

forms. I make no pretensions to expertness in paleontological knowledge, but the fossil fauna at Port Antonio impressed me as being of an Eocene facies. On the Isthmus of Panama, where the horizon is due in the column of strata, there is nothing at all representing this immense coralline limestone of Jamaica. But in Citrus county, Florida, I studied, several years ago, a white coralline Eocene limestone, which seems to me to have a fauna of a facies similar to that at Port Antonio. Certainly there is a remarkably close resemblance between the two formations. If they are parts of the same formation, or limestones formed under like conditions and of the same age, the Blue Mountains of Jamaica consist of a deeply eroded massive 'uplift' of the Vicksburg-Jackson limestone, as the Eocene coralline limestone of the southeastern portion of the United States has been named.

The railroad between Kingston and Port Antonio is built over the white limestone nearly all the way. But for some short distance on the north of the divide and south of Morant Bay the many cuts expose a heavy series of soft or semi-lithified clays, which are probably newer than the limestone.

The only other formation of any importance which was observed on the island is a gravel deposit of Quaternary age which forms an even but gently sloping plain between Kingston and Spanish Town and is represented at intervals on the north coast, where it forms uneven terraces of no great height, indicating apparently a slight uplift of the island in some not very late part of the Quaternary Era.

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CURRENT NOTES ON ANTHROPOLOGY.

NATIVE AMERICAN LANGUAGES.

In the *Proceedings* of the Canadian Institute, May, 1898, the Rev. E. B. Glass

has a few pages on the Cree language. He discusses its euphony, precision, and the formation of its nouns.

The Rev. John Campbell prints another of his 'discoveries' in the *Transactions* of the Canadian Institute (May, 1898). The title is 'The Dénés of America identified with the Tungus of Asia.' Mr. Campbell has announced so many such discoveries that it is difficult to secure consideration for more of them.

The death of Professor Dr. Friederich Müller, of Vienna, which occurred May 25th, should not be allowed to pass without a tribute to his studies of American languages. In the second volume of his great work 'Grundriss der Sprachwissenschaft' (Vienna, 1882), he presented the analysis of forty-one native tongues and dialects spoken by the aborigines of this continent, in accordance with the most rigid demands of science. He avoided the treacherous ground of verbal comparisons, and devoted his attention to morphology and grammatical structure. Both in extent and scholarly thoroughness, his work in this branch stands easily ahead of that of any other writer in this generation.

THE STUDY OF DECREASED NATALITY.

Few subjects in anthropology have more practical bearing than that of the decadence of races. This comes most directly from a diminished birth rate. It has been calculated that a minimum of four living children are required to each marriage under ordinary conditions in order merely to prevent diminution. Decrease in natality, therefore, is an ominous outlook for a community.

A study of it in the United States by Dr. K. R. Storer appeared some months ago (reprint from *Atlantic Monthly*, October, 1897). It is disappointing in both facts (?) and conclusions. With his full opportunities of observation he is quite unable to

present his statistics in scientific form. What nonsense to talk of the laws of decreased natality as 'a penalty inflicted for the sin of the people' (p. 32)! Or to attribute the greater fecundity of our foreign-born population to 'the watchful protection of the Roman Catholic Church' (p. 25), in face of the facts that a large percentage of the foreign-born are not Catholics, and in France, where 95 per cent. of the population are Catholic, the decrease of natality is more striking than in any other country! The topic must be studied in a very different spirit from this in order to reach results worth anything.

MEXICAN FLUTES.

A CONTRIBUTION by Professor Kollmann, of Basel, to the Bastian *Festschrift* should be mentioned, though it is a little late to refer to it.

The subject is a portion of the collection of Mexican antiquities brought to Basel about 1837 by Lucas Vischer. It includes a number of flutes and whistling jars of pottery, not materially unlike quantities of others in various museums. Professor Kollmann describes and figures them, speaks of their employment in religious and other ceremonies, and speculates as to their origin, seemingly leaning toward an 'Asiatic' suggestion. He is in error in supposing the flute was confined to the aborigines of Mexico and Central America. It was known to the Indians of Florida and elsewhere.

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SCIENTIFIC NOTES AND NEWS.

THE MARYLAND GEOLOGICAL SURVEY.

WE learn from an article in the Baltimore *Sun* that the work of the Maryland Geological Survey, which is being carried on under the direction of Professor William Bullock Clark, of the Johns Hopkins University, State Geologist, is being pushed with vigor in several sections of

the State. A large area will be thoroughly surveyed during the present summer. At the same time the results of the previous work are being rapidly brought together for publication, and the second volume of the Survey Reports, much elaborated over earlier plans, will shortly appear.

The topographic work which is being carried on under an act of the last Legislature, in cooperation with the United States Geological Survey is making rapid strides in the mountainous portions of western Maryland and Garrett and Alleghany counties, and will be completed before the close of the field season. The geological work proper is being carried on at the present time in sections of western, southern and northern Maryland. A party of several geologists, under the direction of Dr. G. B. Shattuck, is studying the later Tertiary formations, with their marls, clays and gravels, in the southern counties, while associated with them during most of the season has been Dr. R. M. Bagg in a study of the earlier Tertiary of Anne Arundel and Prince George's counties. Mr. A. Bibbins is engaged in the study of the clays and iron carbonate deposits of the older coastal plain formations in Cecil and Harford counties, and their extension beyond the limit of the State.

The geology of the Piedmont belt is under the direction of Dr. E. B. Mathews, who has had associated with him in the study of the distribution of the basic eruptive rocks in the northern counties, especially Cecil, Harford and Baltimore, Dr. A. G. Leonard, who will spend the summer in tracing the distribution of these rocks across the State.

The geology of western Maryland, which is under the charge of Dr. Charles S. Prosser, is being investigated by him and Messrs. O'Harra, McLaughlin and Rowe, who have already nearly completed their work in this district. The magnetic survey of the State is being carried on under the direction of Dr. L. A. Bauer.

The new highway division of the Survey established by an act of the last Legislature is under the charge of Dr. H. F. Reid, who has associated with him Mr. A. N. Johnson as highway expert. These gentlemen, in conjunction with Professor Clark, have visited various sec-