imperfectly acquainted with the writings of that distinguished antiquary. For instance, the name of the fifth day in the Maya calendar is *chicchan*, which in one of his articles, published in 1888, Dr. Seler derives from *can*, serpent, and *chi*, to bite; but in a later paper, published in 1891, he retracts this etymology, and says, "Jetzt ist es mir zweifellos, dass es *chic-chaan*, d. h., 'tomado señal,' 'tomado aguero,' bedeuten soll." Dr. Thomas, unacquainted with the latter article, asserts that my quotations were not correct, and questions the translation. It is good for reviewers, as well as writers, to keep themselves acquainted with the current literature of their own special branches.

Dr. Thomas also objects to my interpretations of the Maya month names from religious ceremonies held at certain seasons, stating that it is "totally different from the method by which the names of the months of other calendars were obtained";—entirely overlooking the fact (for I cannot suppose he is ignorant of it) that the Nahuatl month-names are recognized by all to have been derived just in this way.

In his letter to *Science*, Dr. Thomas fails to grasp Mrs. Nuttall's theory. There is no fixed relation of the ceremonial year of 260 days to each civil solar year of 365 days; but in a cycle of exactly 37 solar years, 13,515 days, the two calendars coincide; and there is certainly some evidence that this cycle was noted and celebrated by both Mayas and Mexicans. We may well leave, however, further discussion of this intricate subject till the appearance of Mrs. Nuttall's work, now in course of publication by the Peabody Museum of Archæology.

The analogies which Dr. Thomas endeavors to point out in favor of a Polynesian origin of the calendar are not impressive. For instance, 8 months, 232 days, surely does not "correspond somewhat closely with the sacred period of the Mexican calendar," which was 260 days. Nor is it easy to see why it is such a "singular fact," that the Javanese, like the Mexicans, had a five days' week, since both employed the quinary method of enumeration. As to the Hawaiian system, Dr. Thomas is quite right in speaking of the accounts of it as "in evident confusion"; therefore the less we base analogies upon it, the more creditable will be our caution.

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Philadelphia.

Mining Exhibits at Chicago.

THE anonymous writer of the article entitled, "The Columbian and the Centennial Expositions," in *Science* of Feb. 2, we think unjustly criticizes the exhibits of the Mining Building. It is evident that the writer, in common with probably nine-tenths of the visitors, has passed judgment on the exhibit as a whole by examining merely those parts of it which were displayed on the ground floor. To a lover of educational features in the exhibit nothing could arouse greater regret than that so vast an amount of space on the ground floor was devoted to "great piles of rocks and ores utterly without system" and to the veritable storage of practically worthless, unlabeled material in expensive showcases, as for example in the wretched Mexican display. Your correspondent most justly condemns such waste of space, but when he attempts to score "the rest" of the exhibits, it is very easy to see that he overlooks the gallery exhibits, which in educational value far exceeded any at the Centennial. In Philadelphia exhibits of considerable interest, but of no scientific value, were scattered through several buildings; and the "Mining Annex," itself an afterthought, and added to the main building merely to supply the demand for space, contained little that was comparable even to the exhibits on the ground floor of the Chicago Mining Building. The elaborate, and on a whole excellent, metallurgical display in the west gallery, though defective, had no competitor at the Centennial; the most instructive Coke-exhibit, the admirable abrassive exhibit, the large floor chart of the coal fields of the United States, and the collections of building stones all in the east gallery and the grand display of oils in the north gallery, the mere decoration of which we understand cost $65,000, are not even mentioned by your correspondent, and probably he never ascended the tiresome stairways which led up to the real mecca of the few who desired to study the educational exhibits in the Mining Building. Nor is mention made of the great systematic collections of minerals and rocks displayed respectively in the east and west galleries. It is worth noting that every specimen in two of these collections was labeled with its species, crystallographic form, chemical formula and locality, and so mounted as to clearly display the label, which in one collection was invariably a printed one. These systematic collections were unquestionably the best labeled, most complete and scientific, ever shown at any World's Fair. Two fine displays of gems in the rough and cut, in the west gallery, are also overlooked. It is easy to find fault, but far better, in our judgment, to discern merits, and as a mineralogist who visited the Centennial more than a score of times and spent six months at the Columbian Exposition, the opinion here expressed that the mining exhibit at Chicago far exceeded that at Philadelphia may coincide within the unwritten opinion of many a mineralogist.

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New York.

BOOK REVIEWS.

Histories of American Schools for the Deaf, 1817–1893. Edited by EDWARD A. FAY. 3 vols., octavo. Washington, D. C., The Volta Bureau.

THE historical sketches contained in these goodly volumes were prepared for the Columbian anniversary, the enterprise having been first suggested in December, 1892. They give accounts of all the schools for the deaf that have been established in the United States, Canada and Mexico, most of the histories having been prepared by the heads of the various schools or by persons designated by them, several of the writers being deaf themselves. The different articles of which the work consists are printed and paged separately, the printing in many cases having been done by pupils or graduates of the schools, and the volumes are profusely illustrated with portraits and other pictures. Most of the schools are public, and supported in whole or in part by the state; but private and denominational institutions are also included, the whole number of schools dealt with being seventy-nine in the United States, seven in Canada and one in Mexico. Besides the histories of the various schools, these volumes contain an introduction by the editor, an account of several conferences of the instructors and also of the American Association to Promote the Teaching of Speech to the Deaf, together with many statistical and personal items pertaining to the general subject.

Of the schools whose origin and history are here recounted, the greatest interest naturally attaches to the earliest ones and to those which at a later time introduced the system of oral teaching. The editor in his introductory note alludes to the first establishment of the European schools for the deaf, which were the models of our own; and the opening chapters of the first volume describe the founding of the first two American schools, the American Asylum at Hartford, which was opened in 1817, and the New York Institution, which originated independently the following year. The remainder of the