds. Smaller and slower shifts of the deeper currents are found; while these effects are not yet definitely correlated with their causes, it is believed that they may be the cumulative results of varying surface impulses. Twenty-one sections are appended, shaded in red and blue to represent differences of temperature. Unfortunately they are without sufficient indication of place, depth or date.

PREGLACIAL EROSION CYCLES IN ILLINOIS.

O. H. HERSHEY discusses the physiographic development of northwestern Illinois on the basis of personal observations, comparing his results with those found by others elsewhere (Amer. Geol., Aug. 1896). He regards the general upland as a peneplain of Tertiary erosion. It is surmounted by low monadnocks, locally known as 'mounds,' 200 feet or more in local relief; the accordant summits of these eminences are tentatively taken to indicate an almost destroyed ancient peneplain, probably to be correlated with the peneplain of Cretaceous erosion elsewhere recognized. The uplands are interrupted by broad-floored valleys, and these in turn are trenched by narrow valleys, of late Tertiary and of Quaternary date respectively. The narrow valleys are more or less clogged with drift, concerning which several details are given. The drainage lines are interpreted as having been modified from ancient consequent courses by continually advancing adjustment to weak structures in successive early cycles; except that the Mississippi between Iowa and Illinois is thought to have first come into existence after the excavation of the broad-floored valleys in late Tertiary time. Taking 5 as the time needed for cutting the trenched valleys, 25 is given for the broad-floored valleys, 200 for the uplands, and more than 500 for the doubtful ancient peneplain of the monadnock tops; but all this is admittedly very rough. This essay is not only intrinsically valuable for its contents, but interesting as one of the few products of individual work in physiographic exploration; standing in this respect on the same plane with Taylor's studies of the ancient shore lines of our Great Lakes.

THE PIEDMONT PLATEAU OF VIRGINIA.

THE eighth annual field meeting of the National Geographic Society at Monticello, Va., was the occasion of an address by McGee, on the Geographic History of the Piedmont Plateau (Nat. Geogr. Mag., Aug., 1896). The undulant and mountain-embossed plateau is described as the pene-

plained surface of a vast mass of inclined schists, with many dikes and veins, of which an unmeasured upper portion has been worn away; the peneplain being now uplifted and trenched by sharp-cut gorges, 100 to 300 feet deep. Monticello, and Carter mountain with which it is joined, are residual eminences surmounting the undulant peneplain. It is well pointed out that a peneplain like the Piedmont plateau is a better witness to the work of rain and rivers than even the Colorado canyon; for what has been only well begun in the canyon is carried almost to completion in the peneplain. Several historico-geographical essays followed McGee's physiographic address.

NOTES.

THE North German heaths and moors, geographical inheritances of glacial action, are described with particular reference to their flora by Krause in Globus, lxx., 1896, Nos. 4, 5.

THE origin of the Wind Gap in Blue Mountain, Pa., north of Easton, by the diversion of an ancient river to several subsequent branches of the Delaware and Lehigh, finds a recent advocate in F. B. Wright, of Oberlin (Amer. Geol., Aug., 1896).

AN interesting flight of interpretation by O. H. Howarth (London Geogr. Journ., Aug., 1896) treats Popocatapetl and the neighboring volcanoes of the Mexican chain as subsidiary vents, marginal to and later than the Pedregal, a vast flood of uniform basaltic lava that stretches from the Ajusco cone over 200 miles westward nearly to Acapulco. The lava flood is referred to a quiet fissure eruption, while the scoriaceous cones, high as they tower above the Pedregal, are ascribed to explosive eruptions at points where the great body of hot lava encountered accumulations of water. Before the fissure eruption, the North American continent is believed to have ended with the Mexican plateaus.

A GEOLOGICAL and a hypsometrical map of northern Venezuela by Sievers, with explanatory text, appears in Petermann's Mittheilungen, vi., vii., 1896.

THE undersigned has recently published the following essays: The Seine, the Meuse and the Moselle (Nat. Geogr. Mag., June, July, 1896), in which the Meuse is shown to have lost certain branches to its neighbors on the west and east. The Outline of Cape Cod (Proc. Amer. Acad., Boston, 1896), in which the attempt is made to reconstruct the original outline of the terminal portion of the Cape. Large-scale Maps as Geographical Illustrations (Chicago Journ. Geol., May–June, 1896), advocating the introduction of detailed topographical maps in teaching geography, and describing several examples selected from the official surveys of Great Britain, France and Germany.

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CURRENT NOTES ON METEOROLOGY.

WORK OF THE WEATHER BUREAU IN CONNECTION WITH OUR RIVERS.

COMPARATIVELY few persons know of the work our Weather Bureau is doing in connection with the rivers of the United States, and fewer still realize the importance of this work. Bulletin No. 17 of the Weather Bureau contains an account of the origin and development of the river and flood system of the Bureau, and of the work that is now being done in this division of the service. The object of this department is to facilitate commerce on navigable streams by publishing daily information as to water stages along the course of each river, and to issue warnings of coming floods. Observations of river stages were made by the United States Engineer Corps prior to 1873, in which year the Weather Bureau formally undertook the work of making daily observations of the height of the water in the principal rivers, these ob-