

experimental, but the cost of the coloured plate in the frontispiece, presumably an advertisement of the publishers, would have been better expended in illustrating such pathological changes as are known in the explanation of mental disease. The bibliography at the end of each chapter is valuable, and the index is well compiled. We hope to see published at an early date a second edition of this valuable text-book.

British Mammals.

British Mammals. Written and illustrated by A. Thorburn. (In two vols.) Vol. 2. Pp. vi+108+plates 26-50. (London: Longmans, Green and Co., 1921.) 10s. net (2 vols.).

IT is somewhat unfortunate that seals, whales, and bats constitute so large a proportion of our mammals, for the public, after all, take a lively interest only in such creatures as come under their notice. Including sub-species, there are roughly eighty in all, of which twenty-eight are sea creatures, mostly rare and generally thrown up on our coasts in a decomposing condition, whilst the bats, which number twelve, being crepuscular or nocturnal in their habits, are also known to few. When we add to this total the rats, mice, and voles, for the most part shy and elusive inhabitants of the earth, the total number of British mammals that come under the notice even of the most observant country dwellers is remarkably small.

In his second volume Mr. Thorburn treats his subject with the same care and attention to detail that he gave to us in volume one. Even when the subject is somewhat dull he succeeds in making an interesting feature of it by means of skilfully introduced natural features or landscape. We cannot say, however, that in the present volume he is equally at home in depicting deer or the so-called wild cattle as he is with the small rodents or Cetaceæ. The mountain hare is good, but the common hare is stiff and inartistic. Of all our mammals it is the most difficult to draw, and in this case the artist has failed to reproduce it in one of its more favourable attitudes. Nor are we enamoured of the pen drawings; they fall far behind the brush work, and being reproduced on pure rag-paper lose much of their original delicacy. In his coloured plates of mice and voles Mr. Thorburn is at his best, and that is saying a great deal, for it is evident he has drawn the majority of these from life, and has given us all their sleek beauty and rotundity. Here his art is triumphant, which is to say it is entirely satisfactory. Such work will live and hold its own,

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and take high place among works on British birds and beasts. Mr. Thorburn, too, has achieved a notable success in his representations of the British Cetaceæ, difficult subjects either to render accurately or to make interesting. We notice few errors, with the exception that the teeth of the sperm whale are too small and too white, while the head and flippers of the hump-backed whale are scarcely long enough.

The letterpress gives a short and on the whole very accurate account of all the species of rodents, ungulates, and whales. The author describes each species from careful research in standard works, supplemented by interesting little notes from personal observation. That he is a real lover of animals is evinced on every page where he describes the intimate habits of little harvest mice and other small creatures that he has kept in confinement and allowed to escape when they have been sufficiently studied and have sat for their portraits.

The second volume of "British Mammals" is a notable achievement and worthy of Mr. Thorburn's high reputation, but it is not on a level with the first volume. The printing, both of the coloured plates and of the text illustrations, leaves much to be desired. These faults, however, cannot be attributed either to the author or his publishers, but are due to the carelessness of printers and block- and paper-makers, who, we think, do not take the same care and pride in their work as in pre-war days. J. G. M.

Plant Biochemistry.

The Chemistry of Plant Life. By Dr. R. W. Thatcher. (Agricultural and Biological Publications.) Pp. xvi+268; (New York and London: McGraw-Hill Book Co., Inc., 1921.) 18s. net.

OF recent years much attention has been given to plant- or phyto-chemistry, if we may judge from the number of books which have been published on the subject. The origin of this attention can be traced to the strides that have been made in the organic chemistry of the carbohydrates, proteins, and other complex compounds, and to the development and wide general applications of physical chemistry. The purely chemical and physical details are the essential foundations for a proper understanding of the subject and for throwing new light upon the complicated chemical and physical processes going on simultaneously in life. Authors of books on plant chemistry have an advantage over their colleagues in the other branch of biochemistry—physiological or animal chemistry—in not being cumbered with a mass of