

collection of the limb bones of *Camarasaurus* from the Reed Quarry. The fourth expedition went into South Dakota and northern Wyoming, under Mr. Barnum Brown, and resulted particularly in the discovery of abundant mosasaur and plesiosaur material.

The explorations of the Carnegie Museum have been described by Mr. Hatcher in a recent number of SCIENCE.

Mention should also be made of the continuation of the explorations in the Triassic under Professor Merriam, of the University of California, as well as of the cave fauna in Shasta County, a description of which has already appeared in SCIENCE. H. F. O.

BOTANICAL NOTES.

THE MISSOURI BOTANICAL GARDEN.

THE appearance of the Fourteenth Annual Report of the Missouri Botanical Garden covering the year ending December 31, 1902, enables us to note the rapid growth of this institution. The report shows that the income from all sources for the year was \$127,142.50 and that considerably more than one half of this amount was expended on the garden, including library, herbarium, salaries, etc. The total number of species of plants now in cultivation in the garden is 11,551, which is more than double the number grown in 1895. The herbarium now includes 427,797 specimens. During the year there were added no less than 62,844 sheets of specimens. The botanical library was increased by more than 2,000 books and pamphlets, bringing the total number up to about 42,000. Other interesting statistics are given, showing that the garden has been an active agent in the promotion of botanical knowledge.

The bulk of the volume is taken up with a paper by Alfred Rehder under the title of 'Synopsis of the Genus *Lonicera*,' covering 206 pages, and including twenty full-page plates. The lapse of seventy years since the last general revision of the genus in the fourth volume of DeCandolle's 'Prodromus' makes such a paper as this especially necessary. This is shown by the fact that of the 154 species recognized in this monograph, but 42 occur in the 'Prodromus.' The conservative

treatment accorded to the genus is indicated by the small number of new species (eleven, only) which the author has described. Such moderation, after the 'lying fallow' of this particular botanical field for so long a time, should put to shame our 'species makers.' In this the Missouri Botanical Garden has rendered a distinct service to botanical science.

AN ELEMENTARY JOURNAL OF MYCOLOGY.

ABOUT a year ago Professor Kellerman, of Columbus, Ohio, began publishing a leaflet for the benefit of those who wish to learn something about the fungi. He called it the *Ohio Mycological Bulletin* and filled it with excellent photoengravings of the larger fungi. With each picture was given a simple description adapted to the understanding of 'children in years and children in knowledge.' It has been so successful that practically all of the earlier numbers have been exhausted. The first volume, which includes twelve numbers aggregating forty-eight pages, closes with a good index. With the last number a title page for the volume is supplied. The new volume is to start with the new year, and it is announced that 'the frequency of issue during the year will depend on the financial receipts.' The hope is expressed that two numbers a month may be issued during the spring and fall. For teachers in the public schools who wish to learn to know the commoner large fungi nothing better than this is published anywhere.

SOME RECENT PAPERS ON SYSTEMATIC BOTANY.

WILLIAM R. MAXON in the 'Contributions from the United States National Herbarium' (Vol. VIII., part 3) publishes 'A Study of Certain Mexican and Guatemalan Species of *Polypodium*,' in which he notices eight species, five of which are new to science. Two good plates illustrate the paper.

In the September number of the *Bulletin of the Torrey Botanical Club* Dr. G. N. Best revises the mosses of the genus *Leskea*, so far as the North American species are concerned. Ten species are recognized, two of which are new. He finds two new varieties also. The paper is accompanied with two plates showing structural details.

In the October number of the *Journal of the Linnean Society* the 'Enumeration of all the Plants known from China Proper, Formosa, Hainan, Corea, the Luchu Archipelago and the Island of Hongkong,' by Francis B. Forbes and William B. Hemsley, is carried forward nearly through the Cyperaceæ. As the sequence is that of Bentham and Hooker, it is likely that a few more numbers will see the end of this great work.

In No. 247 of the *Journal of the Linnean Society* (dated October, also) W. and G. S. West publish an interesting paper on the 'Scottish Freshwater Plankton,' which shows that the Scottish phytoplankton 'is unique in the abundance of its desmids.'

CHEMISTRY OF PLANT AND ANIMAL LIFE.

PROFESSOR SNYDER, of the University of Minnesota, has compiled a handy little volume under the title of 'The Chemistry of Plant and Animal Life,' which merits a notice here, since it is an attempt to place within reach of the beginner many of the chemical facts which otherwise are inaccessible to him. It is an elementary treatise and was originally prepared for the students in the school of agriculture of the university. This made it necessary that the treatment should be quite simple, and as nearly non-technical as possible. It is not, therefore, a 'contribution' to science, but it is a contribution to the pedagogics of science. The author has found how to present the subject for the class of students under consideration; a class characterized by great earnestness and a desire to learn all that can be reached, but whose scholastic preparation is somewhat defective. Difficult as is the problem, Professor Snyder has successfully solved it. He first gives about twenty chapters to a simple statement (with experiments) of general chemistry, and follows these with such topics as 'the water-content of plants,' 'the non-nitrogenous organic compounds of plants,' 'the nitrogenous organic compounds of plants,' 'chemistry of plant growth,' 'composition of fodders,' 'composition of wheat,' etc. The book, while a simple one, and no doubt here and there open to the criticism of some confusion of details, is without question

one which will be of great service to beginning students, especially in the schools of agriculture. A new edition is under way, and is to appear soon. It should find place in many schools.

CHARLES E. BESSEY.

THE UNIVERSITY OF NEBRASKA.

THE CARNEGIE INSTITUTION.

THE trustees of the Carnegie Institution have approved the recommendation of the executive committee that \$10,000 be granted for twenty tables at the Marine Biological Laboratory at Woods Hole, Mass., for 1904. Applications received prior to February 1, 1904, will be considered, and twenty persons assigned to the tables at the laboratory, for the season of 1904.

The trustees have also approved of an appropriation for two tables at the Naples Marine Biological Station, for which applications will be received and considered up to February 1, 1904.

It is desirable that all applications for research assistantships shall be in the hands of the committee by February 1.

The regulations in regard to the research assistantships are as follows:

It is the purpose of the Carnegie Institution of Washington, among other plans, to encourage exceptional talent by appointing a certain number of research assistants.

These positions will not be those commonly known as fellowships or scholarships; nor is the object of this provision to contribute to the payment of mechanical helpers or of assistants in the work of instruction. It is rather to discover and develop, under competent scrutiny and under favorable conditions, such persons as have unusual ability. It is not intended to provide means by which a student may complete his courses of study, nor to give assistance in the preparation of dissertations for academic degrees. Work of a more advanced and special character is expected of all who receive appointment.

The annual emolument will vary according to circumstances. As a rule, it will not exceed \$1,000 per annum. No limitations are prescribed as to age, sex, nationality, graduation or residence. Appointments will, at first, be made for one year, but may be continued.