

example, the sun is regarded as an animal; but perhaps it was conceived that the light emanated from a certain part of the creature, just as in the numerous myths where the luminous disk is regarded as part of the decoration of a sun-bearer.

Mr. A. L. Kroeber presented a collection of animal tales of Eskimo, in part as made by himself from Smith Sound Eskimo. In these tales there is a contrast between Indian and Eskimo conceptions. Among Indians animals play an important part and are conceived as human in character. With Eskimo, on the contrary, animal stories are few; they belong chiefly to two classes, the first describing a marriage between a human being and an animal, the second answering to European beast fables. The paucity and brevity of the latter differentiate them from the Indian narratives. Dr. Kroeber subjoined a list of recorded Eskimo animal tales.

Dr. Livingston Farrand read a paper on the 'Mythology of the Chilcotin,' in which the relations of the tales of this people with those of their neighbors was discussed, with a view to obtaining a criterion in regard to the vexed question of diffusion or independent origination of similar myths. Dr. Farrand concluded that identity of theme was of minor importance as proof of borrowing, while agreement in details, among races contiguous or in communication, could be explained only on the hypothesis of diffusion.

Notes on American Indian names of white men and women were presented by Dr. A. F. Chamberlain, of Clark University, and 'Contributions toward a bibliography of folk-lore relating to women,' by Mrs. Isabel Cushman Chamberlain.

Miss Cornelia Horsford communicated information in regard to traditions connected with an apparent footprint on a rock of Shelter Island.

Other papers were offered by Dr. Robert

Bell, Professor Thomas Wilson and Mrs. F. D. Bergen. Demonstrations were made of phonographic records of Indian song.

W. W. NEWELL.

SCIENTIFIC BOOKS.

Kalender für Geologen, Paläontologen und Mineralogen. Herausgegeben von DR. K. KEILHACK. 2d annual edition, 1899, with a portrait of Professor C. W. v. Gümbel. Leipzig, 1899, published by Max Weg. Pp. 288, with blank pages for notes. Price, 3 Marks.

A handbook for geologists comparable to the numerous pocket aids, edited for the use of engineers, has never been issued. Dr. Keilhack began in 1898 the work, which is here described, in such a way as to fill some of the needs for such a book of reference. The list of contents of the present edition will serve as a sufficient notice of the booklet. The work gives a list of the official geological surveys of all countries, including the American States, with their officers, the maps published, the prices of the maps and information concerning the other publications of the surveys. Where possible, the annual money allotment is stated. Secondly, a list of the professors and instructors in geology, paleontology and mineralogy in the colleges and high schools of the world, alphabetically arranged by towns. It is to be noted that the American high schools do not rank as 'high schools' of European grade. Hence American high-school teachers are not here named. Thirdly, a list of geological, paleontological and mineralogical societies, with a brief account of their publications and membership. Fourth, the addresses of geologists, etc., of Germany, Holland, Australia, Switzerland and Hungary. Fifth, the public and private geological, mineral and paleontological collections of the countries just named. Sixth, the subdivisions of the greater geological formations in Europe. Seventh, a tabular view of the massive rocks, after Zirkel. Eighth, the characteristics of common minerals, giving their system of crystallization, specific gravity, hardness, chemical composition, streak color and the crystallographic position of their leaf cleavage. Ninth, a comparative table of the

crystallographic systems of Naumann, Weiss and Miller, with formulas for converting the symbols of one system into those of another. Tenth, atomic weights of the elements. Eleventh, an essay on the history of the names of geologic formations, by J. Walther. Twelfth, rules for the termination of proper names in scientific literature. Thirteenth, a brief notice of the advance of geology for the year. Fourteenth, list of geologists who have died since October 1, 1897. Fifteenth, table of the commonly-used measures of length. Sixteenth, isogonic chart of Europe for 1899. Seventeenth, lists of periodicals now published. Eighteenth, a list of geological, paleontological and mineralogical literature for 1898. (Very incomplete, particularly as regards America, and frequently useless because name of periodical is not given.) Following is a chart of map scales, a daily calendar, a few blank pages for accounts, and blank and cross-section pages for geologic notes. Then come 26 pages of advertisements of German materials for use in geologic investigation and teaching. Worthy of notice among these advertisements is Professor Dames' Geological Globe, of 34 cm. diameter, which will be useful in every geological laboratory.

The writer found the first edition of this book an invaluable *vade mecum* in a European trip. At home the book serves as a valuable check-list for the sending of separates, for information concerning geologic maps, and while it is not particularly adapted to the American geologist it is a welcome addition to the reference books one keeps about his desk. A handbook for the field geologist has yet to be written. Just what such a book should contain is probably difficult to ascertain.

J. B. WOODWORTH.

The Chinch Bug. By F. M. WEBSTER. Bull. No. 15, N. S., Div. of Entomology, U. S. Dept. of Agriculture. [November] 1898. Pp. 82.

This excellent bulletin deals with a subject of perennial interest to farmers and entomologists; and although the literature of the chinch bug is already large, Professor Webster has found plenty of new and interesting things to say about it. In the most interesting and convincing way, he shows how the insect may have origi-

nated in Central America, and spread northward in three columns, one along the Pacific coast, the second over the prairie region east of the Rocky Mountains, and the third along the shores of the Gulf of Mexico and Atlantic ocean. On p. 72 a map is given illustrating these migrations. The Pacific column appears to be weak, and is little known, but the other two are strong in numbers. In the course of these migrations the insects have become modified, and it is clearly shown that the Atlantic and prairie hordes differ both in habits and structure. Just at this point the present writer is inclined to disagree with Professor Webster's opinion, that there is only one species of *Blissus* in North America. There are reasons for believing that we have at least three species, and Montandon (Ann. Soc. Ent. Belg., XXXVII., 1893) has described as new *B. hirtus* from North America, and *B. pulchellus* from Central and South America. Unfortunately, I have not access to these descriptions, but from the data furnished by Professor Webster we may separate the following:

1. Form of Central America and the West Indies: Macropterous, perhaps of larger average size than the North American type. This may be Montandon's *pulchellus*.

2. Form of the prairie region of North America, probably also of California: Macropterous, more slender and less hairy than the coast insect. This is doubtless Le Baron's *Rhyparochromus devastator*, and will be called *Blissus devastator* (Le Baron). This insect occurs in small numbers, and is evidently native, along the eastern base of the Rocky Mountains, in Colorado and New Mexico. Like the Colorado potato beetle, it has become destructive when, moving eastwards, it found the cultivated fields of the central States. Professor Webster shows that it is very destructive to wheat and corn, but rarely attacks timothy. It has two annual broods.

3. Form of the coast region and northeastern States. This is doubtless the true *Blissus leucopterus*, Say. It has both brachypterous and macropterous forms, and is somewhat broader and decidedly more hairy than *devastator*. It predares almost exclusively upon timothy grass and is single-brooded.