

—as the Cetaceans, Edentates and their allies, and others. While it has been deemed useful, especially in an American review, to point out the most conspicuous errors in the treatment of the American members of the perplexing order Rodentia, it must not be supposed that other parts of the book are equally open to criticism. In reviews it is both proper and desirable to point out erroneous statements, while, from the nature of the case, like detailed comment respecting the good qualities is well nigh impossible. Hence notices of very good books often seem to consist mainly of adverse criticism. I fear this is true in the present instance.

The bird part of the Royal Natural History will be reviewed separately.

C. H. M.

Lehrbuch der Biologie der Pflanzen. FRIEDRICH LUDWIG. Stuttgart, Verlag von Ferdinand Enke. 1895. 8°, pp. vi + 604, with 28 figures in the text.

The Germans are quite persistent in refusing to recognize as biology the mixture of botany and zoölogy, which is rather unfortunately called biology by the English and Americans, and as a general thing they designate by the latter name the relations of plants to their surroundings, a subject that the Madison Congress of American botanists agreed to call ecology. It is, therefore, to this subject that Professor Ludwig's latest book refers, and it includes chapters on the adaptations of land and water plants to their surroundings, adaptations to a parasitic habit of life, the part played by fungi in the nutrition of higher plants, carnivorous plants, commensalism and symbiosis, adaptations of plants to the physical and chemical character of the soil, climbing plants, phenology, the various protective devices met with in plants, the many interesting arrangements concerned with pollination and dissemina-

tion, and the influence of man on the forms of plants, with which is connected a general discussion of heredity and the causes of variation from hereditary types.

Dr. Ludwig is an earnest student of the relations of plants to their surroundings, especially of their adaptations to pollination by insect agency, and his book appears to be not only pleasantly written, but accurate in its statement of fact.

WM. TRELEASE.

A Monograph of the North American species of the genus polygonum: By JOHN KUNKEL SMALL. Memoirs from the Department of Botany of Columbia College, Vol. I. Issued April 23, 1895. 4°. pp. 183, Pl. A. and 84. Price \$6.00.

While it is generally believed that the classification and naming of plants is a less advanced branch of botanical investigation than the study of their morphology, development and physiology, botany would be a very crude science, indeed, without such work, and one of the duties that fall to the possessors of every large herbarium is that of monographing difficult groups—a duty all the more imperative because of the undeniable fact that such work can only be done where good library and herbarium facilities are at hand.

The botanical department of Columbia College, with one of the finest herbaria and systematic libraries in the country, is apparently fully aware of this fact, and at frequent intervals Dr. Britton and his assistants and special students publish revisions that are helpful to all systematic students of the North American Flora. The last of these publications inaugurates a series of Memoirs which promise to reflect much credit on the institution under the auspices of which they are published.

No collection in the world contains more valuable material for a study of the North American Knotweeds than is to be found at