

attention to this fact for the Michigamme district.

In my previous article I suggested that the period of this ancient denudation was Cretaceous, and gave reasons for the belief that the predominating agent in the process was sub-aërial erosion.

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CURRENT NOTES ON PHYSIOGRAPHY.

SAN FRANCISCO PENINSULA.

THE geology of the San Francisco peninsula by Lawson (16th Ann. Rep. U. S. G. S.) closes with a chapter on its geomorphy, in which it is shown that two fault blocks—San Bruno and Montara, the first more carved than the second—dominate the form of the region. The bounding faults trend northwest, and the fault scarps faced southwest. After faulting and well advanced dissection, a progressive emergence of the two blocks in unison revealed marine terraces at various levels on their flanks. Recently a slight submergence has drowned the lower stretches of the valleys, the Golden Gate being then made a waterway. An effective colored relief map, photographed from a model, brings out the topography very clearly.

TURKEY LAKE, INDIANA.

A BIOLOGICAL study of Turkey lake, Indiana, under the direction of C. H. Eigenmann, of the Indiana University Biological Station, gives many details concerning outline, depth and temperature (Proc. Indiana Acad. Sci., V., 1895) that may serve as typical for the smaller morainic lakes of the prairie States. For dimensions the surface is five and a-half long by about a mile wide, with a perimeter of over twenty miles and an area of 5.66 square miles. Soundings have shown the bottom to be of rolling morainic form, like the adjacent county. The greatest depth is nearly 70 feet; the average depth, 17. Small natural changes

have occurred in depth or outline, except for the conversion of shallow marginal water into swamps. The catchment basin being small, it is estimated that only seven inches of water are drained off through the outlet, while thirty inches pass away by evaporation. The action of ice in forming beaches is described, following Russell.

GEOLOGY AND SCENERY OF SUTHERLAND.

THIS attractive little book of a hundred pages by H. M. Cadell, now appears in a second edition (Edinburgh, Douglas, 1896) and gives us northern Scotland in a nutshell. Although chiefly occupied with geological structure and succession, and with diagram and experimental illustration of the 'secret of the highlands,' due attention is given to the topographic forms characteristic of each formation. The bold mountains of nearly horizontal Torridon sandstone, of which the superb Suilven is among the most striking, are benched and cliffed around by the harder layers, and seem to bear witness to the long undisturbed attitude of these ancient strata; but they are neatly shown to have recovered from a tilted position into which they were thrown in pre-Cambrian times. Eight page plates, a dozen figures, an orographical and a geological map illustrate the text.

GEOGRAPHY IN THE ENGLISH UNIVERSITIES.

SIR CLEMENTS MARKHAM, in his recent annual address to the Royal Geographical Society, announces that the geographical readership at Oxford, subsidized for ten years past by the Society, will be continued by the University without outside aid; the position still being held by Mackinder. Oldham, at Cambridge, has a less assured position, the subsidy there being still continued. Herbertson, at Manchester, is not mentioned, as the Society has not given a subsidy there. It is proposed that a London School of Geography of university rank should be formed under the

auspices of the Society. In comment, it may be said if Great Britain to-day supplies the most active explorers and holds the greatest colonial possessions in the world in spite of the lack of instruction in geography so generally complained of, what will she become when this branch of instruction is duly organized!

THE PAMIRS.

AN entertaining narrative of exploration by Curzon over the Pamirs to the source of the Oxus (London Geogr. Jour. July, Aug.) discusses the meaning of Pamir, discarding the 'roof of the world' as fantastic, and concluding, with much appearance of truth, that a Pamir is an elevated valley (12,000-14,000 ft.), floored with broad slopes of waste from the adjoining lofty mountains (20,000 ft.+), drained by a medial stream, which runs noisily over a stony bed, meanders through a peaty tract or spreads in a lake; buried in snow for seven winter months, but affording abundance of summer pasturage, although devoid of trees and cultivation. The further statements that the Pamir is 'a mountain valley of glacial formation,' and that the inability of the medial stream to scour for itself a deeper channel is due to the 'width of the valleys and the consequent absence of glaciers on any scale' seem to be open to question. Eight different Pamirs are described and mapped.

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CURRENT NOTES ON ANTHROPOLOGY.

THE SIGNIFICANCE OF THE METOPIC SUTURE.

A WELL studied memoir on this subject is that of Dr. G. Papillault, published by the Anthropological Society of Paris (*La Suture Métrope, et ses Rapports avec la Morphologie Crânienne*, pp. 122. Paris, 1896). His results are derived from a comparison of a long series of skulls of different ages, sexes and races. They clearly indicate that the presence and persistence of the

metopic suture is an evidence of superior mental (cerebral) activity and superiority, because this persistence unquestionably finds its point of departure in the brain itself. It is seen most frequently in women and children, and is not uncommon in the Negritos. These facts, however, do not impair the author's position. The superiority he refers to is relative to weight and height, and in that sense he claims that the brain of the female and the child does rank above that of the adult man.

He does not affirm the intellectual superiority of metopics in an absolute sense, but that the capacity and functional energy of their brains are greater in proportion to the whole body than in others. Moreover, he very pertinently adds that nothing is more difficult than to pronounce positively on the intelligence of a race or an individual. Civilization and success are not sure criteria, as every one must admit. The demonstration of his position is ably argued.

THE SVASTIKA AND THE TRISKELES.

It is singular to how many possible origins these famous symbols lend themselves. The latest is proposed by the well-known explorer, Karl von den Steinen, in a paper contributed to the Bastian Memorial Volume. He believes that the svastika was developed from the conventional outline of the stork, and the triskeles from that of the domestic fowl! He brings forward considerable learning and ingenuity to demonstrate his thesis, and succeeds in rendering it as plausible as a dozen other hypotheses which have been advanced. How the svastika came to be in America, where we have no storks, he fails to explain; in fact, does not refer to the American examples of these figures, which for an Americanist, *ex professo*, is an unexpected oversight. At the close he makes some observations on the Runic alphabets, which he believes are something more than modifications of Latin letters.