DR. EMIL SCHMIDT'S RECENT WORKS.

DR. EMIL SCHMIDT, of Leipzig, is favorably known to anthropologists by his many practical contributions to their science. His text-book on physical anthropology is the best manual extant. Quite lately I referred to his investigations into the pre-Columbian history of the United States (see SCIENCE, p. 256). These were a chapter of his large volume, 'Vorgeschichte Nordamerikas, im Gebiet der Vereinigten Staaten' (pp. 216, Braunschweig, 1894). This is divided into four parts, one on the very oldest relics of man in the area of the United States; the second on the prehistoric copper implements of North America; the third on the prehistoric Indians of North America east of the Rocky Mountains; and the fourth on those in the southwestern portions of the United States. These topics are treated with a thorough knowledge of the best authorities and a calm judgement. The book will, I hope, have a translation into English.

In another work, 'Reise nach Südindien' (pp. 314, Leipzig, 1894), Dr. Schmidt gives the results of his own observations and investigations into the native tribes of southern India. It is written in popular style, abundantly enriched with illustrations of the natives and of the scenery, and replete with valuable information.

THE ANCIENT ETHNOGRAPHY OF WESTERN ASIA.

THERE is no other portion of the globe of equal area the ancient ethnography of which is so interesting to the history of human culture as western Asia, in the land area included between the four seas, the Black, the Caspian, the Persian Gulf and the Mediterranean. This embraces Palestine, Mesopotamia and the upper Euphrates valley, eastern Asia Minor, Arménia, Mount Ararat and many other wondrous sites of old. Here lay the Garden of Eden, the holy cities and the earliest centers of civilization.

A most valuable contribution to the study of its earliest geography and ethnography, as understood by the ancient Egyptians and preserved in their writings, appeared a little over a year ago from the pen of Professor W. Max Müller, now of Philadelphia (Asien und Europa nach altegyptischen Denkmälern, pp. 403, Leipzig, 1893). It is very abundantly illustrated with copies of the ethnic types found on the Egyptian monuments and with texts in the hieroglyphic script of the Nilotic scribes. As the author is one of the most accomplished Egyptologists living, his translations of the hieroglyphs are peculiarly valuable to the ethnographer, since few students of that specialty have paid attention to ethnic descriptions. A map appended to the volume locates from Egyptian sources those troublesome people, the Hittites, this time, in Cappadocia, as well as the Mitanni, the Kilak, and other little known tribes. The numerous drawings of the faces, costumes, armors, etc., of these former inhabitants, as well as the profound linguistic analysis of texts, render this volume one of exceptional value.

D. G. BRINTON.
UNIVERSITY OF PENNSYLVANIA.

CORRESPONDENCE.

A CARD CATALOGUE OF SCIENTIFIC LITERATURE.

EDITOR OF SCIENCE—*Dear Sir:* I presume that there is no doubt of the existence of considerable demand among workers in, and writers upon, various branches of science for an index catalogue of the books and papers relating to the subjects in which they are interested, and that an accurate card catalogue, each card to be promptly furnished as soon as the book or paper is published, will best meet this demand. It is also desired that each card should contain a brief summary of the contents of the article.

A large number of investigators and writers would be glad to have their work done for them by some automatic or mechanical means, as far as possible, up to a point just short of the conclusions or results. These, of course, they prefer to prepare and state themselves. Those who like literary research would be pleased to have coöperative laboratories established in which, for a moderate annual subscription, they could have any experiments made which they might suggest, the results to be reported to them for their use. Others would prefer to do the experimenting themselves, and have some one else tell them everything that other people have done and written about the matter. And if each party is able and willing to pay for the assistance he requires, and can find persons competent to give that assistance and willing to do the work merely for the pay offered, every one will agree that it is a good thing, and will furnish new channels of employment and remuneration for experts, for which channels the need is steadily increasing.

It is, however, not clear that the benefits to science and to humanity, which would result from a complete card index of science up to date and available for every one who would like to consult it, would be so great as to make it the duty of any existing scientific body or institution to incur the great expense of taking charge of the matter or to contribute largely to its support.

Physicians meet with some cases for which it is desirable that the food should be carefully minced and partially digested before it is given, and sometimes it is necessary to push this food far back on the tongue to make sure that it will be swallowed, or even to forcibly inject it, but in most cases this benefits no one but the patient.

There is a very considerable number of men now engaged in preparing abstracts and summaries of what is known in various branches of science, and publishing them as monographs, monthly reviews, year books, etc.; and in medicine, at all events, the supply of this kind of material is quite equal to the paying demand for it.

Moreover, it is not certain that the investigator who wishes to know everything that has been suggested with regard to the subject which he has under consideration will be much happier when he gets his card index up to date, if he has not made it himself. He will find references to articles by Smith, and Schmidt, and Smitovich; but where are the books containing these articles? Very probably, after a week's hunt and correspondence, he finds that there are one or two of them that are not in any library accessible to him, and then he is decidedly worse off than he would be if he did not know that they existed.

It is probable that such complete card catalogues with abstracts would be the means of adding largely to the bulk of scientific literature, as the Index Catalogue of the National Medical Library and the Index Medicus have done to the literature of medicine. The bibliography and the abstracts will be published over and over again in successive papers by different writers.

The expediency of having such card indexes prepared depends upon the cost, and upon whether the money could be used to better advantage in promoting the increase and diffusion of knowledge in other ways. I should suppose that $25,000 a year would be a moderate estimate for providing 25 copies of such a card index for all branches of science, and to bring the cost within this limit would require careful selection.

If each author were to make his own abstract, and every article thus abstracted is to be indexed, probably $50,000 a year would be required. Much might be done for the advancement of science with a fund of $25,000 per annum.

I do not wish to be understood as opposing the preparation and furnishing of an universal card index; the schemes proposed are beautiful in the glow and shimmer of their optimism—reminding one of Chimmie Fadden, "Up t' de limit an' strikin' er great pace t' git on de odder side of it," but they must be looked at from the practical business point of view by those who are to defray the cost, and who have, I feel sure, other important uses for their money and for the skilled brains required for such work, and more definite information is wanted with regard to the number of titles, etc., which must be indexed annually upon such a scheme before a wise decision can be made. For general Biology, Morphology, Physiology, Bacteriology and scientific Pathology, and other subjects of scientific importance connected with medicine, I think that about 10,000 cards a year would be sufficient if all second-hand matter and hash were carefully excluded.

Very truly yours,

J. S. Billings.

Washington.

SCIENTIFIC LITERATURE.

The Great Ice Age and its Relation to the Antiquity of Man. By James Geikie, LL. D., D. C. L., F. R. S., etc. Murchison Professor of Geology and Mineralogy in the University of Edinburgh, formerly of H. M. Geological Survey of Scotland. Third Edition, largely rewritten, with maps and illustrations. New York, D. Appleton & Company. 1895. 8vo., xxviii + 850.

Twenty-two years ago the first edition of this book appeared in England. The author then endeavored to give a systematic account of the Glacial Epoch, with special reference to its changes of climate. In so doing he entered first quite fully into the geological history of glacial and post-glacial Scotland, presenting many elementary matters, and taking more than half the book for this purpose. Afterwards he discussed the glacial phenomena as exhibited in England, Ireland, Scandinavia, Switzerland and North America. A newly acquired view with him related to the age of the paleolithic deposits of southern England—all of which he referred to inter-glacial and pre-glacial times. It was this book that first called the attention of many geologists to the doctrine of several periods of cold in the ice age separated by as many times of milder conditions. Like the early doctrine of Agassiz and Buckland that the drift phenomena were to be explained by the agency of glaciers, so this theory of a series of cold and warm periods has been vigorously contested by geologists, but bids fair to be as generally accepted as the former. In 1877 a second edition of the book appeared. The author remarks in its preface that great additions to our knowlege of the facts had been made, above those first presented, all of which strengthened his argument that the epoch was not one continuous age of ice, but consisted of a series of alternate cold and warm or genial periods; while the ancient cave-deposits cannot be assigned to a later date than the last genial interval of the ice age, and some of them were probably still older. Among the more important alterations he notes a change in the use of the terms *till* and *boulder clay*. Instead of calling one purely glacial and the other partly marine, both are referred more or or less directly to the grinding action of glaciers, and are strictly synonymous terms. Likewise he modifies his view of the *kames;* none of them are now regarded as of marine origin. There has been no great submergence of Scotland since the close of the glacial epoch, and thus the Scotch deposits are brought into much closer relationship with those of England. In the interim he made many personal studies of the English phenomena until able to say positively that after the deposition of the ossiferous gravels