

this time considerable abundance over an unusually extensive range. Also birds with the greatest development of centripetal migration, though often exceedingly abundant, are perhaps less resistant than others. Of the shore birds which formerly thronged our coast, the greater yellowlegs, whose summer and winter ranges were not so widely separated, has held out best against the inroads of gunners, while the Eskimo curlew and golden plover with the longest migration routes, have suffered most severely.

The above aspect of the situation may be of interest to the student of fluctuating population and political complications arising therefrom as well as to the student of bird migration. The fact seems to be that in nature a species adjusted to maintain its numbers constant even though comparatively small, is in a more advantageous position than one in which there is a rapid increase of numbers necessitating migrations beyond the capabilities of the individuals.

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QUOTATIONS

THE ROCKEFELLER FOUNDATION

THE Rockefeller Foundation in New York is a conspicuous example of modern philanthropic effort. Owing its existence and its maintenance to the enlightened liberality of Mr. John D. Rockefeller, it is conducted on business lines without the appeals to public benevolence which, in the absence of state endowment, are generally necessary to procure the funds required for the successful prosecution of charitable enterprises. A review of the work done by the foundation in 1917 for various purposes connected with the war, and in regard to public health and medical education, recently issued by the president, Mr. George E. Vincent (New York, 1918) states that at the end of 1917 the principal fund had a market value of about £21,000,000; the income of that fund for the year was £1,430,770. To this were added a balance carried over from 1916, a gift by Mr. Rockefeller of £1,100,000, and the sum of £1,000,000 voted by the trustees from

the principal fund. The cash balance carried forward into the year 1918 was £23,325,809, but all except £254,267 of this amount will be needed to meet appropriations and pledges for the next fiscal year. The foundation is at present devoting by far the greater part of its available resources to the support of war work. When the United States joined in the great struggle the foundation placed a large sum at the disposal of the American Red Cross, which has undertaken comprehensive schemes of relief for the allied armies and the civilian population of the invaded countries. The only work which it is now directly administering in Europe is an antituberculosis campaign in France. The American government from the first insisted that the training camps were to be regarded as educational institutions. Official commissions and national and local societies worked together in providing within and outside camps comfort, recreation, social entertainment, educational opportunities, and moral safeguards for the troops. To nearly all the units that make up this vast cooperation the foundation has given sums amounting in the aggregate to £900,000. In 1917 a portable military base hospital was erected in the grounds of the Rockefeller Institute for Medical Research, embodying the features which British and French experience has proved to be essential. In this hospital the Carrel-Dakin method of sterilizing wounds is being demonstrated. To the hospital and the laboratories medical officers of the army and navy are being sent for study and experience. The foundation has undertaken the making of serums and their distribution to government hospitals. Funds are being provided to help the Surgeon-General in engaging specialists for the treatment and hospital care of nervous and mental diseases due to the war. Contributions were also made for the after-care of the victims of infantile paralysis in the epidemic in New York in 1916. In 1915 the foundation offered to bear the cost of establishing and maintaining as a part of Johns Hopkins Hospital a school of hygiene and public health. During 1917-18 a staff was recruited and lines of work laid down. Dr. William H. Welch resigned

his professorship in Johns Hopkins to become director of the new institution. During 1917 steady progress was made in campaigns against hookworm, malaria and yellow fever, in promoting better health administration, in securing reform in sanitary legislation, in persuading governments to increase their expenditure for preventive medicine, and in encouraging public health education. In China the foundation is promoting modern medical education and hospital administration. In September last the Chinese Minister of Education laid the corner stone of the Peking Union Medical College, which is being built in the Chinese capital. The program also includes a medical school and hospital at Shanghai, but the war has interrupted the prosecution of this scheme. The growth of the Rockefeller Institute for Medical Research has called for increasing sums for equipment and current expenses, and £400,000 was appropriated during 1917 as an addition to its endowment.—*British Medical Journal*.

SCIENTIFIC BOOKS

Fresh-water Biology. By HENRY BALDWIN WARD and GEORGE CHANDLER WHIPPLE, with the collaboration of a staff of specialists. New York, John Wiley & Sons. 1918. 8vo. 1111 pp., 1547 figures in text.

At last American students of fresh-water life are provided with a handbook and guide that will enable them to acquaint themselves with the forms of life found in their native lakes, ponds and streams. Ward and Whipple are the editors, and they themselves contribute five of the thirty-one chapters. Ward writes the general introduction and two chapters on parasitic worms, and one on *Gasterotricha*, and Whipple writes the concluding chapter on Technical and Sanitary Problems. There are two further introductory chapters, one by Shelford on conditions of existence, and an altogether excellent and practical chapter by Reighard on methods of collecting and photographing. The remaining chapters discuss the principal groups of aquatic organisms and are written by well-known American specialists in the several groups. All are prepared with evi-

dent care and with due regard for the needs of the general student and all are adequately illustrated.

Three of these chapters are for reading purposes only—the ones on bacteria by Jordan, on the higher plants by Pond and on aquatic vertebrates by Eigenmann. These are excellent summarized statements of the chief biological phenomena of these groups and are most interesting reading.

The volume is much more than a text-book for the remaining groups (to which 26 chapters are devoted): it is a handbook and guide, and a means of identification, and this is its peculiar merit. Each chapter gives, besides an introductory account of the group, an illustrated key, that is adequate for the determination of the forms and that is convenient and workable. No such set of keys has hitherto been available anywhere. The clear and copious illustrations are placed alongside the reading matter relating to them in the text, and are adequate for the interpretation of the characters used.

This book will at once take its place as the most indispensable reference work for students of freshwater biology; and it is likely to hold that place for a long time.

JAMES G. NEEDHAM

Equidæ of the Oligocene, Miocene and Pliocene of North America. By HENRY FAIRFIELD OSBORN. *Memoirs of the American Museum of Natural History*, Volume II., Part I., issued June 10, 1918.

AN extensive memoir of two hundred and seventeen quarto pages, illustrated by one hundred and seventy-three figures, and fifty-four plates reviews our knowledge, from a systematic standpoint, of the "Equidæ of the Oligocene, Miocene and Pliocene of North America."

The present revision of the fossil horses "is *iconographic* in the sense that all the original type figures of authors are reproduced in *facsimile*, and all unfigured types, especially those of Marsh, are now figured for the first time. . . ." The work is based largely on the collections at Yale and at the American Mu-