to the nation all scientific information and specimens discovered by the employees of the company. The particular skull was found by Mr. A. W. Phillips, Resident Engineer, at Tranquille. Unfortunately the bones found with it were buried in the dump by the ignorant labourers, but effort is being made by the authorities of the railroad to have them uncovered for the national museum. The skeleton was turned out near Tranquille by the grading machine plough about 8 feet below the surface of the ground and was sent to Mr. H. L. Johnston, Division Engineer at Savona. The Dominion Archæologist of the Canadian Geological Survey has urged upon the authorities and engineers of this road as well as upon those of the other great railroads of Canada, the Indian agents, and the North West Mounted Police, the great necessity of saving whatever is found for the use of all the people of Canada. Accession 13.

## BOOK NOTICES.

ELEMENTARY ENTOMOLOGY.—By E. Dwight Sanderson and C. F. Jackson, pp. VIII, + 372, 496 figs. Boston: Ginn & Co.; \$1.50.

The need for a good introductory book on Entomology has been felt by teachers and those who are called upon from time to time to recommend such a book to one who may be desirous of taking up the science. Packard and Comstock have each given us excellent text-books for the student, but a book was desired of a more elementary character to put into the hands of the beginner, and one which would serve as an introduction to these and such other standard works as Sharp, Kellogg and Howard have written. Only those who have had experience in teaching entomology will realize the difficulties to be encountered in writing such a book. The authors of the present work have succeeded where others with less experience of teaching and often of the subject have failed. In so doing they have placed under a debt of gratitude not only teachers of entomology but the increasing number of those who are desirous of beginning a study of this subject. As the authors admit, the economic side has been made the dominant note in the book. numerous reasons we think that this was a wise course to take; nor has the value of the book to the general student been diminished by unduly emphasizing the economic aspect.

The book is divided into three parts. The first part treats of the structure and growth of insects. In the second part the different orders are considered seratim in a most readable and interesting manner. The third part is extremely valuable as

it describes in very clear language the methods by which the elementary student may familiarize himself with and study the structure, life-history and classification of insects. An excellent key to the different orders is given; in the preparation of this key the authors have been fortunate in securing the helpful criticism of the leading authorities in the various orders, thereby

rendering it increasingly valuable and accurate.

In a book of this nature there are naturally a number of points which, if space did not forbid, we might discuss. It is unfortunate that "cesophagus" should be mis-spelt throughout the book, and surely "axe" does not, even on the ground of simplified spelling, deserve to have the "e" chopped off (p. 337). The so-called "rasp-like" character and "rasping" function of the labial lobes of the house-fly and blow-fly (p. 18) are mistakes which have crept into entomological literature due to an incorrect interpretation of the nature of the pseudotracheæ resulting from lack of actual observation and careful examination. The statement that "no true gills, that is, gills carrying blood vessels, like those of fishes, are found in insects," whilst strictly true, might be misleading in view of the possession by larval Chironomids of respiratory filaments containing blood spaces and similar in function to the gill filaments of fishes. Among the minor mistakes we notice "Corisidae" (p. 108), "Torie" (p. 305) and the laying of Fig. 434 on its side. We are of the opinion that some mention of such important facts as parthenogenesis and the alternation of generations, etc., would have enhanced the biological side of the book.

The book is well illustrated with nearly five hundred figures which have been selected with considerable care from good sources, and we note with no regrets the absence of many old acquaintances which have been rightly allowed to enjoy their well-earned rest. To all, whether they be teachers or students or those merely desiring to learn something about insects, we

recommend this book most heartily.

C. GORDON HEWITT.

THE FLIGHT OF BIRDS.—By F. W. Headley, M.B.O.U. With sixteen plates and many text-figures. Witherby & Co. 326 High Holborn, London; 163 pp. Price, 5s. net.

"The Flight of Birds" is the first book which has come to our notice dealing exclusively with the science of flight from an ornithological viewpoint. It is only within recent years that the subject has had much attention from naturalists, and this chiefly by European ornithologists. The subject seems not to have been studied to any extent in a systematic way on our own continent.



Hewitt, C. Gordon. 1912. "Elementary Entymology, by E. Dwight Sanderson and C. F. Jackson [Review]." *The Ottawa naturalist* 26(7), 90–91.

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