

Adelbert College, upon the *Biology of the Lobster* will be printed in full in a later number of SCIENCE.

#### CURRENT NOTES ON ANTHROPOLOGY (II.).

##### NATIVE ASTRONOMY IN MEXICO AND CENTRAL AMERICA.

At the International Congress of Americanists, which met in Stockholm last August, two papers were presented which ought to give pause to those would-be critics who of late years have been seeking to belittle the acquirements of the semi-civilized tribes of Mexico and Central America. Both are studies of the positive astronomic knowledge which had been gained by the observers among those tribes. One is by Mrs. Zelia Nuttall, and bears the title, *Notes of the Ancient Mexican Calendar System*. It is intended merely as a preliminary publication to a thorough analysis of this system as it was carried out in Mexico, and contains only the outlines of her discoveries. These are, however, sufficient to support her thesis, that the astronomer-priests possessed a surprisingly accurate knowledge of the exact length of the solar year, of the revolution of the moon, and of the synodical revolution of the planet Venus.

The second paper is by Dr. Förstemann, who is the foremost student in Germany of the contents of the books written in the hieroglyphic script of the ancient Mayas. He takes up page 24 of the Dresden Codex, and explains its meaning. This page has been long recognized as a sort of abstract or table of contents of those which follow it in the Codex, but its exact bearing has not previously been interpreted. Dr. Förstemann shows by ingenious and accurate reasoning that it relates chiefly to the synodical revolution of the planet Venus and its relation to the courses of the sun and moon.

##### RECENT AMERICAN LINGUISTIC STUDIES.

It is gratifying to note that the immense field of native American languages is finding cultivators in many countries.

Even in England, where so little has been done in this direction, a special fund has been raised called the 'vocabulary publication fund,' which prints and issues (through Kegan Paul, Trench, Trübner & Co.) short grammars and vocabularies of languages from MSS. in the possession of learned societies and individuals. The first printed is a grammar and vocabulary of the Ipurina language, by the Rev. J. E. R. Polak. This is one of the Amazonian dialects, and though we were not without some material in it before, this addition to our knowledge is very welcome.

From the same teeming storehouse of Brazil, Dr. Paul Ehrenreich has lately published in the Berlin *Zeitschrift für Ethnologie*, his excellent studies in the language of the the Carayas and Cayapos. They are practically new in matter and form. The Puquinas are a rude tribe who live about Lake Titicaca. M. Raoul de La Grasserie has lately issued (through Koehler, Leipzig) a number of old texts in their language; and Dr. Max. Uhle has collected considerable material in it as spoken to-day. Dr. A. F. Chamberlain, in the American Anthropologist for April last, analyzes a number of neologisms in the Kootenay language; while our knowledge of the remote and confusing dialects of the Gran Chaco has lately been notably increased by the activity of the Argentine scholars, Macedo and Lafone-Quevedo, in editing from rare or manuscript works the notes collected by the early missionaries.

##### AMERICAN ONOMATOLOGY.

THE study of the meaning and origin of geographical names has a higher purpose than to satisfy a passing curiosity. They are often the only surviving evidences of

migrations and occupancy; they preserve extinct tongues or obsolete forms; and they indicate the stage of culture of the people who bestowed them. Especially useful in these directions are the aboriginal names on the American continent; for the shifting of the native population was so rapid, and the dialects disappeared so quickly, that the place-names are sometimes the only hints left us of the presence of tribes in given localities.

A model study in this field is that of Dr. Karl Sapper in *Globus*, Bd. LXVI., No. 6, on 'The Native Place-names of Northern Central America.' It embraces Guatemala, Chiapas, Tabasco, and portions of Yucatan, Honduras and San Salvador. The aim of the writer is to define the limits of the Mayan dialects, and to explain the presence of Nahuatl influence. He accomplishes his purpose in a thorough manner. Mr. De Peralta, in his *Etnología Centro-Americana* (Madrid, 1893), did much the same for Costa Rica; and in the Algonkian regions of the Eastern United States, Mr. William Wallace Tooker (in the *American Anthropologist* and other periodicals) has supplied unquestionably correct analyses of the complicated and often corrupt forms derived from that stock.

#### SOME RECENT EUROPEAN ARTICLES ON AMERICAN ARCHÆOLOGY.

ALTHOUGH some lofty archæologists in the United States display an inability to perceive the value of the antiquities of this continent, it is gratifying to note that this purblindness does not prevail in Europe.

What native American skill could accomplish in the line of true art is well shown by the reproduction on the design on a beautifully colored and decorated vase from Chama, Guatemala, figured by Herr Diesel-forff in the *Zeitschrift für Ethnologie*, 1894, Heft V. It will creditably bear comparison with the higher periods of Etruscan technique.

In a publication which has been lately started by the Museum of Ethnography of Berlin, called *Ethnologisches Notizblatt*, Dr. E. Seler, well known for his profound researches into Mexican antiquity, has a copiously illustrated article on the great stone sculptures of the National Museum of Mexico. He identifies several of the figures about which doubt has been entertained.

The Count de Charencey, also an author who has written abundantly on American subjects, has an article in the *Revue des Religions* for June last, on *Les Déformations Craniennes*. Unfortunately, he has not outgrown the theories of Angrand and other obsolete writers, who saw 'Toltecs' and 'Asiatic influence' and the 'Ten Lost Tribes' wherever they turned their gaze in the New World. It is a pity that his real learning should be thus misdirected.

The Report, the ninth, of the British Association on the *Northwestern Tribes of Canada*, contains this year but 11 pages, written by Dr. Boas. At the next meeting it will conclude its labors.

#### SOME OF ADOLPH BASTIAN'S LATER WRITINGS.

THE untiring activity of Professor Adolph Bastian, who for more than a quarter of a century has occupied the position of Director of the Royal Museum of Ethnography at Berlin, is something amazing.

He but recently returned from a long journey in the Orient, one of the products of which was a remarkable book with a not less remarkable title, *Ideal Worlds according to Uranographic Provinces*, in which he discusses at length the cosmogonies and theogonies of the philosophers of India. This indicates the special direction of his studies of late years. They have turned toward the elementary conceptions of primitive and early peoples concerning the universe, cosmogony and theogony, the nature and destiny of the soul, the life and supposed worlds hereafter, the processes of

thought, the notions of social relation, traced as far into their abstract forms as it was possible for the human mind in that stage of development to conceive and express them.

This tendency is illustrated by the titles of some of his latest issues; as, *Vorgeschichtliche Schöpfungslieder in ihren Ethnischen Elementargedanken*; *Zur Mythologie und Psychologie der Nigritier in Guinea mit Bezugnahme auf Socialistische Elementargedanken*; *Wie das Volk Denkt*; *ein Beitrag zur Beantwortung sozialer Fragen auf Grundlage Ethnischer Elementargedanken*, etc.

These writings are all crammed with wide erudition and mature reflection; but, unfortunately, the author persists in following a literary style of expression which is certainly the worst of any living writer, intricate, obscure, sometimes unintelligible to a born German, as one of his own pupils has assured me. This greatly limits the usefulness of his productions.

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#### THE CONNECTICUT SANDSTONE GROUP.

THE attempt to revive the abandoned name of Newark for the older designation of Connecticut, in its application to the Triassic terranes in the Atlantic geographic area, is supported by G. K. Gilbert and opposed by B. S. Lyman, in a joint discussion, in the *Journal of Geology*, Vol. II., No. 1. One would think that the considerations presented by me in the *American Geologist*, Vol. V., page 201, would have been sufficient to satisfy any one looking at the subject judicially and impartially, of the inadequacy of the name Newark to special recognition. In seeking a name for a terrane we should naturally inquire, *first*, where is the area which exhibits best the typical features? In answer to this we have the fact that in the Connecticut area the early exploration was the most thorough, the very

unique occurrence of fossil footmarks was first recognized, and is the only one in which they have been thoroughly studied. At first these were thought to have been made by birds; but the later suggestion of dinosaurs has been verified by the masterly restorations of *Anchisaurus* by Prof. O. C. Marsh, obtained in the same Connecticut valley. Reptilian bones were known also from Pennsylvania, but no one has ever connected them with the tracks. Thus the feature which characterizes the American Trias is found in its perfection in the Connecticut and not in the Newark area. The fish are also more abundant in the first named area. The other features of importance are the coal and fossil plants, and these are best developed in a Virginia area.

*Second.* It is essential for the suitability of a geographical term, that the locality be one where the terrane should be exhibited in its entirety or maximum. The Connecticut valley has the whole series. The city of Newark 'does not contain one-fourth part of the thickness of this sandstone, and that which is visible is only a fraction of this fourth.' This early statement of mine is confirmed by Mr. B. S. Lyman, who says the exposures at Newark amount to 'one-tenth or one-twentieth of the beds to be included in the name.' Mr. Lyman has still later called attention to the probability that the Newark beds belong to the Permian instead of the Triassic.

*Third.* The name of Connecticut or Connecticut river sandstone has precedence over Newark. It was both in actual use before the suggestion of Newark, and was again proposed and used after 1856 and before 1892, because no one except Mr. Redfield employed the term Newark. The proposal was never accepted by the geological public.

In the early days of geology the use of local names was confined to the groups like