INSECTS INJURIOUS TO FRUITS. By W. Saunders. Philadelphia: Lippincott, 1883, 8vo. Illustrated with 440 woodcuts, pp. 436. Dedicated to the Fruit Growers of America.

No one will deny that this book supplies a long-felt want, and supplies it well. The author's long and well-known experience as a fruit grower and entomologist, gives just the qualification necessary for such work. He knows exactly what fruit growers want, and in which way and manner the needed information should be given to be useful and at the same time pleasing. Therefore the plan of this book is simple and to the point; the treatment of the enemies plain and sufficient, without tedious length; the remedies recommended backed by experience, and such as can be used by everyone. All this seems very simple and easy just as if everybody could do it. Often, I suppose, will it be said, Why was this book not published long ago? It is so eminently practical! But it is much easier to give long detailed descriptions than short ones, specially adapted to certain purposes. It is much easier to enumerate a number of proposed remedies than to select just the right one. After all, we should not forget that during late years the busy and prominent students of economic entomology have advanced this department of the science in a manner never equalled before this time.

The plan of the book is as follows: Twenty different fruits—all eatable without preparation (except quince and olive)—are treated in so many chapters. The insects injurious to them are arranged as attacking root, trunk, branches, leaves, fruit, always followed by the enemies of those enemies—the beneficial insects. The species are profusely illustrated with excellent, often superior, woodcuts; the well-known cuts of Mr. C. V. Riley are largely represented, and rather dangerous for all others.

The plain and judicious manner in which remedies are recommended is a decided and prominent feature of the book. There are no ambiguous, no large-mouthed sentences, no humbug about millions lost by such an enemy, or millions saved by such a remedy. There is nothing but plain truth, said in the most unpretentious words. I think every scientific student is deeply obliged to the author for his happy innovation.

Of course the author has, besides his own large experience, used all the rich and splendid discoveries and observations published by other scientists. The absence of quotation marks is entirely justified, as they belong to the history of the natural history, but not to a practical book intended for fruit growers. Scientific students know where such facts are published, and the author has in the preface fully satisfied all economic entomologists with his acknowledgments. It is obvious that in a book treating of the history of so many species, omissions and sometimes errors cannot be entirely avoided. Since the book is issued and the errors are insignificant, we may safely leave them to be corrected by the author himself. *Bene meruit!*

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THE FOOD RELATIONS OF THE CARABIDÆ AND COCCINELLIDÆ. By S. A. Forbes. From Bulletin No. 6, Ill. State Lab. of Nat. Hist., Normal, Ill., Jan., 1883, 8vo, pp. 31.

Through the kindness of the author, we have been favoured with a copy of the above paper, which embodies the results of a very laborious series of microscopic examinations of the contents of the alimentary canal of insects belonging to the Carabidæ and Coccinellidæ. In the Carabidæ the results of the dissection and study of 175 specimens are given, representing thirty-eight species and twenty genera. Of the Coccinellidæ, the results of the dissection of thirty-nine specimens are given, accompanied by carefully compiled tables presenting the evidence in the most convenient and accessible forms. Prof. Forbes' experiments show clearly that the opinions hitherto held by entomologists as to the food of these insects are in many respects incorrect. While it is shown that the insects belonging to the genus Calosoma live almost exclusively on animal food, those of Chlœnius and Galerita to the extent of nine-tenths, and those of Pterostichus three-fourths; the species of Harpalus take only about twelve per cent. of animal food, Anisodactylus twenty-one per cent., Amara and Amphasia twenty-three per cent., and