

currents, waves and tides. The book may be strongly recommended for a professor's library.

#### THE GEOGRAPHICAL ASSOCIATION.

A NUMBER of English schoolmasters have formed a Geographical Association, 'to improve the teaching of Geography in secondary schools by adopting any methods that tend to the comprehension of geographical principles rather than the accumulation of isolated facts.' The prevalent backward condition of the study in England can be inferred from the publication of an essay on 'Geography as a school subject,' by the Hon. Secretary, B. B. Dickinson (Lawrence, Rugby, 1896), 'an attempt to show that geography can be taught as a training of the mind.' It is curious to note that the element of training, as far as it is illustrated in this essay, is almost entirely derived from a consideration of climate, and that no disciplinary value is assigned to the study of land forms themselves. The treatment of the winds, under climate, is unsatisfactory; for example: "It can be explained in simple language that one effect of [the earth's] rotation will cause the atmosphere to be heaped up relatively high over the equatorial regions and low over the poles, and that this would lead to a gradual increase in the atmospheric pressure on the surface of the earth as we proceed from the poles to the equator." Again: "The pupils should carefully note how gradual is the falling-off of the heat received in the first 45° [from the equator], and how rapid it becomes with greater obliquities." Both quotations contain errors of statement that are inconsistent with good training. On the other hand, the attempt to connect human conditions with physical conditions is admirable; so admirable, indeed, that it should be uniformly extended all through the study of geography with as much care as is here given to the chapter on climate.

#### NOTES.

'THE Missouri river and its utmost source' is the title of a book by J. V. Brower (St. Paul, 1896), already known by his studies of the source of the Mississippi. This newer volume contains a little in the way of observation on the ground, but it is confused with a quantity of irrelevant matter, both in text and illustration. The text has less of physiographic matter than might be inferred from the title.

PROFESSOR A. A. WRIGHT, of Oberlin, has recently addressed the Ohio Academy of Science on the importance of establishing a topographic survey of that State. The educational, as well as the technical, value of the survey is emphasized, and a joint undertaking with the U. S. Geological Survey is recommended. The Academy approved the plan and appointed a committee of three to secure favorable action by the next Legislature.

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#### CURRENT NOTES ON ANTHROPOLOGY.

##### THE GAME OF MANCALA.

THE value of games, both as marking distribution within certain areas and as illustrating analogous lines of independent development, has been a fruitful study in the hands of Mr. Stewart Culin, of the Museum of the University of Pennsylvania.

His latest contribution is entitled 'Mancala, the national game of Africa,' and appears in the last Report of the United States National Museum (pp. 10, with illustrations). He believes that "it marks the limits of Arab culture," or, rather influence, and was historically disseminated by the extension of this Semitic people. He describes the modes of playing it and comments on its historical spread. It seems to have been known for some years in the United States under the name 'chuba.'

## ORIENTAL ITEMS OF ETHNOLOGIC INTEREST.

THE seventeenth volume of the Journal of the American Oriental Society contains several articles of ethnologic interest. One is the date of Zoroaster, which fixes the definite form of the Mazdeistic cult. This is placed by Prof. A. V. W. Jackson, in a very erudite analysis of the testimony, 'between the latter half of the seventh century and the middle of the sixth century B. C.'

Dr. John P. Peters defends with strong arguments the opinion that "the original home of civilization in Babylonia was the strip of land from Nippur southward to the neighborhood of Ur," and the founding of the city of Nippur "considerably antedated 6,000 B. C. and perhaps 7,000 B. C." That there were city builders among men that long ago is a most interesting result.

Prof. Haupt, in a critical analysis of the Judaic account of creation, adds to the evidence that it is 'specifically Babylonian' in origin.

Dr. C. P. G. Scott has some remarks on the 'universal' qualities of language, apropos of Malayan, a subject of the greatest anthropologic interest.

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## NOTES ON INORGANIC CHEMISTRY.

IN a recent number of the *Zeitschrift für physikalische Chemie*, Debus criticises some of the conclusions of Roscoe and Harden in the 'New Views of Dalton's Atomic Theory.' He holds that in 1801 Dalton was led to the hypothesis that equal volumes of gases under normal conditions contain equal numbers of molecules, and that this hypothesis and his study of the oxids of nitrogen led him to formulate his atomic theory. In 1805 he abandoned his earlier views as to the equal number of molecules. Avogadro was probably aware of Dalton's views and borrowed his hypothesis, which is now known as Avogadro's law.

To the number of metallic carbids produced in his electric furnace by Moissan must now be added lanthanum carbid,  $C_2La$ . It is, like most of the other carbids, decomposed by water and yields chiefly (71%) acetylene with 27% methane, a little ethylene and small quantities of liquid and solid hydrocarbons, thus closely resembling the carbid of cerium.

THE last Proceedings of the Chemical Society (London) contain accounts of experiments of E. Sonstadt on sea water. As long ago as 1872 Sonstadt showed that the iodine in sea water is in the form of calcium iodate, four parts per million. His experiments not having been repeated by others, he now shows that an oxidizing substance must be present in sea water. He compares the oxidizing action of sea water on ferrous sulfate with that of sea water which has been deprived of iodates and similar compounds by evaporation and heating with mercury. He finds that the oxidizing quality of sea water is far greater than would be due to the presence of the iodate, and infers that other oxidizing substances are present. It seems ordinarily to be taken for granted that iodine is present in sea water as sodium iodide, analogous to chlorine and bromine, but, aside from Sonstadt, Balard and Pfaff are the only observers who have been able to even detect the presence of iodine in any form in sea water.

Sonstadt also shows that silver and gold can be detected in as small quantities as two liters of sea water, by continued agitation with mercury. The mercury on evaporation leaves a film partly soluble in nitric acid showing silver, while the insoluble portion dissolves in aqua regia and on cupellation gives a very minute bead of gold. Sonstadt concludes that, inasmuch as silver chloride is not decomposed by mercury, the silver may be considered to be present practically as metallic silver, and the gold probably in a similar condition.