

has been executed with scrupulous fidelity. Some offenders will writhe at the point of his pen, as they feel the keen discernment of his criticisms, and others may thank their own insignificance for the charitable mantle of his silence. Meanwhile, this Introduction takes its rightful place as the most valuable and most interesting contribution ever made to the subject of which it treats.

Lacking space for any adequate analysis of this portion of the Dictionary, we prefer to say no more.

ELLIOTT COUES.

Recent Geological Bibliographies. (Bibliography and Index of North American Geology, Paleontology, Petrology and Mineralogy for 1895; F. B. WEEKS; Bul. U. S. Geol. Survey, No. 146, 130 pp.; Washington, 1896. Bibliography of Missouri Geology; C. R. KEYES; Mo. Geol. Surv., Vol. X., pp. 221-523; Jefferson City, 1896.)

Perhaps there are no publications more welcome or more serviceable to the worker in any branch of science than bibliographies. When accurately and conveniently arranged they save the specialist much time, energy and money. One who is not a specialist is even more dependent on them. This is particularly true in our country, where so many who are interested in scientific subjects are necessarily located where library facilities are poor. The worker in some small town, miles, perhaps, from any really good library, learns to carefully treasure all bibliographic matter. Bibliographies render distant libraries more or less accessible, and enable book purchases to be made by mail with the same certainty of satisfactory selection which comes from personal examination. A glance over the list of periodicals examined by Mr. Weeks shows that it is quite complete. Indeed the U. S. Survey library is one of the most complete geological libraries in America. The acquisitions for 1895, as listed here, include 575 titles. In Mr. Weeks' paper there is, under each title, a brief abstract of the contents of the paper noted. This in a certain sense brings the library to each worker, while a visit to the library would be impossible to many geologists, except at great expense.

The survey has from the first recognized the responsibility which comes with the possession of an excellent library, and has issued many helpful bibliographies.* Two of these were compiled by Mr. Weeks, and their wide use has shown that they were carefully planned and conscientiously executed. In the present, as in the preceding papers, the references are full and clear, the abstracts concise and the arrangement convenient. Limits have necessarily been drawn. The proper limits to such a work are a matter of opinion. It would seem, for instance, that signed editorials in standard journals might properly be included, since they often contain much which is germane to current geologic discussion. In this they seem on a par with signed reviews which have been included. While certain trade journals, such as *Engineering and Mining Journal*, have been included, others, which often contain original papers of merit, for example the *Colliery Engineer*, have been excluded. Since so large a portion of the work of the modern geologist has to do with economic subjects, an extension of the scope of the work to include a larger portion of the economic literature would be welcome. Certain of the discussions in such a book as 'The Mineral Industry,'† would probably be as helpful to the working geologist as some of the strictly paleontologic literature noted. This is a criticism, not of the bibliography itself, but upon its possibly too restricted scope.

The paper by Dr. Keyes is on a somewhat different plan. The attempt has been made to bring together all the literature bearing upon the geology of a single State. The result is that a considerable number of titles have been added to the list published by Sampson.‡ There is the same lack, however, of references to important economic literature that is shown by Mr. Weeks' paper. Numerous papers upon the zinc and lead deposits of Missouri have been published in the *Engineering and Mining Journal*, and any one studying the deposits would need to be familiar with these papers, yet none have

* See Bulletins 7, 13, 44, 63, 69, 71, 75, 91, 99, 100, 102, 121, 127, 130, 135.

† Scientific Pub. Co., New York.

‡ Geol. Surv. Mo., Bul. 2, 158 pp. Jefferson City, 1890.

been noted. It would seem that, in this case at least, too much has been eliminated. The list is quite complete otherwise. It is particularly rich in references to the geology of the surrounding region. Such side references are especially valuable to workers in Missouri, since they recall widely scattered notes which might otherwise be overlooked. The paper also becomes more than a mere bibliography of Missouri. It is a guide to the study of the geology of the central Mississippi Valley and brings out excellently the development of our present knowledge from a historical point of view. Such a bibliography could only come as a result of wide studies throughout the region and is a natural sequence to the similar publication issued by Dr. Keyes while connected with the Iowa Survey.* The general scope and arrangement of the paper is the same as that followed by the author in the Iowa bibliography. The abstracts are perhaps briefer than those given by Mr. Weeks, but its value is very largely increased by the dictionary arrangement. A not unimportant feature of both the bibliographies reviewed is the very full accompanying index.

H. F. BAIN.

SOCIETIES AND ACADEMIES.

CHEMICAL SOCIETY OF WASHINGTON; THE 93D
REGULAR MEETING, WASHINGTON, D. C.,
FEBRUARY 11, 1897.

THE Society was called to order at 8 p. m. by the President, Dr. Bigelow, with twenty-five members and several invited guests present.

The first paper of the evening was read by Dr. E. W. Allen, and was entitled 'A Critical Review of Aikmann and Wright's Translation of Fleischmann's *Lehrbuch der Milchwirtschaft*,' an abstract of which has been presented by the author: "Attention was called to the heavy verbose style of the translation, and often foggy statements, errors in translating the sense and failure to adapt the book for English and American readers, and to correct certain statements which do not apply at the present status of knowledge. The fallacy of

*Iowa Geol. Surv., Vol. I., pp. 209-464. Des Moines, 1893.

translating a book for students and semi-popular use, without editing the translation and in a measure adapting it to the new field, was pointed out."

Dr. H. Carrington Bolton exhibited two British patents which he has described in *SCIENCE* (p. 401).

Mr. W. H. Krug read a review, from the German, of a paper by Adolph Meyer entitled 'The Maximum of Plant Production.'

Mr. Wirt Tassin's paper was entitled 'A New Blowpipe Reagent.' He gave a review of the use of iodine in blowpipe analysis from the time of Bunsen to Haanel and Andrews. He then stated that for several years past he had been using iodine in several forms and found that a mixture of equal parts of iodine and potassium sulfocyanate, plus a little sulfur, the whole being intimately mixed, fused and then ground, gave the most satisfactory results. The powder was used as a flux on a gypsum tablet. A series of the iodine and cyanate films produced by some forty minerals was shown. Some of these illustrated the extreme delicacy of the test; others showed the effect that the coating produced by one element had upon that produced by another when they were deposited together; still others showed the methods of differentiating interfering elements. Some attempts at quantitative methods were shown, and attention was called to the fact that a mixture of three parts of alcohol and one part of chloroform burned in a lamp gave rise to some very interesting reactions either with or without the iodine flux.

The Society adjourned at an early hour, and the remainder of the evening was devoted to feasting and social discourse.

SPECIAL MEETING, TUESDAY, MARCH 9, 1897.

A SPECIAL meeting of the Chemical Society was held in the Assembly Hall of the Builders' Exchange Club, under the auspices of the Joint Commission of the Scientific Societies of Washington, to hear the address of the retiring President, Dr. E. A. de Schweinitz, upon 'The War with the Microbes,' which will be printed in *SCIENCE*. The speaker was introduced by Surgeon General Sternberg, of the United States Army, and the hall was filled with members of